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TECHNICAL
R E P O R T

Evaluation of the
Arkansas Tobacco
Settlement Program

Progress During 2008 and 2009

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PREFACE

The Tobacco Settlement Proceeds Act, a referendum passed by Arkansans in the November 2000 election, invests Arkansas' share of the tobacco Master Settlement Agreement (MSA) funds in seven health-related programs. The Act also created the Arkansas Tobacco Settlement Commission (ATSC) to monitor and evaluate the performance of the funded programs. As part of its evaluation function, the ATSC contracted with the RAND Corporation in January 2003 to serve as an external evaluator. RAND is responsible for performing a comprehensive evaluation of the progress of the seven programs in fulfilling their missions, as well as the effects of the programs on smoking and other health-related outcomes. RAND submitted its first biennial report to the ATSC in July 2004, presenting evaluation results for the first biennium of the tobacco settlement program (Farley et al., 2004). RAND submitted a subsequent interim report in June 2005 (Farley et al., 2005) and a second biennial report in June 2006 (Farley et al., 2007). RAND submitted a third official biennial report in 2008 (Schultz et al., 2008).

This report represents the fourth official biennial report from the RAND evaluation. It documents continued activity and progress by the ATSC and the seven funded programs through December 2009, as well as trends in relevant health-related outcomes. First, the report summarizes the history and policy context of the tobacco settlement funding in Arkansas and discusses the ATSC's activities and its responses to recommendations made by RAND in the earlier evaluation reports. Then it evaluates the progress of each of the funded programs, including assessing progress in achieving long-range goals and tracking the programs' process indicators. The report also updates trends in outcome measures developed to monitor the effects of the funded programs on smoking and other health-related outcomes. Finally, it provides both program-specific and statewide recommendations for future program activities and funding. The contents of this report should be of interest to national and state policymakers, health care researchers and providers, and others concerned with the effect of the tobacco settlement funds on the health of Arkansans.

This work was sponsored by the Arkansas Tobacco Settlement Commission, for which Aaron Black serves as project officer. The work was carried out within RAND Health. RAND Health is a division of the RAND Corporation. Abstracts of all RAND Health publications and full text of many research documents can be found at the RAND Health website at <http://www.rand.org/health/>.

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SUMMARY

The Master Settlement Agreement (MSA), the historic agreement that ended years of legal battles between the states and the major tobacco companies, was signed on November 23, 1998. Under the terms of the MSA, Arkansas has a 0.828 percent share of the payments made to participating states over the next 25 years. Arkansas is unique in the commitment made by both elected officials and the general public to invest its share of the tobacco settlement funds in health-related programs. The Arkansas Tobacco Settlement Proceeds Act of 2000 (referred to hereafter as the Initiated Act), a referendum passed by the voters in the November 2000 election, specifies that the Arkansas tobacco funds are to support seven health-related programs:

- **College of Public Health (COPH).** COPH provides professional education, research, and services to the public health community of Arkansas. It is a unit of the University of Arkansas for Medical Sciences (UAMS).
- **Arkansas Bioscience Institute (ABI).** ABI works to develop new tobacco-related medical and agricultural research initiatives, improve the health of Arkansans, improve access to new technologies, and stabilize the economic security of Arkansas. The Initiated Act provides for ABI to be funded through separate appropriations to the participating institutions. The program's management reports to the ABI board, which also was established by the Initiated Act.
- **Delta Area Health Education Center (Delta AHEC).** Delta AHEC is an additional unit in the statewide Arkansas AHEC system to provide clinical education throughout the state. It was put into the Initiated Act to provide such services for the underserved and disproportionately poor Delta region of the state.
- **Arkansas Aging Initiative (AAI).** AAI provides community-based health education for senior Arkansas residents through outreach to the elderly and educational services for professionals. It is housed in the Reynolds Center on Aging, a unit of UAMS.
- **Minority Health Initiative (MHI).** MHI aims to identify the special health needs of Arkansas' minority communities and to put into place health care services to address these needs. MHI is managed by the Arkansas Minority Health Commission (AMHC).
- **Medicaid Expansion Programs (MEP).** The MEP seeks to expand access to health care through targeted expanded benefits packages that supplement the standard Arkansas Medicaid benefits. The programs are managed by the Arkansas Department of Human Services.
- **Tobacco Prevention and Cessation Program (TPCP).** Managed by the Department of Health, TPCP aims to reduce the initiation of tobacco use and resulting negative health and economic impacts. TPCP uses the Centers for Disease Control (CDC) recommendations for tobacco cessation and prevention activities in developing its programs.

The Initiated Act was explicitly aimed at the general health of Arkansans, not just at the consequences of tobacco use. Only one of these programs, TPCP, is completely dedicated to smoking prevention and cessation; it does, however, receive about 30 percent of Arkansas' MSA funds. Some programs primarily serve short-term health-related needs of disadvantaged

Arkansas residents (Delta AHEC, AAI, MHI, MEP); others represent long-term investments in the public health and health research knowledge infrastructure (ABI, COPH).

The Initiated Act also created the Arkansas Tobacco Settlement Commission (ATSC) and gave it the responsibility for monitoring and evaluating the performance of the funded programs. As part of its evaluation function, the ATSC contracted with the RAND Corporation to serve as the external evaluator. RAND was charged with performing a comprehensive evaluation of the progress of the programs in fulfilling their missions, as well as the programs' effects on smoking and other health-related outcomes.

This report is the fourth official biennial report from the RAND evaluation. The report updates the information and assessments provided in our first three biennial reports submitted to the ATSC in 2004, 2006, and 2008. The present evaluation is designed to address the following research questions:

- Have the funded programs achieved the goals that were set for them for the past two years?
- How did the programs respond to the recommendations made in earlier evaluations?
- How do actual costs for new activities compare with the budget, and what are the sources of any variances?
- What effects do the funded programs have on improving the health of Arkansans in terms of smoking behavior, health outcomes related to tobacco use, and other health outcomes addressed by the programs?

The answers to these questions form the basis of recommendations for how the programs, the ATSC, and other Arkansas agencies might better fulfill the aims of the Initiated Act.

SUMMARY OF PROGRAM PERFORMANCE THROUGH 2009

The Initiated Act states basic goals to be achieved by the funded programs through the use of the tobacco settlement funds. It also defines indicators of performance for each of the funded programs—for program initiation and short- and long-term actions. In our prior reports, we reported our conclusion that TPCP, COPH, Delta AHEC, AAI, and ABI had achieved their initiation goals and short-term goals and were now working toward long-term goals.

During 2008–2009, each program systematically reviewed its programmatic goals and the process, cost, and outcome indicators used to assess progress to ensure that the goals and indicators were aligned with changes and additions to the program's activity areas that had occurred over the last several years. While some goals have remained the same, there are also new goals that reflect the maturation of the programs over time. For these new goals, this evaluation report provides baseline data that will be used to assess progress moving forward.

Overall, the seven programs have continued to refine and grow their program activities during the past two years. In doing so, the programs have made a number of changes in their activities in response to the program-specific recommendations we presented in our 2008 biennial evaluation report. Others—including MHI and MEPS—have either completely redefined program goals or are in the process of doing so. In Chapters 3 through 9 of this report, we provide an update on each program's activities and describe progress toward achieving

programmatic goals. We also present an analysis of spending trends for each program and provide recommendations for each program as it moves forward.

As shown in Table S.1, the programs achieved a substantial majority of their performance goals or demonstrated progress toward meeting them.

**Table S.1
Program Status on the Programmatic Goals**

| Program | Status of Goal | | | |
|--|----------------|------------|-----------------------|---------|
| | Accomplished | In Process | New; Unable to Assess | Not Met |
| College of Public Health | 4 | | 2 | |
| Arkansas Biosciences Institute | 2 | | | |
| Delta Area Health Education Center | 2 | 1 | | |
| Arkansas Aging Initiative | 4 | 1 | 1 | |
| Minority Health Initiative | | | 5 | 1 |
| Medicaid Expansion Programs | 3 | | 1 | 1 |
| Tobacco Prevention and Cessation Program | 1 | 4 | 1 | |

Below, we briefly summarize each program’s status and progress toward program goals during 2008 and 2009 and list specific recommendations for each program.

College of Public Health

Over the past two years, COPH has continued to develop its education programs, research activities, and service efforts. Enrollment and the number of counties represented by COPH students have both remained stable over the last several years. In the current academic year (2009–2010), COPH had 218 students representing 38 counties enrolled in its education programs. Minority enrollment in its degree programs has also remained consistent over time. The vast majority of graduates pursue employment in a public-health-related field. COPH’s research activities involve obtaining federal and philanthropic funding and conducting research. In terms of its research activities, COPH faculty submitted 97 grants and were awarded 49 totaling nearly \$13 million during 2008 and 2009. The total number of ongoing research projects has remained at about 40 during each six-month period. During 2009, COPH faculty produced 86 publications in peer-reviewed journals, representing almost two publications per full-time equivalent (FTE). The quality of the publications increased substantially, with significantly more publication in the top ten journals during 2008 than in prior years. COPH has also maintained its efforts to serve as a policy and advisory resource to legislative committees and individual legislators. Throughout 2008–2009, COPH faculty were involved in giving talks, lectures, and legislative briefings. COPH efforts to increase funding from sources other than the tobacco settlement funds have continued. Since 2005, COPH has expanded its revenue stream, so that tobacco settlement funding makes up a diminishing share of total revenues. In 2005, tobacco

settlement funds accounted for 38 percent of COPH funding; in 2009, this percentage fell to 22 percent. The remaining funding for COPH came from research grants and contracts (64 percent) and tuition (13 percent). Stakeholders with an interest in COPH rated the quality of its activities and its effectiveness in reaching its goals as quite high, and most indicated that COPH should expand and conduct more activities.

**Table S.2
COPH Program Goal Status**

| Goal | Status |
|---|--|
| Maintain the number of Arkansas counties in which citizens receive public health training. | ACCOMPLISHED |
| Maintain a high level of graduates entering the public health field. | ACCOMPLISHED |
| Maintain minority enrollment in the degree programs at or above the minority population of the State (20 percent, as specified in the latest census data). | ACCOMPLISHED |
| Ensure that by graduation, COPH students report that they have achieved 80 percent or more of the learning objectives associated with their selected degree programs. | UNABLE TO ASSESS (new goal established partway through 2009) |
| During their tenure at COPH, students provide service and consultation to public-health-related agencies and community organizations throughout Arkansas. | UNABLE TO ASSESS (new goal established partway through 2009) |
| Increase new extramural grant and contract funding for research by 20 percent above that achieved during 2004–2005. | ACCOMPLISHED |

Below we present three recommendations from our evaluation of COPH’s activities during 2008 and 2009. The recommendations focus on strengthening its degree programs and enrollment to help ensure the institution’s future.

- Maintain the growth trajectory of minority student enrollment, student enrollment from across the state, and faculty research.
- Continue to build COPH’s major programs, especially Epidemiology and Biostatistics.
- Develop a student tracking system that provides more current and accurate information on student enrollment.

Arkansas Biosciences Institute

ABI’s efforts focus on research and collaboration among its member institutions. For the most part, the number of research projects in the five target research areas decreased or stayed the same during 2008–2009. However, ABI saw substantial increases in total research funding to a total of \$64.5 million in fiscal year (FY)2009. The ratio of extramural funding to ABI has

increased substantially in the past two years and now stands at 7:1. ABI has also increased the number of collaborative research projects led by the member institutions to 64 such projects in FY2009. ABI's other activity area encompasses its efforts to disseminate research results. Since FY2007, ABI increased the number of publications, lectures, and seminars; in-person media contacts and press releases were similar to prior levels. Looking at the program's policy context, ABI's stakeholders were quite involved in its research and collaboration efforts and perceived its research to be of high quality. While most stakeholders believed that ABI had been effective in reaching its goals, there was also consensus that ABI should expand its efforts. Our assessment of the impact of ABI's funded research found that the total number of publications and the number of articles in top journals decreased for the 2007–2008 academic year.

**Table S.3
ABI Program Goal Status**

| Goal | Status |
|--|---------------|
| Increase funding on an annual basis to conduct research. | ACCOMPLISHED |
| Increase dissemination of research findings, policy-relevant information, and technical assistance to relevant government and community organizations. | ACCOMPLISHED |

Below are three recommendations for ABI that come out of our most recent evaluation process. These recommendations emphasize continued growth in ABI's research and collaborative efforts to address sustainability issues across the member institutions.

- Strengthen efforts to foster collaborations among ABI institutions.
- Continue to obtain grant funding at a level that can support the infrastructure that has been established at the different institutions.
- Focus on sustainability at each ABI institution by increasing external funding.

Delta Area Health Education Center

Through its more than three dozen programs and services, Delta AHEC has strengthened its ability to recruit and train health students and professionals and provide education and health-related services to communities and clients throughout the Delta region. For FY2009, Delta AHEC spent about 15 percent of its total budget on recruiting and training health students and professionals. During 2008–2009, Delta AHEC reached approximately 1,800 students with its program to expose young people to careers in health professions. Eighteen medical school students participated in preceptorships, senior selectives, or internships in the Delta region. Delta AHEC's continuing education programs for medical professionals served over 1,400 participants during 2008–2009, and its medical library provided services to over 2,300 health professionals and students. With the vast majority of its budget targeted to community services, Delta AHEC greatly increased the number of community members reached through its health and education services. Overall, there were nearly 68,000 program encounters during 2008 and more than 100,000 during 2009. Delta AHEC met its goals to increase participation in both its health recruitment and training efforts and education and health-related services. Delta AHEC's

stakeholders rated the quality of its programs and services as quite high but were divided about whether it should maintain its current activity level or expand. In looking at smoking-related outcomes for the Delta region, we found that smoking rates for adults and pregnant women do not differ from the baseline trend.

**Table S.4
Delta AHEC Program Goal Status**

| Goal | Status |
|--|---------------|
| Increase participation in activities related to recruiting and training health students and professionals. | ACCOMPLISHED |
| Increase participation in services to communities and clients across the Delta region. | ACCOMPLISHED |
| Partner with tobacco programs to help each other meet program goals. | IN PROCESS |

Below are four recommendations based on our evaluation of Delta AHEC’s activities during 2008 and 2009. These recommendations relate to improving the efficiency and effectiveness of the services being offered to community member and professionals.

- Determine capacity for each program and program area.
- Increase utilization of programs with excess capacity to reach the most consumers and professionals and achieve optimal unit cost for program offerings.
- Monitor participants’ improvement with evaluations that include participant and comparison groups by using the existing system to monitor and support evidence based member behaviors.
- Monitor professionals’ educational needs and tailor services to meet those needs.

Arkansas Aging Initiative

AAI’s activities during the past two years have resulted in increased access to quality, evidence-based education, and clinical services for older Arkansans. The Senior Health centers provided clinical services during more than 42,000 visits each year in 2008–2009. AAI also increased its educational activities, with nearly 60,000 education encounters with community members, health professionals, paraprofessionals, and students in FY2008 and over 70,000 in FY2009. Through its promotion and policy work, AAI continued efforts to increase its visibility and inform aging policies at the local, state, and national levels. AAI made substantial progress in its efforts to secure additional funds to supplement its tobacco settlement funding. For FY2008 and FY2009, AAI received more than \$4.5 million in additional funds. The vast majority of AAI’s spending is dedicated to its education efforts, with very small portions supporting the other activity areas. The majority of the stakeholders with an interest in AAI’s work rated the quality of its efforts as high. After declining since its peak in 2003, the avoidable hospitalization rate among elders in Arkansas counties that have Centers on Aging has stabilized.

Table S.5
AAI Program Goal Status

| Goals | Status |
|--|---|
| Clinical Services: Older Arkansans will receive evidence- or consensus-based health care by an interdisciplinary team of geriatric providers. | ACCOMPLISHED |
| Education: AAI will be a primary provider of quality education for the state of Arkansas. | ACCOMPLISHED |
| Promotion: AAI will employ marketing strategies to build program awareness. | UNABLE TO ASSESS (new goal established during 2009) |
| Policy: AAI will inform aging policies at the local, state, and/or national levels. | ACCOMPLISHED |
| Sustainability: AAI will have permanent funding sufficient to continue implementation of its programs. | ACCOMPLISHED |
| Research: AAI will evaluate selected health, education, and cost outcomes for older adults who are provided services. | IN PROCESS |

Below are six recommendations that result from our evaluation of AAI activities during 2008 and 2009. Each recommendation links to one of the six activity areas outlined in AAI’s strategic plan, including clinical services, education, promotion, policy, sustainability, and research.

- Develop and implement an assessment of the optimal mix of professionals needed to maximize encounters in the most cost-effective manner to maintain high quality care for seniors.
- Continue to make progress in training the Centers On Aging in use of evidence-based guidelines and developing partnerships with nursing homes.
- Maintain work with strong Regional Community Advisory Committees and promotion efforts through media outlets and professional publications, focusing on involvement in policy and clinical services.
- Continue monitoring contact with legislators. Focus on a finite set of legislative issues and provide timely information to lawmakers making decisions relevant to AAI target populations.
- Develop a plan for sustainability that includes identifying multiple reimbursement streams, and continue to seek grants leveraged funding to expand services.
- Continue growth in research activities focusing on publishing completed findings and reporting use of programmatic evaluation.

Minority Health Initiative

At the end of 2009, MHI completed a strategic planning process that identified three priority areas: access to health care, education, and prevention. MHI developed awareness,

screening, and intervention strategies to address these priorities. Through its awareness activities, MHI educated, trained, or screened approximately 2,500 community members and distributed nearly 100,000 educational inserts during FY2009. MHI's participation in Community Health Fairs was its primary strategy for providing screening to minority populations. During FY2008–2009, MHI participated in 36 health fairs with almost 10,000 participants. At these fairs, nearly 5,000 health fair participants were provided with blood pressure, cholesterol, glucose, and cancer screening. For its intervention and pilot work, MHI supported four intervention or pilot projects: (1) educating African American church congregations and other organizations about healthy eating and cooking; (2) training Spanish-speaking medical interpreters and supporting health care centers in using medical interpreters; (3) expanding a minority health clinic's capacity to provide care for chronic conditions, such as diabetes, hypertension, and obesity; and (4) providing educational materials on sickle cell disease to health care providers, sickle cell patients, and their families. During 2008–2009, in response to RAND's recommendation, MHI increased its involvement in policy-related task forces and coalitions to broaden MHI's impact and help MHI reach its goals. In analyzing MHI's spending, unit costs were largely driven by participation levels, with relatively higher unit costs for its intervention strategies and lower unit costs for awareness and screening activities. MHI's stakeholders agreed about the appropriateness and purpose of its goals and believed that MHI is effectively reaching these goals. MHI has expanded its capacity to assess the outcomes of its programs and plans to use this information for future program planning.

As noted earlier, MHI's programming goals are undergoing redefinition. A strategic planning process identified six goals for FY2010 and FY2011. Data for the current reporting period will serve as a baseline to assess progress moving forward for its screening, awareness, intervention, and database activities.

Table S.6
MHI Program Goal Status

| Goal | Status |
|---|---|
| Screening: Increase the annual number of minority Arkansans screened through MHI programs. | NOT MET DURING THIS REPORTING PERIOD |
| Awareness: Increase the annual number of minority Arkansans educated regarding disparities in health and health care and equity to health and health care services. | UNABLE TO ASSESS (new goal established during 2009) |
| Intervention: Establish collaborative stakeholder networks in five counties each year to address health care equity, health workforce diversity issues, and minority health disparities. | UNABLE TO ASSESS (new goal established during 2009) |
| Intervention: Establish a comprehensive system among agencies of coordination and collaboration surrounding minority health disparities. | UNABLE TO ASSESS (new goal established during 2009) |
| Intervention: Influence public policy towards an equitable health care system for all Arkansans. | UNABLE TO ASSESS (new goal established during 2009) |
| Database: Establish a free online navigation and resource guide to provide the public access to relevant sources on minority health care in Arkansas. | UNABLE TO ASSESS (new goal established during 2009) |

Since most of the MHI programs cut across different activity areas, the seven recommendations that result from our evaluation of MHI during 2008 and 2009 focus on building service and evaluation capacity for its screening, awareness, and intervention activities.

- Maintain legislative focus on HIV/AIDS, sickle cell disease, health workforce, and system navigation issues.
- Continue to strategically fund pilot and demonstration programs.
- Use the Outreach Initiative Grants, as well as other opportunities to partner with other tobacco settlement programs, to reach program goals.
- Continue to forge collaborations with agencies and programs that have completed successful evaluations and with researchers who can bring needed expertise to these efforts.
- Take the next step with outreach grantees to ensure proper reporting and evaluation and monitoring.
- Seek supplemental funding for programs and services.

Medicaid Expansion Programs

With its four expansion programs, MEP provides access to health care for vulnerable populations in Arkansas. By the end of 2009, the ARHealthNetworks had enrollment of 9,554 small-business employees age 19–64 with income at or below 200 percent of the federal poverty level. During 2008–2009, the program’s monthly average number of participants rose from less than 500 per month to more than 1,500. Aside from the ARHealthNetworks program, enrollment in the Medicaid programs remained at consistent levels throughout 2008 and 2009. The MEP Pregnant Women’s Expansion Program provided access to Medicaid services to an average of 1,939 pregnant women with income between 133 percent and 200 percent of the federal poverty level during each six-month period of 2008–2009. More than 450 women received at least two prenatal visits during each six-month period of 2008–2009. Through its AR-Seniors program, MEP expanded Medicaid benefits to an average of 5,253 Medicare beneficiaries per six-month period in 2008–2009. The Medicaid-Reimbursed Hospital Care Program provided reimbursement for hospital care to about 9,200 Medicaid beneficiaries age 19–64. The spending analysis found that spending on the ARHealthNetworks program increased substantially reflecting its expanded enrollment. At the same time, spending in FY2009 on the Pregnant Women’s Expansion Program and the AR-Seniors program was considerably below FY2005 levels. The analysis of outcomes for MEP found that the AR-Seniors program has contributed to a decline in avoidable hospitalizations among the elderly, particularly in high-poverty counties. While the expanded hospital benefits provided by the Medicaid Reimbursed Hospital Care Program appeared to increase access to hospital care for conditions requiring very short stays, the expansion of benefits for pregnant women through the Pregnant Women’s Expansion Program is not associated with increased prenatal care.

**Table S.7
MEP Program Goal Status**

| Goal | Status |
|---|---|
| The percentage of enrolled women who receive at least two prenatal visits will increase. | UNABLE TO ASSESS (new goal established during 2009) |
| Beneficiaries currently enrolled in the Pregnant Women’s Expansion program will utilize services at least at the same level as the average pregnant Medicaid beneficiary. | ACCOMPLISHED |
| Enrollment in the AR-Seniors program will increase by 15 percent annually. | NOT MET |
| Beneficiaries currently enrolled in the AR-Seniors program will utilize services at least at the same level as the average dually eligible beneficiary. | ACCOMPLISHED |
| Enrollment in ARHealthNetworks will increase by 75 new employers annually and 400 new members per month. | ACCOMPLISHED |

Below are five recommendations based on our evaluation of MEP activities during 2008 and 2009. These recommendations emphasize understanding the size and needs of the populations targeted by MEP and improving access to and utilization of the programs.

- Determine the extent of need for each component of MEP and each program’s effectiveness in meeting that need.
- Assess and track service use for the Pregnant Women’s Expansion Program and the AR-Seniors Program.
- Improve the enrollment process.
- Increase the capacity for conducting education and outreach to increase service utilization and enrollment for the programs.
- Develop partnerships with other tobacco settlement programs or other state or local organizations to educate and conduct outreach in communities.

Tobacco Prevention and Cessation Program (TPCP)

TPCP continues to pursue prevention and cessation efforts in accordance with the CDC program components. Through its community prevention, school, and Minority Initiative Sub-Recipient Grant Office (MISGRO) grant programs, TPCP funded a total of 56 community- or school-based organizations in FY2010 to conduct prevention, education, and outreach activities in communities throughout Arkansas. The Arkansas Tobacco Control Board made over 5,200 compliance checks during 2009 with an uptick in the violation rate during the past two years. The new Quitline program fielded more than 27,000 calls during 2009, with 89 percent of the callers enrolling in either the single- or multiple-call program. Follow-up with program participants at 7 months found that 37 percent of those enrolled in the multiple-call program who had also had nicotine replacement therapy had remained abstinent for 30 days. For those in the

multiple-call program without nicotine replacement therapy, the quit rate was 28 percent at 7 months. For its public awareness efforts, TPCP increased its media budget to promote the new Quitline and attracted large amount of free media contributions, even though the media campaign has received less funding over time. Overall, TPCP spending increased by 11 percent in FY2009, reflecting an increase in its appropriation. Cessation programs and activities represent 24 percent of the total budget. The percentage of tobacco funds spent on non-tobacco-related activities remained at about one-fifth of TPCP’s total spending. TPCP’s stakeholders considered the program’s purpose and goals to be appropriate and rated TPCP as effective in reaching its goals.

Our analysis provides evidence of the continued effectiveness of the tobacco settlement programs on smoking-related outcomes, especially for the most vulnerable populations, particularly young people and pregnant women. These outcomes are discussed in more detail in the section below. Other outcomes for TPCP include those related to smoking policies, enforcement, and the geographic distribution of grants. The latest survey data indicate that the proportion of people reporting that smoking is not allowed in workplace indoor common areas increased significantly compared with other states. Recent enforcement data indicate that the violation rate for laws forbidding sales to minors has stabilized at 5 percent. Finally, while there are large regional variations in per-capita TPCP spending, this variation is not associated with differences in smoking rates.

**Table S.8
TPCP Program Goal Status**

| Goal | Status |
|--|------------------|
| Prevent youth and young adult initiation of tobacco use. | IN PROCESS |
| Promote quitting among adults and youth. | IN PROCESS |
| Eliminate exposure to secondhand smoke. | IN PROCESS |
| Identify and eliminate tobacco-related disparities among population groups. | UNABLE TO ASSESS |
| Increase the number of communities with stronger smoke-free environment laws than the state legislation. | ACCOMPLISHED |
| Increase the percentage of Arkansas workers with a smoke-free work environment. | IN PROCESS |

Below we present nine recommendations based on our evaluation of TPCP’s activities during 2008 and 2009. The first six recommendations pertain to developing new strategic goals for the program and for other ways to strengthen communication and quality management processes. The last three recommendation fall outside of the purview of TPCP but are nonetheless important to its ultimate success.

- Strengthen the web-based reporting system to improve data collection.
- Utilize program-level reporting into the web-based reporting system in an improved quality feedback mechanism.

- Strengthen communication, coordination, and collaboration between TPCP and agencies, organizations, and grantees in the communities.
- Consider refocusing the work in the school education and prevention activity area on activities within schools aimed at reducing youth tobacco use.
- Strengthen involvement of TPCP advisory committee in planning and decisionmaking.
- Raise funding for the five components of a comprehensive statewide tobacco control strategy to the level recommended for Arkansas by the CDC through either additional funds over and above those provided by the MSA or reallocation of funds from non-tobacco programs.
- Reevaluate funded programs that are not within the scope of tobacco prevention and cessation programming, as defined by the CDC guidelines, for their value in contributing to reduction of smoking and tobacco-related disease.
- Change the process that TPCP must use to budget its funds to be in line with the other tobacco settlement programs.

PROGRAM EFFECTS ON SMOKING-RELATED OUTCOMES

Our analysis of smoking behavior in Arkansas provides evidence of the continued effectiveness of the tobacco settlement programs on smoking outcomes, especially for the most vulnerable populations, such as young people and pregnant women.

Adult Smoking Behavior

- The 2008 adult smoking rate was 22 percent, four percentage points lower than the five-year average preceding TPCP programming, which is equivalent to 16 percent fewer adult smokers. However, the smoking rate was only slightly below the baseline trend and did not match the expected decrease from comprehensive smoking control program comparable to California's. Nonetheless, this trend represents a major improvement for the health of Arkansans.
- For 2008, adult women were smoking significantly less than would be predicted by their baseline trend, while men were not.
- While the smoking rate for young adults did not decrease in 2008, it remained below the baseline trend for this population.
- Analysis of the 2008 data reveals that the smoking rate for pregnant women continued to decrease and was significantly below the baseline trend.

Youth Smoking Behavior

- The smoking rate for high school students and pregnant teenagers was lower than would be expected based on trends prior to establishment of the TPCP activities.

Cigarette Sales

- The most recent data indicate that per-capita cigarette sales increased from prior years and reverted to the baseline trend. Because Arkansas' cigarette tax rate is higher than that of some neighboring states, it was not possible to determine the extent to which this trend reflected increased cigarette purchases by Arkansas residents versus sales to visitors from neighboring states.

Smoking-Related Health Indicators

- There have been reductions in the hospitalization rates for several smoking-related health conditions, including strokes and acute myocardial infarctions (heart attacks).

As in our previous report, we find statistically significant decreases in smoking among adult women and among young people, especially young pregnant women. We also find that smoking rates for adults in Arkansas are significantly below what they were prior to the initiation of tobacco settlement programming. Our analysis of short-term health outcomes shows promising evidence of improvements for smoking-related health conditions. We find strong evidence for reductions in hospitalizations for strokes and heart attacks.

There are mixed results, however, with regard to many of the measures, including smoking prevalence among middle-aged and older adults. Arkansas also lags behind Texas, one of its neighbor states, in cigarette tax rates. However, we expect to find more positive effects of the statewide tobacco control policies and activities on health and health care for Arkansas residents in the coming years as more data become available. Since many of these changes happen slowly, it is necessary to observe the trends over a long period of time.

POLICY ISSUES AND NEW STRATEGIC RECOMMENDATIONS

The programs supported by the tobacco settlement funds provide a variety of services and other resources in an attempt to respond directly to Arkansas' priority health issues. The two academic programs—COPH and ABI—are building educational and research infrastructure that can be expected to make long-term contributions to meeting the state's health needs. The three service-oriented programs—Delta AHEC, AAI, and MHI—are providing needed health-related programs to underserved communities in Arkansas. MEP is extending Medicaid benefits to populations without access to health care. TPCP is providing a statewide comprehensive tobacco control program. The programs' impacts on health needs also can be expected to grow as they continue to evolve and leverage the tobacco settlement funds to attract other resources. Below, we highlight some new areas of focus and provide recommendations for the programs and the ATSC based on our multifaceted evaluation.

Program Reporting and Planning

***Recommendation:* With strategic plans in place, the tobacco settlement programs should utilize progress-reporting systems for ongoing program planning.**

Over the past two years, the tobacco settlement programs have made progress developing strategic plans to guide their efforts in coming years. Many of the programs have also made progress in establishing reporting systems to monitor and assess program activities on a routine basis. The programs should ensure that progress reporting reflects the specific strategies and tasks outlined in the strategic plans. Once the progress-reporting systems are aligned with the

strategic plans, programs should use the information from these monitoring systems to provide their advisory boards with routine feedback on program activities and to better engage the advisory boards in ongoing planning.

Program Capacity and Need

***Recommendation:* As the programs focus on specific activity areas, each program should build on areas of strength relative to the needs of the state and develop capacity within those areas.**

Each tobacco settlement program reviewed its activity areas and the strategies within its activity areas during this reporting period. This process helped identify areas of strength and gaps where strategies are still needed. The programs should use the results of this review to focus on further developing areas of strength and building program capacity to address the gaps. The areas of strengths are different for each program, demonstrating the variety and versatility of the activities supported by tobacco funds.

Education and Outreach

***Recommendation:* The programs should focus on education and outreach efforts to market themselves and provide information to maximize participation.**

Results of stakeholder surveys indicate that about 20–30 percent of stakeholders are completely unaware of one or more of the tobacco settlement programs. Although several of the programs focus on public awareness and education about specific activities or health more generally, these efforts should be expanded to inform communities about the programs and services available through each tobacco settlement program. By targeting the education and outreach efforts, programs can increase participation and service utilization to ensure that the programs and services reach capacity.

Collaboration

***Recommendation:* The seven tobacco settlement programs should be encouraged to intensify their collaborative efforts. The ATSC can further these efforts by providing incentives and focused opportunities for programs to work together.**

Our prior evaluation report recommended that the seven tobacco settlement programs increase collaboration. While our evaluation found a few limited examples of collaboration, stakeholders of the programs noted a need for improved collaboration among the tobacco settlement programs. As a result, we continue to recommend that the program capitalize on the natural synergies between programs to promote and educate communities about the breadth of programs available to different populations. The community-based programs should work together to form strategic partnerships with local organizations to extend each program's reach in the community. The academic programs should work with the service-oriented programs to provide technical assistance related to data collection, management, and analysis.

CONCLUDING THOUGHTS

Arkansas has been unique among the states in investing all its funds from the settlement in programs that focus on smoking prevention and cessation and other health-related endeavors. The seven programs supported by the tobacco settlement funds have continued to strengthen and

expand their reach in support of improving the health of Arkansans. The results of the outcome evaluation indicate that, collectively, the tobacco settlement programs are reducing smoking behavior and improving health in Arkansas. There have been significant decreases in smoking rates for adult women, high school students, and pregnant teenagers. Overall, smoking rates for adults in Arkansas are significantly below what they were before initiation of tobacco settlement programming. There is also evidence of improvements in smoking-related health conditions, including strokes, heart attacks, and low-weight births.

The programs have achieved many of their goals and need to continue to work on the new goals and objectives established during this reporting period. Despite this progress, there is room for improvement. Although Arkansas has been a national leader in spending its tobacco settlement money on smoking prevention, the state still spends only about half of the amount recommended by the CDC for prevention efforts. Increasing funding to CDC-recommended levels would help Arkansas extend its gains in smoking reduction. Most important, we encourage Arkansas policymakers to continue their commitment to dedicate the tobacco settlement funds to health-related programming. To do justice to the services, education, and research that these programs are delivering, they should receive continued support and the time necessary to achieve their mission of improving the health of Arkansas residents.

ACKNOWLEDGMENTS

We acknowledge with pleasure the thoughtful participation by numerous people in the evaluation process as RAND gathered information on the context, history, and progress of the seven funded programs initiated by the Tobacco Settlement Proceeds Act, including the members of the Arkansas Tobacco Settlement Commission, members of the Arkansas general assembly, and program directors and staff at the Department of Health, College of Public Health, Arkansas Biosciences Institute, Centers on Aging, Arkansas Minority Health Commission, Delta Area Health Education Center, and state Medicaid offices. These individuals participated in group and individual interviews, sharing their experiences in the history, context, and progress of the funded programs. They also engaged with RAND in the development of program goals and outcome measures.

We would also like to acknowledge the assistance and guidance of the Arkansas Tobacco Settlement Commission during the execution of our evaluation, including that of Aaron Black, current executive director; Karen Elrod, executive assistant; Karen Wheeler, current commission chair; General William Lefler, former commission chair; and the commission members. Their support derives from a commitment to objective evaluation that continues to reinforce our evaluation work.

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ABBREVIATIONS

| | |
|------------|---|
| AAI | Arkansas Aging Initiative |
| ABI | Arkansas Bioscience Institute |
| ACHRI | Arkansas Children’s Hospital Research Institute |
| AHEC | Area Health Education Center |
| AMHC | Arkansas Minority Health Commission |
| ARCHES | Arkansas Cardiovascular Health Survey |
| ASCNEEP | After School Childhood Nutrition Education and Exercise Program |
| ASU | Arkansas Sate University |
| ATS | Arkansas tobacco settlement |
| ATSC | Arkansas Tobacco Settlement Commission |
| BRFSS | Behavioral Risk Factor Surveillance System |
| CDC | Centers for Disease Control and Prevention |
| COA | Center on Aging |
| COPH | College of Public Health |
| Delta AHEC | Delta Area Health Education Center |
| FFY | federal fiscal year |
| FTE | full-time equivalent |
| FY | fiscal year |
| JIF | journal impact factor |
| MEP | Medicaid Expansion Programs |
| MHI | Minority Health Initiative |
| MISRGO | Minority Initiative Sub-Recipient Grant Office |
| MSA | Master Settlement Agreement |
| SAFS | Southern Ain’t Fried Sunday |
| SHC | senior health clinic |
| SMART | Specific Measurable Attainable Relevant Timebound |
| SSI | Supplemental Security Income |
| TPCP | Tobacco Prevention and Cessation Program |
| UA-Ag | University of Arkansas, Division of Agriculture |
| UAF | University of Arkansas, Fayetteville |
| UALR | University of Arkansas at Little Rock |
| UAMS | University of Arkansas for Medical Sciences |
| UAPB | University of Arkansas at Pine Bluff |
| YRBSS | Youth Risk Behavior Surveillance System |

Chapter 1

Introduction and Background

In November 1998, the states and the major tobacco companies ended years of legal battles by signing the Master Settlement Agreement (MSA). Under the terms of the MSA, the tobacco companies agreed to make payments to participating states totaling more than \$206 billion over 25 years. Arkansas' share of these payments is .828 percent (or approximately \$170,568,000), which it has been receiving since the agreement went into effect.

The state of Arkansas is unique in the commitment made by both elected officials and the general public to invest its share of the MSA funds in health-related programs. The Tobacco Settlement Proceeds Act, a referendum passed by over 65 percent of Arkansans in the November 2000 election (henceforth called the Initiated Act), established a comprehensive program that uses the MSA funds to invest in the public health of Arkansans.

The Initiated Act created the Arkansas Tobacco Settlement Commission (ATSC), giving it the responsibility for monitoring and evaluating the performance of the funded programs. As part of its evaluation function, the ATSC contracted with the RAND Corporation to serve as an external evaluator. RAND was charged with performing a comprehensive evaluation of the progress made by the programs in fulfilling their missions, as well as the effects of these programs on smoking and other health-related outcomes. This report is the fourth biennial report from the RAND evaluation and includes findings for 2008 and 2009.

In the remainder of this chapter, we provide background information about the MSA, the basic orientation and content of the Initiated Act, and the methods used in the RAND evaluation.

THE MASTER SETTLEMENT AGREEMENT

The MSA settled all legal matters alleged by the participating states against the participating tobacco companies, placed conditions on the actions of the tobacco companies, and provided for large payments from those companies to the states and several specific funds. All states except Florida, Minnesota, Mississippi, and Texas are participants in the MSA, as are the District of Columbia and several U.S. territories.

Under the MSA, the tobacco companies are to make three types of payments to the states:

- **Up-Front Payments.** The up-front payments totaled \$12.7 billion, with \$2.4 billion paid in 1998 and a like amount (adjusted for inflation) paid annually from 1999 to 2003.
- **Annual Payments.** As specified in the MSA, the annual payments started at \$4.5 billion in 2000, increased to \$5 billion in 2001, \$6.5 billion in 2002 and 2003, and \$8 billion annually in 2004 through 2007. From 2008 through 2017, the payments increase to \$8.1 billion annually, with payments in later years set at \$9 billion annually.
- **Payments to the Strategic Contribution Fund.** Starting in 2008 and continuing through 2017, the tobacco companies began paying \$861 million annually into the Strategic Contribution Fund, for a total payment of \$8.6 billion. Payments to the fund will be allocated to states based on a formula developed by their attorneys general.

This formula reflects the contribution made by the states to the resolution of the state lawsuits against the tobacco companies.

All the payments to the states are subject to a number of adjustments, reductions, and offsets, so the actual payments the states receive differ from the base amounts defined in the MSA. These include adjustments for inflation, volume, nonsettling states' reduction, miscalculated and disputed claims offset, nonparticipating manufacturers offset, federal legislation offset, and litigation releasing parties offset. As a result of these offsets, payments totaled \$7 billion in 2008 and \$7.6 billion in 2009, which is short of the anticipated \$8.1 billion.

In addition to the state payments, the MSA places other conditions on the tobacco companies, some involving additional payments and others placing constraints on their business practices, in particular with respect to the marketing of tobacco products to youth.

THE TOBACCO SETTLEMENT PROCEEDS ACT

In Arkansas, the Initiated Act authorized the creation of seven separate programs to be supported by tobacco settlement funds, established short- and long-term goals for the performance of these programs, specified the funding shares to support the programs and a structure of funds for management and distribution of proceeds, and established the ATSC to oversee the overall initiative (Appendix A). Subsequent legislation made slight modifications to some of the goals and programs but maintained the original intentions.

Funded Programs

The goals of the Initiated Act are to (1) reduce the initiation of tobacco use and increase its cessation, with the resulting health and economic impact; (2) expand access to healthcare, especially for those who demonstrably lack access; (3) develop basic and applied tobacco-related medical and agricultural research in Arkansas; and (4) specifically address targeted state needs. Seven programs follow from these goals:

- **College of Public Health (COPH).** COPH is a resource to provide professional education, research, and services to the public health community of Arkansas. It is a unit of the University of Arkansas for Medical Sciences (UAMS).
- **Arkansas Bioscience Institute (ABI).** ABI works to develop new tobacco-related medical and agricultural research initiatives, improve the health of Arkansans, improve access to new technologies, and stabilize the economic security of Arkansas. The Initiated Act provides for ABI to be funded through separate appropriations to the participating institutions. The program's management reports to the ABI board, which also was established by the Initiated Act.
- **Delta Area Health Education Center (Delta AHEC).** Delta AHEC is an additional unit in the statewide Arkansas Area Health Education Center (AHEC) system, which provides clinical education throughout the state. It was put into the Initiated Act to provide such services for the underserved and disproportionately poor Delta region of the state.
- **Arkansas Aging Initiative (AAI).** AAI provides community-based health education for senior Arkansas residents through outreach to the elderly and educational services for professionals. It is housed in the Reynolds Center on Aging, a unit of UAMS.

- **Minority Health Initiative (MHI).** MHI aims to identify the special health needs of Arkansas' minority communities and to put into place health care services to address these needs. MHI is managed by the Arkansas Minority Health Commission (AMHC).
- **Medicaid Expansion Programs (MEP).** The MEP seeks to expand access to health care through targeted expanded benefits packages that supplement the standard Arkansas Medicaid benefits. The programs are managed by the Arkansas Department of Human Services.
- **Tobacco Prevention and Cessation Program (TPCP).** Managed by the Department of Health, TPCP aims to reduce the initiation of tobacco use and resulting negative health and economic impacts. TPCP uses the Centers for Disease Control (CDC) recommendations for tobacco cessation and prevention activities in developing its programs.

Only one of these programs, TPCP, is completely dedicated to smoking prevention and cessation. While it receives one-third of the MSA funds, not all of those funds are available for its cessation and prevention efforts. Most of the programs primarily serve the health-related needs of disadvantaged Arkansas residents (AAI, Delta AHEC, MEP, MHI); others are long-term investments in the public health and health research infrastructure (ABI, COPH).

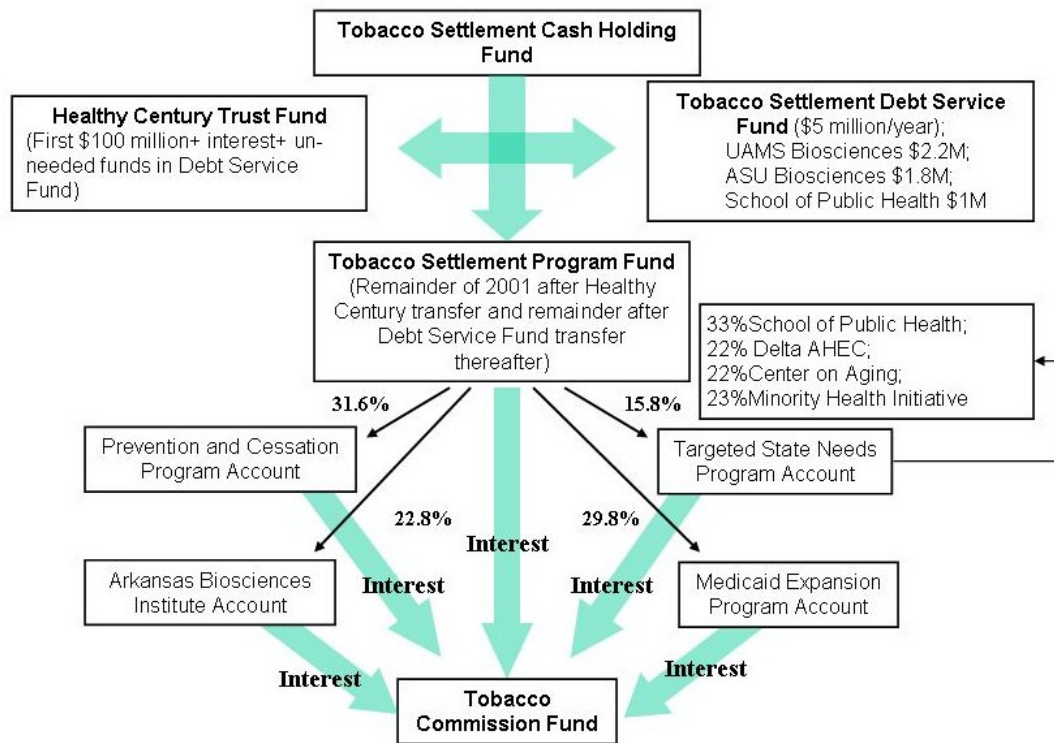
The Initiated Act states basic goals to be achieved by the funded programs through the use of the tobacco settlement funds. It also defines indicators of performance for each of the funded programs—for program initiation and short- and long-term actions. In our previous report (Schultz et al., 2008) we reported our conclusion that all the programs had achieved their initiation goals and short-term goals.

In 2005, the ATSC formally approved the programs' long-term goals, and it has continued to monitor their progress toward those goals. During this reporting period, RAND has worked with each of the programs to revisit the two methods used to assess progress toward these longer-term goals. First, each program has a set of specific programmatic goals that define the programs' vision for their future scope of activities. Second, each program has specific outcome measures for assessing the effects of the programs on the most salient outcomes. For the long term, the monitoring should be a two-step process, starting with tracking how well programs are progressing toward programmatic goals, then assessing how much effect this progress is having on their outcome measures. If the level of activity is not affecting outcomes, then the long-term goals may have to be revised to target stronger interventions to ultimately affect outcomes.

Flow of Funding

The Initiated Act authorized the State Board of Finance to receive all disbursements from the MSA escrow and to oversee the distribution of the funds as specified in the act. The fund structure and distribution of funding shares by program are displayed graphically in Figure 1.1. The MSA disbursements are deposited into the Tobacco Settlement Cash Holding Fund, from which funds are distributed to other funds. The other funds consist of the Tobacco Settlement Debt Service Fund, the Arkansas Healthy Century Trust Fund, the Tobacco Settlement Program Fund, the Arkansas Tobacco Settlement Commission Fund, and the program accounts.

**Figure 1.1
Flow of Funds for the Arkansas Tobacco Settlement Funds**



SOURCE: modified from 2001 Arkansas Bureau of Legislative Research; Fiscal Review Division

In calendar year 2001, \$100 million of the first MSA funds received (mostly the up-front payment) were deposited in the Arkansas Healthy Century Trust Fund. This trust fund is intended to serve as a long-term resource to support health-related activities. Interest earned by the fund may be used to pay expenses related to the responsibilities of the State Board of Finance, as well as programs and projects related to health care services, health education, and health-related research as designated in legislation adopted by the general assembly. Since then, no additional MSA funds have been placed in this trust fund.

The remainder of the 2001 funds and the funds for each subsequent year have been deposited in the Tobacco Settlement Cash Holding Fund. Each year, the first \$5 million in funds are transferred to the Tobacco Settlement Debt Service Fund to pay the debt service on bonds for three capital improvement projects (debt service limits shown in Figure 1.1): the UAMS Biosciences Research building, the COPH building, and the Arkansas State University Biosciences Research building. The remaining amounts are transferred to the Tobacco Settlement Program Fund for distribution to program accounts for the funded programs, according to the percentages shown in Figure 1.1. The State Board of Finance invests all funds held in the Tobacco Settlement Program Fund and the program accounts. Interest earned on funds in the Tobacco Settlement Program Fund is used to pay the expenses of the ATSC and is transferred to the ATSC on July 1 of each year.

If the deposits into the ATSC Fund exceed the amount necessary for ATSC expenses, then the ATSC is authorized to make grants to nonprofit and community-based organizations for activities to improve and optimize the health of Arkansans and to minimize future tobacco-related illness and health care costs in Arkansas. Grant awards may be made up to \$50,000 per year for each eligible organization, and funds are to be invested in solutions that work effectively and efficiently in Arkansas.

The programs, as well as the ATSC itself, receive biennial appropriations from the legislature (Table 1.1). These appropriations are not cash allocations but are instead maximum amounts that the programs can spend, by category of spending. Programs can spend the tobacco settlement funds they receive in both years of each biennium, i.e., they are allowed to carry over unspent funds from the first to the second year of any biennium. However, any funds that remain unspent at the end of the biennium are returned to the Tobacco Settlement Program Fund and are then redistributed across all the funded programs according to the percentage distributions of funding established within the Initiated Act. The MEP is an exception to this provision because it has delayed payments of claims for health care costs incurred (Initiated Act, section 8(e)). TPCP is also an exception because of a shifting of the first year of funds, which has had cascading effects.

Within a year following the tobacco settlement appropriations, Arkansas experienced a budgetary crisis that put the state Medicaid program at serious risk. In a special session in 2002, the general assembly declared an emergency and made two changes to the Initiated Act that would provide emergency funding for the Medicaid program to mitigate the threat to its ability to provide adequate care to the state's neediest citizens. The first change was a modification of the MEP account so that funds in that account also could be used to supplement current general Medicaid revenues, if approved by the governor and the chief fiscal officer of the state for the Arkansas Medicaid Program. Funds could not be used for this purpose, however, if such usage reduced the funds made available by the General Assembly for the Meals-on-Wheels program and the senior prescription drug program. The second change was the funding of an Arkansas Rainy Day Fund by shifting the first year of funds out of the TPCP account. The purpose of the Rainy Day Fund is to make funds available to assist the state Medicaid program in maintaining its established levels of service in the event that the current revenue forecast is not collected. As a result of this shift in funds, the Department of Health has been placed in the position each year of borrowing funds to support its tobacco prevention and education activities, which then are repaid in the next cycle of tobacco settlement funds.

**Table 1.1
Tobacco Settlement Funds Appropriated to ATSC Programs, by Fiscal Year**

| Program | Second Biennium | | Third Biennium | | Fourth Biennium | | Fifth Biennium |
|---|-----------------|--------------|----------------|--------------|-----------------|--------------|----------------|
| | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
| College of Public Health | | | | | | | |
| Annual Total | \$3,486,713 | \$3,486,713 | \$3,486,713 | \$3,486,713 | \$2,409,195 | \$2,450,749 | \$3,021,053 |
| Biennium Total | \$6,973,426 | | \$6,973,426 | | \$4,859,944 | | |
| Arkansas Biosciences Institute | | | | | | | |
| Annual Total | \$15,764,858 | \$15,764,858 | \$15,764,858 | \$15,764,858 | \$15,813,379 | \$15,632,706 | \$14,468,557 |
| Biennium Total | \$31,529,716 | | \$31,529,716 | | \$31,446,085 | | |
| Delta AHEC | | | | | | | |
| Annual Total | \$2,324,475 | \$2,324,475 | \$2,324,476 | \$2,324,476 | \$1,845,342 | \$1,873,719 | \$2,120,796 |
| Biennium Total | \$4,648,950 | | \$4,648,952 | | \$3,719,061 | | |
| Arkansas Aging Initiative | | | | | | | |
| Annual Total | \$2,324,476 | \$2,324,475 | \$2,324,476 | \$2,324,476 | \$1,667,423 | \$1,690,161 | \$2,120,796 |
| Biennium Total | \$4,648,951 | | \$4,648,952 | | \$3,357,584 | | |
| Minority Health Initiative | | | | | | | |
| Annual Total | \$2,012,005 | \$2,016,435 | \$1,966,515 | \$1,971,522 | \$1,486,914 | \$1,491,086 | \$1,530,903 |
| Biennium Total | \$4,028,440 | | \$3,938,037 | | \$2,978,000 | | |
| Medicaid Expansion Programs* | | | | | | | |
| Annual Total | \$78,041,612 | \$78,088,328 | \$107,822,480 | \$52,879,828 | \$57,253,120 | \$69,636,597 | \$83,886,403 |
| Biennium Total | \$156,129,940 | | \$160,702,308 | | \$126,889,717 | | |
| Tobacco Prevention and Cessation | | | | | | | |
| Annual Total | \$18,978,661 | \$19,022,305 | \$17,451,384 | \$15,179,036 | \$15,156,056 | \$15,196,684 | \$22,590,119 |
| Biennium Total | \$38,000,966 | | \$32,630,420 | | \$30,352,740 | | |

*Includes federal matching funds.

EVALUATION APPROACH

The ATSC Monitoring and Evaluation Function

The Initiated Act directed the ATSC to monitor and evaluate the funded programs and to ensure optimal impact on improving the health of Arkansans and fiscal stewardship of the tobacco settlement. The evaluation is designed to assess program performance and thus to justify continued support of the funded programs based upon the state's performance-based budgeting initiative. The act specified the following provisions for the ATSC evaluation:

- Programs are to be administered pursuant to a strategic plan that encompasses a mission statement, specific programs, program goals with measurable objectives, and strategies to be implemented over a specific time frame.
- Evaluation of each program is to include performance-based measures for accountability that will measure specific health related results.
- All expenditures from the Tobacco Settlement Program Fund and the program accounts are subject to the same fiscal control as are expenditures of state treasury funds.
- The chief fiscal officer of the state may require additional controls, procedures, and reporting requirements that are determined to be necessary to carry out the act.

RAND Evaluation Methods

Our evaluation approach responds to the intent stated by the ATSC to perform a longitudinal evaluation of the development and ongoing operation of its funding program. We employ an iterative evaluation process that tracks information on both program implementation processes and effects on identified outcomes. This information can be used to inform future funding considerations by the ATSC and the General Assembly, as well as decisions by the funded programs regarding their goals and operations. The evaluation design is guided by four research questions:

- Have the funded programs developed and implemented their programming as specified in the Initiated Act?
- What factors are contributing to the programs' implementation successes or challenges?
- How do actual costs compare to budget; what are the sources of any variances?
- What effects do the funded programs have on improving the health of Arkansans?

The logic model that guides our evaluation identifies a two-tiered structure for the ATSC and its funded programs, which is mirrored in the evaluation design (Figure 1.2). As shown on the left side of Figure 1.2, each of the tobacco settlement programs uses strategic plans to define objectives consistent with the long-term goals specified in the Initiated Act and develops strategies, tasks, and measures of progress toward these goals. The funded programs conduct activities to establish and carry out their work with specific target audiences, participants, or populations. The ATSC then performs three major functions: collecting, analyzing, and interpreting data to assess progress; reporting the results; and making funding recommendations.

PROGRAMS

Program planning guided by strategic plans:

- Define objectives consistent with the long-term goals specified by the Initiated Act.
- Develop objectives, strategies, tasks, and measures of progress and effects.

Implementation

- Conduct program activities.
- Target audience, participants, or population.

ATSC Monitoring

- Collect, analyze, and interpret data to assess progress toward goals.
- Report results.
- Recommend program funding.

EVALUATION

Evaluation design guided by research questions:

- Have the funded programs developed and implemented their programming as specified in the Initiated Act?
- What factors are contributing to the programs' implementation successes or challenges?
- How do actual costs compare with the budget; what are sources of any variances?
- What effects do the funded programs have on improving the health of Arkansans?

Process Evaluation

- Assess progress toward program goals.
- Evaluate the program implementation process through process indicators.

Cost Evaluation

- Assess the relationships between program activities and spending.

Outcome Evaluation

- Estimate program outcomes for selected measures.
- Synthesize findings for state policy implications.
 - Smoking-related outcomes
 - Program-specific outcomes

Policy Evaluation

- Document tobacco-related policy issues.
- Assess link between policies and programs.
- Examine activities of ATSC.

Figure 1.2 Evaluation Logic Model for the Arkansas Tobacco Settlement Funding Program

The evaluation, shown on the right side of the diagram, includes two tiers. The first tier consists of the research questions that guide the evaluation design. The second tier shows the four evaluation strategies: First, the *process evaluation* assesses progress toward programmatic goals and documents the implementation processes, including relationships between the programs' goals and actions, as well as the successes and challenges experienced during implementation. Second, the *cost evaluation* examines the resources needed to provide the services, assists with resource allocation decisions, and attempts to link program costs to outcomes. Third, the *outcome evaluation* assesses the extent to which the program interventions have achieved the intended outcomes for both program activities and the health status of the state population. Finally, the *policy evaluation* assesses the policy context to ensure that the overall evaluation takes into account the larger policy environment, as articulated by the ATSC and relevant stakeholders, and that the results of the program-level evaluations are synthesized to generate usable information for future policy decisions by the ATSC. The evaluation strategies are linked so that each component informs the assessment of the other components.

In addition to the summative evaluation, which makes judgments on how the programs are doing using the four strategies outlined above, we have continued our formative evaluation, which seeks to help the programs improve their performance. The role of the formative evaluation is implicit in our logic model and has been central to our evaluation efforts to date. The formative evaluation is primarily carried out through the process evaluation activities. In our experience, the most effective evaluation provides a vehicle for program managers to gain new knowledge that they can apply to strengthen the programs for which they are responsible. This principle applies to the ATSC, which has been given the responsibility to invest the tobacco settlement funds in meaningful and relevant programming within the state, as well as to the individual programs, which are expected to achieve the outcomes defined as priorities by the ATSC through its funding actions.

The evaluation strategies and methods are described further in Appendix B.

GUIDE TO THIS REPORT

The rest of this report presents the data gathered from the evaluation. Chapter 2 describes the policy context within which the tobacco settlement program operates, including activities and progress of the ATSC and the results of a survey of key stakeholders for the tobacco settlement program. Chapters 3 through 9 discuss each of the seven programs, including results from the process, cost, policy, and outcome evaluations. Chapter 10 examines smoking-related outcomes for the past two years. Finally, Chapter 11 presents our conclusions and recommendations for the ATSC and the programs. Appendix A presents the Initiated Act. Appendix B describes our evaluation methodologies.

Chapter 2

The ATSC Policy Context in 2008–2009

To effectively assess the performance of the Initiated Act and the work of the funded programs, the evaluation must take into account the larger policy environment and the perspectives of stakeholders throughout the state. In this chapter, we first describe policy changes during 2008 and 2009 that affect smoking in Arkansas and the region. We then examine the operation of the ATSC during the past two years and review the commission's response to previous recommendations. Finally, we present results from a survey of stakeholders conducted to obtain their perspectives on the ATSC and the programs.

TOBACCO-RELATED POLICY ISSUES

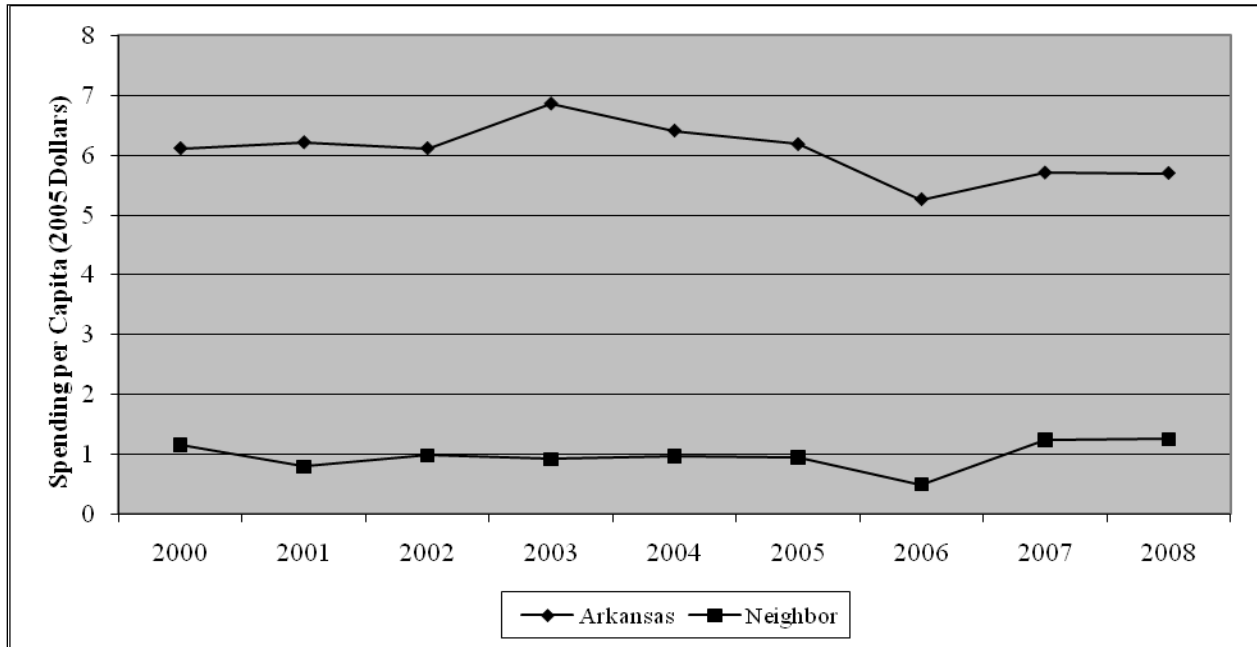
There are three legs to the public policy "stool" that supports improvements in Arkansans' health as it relates to tobacco use: (1) programming to reduce smoking rates through prevention and cessation initiatives; (2) policies that reduce opportunities to smoke; and (3) policies that raise the cost of smoking (CDC, 2007). Each reinforces and adds to the other; without all three, it would be difficult to reduce smoking and subsequently improve health. In this section, we discuss any progress or changes in each area during 2008 and 2009.

Prevention and Cessation Programming

The Initiated Act provides directly for the prevention and cessation programming through its funding of TPCP. Through TPCP, Arkansas has a wide array of smoking prevention and cessation education and treatment initiatives (see Chapter 9). Although these activities fall within the areas recommended by the CDC, Arkansas' overall spending on prevention and cessation remains well below the CDC recommended level. According to the Campaign for Tobacco Free Kids, total spending in Arkansas remained virtually unchanged in FY2008 and FY2009 at around \$17 million. For FY2009, the total spending of \$16.9 million represented 46 percent of the total spending recommended by the CDC. While Arkansas ranks 10th nationally on this measure, it still falls well below the CDC's recommended level. Despite this ranking on spending, Behavioral Risk Factor Surveillance System (BRFSS) data from 2008 show that Arkansas ranked 43rd in adult cigarette smoking prevalence. The ATSC should set a goal of reducing smoking prevalence and improve this ranking.

After adjusting for inflation, Arkansas' per-capita annual spending on smoking prevention and cessation has decreased from a high of approximately \$7 in 2003 to just under \$6 in 2008 (Figure 2.1). Although this remains considerably above the average spending per capita in the six neighboring states, it represents a considerable decrease after adjusting for inflation and population growth. These data on tobacco prevention spending are from the Campaign for Tobacco Free Kids. Our own assessment of TPCP's spending on tobacco-related programs shows that, during the same time period, spending increased about 8 percent, from \$14,641,067 in FY2005 to \$15,752,352 in FY2009.

**Figure 2.1
Tobacco Prevention and Cessation Spending per Capita**



SOURCE: RAND analysis of information in Tobacco Free Kids, “State Tobacco Settlement Spending for Tobacco Prevention 2000–2008”; Census population data; and Bureau of Labor Statistics inflation rates.

NOTE: Neighbor spending is the population-weighted average for the six states that border Arkansas.

Reducing Smoking Opportunities

Arkansas’ Clean Indoor Air Act (Act 8) took effect in July 2006. This act protects nonsmoking individuals from secondhand smoke and also reduces the opportunities for smoking, thereby making it less convenient to begin or continue a smoking habit. Under Act 8, all businesses, including restaurants, are required to be smoke-free. Act 8 does allow businesses that are not open to the public to apply for exemptions. Also in 2006, Arkansas passed the Protection from Secondhand Smoke for Children Act (Act 13), which prohibits smoking with a child in the car.

As we noted in our previous report (Schultz et al., 2008), the most important question at this point is how vigorously the acts are being enforced. TPCP provides materials that inform the public—employers, workers and consumers—of their rights and responsibilities under the act. These materials discuss how to trigger enforcement activities by contacting the Arkansas Board of Health and describe the penalties for violation of the act. Complaint forms are available on the Arkansas Department of Health web site and the required warning signs can be downloaded free of charge.

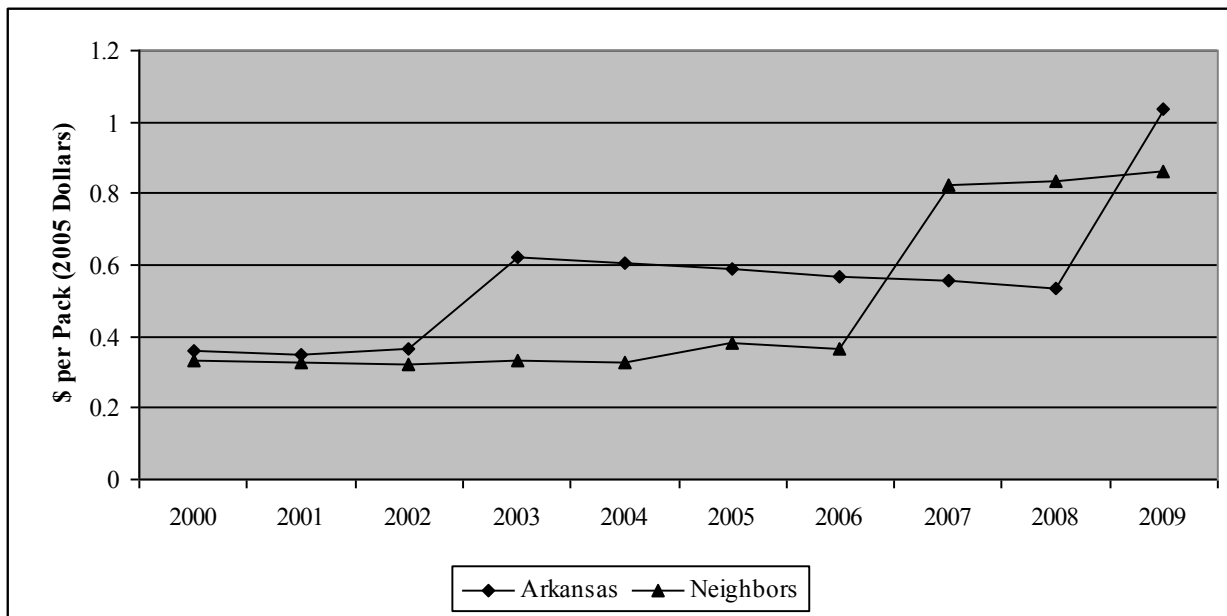
Raising the Cost of Smoking

The third public policy effort is taxation. It is well established that higher taxes are associated with lower levels of cigarette consumption (Franz, 2008; Carpenter et al., 2008). Since our last report, there have been increases in both federal and state cigarette taxes. At the

federal level, Congress passed legislation that raised the federal tax by \$.62 to a total of \$1.01 per pack. This increase went into affect on April 1, 2009.

At the state level, Arkansas raised its tobacco tax by \$.56 to a total of \$1.15 per pack. With the national average at \$1.34, Arkansas now ranks 26th in the nation for cigarette taxation, which represents an improvement from its prior ranking of 39th. Arkansas also made gains regionally with its 2009 cigarette tax increase. As shown in Figure 2.2, Arkansas' tax rate is now higher than the average tax rate experienced by the residents of neighboring states. Now, among Arkansas' neighboring states, only Texas, at \$1.41 per pack, has a higher tax rate.

Figure 2.2
Cigarette Taxes in Arkansas and Neighboring States



SOURCE: RAND analysis of information from CDC State Tobacco Activities Tracking and Evaluation System; Census population data; and Bureau of Labor Statistics inflation rates.

NOTE: Neighbors' tax rate is the population-weighted average for the six states that border Arkansas.

With tax rates that are on par with those in the region, Arkansas no longer lags behind in this area. This substantial increase in Arkansas' cigarette tax rate is expected to lower consumption while leading only to minimal increases in cross-border sales. The existence of tax variance language will minimize the negative impact of tax increases on Arkansas merchants near the borders of those neighboring states with lower taxes.

THE TOBACCO SETTLEMENT COMMISSION

Structure and Activities

There were a number of changes within the ATSC during 2008 and 2009. After serving as ATSC chair for eight years, General William Lefler stepped down when his second term

ended. The governor appointed Dr. Susan Hanrahan to replace General Lefler on the ATSC. Dr. Karen Wheeler, representing the Department of Higher Education, agreed to serve as chair for one year while new commissioners were brought on board. The terms of two other commissioners also expired: Dr. Anthony Fletcher (the attorney general's appointee) and Dr. Omar Atiq (the senate president pro tem appointee). The attorney general appointed Dr. Roddy Smart Lochala to serve a four-year term. The senate president pro tem named Allison Hogue as the replacement for Dr. Atiq. To address concerns about turnover and the active involvement of the current commissioners, the ATSC appointed General Lefler, Dr. Fletcher, and Dr. Atiq as commissioners emeritus. This will enable them to remain involved and share their knowledge of the history and progress of the programs with the new commissioners.

During 2009, the Public Health Subcommittee of the Senate's Public Health, Welfare and Labor Committee initiated an Interim Review of the ATSC and the tobacco settlement programs by means of a newly created Arkansas Tobacco Settlement Subcommittee. For this Interim Review, the committee conducted individual meetings with each of the tobacco settlement programs. At the meetings, each program was asked to provide information about its background, activities, and progress and to bring stakeholders to testify before the subcommittee. These meetings were completed early in 2010. Separately, the Legislative Joint Audit Committee conducted a special audit of the ATSC and the seven funded programs.

For its grant program, the ATSC partnered with the Department of Education and Arkansas Children's Hospital on a Child Wellness Intervention Program (CWIP) to increase physical activity in schools and combat obesity. Through this program, ATSC will provide \$578,000 in grants to implement the SPARK physical health and education program in schools. Each grantee will get (1) the SPARK physical education curriculum and training; (2) equipment needed for the program; and (3) health teacher software with age-specific health lectures. The education portion of the SPARK program will have an anti-tobacco use component. The Arkansas Center for Health Improvement is serving as the evaluator of the program. ATSC funded programs at 20 grade K-2 schools, 26 grade 3-5 schools, and 10 middle schools—a total of 56 grants.

In addition to CWIP, the ATSC continued funding its traditional grant program. This program provides grants to community-based organizations for tobacco prevention and healthy lifestyle activities. For FY2008, the ATSC awarded 14 grants totaling \$500,000 for such efforts as a tobacco-prevention DVD for children and walking trails for rural communities. In FY2009, the ATSC awarded 13 grants totaling \$500,000 for health screening programs, prescription assistance programs, and health education programs. To help manage the new CWIP program, the ATSC increased its staff capacity by establishing a grant coordinator position that was filled in early 2010.

During 2008, the ATSC issued a formal resolution supporting the governor's tobacco tax increase.

Finally, the ATSC contracted with a local media firm on a new public education effort. The contractor will create county profile sheets and program information sheets. The county profile sheets will provide a breakdown of all tobacco settlement spending and programs in the county. The program information sheets will describe each program, including background, activities, and progress to date.

Response to Previous Recommendations

A number of the recommendations in our previous evaluation report related to the ATSC and its functioning. Those recommendations are presented below, along with a discussion of how the ATSC responded during 2008 and 2009.

Managing Transitions and Change

Recommendation: As they continue to grow and change, all the programs need to develop methods to manage leadership transitions and programmatic changes.

ATSC Response: With three commissioners reaching the end of their terms, the ATSC has new members and a new committee chair. The ATSC worked to ensure that, until new appointees were named, the outgoing commissioners continued to attend meetings. The ATSC also asked a seasoned commissioner to step in as interim chair while the new commissioners were brought up to speed. The ATSC also appointed the three outgoing commissioners as emeritus commissioners to maintain institutional knowledge and ensure a smooth transition. The ATSC has also assisted some of the programs in managing leadership and staffing changes by providing historical materials and knowledge while facilitating meetings.

Ongoing Strategic Planning

Recommendation: As the programs mature, each program and the ATSC itself should have in place a documented strategic plan and process that includes concrete objectives, strategies, and tasks.

ATSC Response: Because of its turnover in committee members, the ATSC was unable to conduct any strategic planning activities during this period. However, the ATSC contracted with an independent planner to conduct a two-day strategic planning workshop in April 2010.

Collaboration

Recommendation: The seven tobacco settlement programs should be encouraged to intensify their collaborative efforts, especially as programs develop and adapt to meet changing needs. The ATSC can help in this regard by continuing to convene meetings of the programs specifically on collaboration, requesting that the programs report on their progress during the meetings, and providing incentives for these collaborative efforts.

ATSC Response: The ATSC has continued to host quarterly meetings of the seven programs to encourage and foster collaboration among them. Although these meetings produced a number of ideas about collaborative efforts, there is little evidence that the programs have increased their collaborative activities. The ATSC should consider ways to incentivize the programs to work together by providing grants or other support for joint activities. The ATSC should also consider contracting with an organizational behavior consultant to advise on ways to increase collaboration.

ATSC Management of Program Process

Recommendation: The ATSC should continue to work toward establishing a complete reporting package through which the funded programs can provide it with performance information on both their program activities and spending. The ATSC should use this package for monitoring program performance on a regular basis. The package should build on the existing quarterly progress and financial reports to include systematic tracking of progress on the

process indicators and a comprehensive annual report that assesses progress toward long-term goals and describes the challenges faced.

ATSC Response: The ATSC has standardized the reporting process. Each program now provides quarterly program reports that cover its components. The programs also submit quarterly financial reports and financial narrative reports. Finally, each program makes an annual presentation to the ATSC at one of its quarterly meetings. The next step is to develop a process for tracking progress and changes over time and providing feedback to the programs based on the information submitted.

PERSPECTIVES OF STAKEHOLDERS

The third component of our policy evaluation involved a survey of stakeholders to help understand how those with an interest in the programs view the Initiated Act, the ATSC, and the programs after eight years of operation. Given the changes in the programs' activities and priorities over time, it was important to assess how stakeholders perceived the programs in their current form. The survey was designed first to identify the interest groups for the ATSC and the seven programs and then to assess stakeholders' perceptions of the importance of the Initiated Act itself, the ATSC and its activities, and the programs. The survey was conducted in late 2009. The target sample included specific stakeholder groups for each of the seven programs, which were selected to represent each activity area within the program. Since each program has different stakeholder constituencies, there was no single general formula for identifying the stakeholders. Generally, stakeholders included community leadership in locales where the program is active—elected officials and community interest group representatives; professionals, including public health, law enforcement, and social services; and representatives of the business and education sectors. All the stakeholders were asked about their familiarity with the Initiated Act and the ATSC, and the programs and were asked to assess how well the Initiated Act has served Arkansas. The findings from these survey modules are described in this section. Each program's survey was tailored so that the last module included program-specific questions that were answered only by that program's stakeholders, including their understanding of the goals and activities of the programs and their assessment of the appropriateness of the goals and the progress of the program's activities. The results of the program-specific survey questions are discussed in the policy evaluation section of each program chapter (Chapters 3–9).

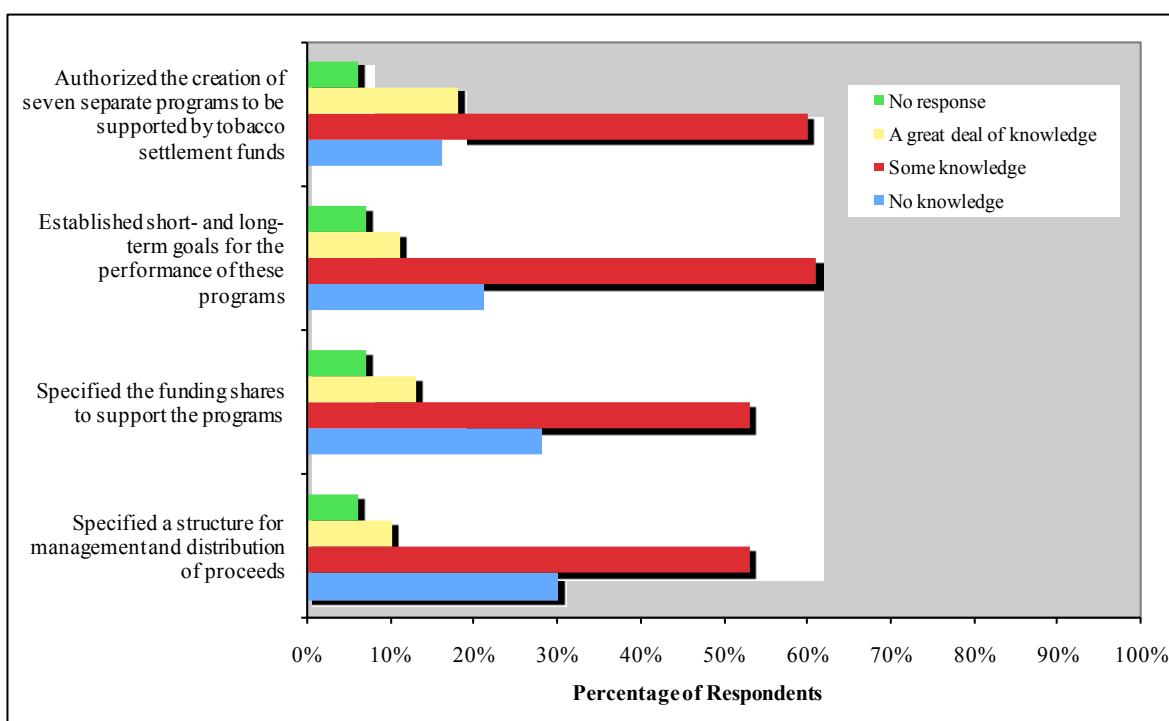
The surveys were administered either by email containing a link to the web-based survey or through the mail to 1,795 stakeholders. There were a total of 477 respondents, yielding a response rate of 27 percent. There was wide variation in the response rate across the programs, with a high of 66 percent for ABI and a low of 10 percent for MEP. Because of the low response rate, both overall and for some of the individual programs, the results of the stakeholder survey should be interpreted with caution. The survey respondents represented a variety of different types of agencies or organizations. Many of the respondents were from academic institutions (45 percent) or public or government agencies (23 percent). Other respondents (20 percent) represented community or neighborhood organizations, advocacy organizations, service providers, or were program participants. The fact that many of the respondents represented organizations that received funding from the programs places some limitations on interpreting these results.

In terms of familiarity with the Initiated Act and its goals, a majority of stakeholders had some general knowledge of the Initiated Act. Sixteen percent of respondents had read the Act

itself, 43 percent had read a summary or seen a presentation describing its purpose, and 31 percent had heard about the act by word of mouth. Five percent said that they had no specific knowledge about the Act.

A majority of stakeholders were aware of each component of the act (Figure 2.3). More than three-quarters of respondents (79 percent) knew that the act authorized the creation of seven separate programs supported by tobacco settlement funds. Nearly as many (73 percent) were knowledgeable about the short- and long- term goals of each Arkansas tobacco settlement (ATS) program. Stakeholders were slightly less aware of how the act specified funding for each program (65 percent) and the structure for management and distribution of proceeds (63 percent) than other components.

Figure 2.3
Stakeholder Knowledge of Each Initiated Act Component (n=477)

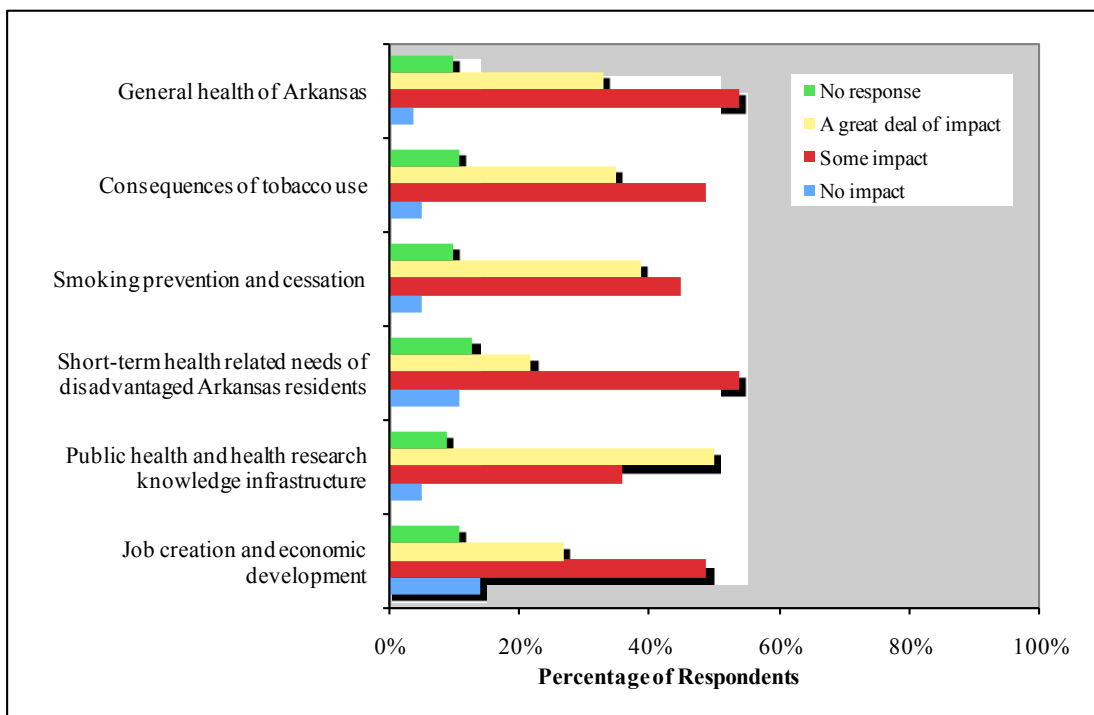


The survey also assessed in what ways the Initiated Act may have had a positive impact in Arkansas (Figure 2.4). Overall, one-half of respondents said the Initiated Act had a large impact on public health and health research knowledge infrastructure. Around one-third of respondents indicated that the Initiated Act had a great deal of impact on smoking prevention and cessation (39 percent), consequences of tobacco use (35 percent), and the general health of Arkansans (33 percent). Somewhat fewer stakeholders felt that the act had a significant impact on job creation and economic development (27 percent) or the short-term health related needs of disadvantaged Arkansas residents (22 percent).

The survey queried stakeholders about the ATSC and its function. Overall, 64 percent of responding stakeholders had some knowledge of the ATSC and its function and 9 percent had a great deal of knowledge. A majority of stakeholders were familiar with the ATSC, but most (61 percent) were not aware that the ATSC may authorize grants to fund new or existing programs that could improve health and provide better access to Arkansans throughout the state.

The survey asked respondents to identify whether their agency or organization had financial involvement with any of the programs or the ATSC. Most stakeholders reported that their agencies or organizations receive funds from one of the programs (61 percent). Twenty-seven percent of respondents represented agencies that have assigned or contributed staff to conduct program activities. Some respondents had had proposals for program funds rejected (17 percent) or had partnered with a program to seek funds from an external source (16 percent). For 10 percent of stakeholders, their agencies provided financial support to one of the programs. Further, most respondents represented organizations that had multiple types of financial involvement with the programs (i.e. received funds, had a proposal for funds rejected, and partnered with an organization to seek external funding).

Figure 2.4
Stakeholder Ratings of the Impact of the Initiated Act (n=477)



All stakeholders were asked about their awareness of each tobacco settlement program (Figure 2.5). Overall, respondents were most familiar with TPCP and COPH. Eighty-seven percent of respondents were somewhat or very aware of TPCP, while nearly three-quarters were aware of COPH (74 percent). Two-thirds of stakeholders were somewhat or very aware of MHI. Stakeholders were also quite aware of the other programs: A majority were somewhat or very aware of Delta AHEC (66 percent), ABI (61 percent), AAI (61 percent), and MEP (56 percent).

Stakeholder involvement in the programs also varied (Figure 2.6). Given the high level of awareness of TPCP and COPH, it is not surprising that many stakeholders were also somewhat or very involved with TPCP (41 percent) and COPH (39 percent). Nearly one-third of respondents were somewhat or very involved with ABI (32 percent) and MHI (29 percent). Respondents were less involved with the other programs; more than two-thirds were not at all involved with MEP (76 percent), AAI (69 percent), and Delta AHEC (68 percent).

Figure 2.5
Stakeholder Awareness of Each ATS Program (n=477)

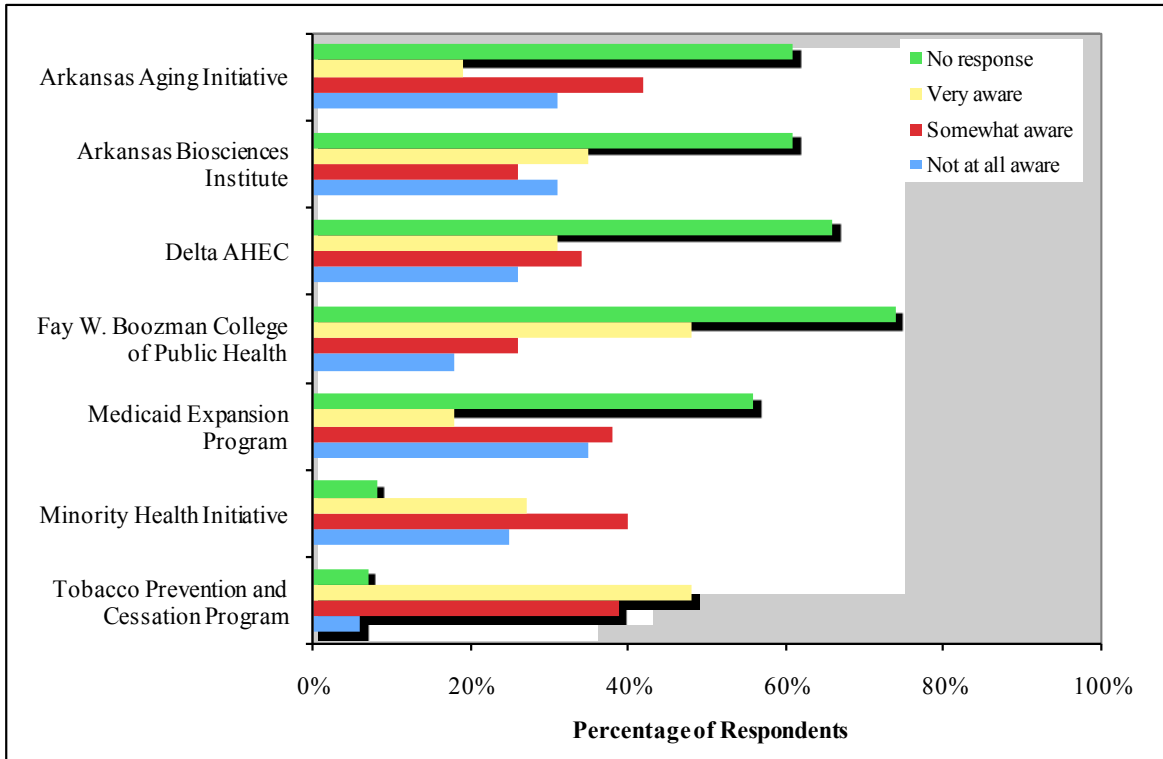
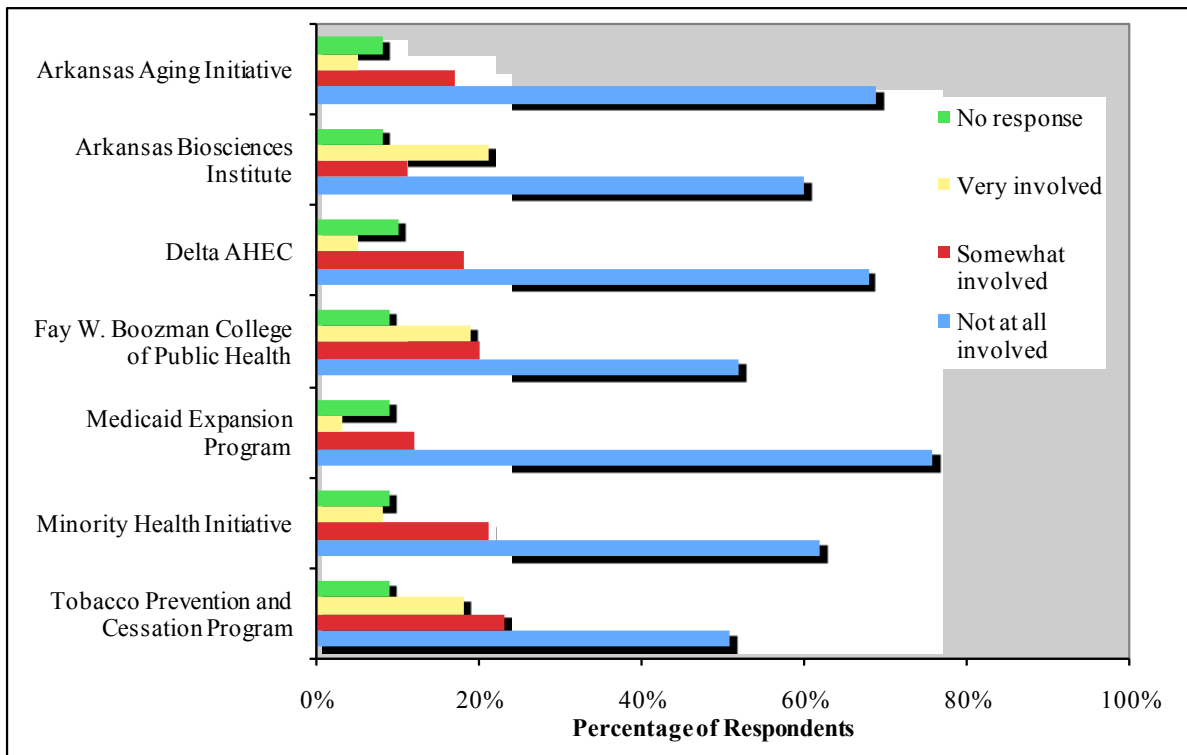


Figure 2.6
Stakeholder Involvement in Each ATS Program (n=477)



Overall, stakeholders were aware of the Initiated Act, particularly that the act authorized creation of seven programs and set goals for each program. According to the respondents, the Initiated Act has had a positive impact, particularly on smoking prevention and cessation, the consequences of tobacco use, and the general health of Arkansans. Most stakeholders were aware of the ATSC but less knowledgeable about its functions than they were about the Initiated Act. Respondents were quite knowledgeable about each of the tobacco settlement programs, particularly those that were community-based, and were also more involved with those programs.

Chapter 3

Fay W. Boozman College of Public Health

This chapter summarizes the results of our multifaceted evaluation of the Fay W. Boozman College of Public Health (COPH). In the first section, we provide an update on each activity area, including goals, process indicators, and intermediate outcome indicators. The program's cost indicators are presented in the second section; the results of the policy evaluation appear in the third section. COPH's outcome indicators are discussed in the fourth section. The fifth section summarizes the findings and provides recommendations for COPH.

PROGRAM DESCRIPTION AND UPDATE

COPH was established as part of UAMS to conduct “activities to improve the health and health care of the citizens of Arkansas.” The Initiated Act called for faculty and course offerings in the core areas of public health, including health policy and management, epidemiology, biostatistics, health economics, maternal and child health, environmental health, and health services research.

COPH was also envisioned as a community resource for the development and dissemination of programs, the acquisition of federal and philanthropic funding, and the implementation of research and other scholarly activities. Since its inception, COPH has made substantial progress, including its accreditation by the Council on Education for Public Health in July 2007. The Council on Education for Public Health establishes, monitors, and periodically revises the criteria by which it evaluates graduate public health schools and programs. COPH will apply and be reviewed for its next accreditation in 2014.

This section focuses on COPH's progress in its three activity areas since our last report, which covered through December 2007. During 2009, COPH revisited the evaluation goals and indicators used to track progress in each of its three activity areas: education, research, and service. In some areas, the goals and indicators were revised or new ones were added to reflect the current scope of activities.

Educational Activities. COPH's primary education activity has been establishing graduate degree programs and continuing education programs. Since appropriation of funds by the Arkansas General Assembly to begin operations on July 1, 2001, COPH has established

- an 18-hour post-baccalaureate certificate program in public health
- an 18-hour post-baccalaureate certificate program in occupational and environmental health administered through the UAMS Graduate School
- a 42-hour Master of Public Health (MPH) program with a generalist track and one specialist track in each of COPH's five departments
- a combined MD/MPH degree program between UAMS College of Medicine and COPH
- a combined JD/MPH degree program between the William H. Bowen School of Law and COPH
- a combined PharmD/MPH degree program between the UAMS College of Pharmacy and COPH

- a combined Master of Public Service and Master of Public Health program between the University of Arkansas' Clinton School of Public Service and COPH
- a Doctor of Public Health program in public health leadership
- a PhD program in health systems research through the UAMS Graduate School
- a PhD program in health promotion and prevention research through the UAMS Graduate School.
- a 4+1 program combining a BA or BS with a MPH, currently offered in collaboration with four Arkansas undergraduate institutions (Arkansas Baptist College, Hendrix College, Philander Smith College, and the University of Arkansas at Pine Bluff).

In addition to these new programs, two existing programs in related fields were successfully moved to COPH from other parts of UAMS. The Master of Science in occupational and environmental health was moved to the COPH Department of Environmental and Occupational Health and continues to be administered through the UAMS Graduate School. The Master of Health Services Administration (MHSA) program moved from the University of Arkansas at Little Rock.

UAMS underwent leadership changes with the recent appointment of a new chancellor. This appointment comes at an important time for COPH as it moves into a new stage of growth and development. This change provides an opportunity for COPH to revisit its strategic plan and to continue to emphasize its role within UAMS. Additionally, it is an opportunity to emphasize the challenges that COPH currently faces with faculty recruitment—for example, in epidemiology and biostatistics.

COPH has several objectives related to enrollment: increasing the number of communities in which citizens receive public health training, increasing the number of graduates entering the public health field, and increasing minority enrollment in its degree programs. For enrollment, COPH tracks the percentage of all enrolled students who originate from each of the AHEC regions. As shown in Table 3.1, after stabilizing at around 255 students for the past three years, enrollment dropped to 218 students for the 2009–2010 academic year. The decrease can be explained by COPH's recent updating of student records. During this process, all students who had been registered for more than six years and were not actively enrolled were removed from the registration lists. Thus, with the number of students in the fall of 2009 virtually the same as in 2005, COPH's actual enrollment has been stable over the past five years.

To maintain its enrollment, COPH has continued to recruit through a variety of efforts, including providing online information; advertising at relevant conferences, college fairs, and town hall meetings; presenting information to high school students; offering nondegree classes to encourage students to sample the college's courses without having to commit to applying for a degree program; and collaborating with other universities in the state. Additional efforts to expand student recruitment have recently included applying for and obtaining grant support from the Association of Schools of Public Health in January 2009 to create materials for use in educating students from undergraduate institutions about careers in public health; hosting open houses for prospective applicants; applying for and obtaining a Health Resources and Services Administration traineeship grant and later applying for and obtaining supplemental American Recovery and Reinvestment Act funding to expand the number of traineeships; and implementing the Association of Schools of Public Health Application Service electronic application system to expand student recruitment regionally.

After declining in the fall of 2006, the number of counties represented has remained stable, with students representing about 38 counties in each of the last four years (Table 3.1). However, this indicator is based on the students' birthplaces rather than their permanent address. Thus, the counties represented may not be the counties where the students have spent the majority of their lives but they may be where the students' families still reside. While overall enrollment has remained relatively stable, the number of students whose birthplaces were in other states or countries has grown considerably. In the fall of 2005, COPH had 17 out-of-state students. More recently, the number of out-of-state students peaked at 51 in 2008–2009 and then dropped to 37 in 2009–2010. Likewise, the number of students from other countries has increased from 7 in the fall of 2005 to 16 in the fall of 2009.

Table 3.1
COPH Enrollment, Academic Year

| | 2005–06 | 2006–07 | 2007–08 | 2008–09 | 2009–10 |
|--------------------|----------------|----------------|----------------|----------------|----------------|
| Number of students | 219 | 254 | 262 | 253 | 218 |
| Number of counties | 45 | 39 | 36 | 37 | 38 |
| Out of state | 17 | 26 | 19 | 51 | 37 |
| Out of country | 7 | 9 | 10 | 26 | 16 |

COPH also works to maintain minority enrollment in the degree programs at or above the minority population of the state. According to 2000 census data, Arkansas' proportion of racial minorities in all groups was 20 percent. For the current academic year 2009–2010, minority students made up 33 percent of total enrollment (Figure 3.1). While COPH has been successful in recruiting a diverse population of students over the past several years, it is notable that the number of Black students has decreased over time. COPH's update of its enrollment files provides part of the explanation for the lower numbers. Nonetheless, COPH's minority enrollment still exceeds the proportion of racial minorities in the general population.

Figure 3.1
COPH Enrollment, by Race/Ethnicity

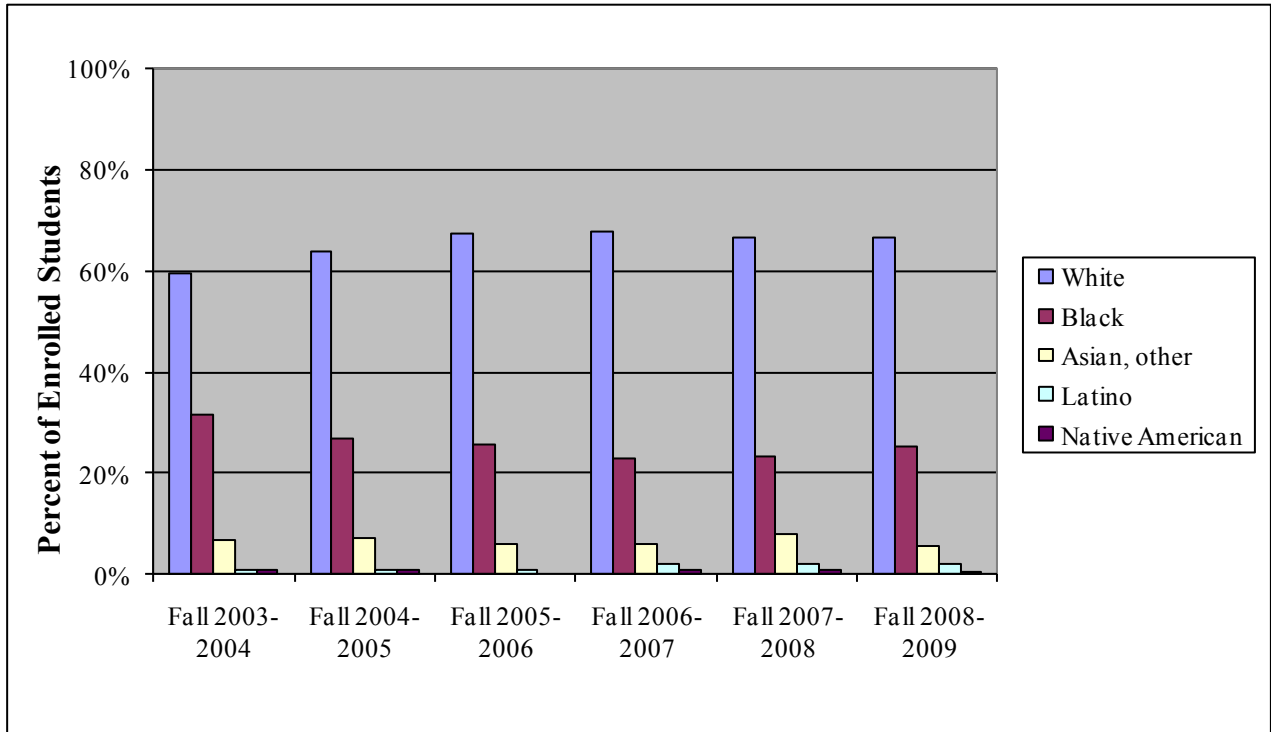


Table 3.2
COPH Graduate Outcomes, Summer 2002–Fall 2009

| Semester | Certificate Graduates | MPH Graduates | MHSA Graduates | DrPH Graduates | Total Graduates | (Number) and Percentage Employed in Public Health–Related Field* |
|------------------|------------------------------|----------------------|-----------------------|-----------------------|------------------------|---|
| Summer 2002–2003 | 0 | 0 | 0 | 0 | 0 | |
| Fall 2003–2004 | 0 | 1 | 0 | 0 | 1 | (1) 100 |
| Spring 2003–2004 | 4 | 10 | 0 | 0 | 14 | (12) 100 |
| Summer 2003–2004 | 0 | 0 | 0 | 0 | 0 | |
| Fall 2004–2005 | 4 | 7 | 0 | 0 | 11 | (10) 100 |
| Spring 2004–2005 | 1 | 10 | 0 | 0 | 11 | (8) 100 |
| Summer 2004–2005 | 2 | 1 | 0 | 0 | 3 | |
| Fall 2005–2006 | 0 | 10 | 0 | 0 | 10 | (12) 92 |
| Spring 2005–2006 | 4 | 11 | 0 | 0 | 15 | (14) 93 |
| Summer 2005–2006 | 0 | 1 | 0 | 1 | 0 | |
| Fall 2006–2007 | 0 | 1 | 2 | 0 | 3 | (3) 75 |
| Spring 2006–2007 | 3 | 10 | 5 | 0 | 18 | (13) 81 |
| Summer 2006–2007 | 1 | 1 | 2 | 0 | 4 | |
| Fall 2007–2008 | 3 | 8 | 2 | 0 | 13 | (15) 94 |
| Spring 2007–2008 | 2 | 18 | 9 | 1 | 30 | (25) 86 |
| Summer 2007–2008 | 2 | 3 | 1 | 0 | 6 | |
| Fall 2008–2009 | 2 | 11 | 2 | 1 | 16 | (15) 83 |
| Spring 2008–2009 | 2 | 13 | 6 | 1 | 22 | (19) 86 |
| Summer 2008–2009 | 0 | 2 | 0 | 0 | 0 | |
| Fall 2009–2010 | 1 | 5 | 1 | 0 | 9 | (5) 83 |
| Spring 2009–2010 | N/A | N/A | N/A | N/A | N/A | |
| Totals | 31 | 123 | 30 | 3 | 187 | |

*This percentage is based on those students who responded to the exit survey.

The vast majority of COPH graduates pursue employment in a public–health related field (Table 3.2). To further assess progress related to its education efforts, COPH has added two new indicators. One indicator tracks student competency on learning objectives for each degree program that was added during the past year. In a survey of its former students, COPH asks questions referring to COPH’s educational preparation in a range of areas, including (but not limited to) analytical skills, general knowledge, specific knowledge in discipline of interest, research methods, data management, evaluation, policy development and program planning. Students rate their preparation on a scale of 1 to 5, with 1 being “not at all well” and 5 being “very well.” Since the survey response rates were quite low, these data are not presented here. COPH is continuing to field the survey with its former students to increase the response rate.

Another indicator added this year tracks preceptorships and integration projects undertaken with community organizations and the regions of Arkansas in which these activities occur. Seventeen preceptorship projects were conducted at 10 sites in 2009 (Table 3.3). Most of the projects were conducted in Pulaski County (Little Rock) because students worked in this area and could not leave to conduct research elsewhere. We point out, however, that the projects had statewide implications. The same is the case for most of the 19 integration projects. These totals will serve as a baseline to assess progress in these areas in the future.

Table 3.3
COPH Preceptorships and Integration Projects

| Year | Preceptorships | | | Integration Projects | | |
|------|--------------------|-----------------|-----------------|----------------------|-----------------|-----------------|
| | Number of Projects | Number of Sites | Counties Served | Number of Projects | Number of Sites | Counties Served |
| 2009 | 17 | 10 | 3 | 19 | 9 | 2* |

*An additional project was in Namibia, Africa.

Research Activities. COPH’s research activities involve obtaining federal and philanthropic funding and conducting research. To measure progress in obtaining grant funding, COPH tracks the of number grant proposals submitted for funding by all COPH faculty, the amount of grant funds awarded for all COPH faculty, and the number of COPH faculty who were principal investigator or co-principal investigator on a submitted proposal. These indicators do not include the number of proposals and/or projects to which faculty members contribute. For example, if a faculty member is a principal investigator on one grant but works on three others, only the proposal for which he/she is the principal investigator counts. Typically, faculty members work on multiple grants at a time and are not the principal investigator on all of them.

To assess its research activities, COPH tracks the number of grant proposals submitted, grants funded, grants pending, and the total number of ongoing research projects since 2005 for all grants where the principal investigator has a primary appointment in the COPH (Table 3.4). For the last two years, COPH faculty submitted 97 grants and were awarded 49. This represents a decrease from the 2006–2007 period, when COPH faculty submitted 114 grant proposals and were awarded 55. At the same time, the number of total ongoing research projects during each six-month period has remained the same. We note that, as faculty have more support from grants and more long-term projects are funded, the rates of grant submission will decline.

**Table 3.4
COPH Faculty Grants and Projects**

| Six-Month Period | Grants Submitted | Grants Funded | Grants Pending | Total Ongoing Research Projects* |
|-------------------------|-------------------------|----------------------|-----------------------|---|
| January–June 2005 | 32 | 15 | 17 | 29 |
| July–December 2005 | 27 | 21 | 5 | 34 |
| January–June 2006 | 18 | 9 | 8 | 38 |
| July–December 2006 | 32 | 14 | 13 | 38 |
| January–June 2007 | 30 | 13 | 14 | 42 |
| July–December 2007 | 34 | 19 | 12 | 42 |
| January–June 2008 | 19 | 13 | 4 | 40 |
| July–December 2008 | 20 | 13 | 5 | 39 |
| January–June 2009 | 34 | 6 | 28 | 35 |
| July–December 2009 | 24 | 17 | 7 | 42 |

* All totals are all distinct to the semester. Total ongoing research projects change as grants expire and/or others are added.

The proportion of funded proposals to total research faculty steadily increased until 2008, then declined during 2008 before rebounding sharply in 2009 (Table 3.5). In these data, instructors or nonresearch faculty were not included as part of the denominator. At the same time, the number of projects per full-time researcher declined from 1.31 during the second half of 2007 to 1.10 for the second half of 2009.

**Table 3.5
COPH Grant Submissions, Awards, and Projects by Total Research Faculty**

| Six-Month Period | Submitted Proposals/Total Research Faculty | Funded Proposals/Total Research Faculty | Projects/Total Research Faculty |
|-------------------------|---|--|--|
| January–June 2006 | 0.64 | 0.04 | 1.36 |
| July–December 2006 | 1.03 | 0.16 | 1.23 |
| January–June 2007 | 0.97 | 0.29 | 1.35 |
| July–December 2007 | 1.06 | 0.50 | 1.31 |
| January–June 2008 | 0.59 | 0.13 | 1.25 |
| July–December 2008 | 0.65 | 0.16 | 1.26 |
| January–June 2009 | 0.97 | 0.60 | 1.00 |
| July–December 2009 | 0.63 | 0.45 | 1.10 |

COPH also tracks the amount of new funding awarded from January 2004 through December 2009, as well as the number of active COPH grants and contracts (Table 3.6). New grant funding indicates the total funding (direct plus indirect) of grants that were awarded during the specified time period; active grants represent the amount of current funding. For example, a five-year grant awarded in September of 2007 would be active through September 2012, but listed as “new” only in 2007. The amount of new grants and contracts has fluctuated over time but has continued to meet the goal of exceeding the 2004–2005 level by 20 percent. As COPH has accumulated more long-term projects, the dollar value of its active grants and contracts has grown each year.

Table 3.6
Amounts of New and Active COPH Grants and Contracts

| Year | New Grants and Contracts | Active Grants and Contracts |
|------|--------------------------|-----------------------------|
| 2004 | \$2,991,470 | \$9,385,233 |
| 2005 | \$6,549,350 | \$20,190,725 |
| 2006 | \$2,986,243 | \$28,257,022 |
| 2007 | \$22,304,398 | \$44,906,974 |
| 2008 | \$8,147,384 | \$32,107,129 |
| 2009 | \$6,248,203 | \$34,297,723 |

In terms of conducting research, COPH also looks at the number of peer-reviewed papers accepted for publication and the number of ongoing research projects involving faculty. The successful conduct of research is measured by documenting the number of research projects conducted by COPH faculty and the number of peer-reviewed publications generated by faculty research. Table 3.7 shows that the number of publications declined in 2008 to 67 (.70 per full time equivalent [FTE]) before rising in 2009 to 86 publications (1.9 per FTE), surpassing the 2007 level.

Table 3.7
Papers Published by COPH Faculty

| Year | Number of Publications | Number per FTE |
|------|------------------------|----------------|
| 2001 | 0 | 0 |
| 2002 | 12 | 0.8 |
| 2003 | 32 | 1.2 |
| 2004 | 43 | 1.3 |
| 2005 | 78 | 1.8 |
| 2006 | 50 | 1.1 |
| 2007 | 74 | 1.6 |
| 2008 | 67 | .70 |
| 2009 | 86 | 1.9 |

Starting in 2009, COPH also began to track the number of nonfaculty FTEs created by extramural funding. In 2009, approximately 60 new nonfaculty employment positions were created with research funding from 42 research projects. Most of the positions were within COPH, but some were external, for such activities as data collection.

Service Activities. The third activity area for COPH involves serving as a policy and advisory resource for the Arkansas General Assembly, the governor, state agencies, and communities. To assess progress in this area, COPH tracks the number of talks and lectures, legislative briefings, and projects with community-based organizations. As shown in Table 3.8, the number of talks and lectures declined from 2007 levels during the past two years; the number of legislative briefings increased and then remained the same. There was a dramatic increase in the number of special projects during 2009, which partly may have resulted from a different manner of counting these projects.

Table 3.8
COPH Faculty Service Activities

| Year | Talks and Lectures | Legislative Briefings | Special Projects |
|------|--------------------|-----------------------|------------------|
| 2001 | 16 | 6 | 12 |
| 2002 | 84 | 9 | 8 |
| 2003 | 188 | 8 | 10 |
| 2004 | 165 | 26 | 21 |
| 2005 | 83 | 28 | 11 |
| 2006 | 128 | 8 | 4 |
| 2007 | 154 | 3 | 4 |
| 2008 | 145 | 8 | 11 |
| 2009 | 118 | 8 | 57 |

In reviewing this activity area, COPH added an indicator to track the number of state policies that were influenced by COPH in the course of the year. COPH reports that the 2009 legislative session was a particularly productive one for public health and that COPH provided input on nine different pieces of legislation. This included the passage of Act 180, which increased the tax on cigarettes and smokeless tobacco and funded many public health initiatives.

Progress Toward Achieving Program Goals. As noted earlier, COPH revisited the programmatic goals and indicators related to the RAND evaluation during this reporting period to ensure that the program goals were aligned with the current activities in each area. This review process led to new goals with indicators to match. All the goals in the education area were new; COPH accomplished three of them and put in place methods to collect data related to the fourth. COPH accomplished its research-related goal, which was the only goal that remained the same. COPH's service goal was also new, and data collected during this reporting period will serve as a baseline for future evaluation. Overall, COPH has been generally staying constant in its activity and is not in a period of rapid growth. Table 3.9 details COPH's progress toward the programmatic goals for the RAND evaluation over the past two years.

**Table 3.9
COPH Program Goals and Status over the Past Two Years**

| Goal | Status |
|---|--|
| Education | |
| Maintain the number of Arkansas counties in which citizens receive public health training (NEW). | ACCOMPLISHED. COPH has maintained the same level of counties with students enrolled for the last several years. COPH has led consistent efforts to recruit students from across the state into its program. In fall 2009, students came from 38 counties. |
| Maintain a high level of graduates entering the public health field (NEW). | ACCOMPLISHED. Although overall enrollment has decreased in recent years, the percentage of graduates entering a public health field has remained consistently high at around 83 percent. |
| Maintain minority enrollment in the degree programs at or above the minority population of the state (20 percent, as specified in the latest census data) (NEW). | ACCOMPLISHED. Although minority enrollment decreased slightly during 2009, the percentage remains higher than the minority population of the State. In addition, the percentage of African American students has remained steady at about 25 percent and is higher than the overall proportion of African Americans who are Arkansas residents. |
| By the time they graduate, COPH students report that they have achieved 80 percent or more of the learning objectives associated with their selected degree programs (NEW). | UNABLE TO ASSESS. This new goal was established partway through 2009 to assess student satisfaction with the quality and effectiveness of COPH's degree programs. The data to assess progress toward this goal were not available. |
| Research | |
| Increase new extramural grant and contract funding for research by 20 percent above that achieved during 2004–2005 (EXISTING). | ACCOMPLISHED. During calendar years 2008–2009, COPH received a total of \$12,736,113 in new extramural funding. This represents 33 percent more than the 2004–2005 total of \$9,540,820. |
| Service | |
| During their tenure at COPH, students provide service and consultation to public health–related agencies and community organizations throughout Arkansas (NEW). | UNABLE TO ASSESS. This new goal was established partway through 2009. The data collected for 2009 will serve as a baseline to assess progress moving forward. |

COST EVALUATION

Table 3.10 presents the total tobacco settlement funds received and spent by the COPH during the last five fiscal years. The COPH total budget consists not only of tobacco funds but also annual cost-of-living adjustments, 30 percent of the tuition from COPH's programs, 30 percent of indirect costs generated by COPH faculty, and additional state funds available to the COPH chancellor. These combined sources of funds are budgeted annually to cover COPH's expenses, in addition to grant and contract direct costs. Spending in FY2007 was lower than that

of FY2006, with reductions in all categories of spending, but tobacco funds were again fully expended in FYs 2008 and 2009.

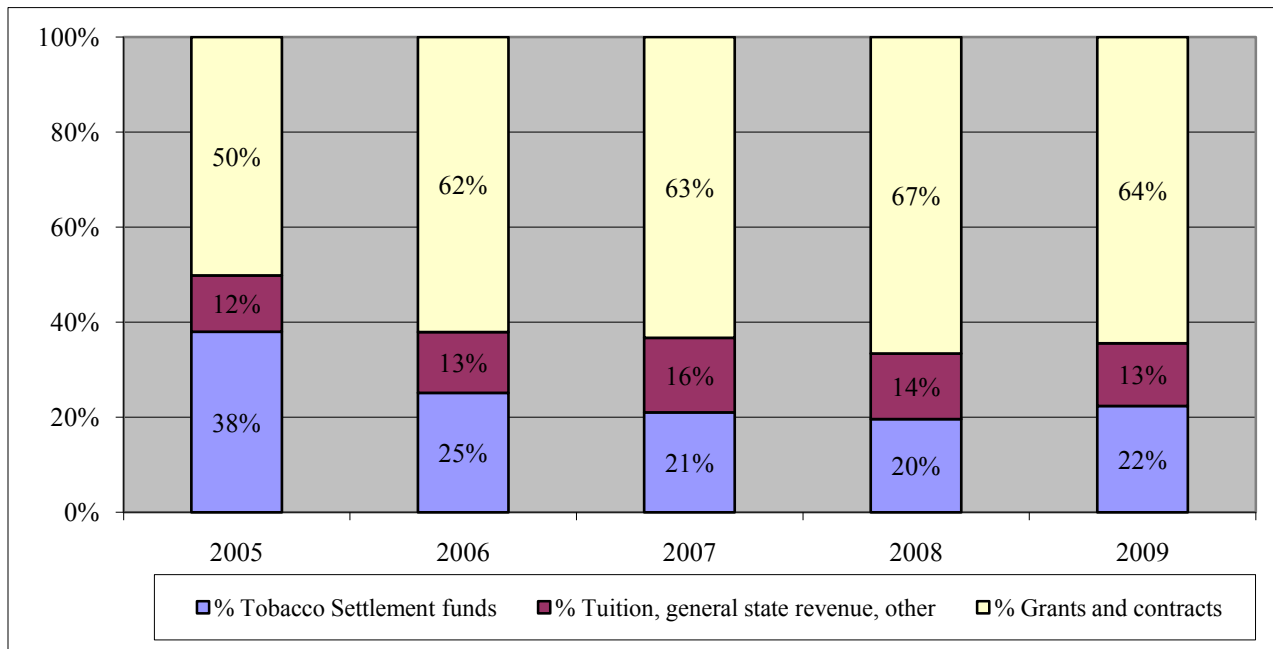
Table 3.10
Tobacco Settlement Funds Received and Spent by COPH, by Fiscal Year

| Line Item | 2005 | 2006 | 2007 | 2008 | 2009 |
|-------------------------------|--------------|--------------|-------------|-------------|-------------|
| (1) Regular salaries | \$2,034,480 | \$1,804,796 | \$1,827,918 | \$1,899,750 | \$2,164,026 |
| (2) Personal service matching | 420,242 | 392,495 | 384,642 | 402,444 | 467,707 |
| (3) Maintenance & operations | | | | | |
| (A) Operations | 272,109 | 213,078 | 105,446 | 81,090 | 110,092 |
| (B) Travel | 41,228 | 27,992 | 10,749 | 0 | 777 |
| (C) Professional fees | 29,978 | 0 | 0 | 0 | 0 |
| (D) Capacity outlay | 19,052 | 2,787 | 3,430 | 0 | 0 |
| (E) Data processing | 0 | 0 | 0 | 0 | 0 |
| Annual total spent | \$2,817,089* | \$2,441,148* | \$2,332,185 | \$2,383,284 | \$2,759,805 |
| Annual total received | \$2,486,503 | \$2,122,171 | \$2,651,162 | \$2,383,284 | \$2,759,805 |

*Overspending in FY2005 and FY2006 was covered by leftover funds from FY2004 and other sources of state funds.

As noted above, COPH has multiple funding streams. From FY2005 to FY2008, COPH increased its funding from sources other than the tobacco settlement funds, with a slight decrease in those sources in FY2009 (Figure 3.2). Currently, nearly two-thirds (64 percent) of the total COPH funding comes from grants and contracts obtained by the COPH faculty.

Figure 3.2
Percentage of Spending from Tobacco Settlement Funds and Other Funds, by Fiscal Year



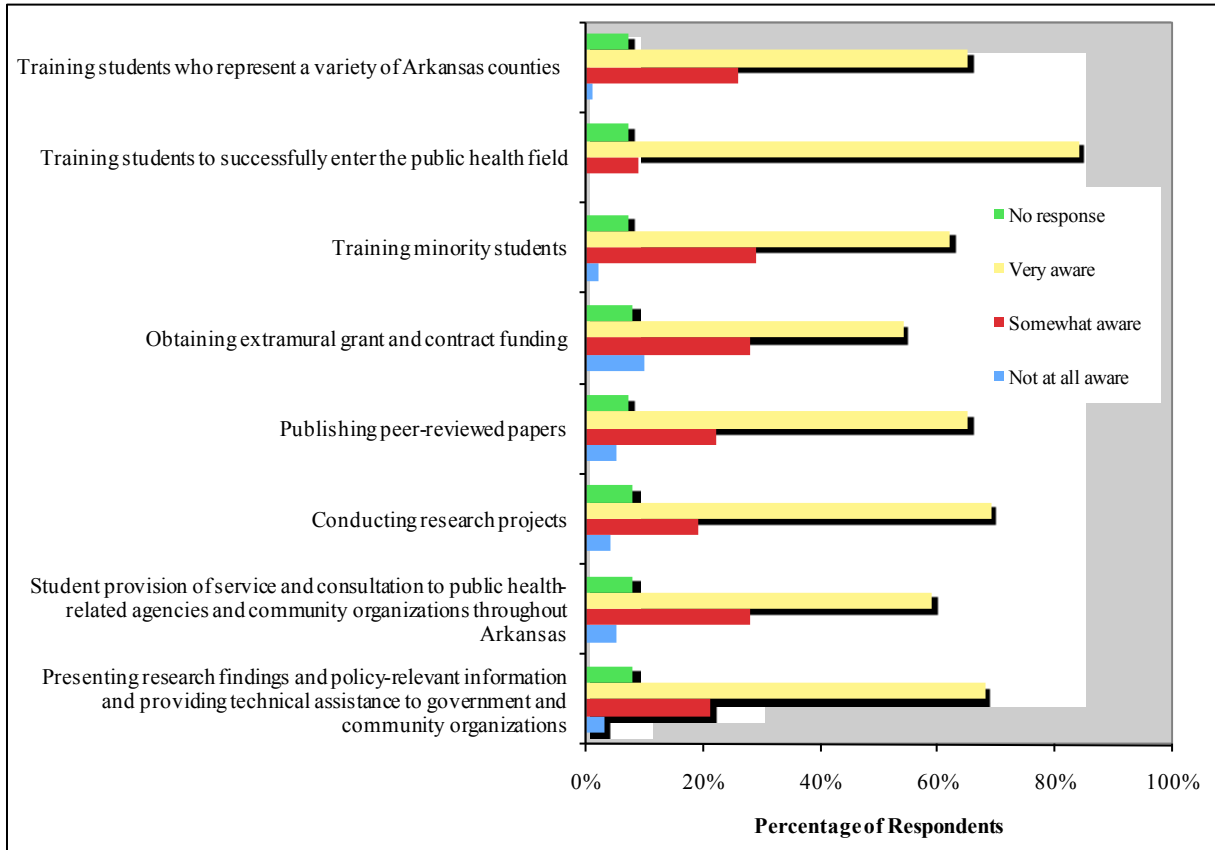
POLICY EVALUATION

The policy evaluation was designed to help understand the context in which the tobacco settlement programs develop and conduct activities in the areas outlined above. As part of this effort, we conducted a survey during 2009 of COPH stakeholders. The purpose of the survey was to assess how COPH’s activities, goals, and progress are perceived by those with an interest in its programs. This section summarizes the results of the survey. The targeted group of respondents included COPH faculty, staff, students, graduates, partners or collaborators, and legislators. Of 561 stakeholders, 110 participated in the survey, yielding a response rate of 20 percent.

The majority of stakeholders became involved with COPH between 2002 and 2005; many had been involved since COPH’s inception in 2002. Forty-four percent of the respondents were COPH faculty or staff, 34 percent were graduates, and 24 percent were students. A few respondents (9 percent) are legislators. The respondents’ engagement in COPH activities ranges from daily to annually, with almost one-third (31 percent) of respondents involved with COPH activities on a daily basis. Almost all responding stakeholders had knowledge of the purpose of the goals of COPH and 84 percent of respondents rated the purpose and goals as very appropriate. Almost two-thirds (65 percent) of stakeholders believed that COPH is very effective in reaching its goals.

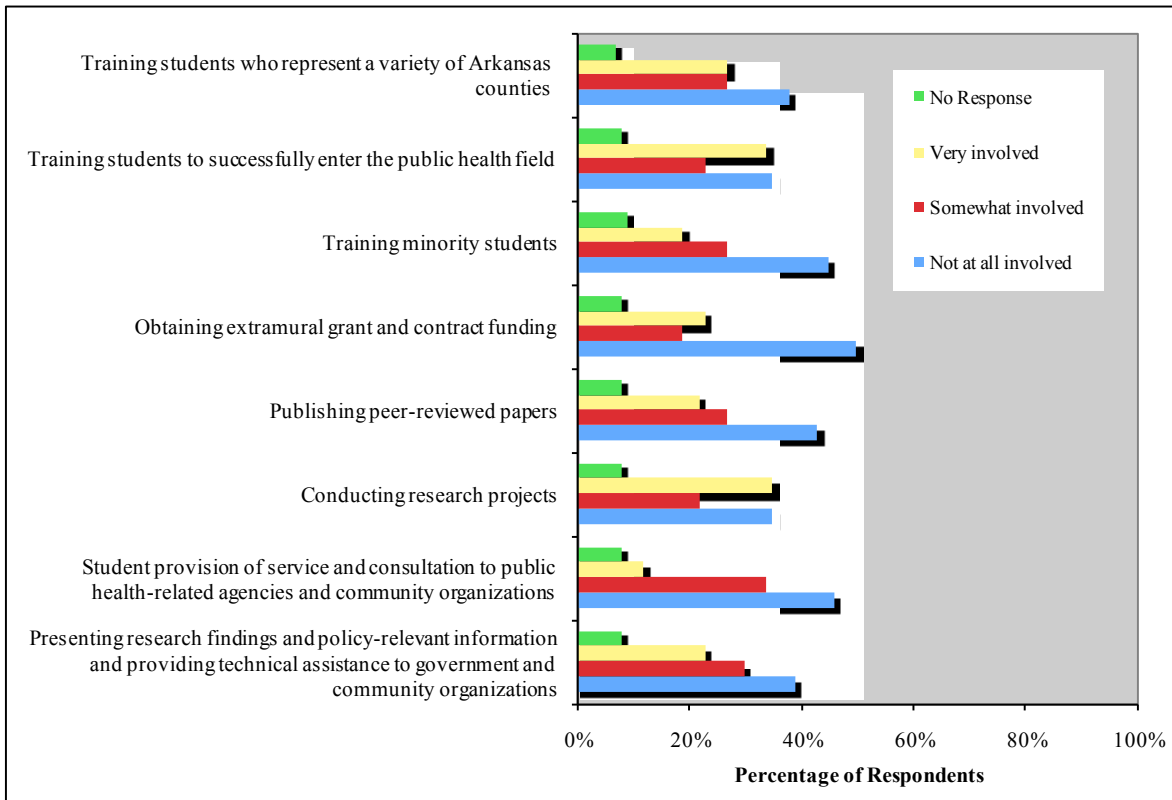
The majority of respondents were very aware of the education activities that train students to enter the public health field (Figure 3.3). They were also familiar with COPH’s research activities: Stakeholders were very aware of activities to obtain extramural grant and contract funding (54 percent), to publish peer-reviewed papers (65 percent), and to conduct research (69 percent). Respondents were similarly aware of COPH’s service activities, such as providing student services to public-health agencies and organizations (59 percent) and presenting research findings to government and community organizations (68 percent).

Figure 3.3
Stakeholder Awareness of COPH Activity Areas (n=110)



Approximately 50 percent of stakeholders were involved in COPH activity areas (Figure 3.4). Respondents were similarly involved with obtaining extramural grant and contract funding (42 percent), publishing peer-reviewed papers (49 percent), and conducting research (57 percent). COPH stakeholders were also quite involved in student provision of service throughout Arkansas (46 percent) and presenting research findings (53 percent).

Figure 3.4
Stakeholder Involvement in COPH Activity Areas (n=110)

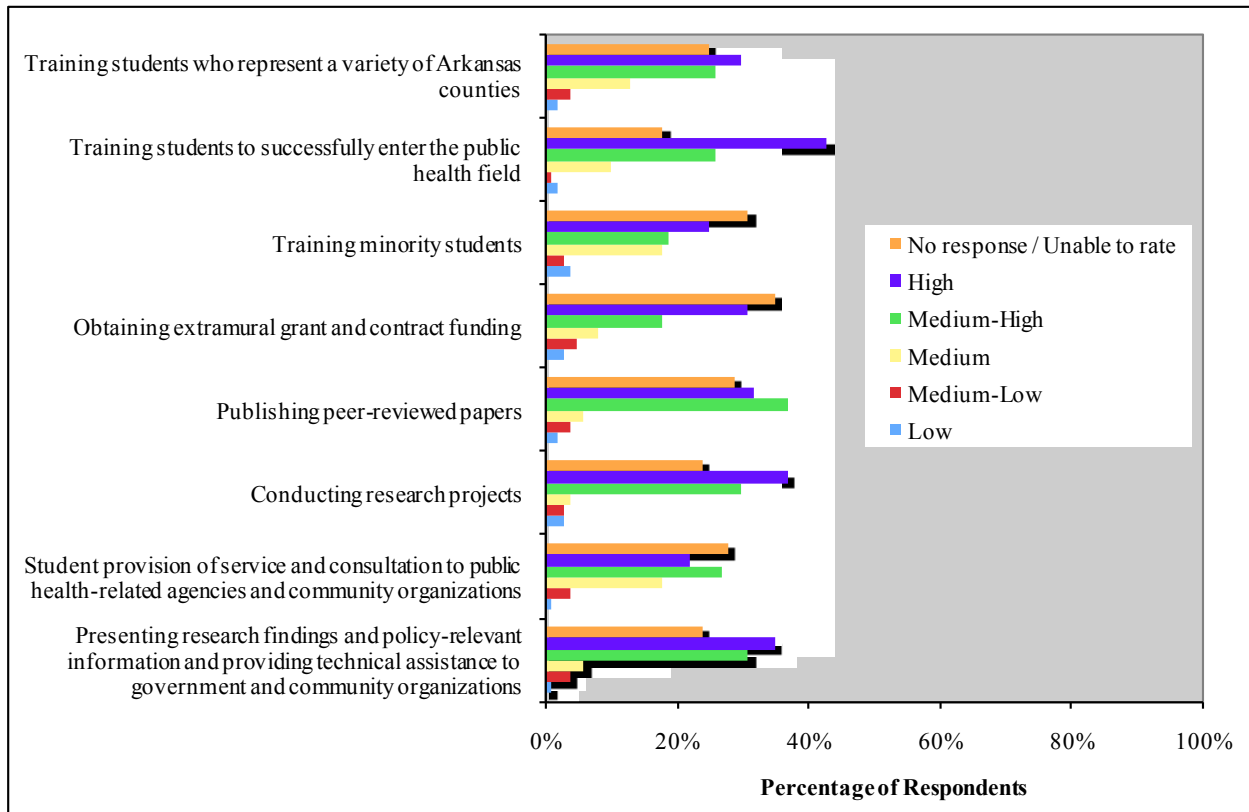


The survey also asked respondents to rate the quality of activities in each area (Figure 3.5). Stakeholders who were not involved in an activity area often did not rate the quality of activities in the area. Overall, those who responded rated the quality of activities from medium-high to high. In the education area, training students to successfully enter the public health field received the highest quality rating, with over two-thirds (69 percent) rating the quality as medium-high or high. For the research activities, 69 percent of respondents rated the quality of the research efforts as medium-high to high. In the service area, student provision of service throughout Arkansas received a medium-high or high rating by 66 percent of the respondents.

As shown in Figure 3.6, the majority of stakeholders believed that COPH administration is of high quality. Most respondents rated leadership provided by the program’s director and staff as medium-high or high quality (65 percent). More than half of respondents (57 percent) rated COPH’s decisions on which activities to pursue and decisions about which activities to continue as medium-high or high. Nearly as many respondents (53 percent) rated communication among program staff and participants as of medium-high or high quality.

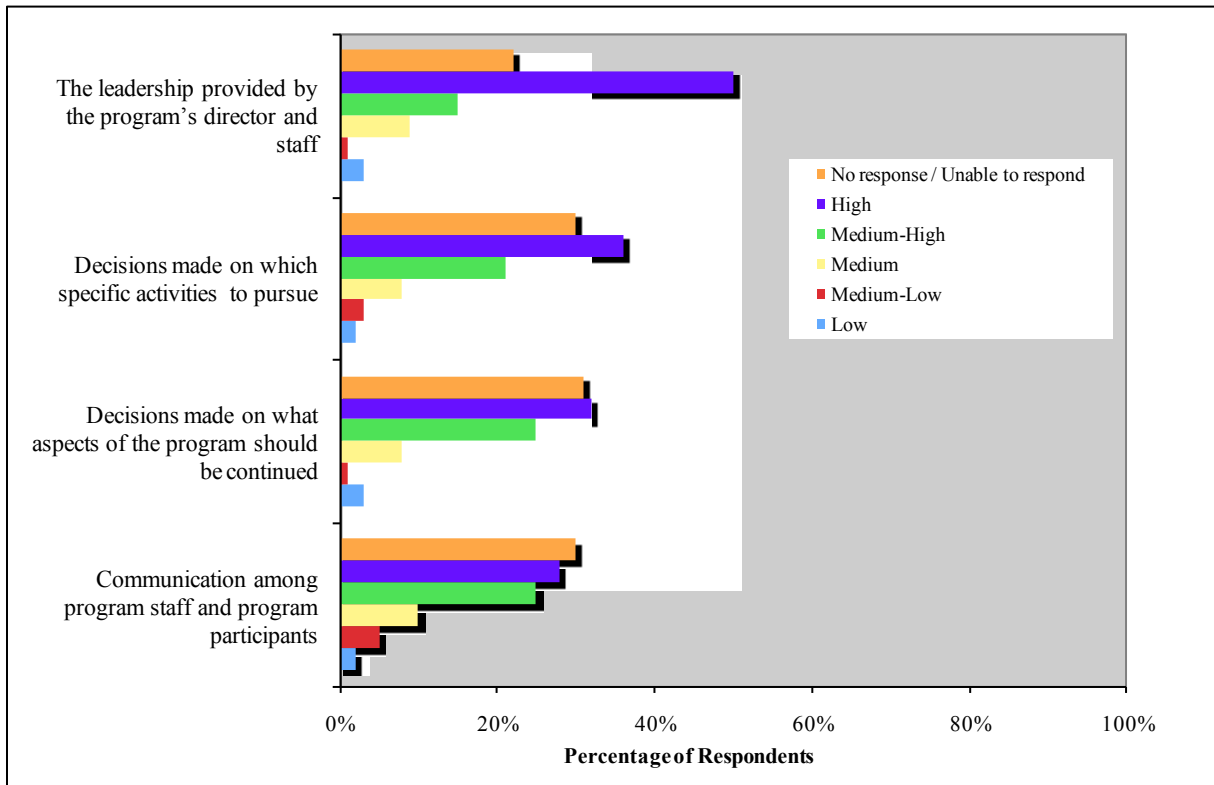
The survey also queried stakeholders about collaboration among programs receiving tobacco settlement funds. The COPH respondents report they were somewhat aware of other ATS programs, but the majority of respondents were not involved in other programs. Programs with the highest COPH stakeholder involvement were MHI (30 percent) and TPCP (37 percent). Overall, stakeholders believed that COPH does collaborate and coordinate with other ATS programs, with 57 percent reporting a great deal of collaboration.

Figure 3.5
Stakeholder Quality Ratings for COPH Activity Areas (n=110)



Finally, a majority of respondents (71 percent) believed that COPH should expand and conduct more activities. Some respondents made specific recommendations for COPH, including increasing the rigor of its programs, expanding the faculty, offering online classes to increase access, focusing on recruitment of minority students, and addressing workforce need for COPH graduates. Seventeen percent of stakeholders felt that the program should continue with its current level of activity. Many of these stakeholders suggested that COPH should expand if it receives additional funding.

Figure 3.6
Stakeholder Quality Ratings of COPH Administration (n=110)



OUTCOME EVALUATION

Key Findings: *The number of scholarly publications by COPH faculty members continues to increase. Although the total number of publications in 2008 was slightly higher than in 2007, the number of publications in ranked journals increased substantially, with a statistically significant increase in the number of publications in the top ten journals.*

This section summarizes results from the outcome evaluation of COPH. As in prior reports, we analyzed the impact of COPH's funded research by examining the knowledge production of funded research. Doing so requires making predictions about the extent to which a current research project will become the building block for future clinical and policy changes that will improve the health of Arkansans. By examining the journal impact factors (JIFs) for the journals in which COPH faculty published papers, we leverage the scientific reviews made by scholarly journals and measure the rate at which scholars have cited a journal's recent articles. Produced by the Institute for Scientific Information, JIF calculates the average number of times published papers are cited up to two years after publication. A high JIF indicates that scholars have judged the journal's articles to be of high scientific quality and therefore worth referencing in their own work. The JIF for a journal tends to be relatively stable over time because high-quality journals receive more submissions from which the editors and peer-reviewers can select the best scientific work. Acceptance of a COPH study by a high-JIF journal indicates that the study has been judged to be of high scientific quality and is likely to have an impact on the field. Therefore, we summarize the JIFs for journals in which COPH studies are published to track the likely impact of the research. Although the JIF is not a perfect measure of scientific quality, it

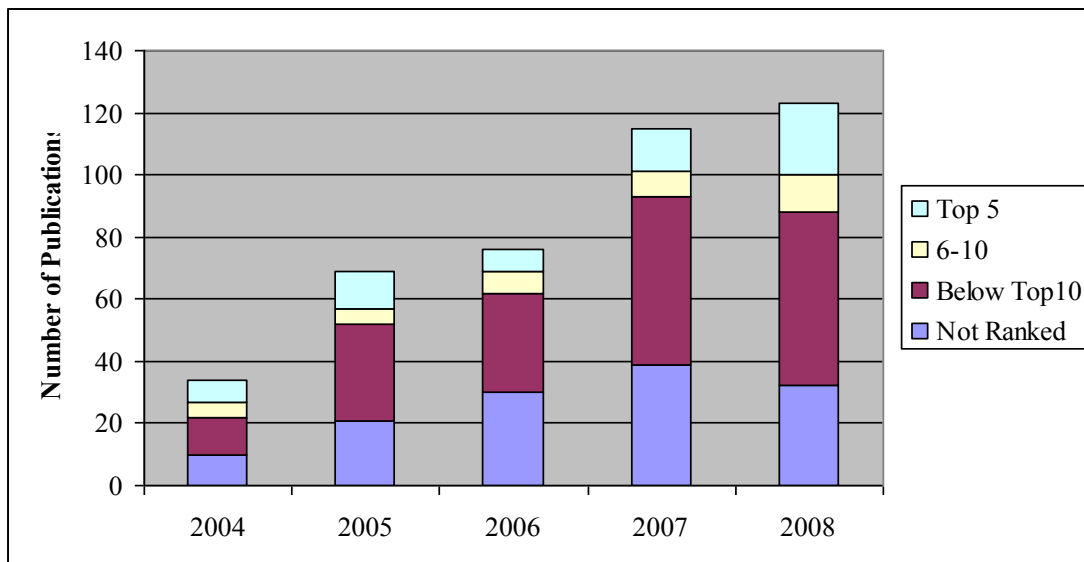
has many advantages, including (1) being widely used, (2) providing timely information, and (3) being available for public use at low cost.

The Institute for Scientific Information produces JIFs by assigning every journal that it rates to one or more subject categories, such as infectious diseases or health policy and services. The citation rates measured by the JIFs differ dramatically among subjects because styles of scholarly writing and citation behavioral norms differ across subjects. However, JIFs provide a useful ranking of journals *within* particular subject categories, so we can base our measures on whether funded research leads to publications in the top five or top ten journals on a given subject. It should be noted that not all publications are in journals included in the Institute’s citation index. Journals and other publication venues that do not receive JIF ratings tend to be non-peer reviewed, of minimal circulation, or rarely cited by other scientific journals. While publications in non-JIF rated venues can make contributions to the research process, research published in ranked journals is likely to have a greater eventual effect on the well-being of Arkansans. Therefore, we defined four quality levels of publication:

1. Publications in journals ranked in the top five by subject
2. Publications in journals ranked between the top five and top ten by subject
3. Publications in journals ranked below the top ten by subject
4. Publications in journals or other venues not ranked.

As the quality of research produced by the funded programs increases over time, we expect an increase in the number of publications in the top five and the top ten journals. Our analysis of the JIF of COPH publications for 2004 through 2008 indicates that the total number of publications in 2008 is not statistically significant from the trend in 2004 and 2007 (Figure 3.7). In terms of the proportion of publications in top-five journals, there is no statistically significant difference between 2008 and 2007 or between 2008 and the 2004–2007 trend. However, the total number of publications by COPH faculty in top-ten journals has increased.

Figure 3.7
Journal Impact Factor Rankings for COPH Publications



SUMMARY AND RECOMMENDATIONS

Over the past two years, COPH has continued to develop its education programs, research activities, and service efforts. Overall, enrollment and the number of counties represented by COPH students have both remained stable over the past several years. In the current academic year, COPH has 218 students representing 38 counties enrolled in its education programs. Minority enrollment in its degree programs has also remained consistent over time. The vast majority of its graduates pursue employment in fields related to public health. COPH's research activities involve obtaining federal and philanthropic funding and conducting research. During 2008 and 2009, COPH faculty submitted 97 grants and were awarded 49, totaling nearly \$13 million. The total number of ongoing research project has remained at about 40 during each six-month period. During 2009, COPH faculty produced 86 publications in peer-reviewed journals, representing almost two publications per FTE. COPH faculty also increased the total number of publications in top-ten journals during 2008. COPH has maintained its efforts to serve as a policy and advisory resource to legislative committees and individual legislators. Throughout 2008 and 2009, COPH faculty were involved in giving talks, lectures, and legislative briefings. COPH efforts to increase funding from sources other than the tobacco settlement funds have continued. Currently, just under two-thirds of the total COPH funding comes from grants and contracts obtained by the COPH faculty. Stakeholders with an interest in COPH rated the quality of its activities and its effectiveness in reaching its goals quite high and most indicated that COPH should expand and conduct more activities.

Below we present three recommendations from our evaluation of COPH activities during 2008 and 2009.

- **Maintain the growth trajectory of minority student enrollment, student enrollment from across the state, and faculty research.**

COPH has shown a strong record in recruiting minority students, as well as students who represent many Arkansas counties. Faculty research, another main pillar of COPH's mission, has also proven strong. We recommend that continued support and efforts be placed on these areas. Along these lines, we point toward our second recommendation.

- **Continue to build COPH's major programs, especially epidemiology and biostatistics.**

Biostatistics and epidemiology departments are essential for a successful school of public health. In light of our first recommendation (i.e., to continue the successful trajectories in student enrollment and faculty research), we note that there has been turnover in the departments of biostatistics and epidemiology. We encourage COPH to dedicate attention toward building and developing these departments, with recruitment of faculty and of students. Recruitment strategies might include identification of rising stars in graduate programs and post-doctoral fellowships, offering chairs and/or protected time to candidates, developing a cohort of new professors and giving them special attention (e.g., mentoring, start-up funding, targeted professional development).

- **Develop a student tracking system that provides more current and accurate information on student enrollment.**

COPH has reached a point where tracking current and former students in an accurate and timely way is essential to future development and progress. We recommend development of a

more sophisticated student information database to provide more accurate information about current and former students. For example, tracking of student enrollment should happen on an annual basis, so that if there are students who are enrolled in COPH but fail to enlist in a class for three semesters or more, they can be tracked.

Chapter 4

Arkansas Biosciences Institute

This chapter presents the results of the process, cost, policy, and outcome evaluations of ABI. The first section describes the progress in each activity area, including goals, process indicators, and intermediate outcome indicators. In the second section, the results of the spending and cost analysis are presented. The third section includes the results of the policy evaluation, while the following section provides the outcome evaluation results for ABI. The fifth section summarizes the findings from all evaluation components and provides recommendations for ABI.

PROGRAM DESCRIPTION AND UPDATE

The Initiated Act of 2000 provided 22.8 percent of the tobacco settlement program funds to establish and support the Arkansas Biosciences Institute (ABI). ABI was directed to foster the conduct of research through its member institutions—the University of Arkansas for Medical Sciences (UAMS), University of Arkansas-Division of Agriculture (UA-Ag), University of Arkansas, Fayetteville (UAF), Arkansas State University (ASU), and Arkansas Children’s Hospital Research Institute (ACHRI). Separate tobacco settlement funds were appropriated for each of these five institutions. The Initiated Act further directed ABI to focus on the following categories:

1. Agricultural research with medical implications
2. Bioengineering research focused on the expansion of genetic knowledge and new potential applications in the agricultural-medical fields
3. Tobacco-related research that focuses on the identification and application of behavioral, diagnostic, and therapeutic research addressing the high level of tobacco-related illnesses in the state of Arkansas
4. Nutritional and other research focusing on prevention or treatment of cancer, congenital or hereditary conditions or other related conditions
5. Other research identified by the primary educational and research institutions involved in ABI . . . which is reasonably related, or complementary to research identified in points 1–4.

ABI is governed by a board of directors that meets quarterly to provide overall program coordination and direction.

Since its inception, ABI has leveraged tobacco funding to work in two main activity areas: (1) research and collaboration among member institutions in each of the five areas specified by the Initiated Act and (2) dissemination of research results to the public and the health care community so that these findings may be applied to planning, implementation, and evaluation of other programs of this state. In the rest of this section, we provide an update on these two areas, including new and existing process indicators used to track progress.

Research and Collaboration Among Member Institutions. As noted above, encouraging the conduct of research through the five member institutions is one of ABI’s primary activity areas. To assess progress in this area, we tracked the following:

- Number of ABI-funded projects awarded for research, by institution, for each of the five research areas
- Ratio of extramural funding to ABI funding, by institution
- Number of external grants and contracts awarded to ABI researchers (total and by institution)
- Number of peer-reviewed papers accepted for publication
- Number of collaborative ABI research projects that involve researchers at more than one participating institution.

To assess its progress in these areas, ABI tracks the number of projects and the total amount of funding in each research area for each institution. The total funding reflects the sum of both ABI-allocated monies and extramural funding. For FY2009, the total number of ABI-funded research projects increased in Category 3 and Category 5 but declined in the other research areas (Table 4.1). However, ABI saw substantial increases in total funding, with funding increases for the different research areas ranging from 1.8 percent (Category 1) to 57.6 percent (Category 3) from FY2008 to FY2009. Research falling within Categories 3 and 5 constituted the bulk of ABI-supported research projects this past fiscal year.

The trajectory of ABI’s funding over time shows that, while ABI funds have remained stable, there have been large increases in extramural funding (Figure 4.1). From FY2008 to FY2009, ABI’s total extramural funding increased by 65 percent.

Figure 4.1
ABI Funding, by Fiscal Year

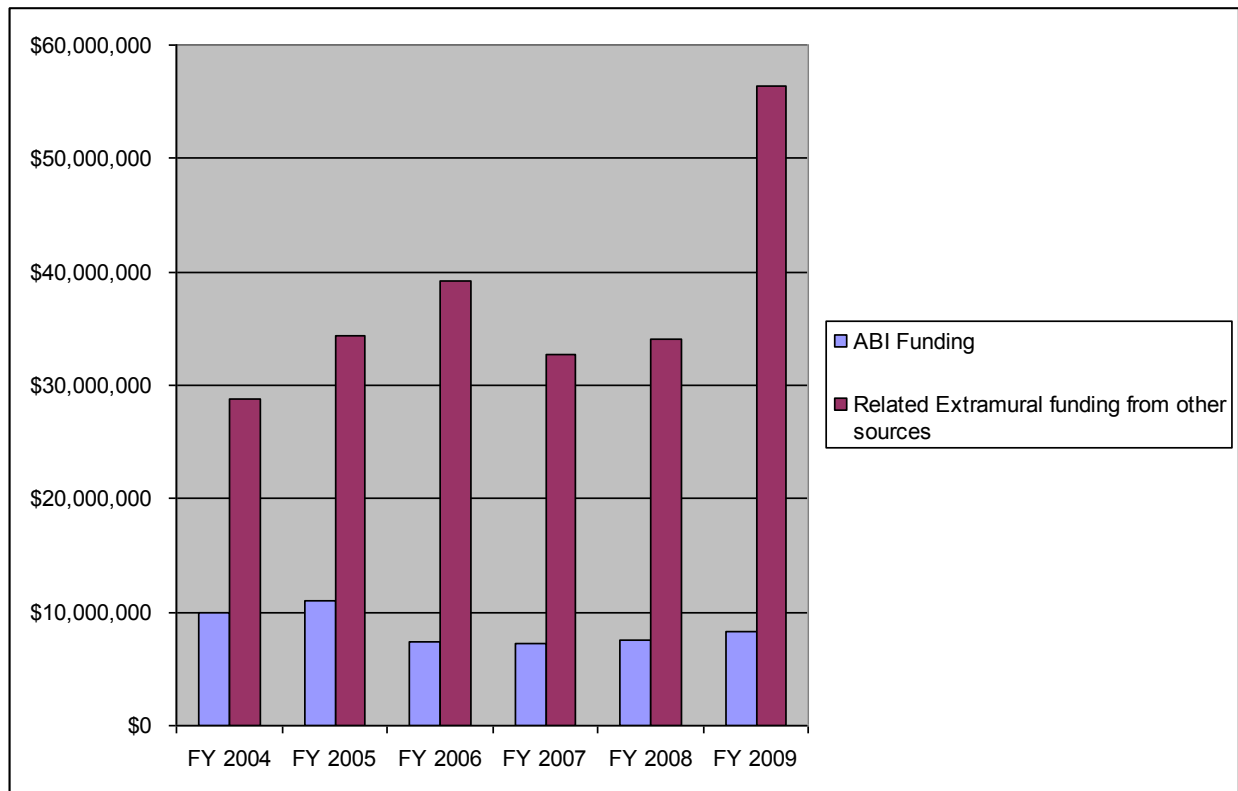


Table 4.1
ABI-Supported Research Projects, by Institution and Category of Research, by Fiscal Year

| | 2005 | | 2006 | | 2007 | | 2008 | | 2009 | |
|---|--------|--------------|--------|--------------|--------|--------------|--------|--------------|--------|--------------|
| | Number | Total | Number | Total | Number | Total | Number | Total | Number | Total |
| Category 1: Agricultural research with medical implications | | | | | | | | | | |
| ACHRI | 0 | \$0 | 1 | \$335,440 | 3 | \$276,487 | 2 | \$674,386 | 2 | \$497,479 |
| ASU | 16 | 1,284,585 | 10 | 791,974 | 10 | 827,545 | 24 | 2,375,038 | 21 | \$4,160,243 |
| UA-Ag | 15 | 3,214,412 | 15 | 3,437,221 | 10 | 2,421,260 | 9 | 2,112,041 | 17 | \$3,639,525 |
| UAMS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UAF | 16 | 4,564,881 | 10 | 3,560,649 | 19 | 2,787,399 | 27 | 7,186,201 | 15 | \$4,282,906 |
| Total | 47 | \$9,063,878 | 36 | \$8,125,284 | 42 | \$6,312,691 | 62 | \$12,347,666 | 55 | \$12,580,153 |
| Category 2: To conduct bioengineering research focused on the expansion of genetic knowledge and new potential applications in agricultural-medical fields | | | | | | | | | | |
| ACHRI | 0 | 0 | 2 | 98,988 | 0 | 0 | 0 | 0 | 0 | 0 |
| ASU | 2 | 100,000 | 7 | 443,952 | 9 | 515,872 | 2 | 1,000,000 | 2 | \$2,950,000 |
| UA-Ag | 2 | 375,360 | 7 | 2,892,601 | 4 | 1,050,319 | 1 | \$449,834 | 1 | \$125,000 |
| UAMS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UAF | 1 | 239,775 | 8 | 3,500,217 | 5 | 761,467 | 3 | 547,675 | 2 | \$284,980 |
| Total | 5 | \$715,135 | 24 | \$6,935,758 | 18 | \$2,327,658 | 6 | \$1,997,509 | 5 | \$3,359,980 |
| Category 3: To conduct tobacco-related research | | | | | | | | | | |
| ACHRI | 2 | 498,925 | 4 | 1,011,878 | 3 | 1,326,329 | 4 | 588,523 | 3 | \$117,138 |
| ASU | 21 | 901,607 | 12 | 638,442 | 7 | 753,697 | 6 | 779,841 | 4 | \$323,720 |
| UA-Ag | 1 | 115,567 | 2 | 155,569 | 2 | 201,572 | 0 | 0 | 0 | 0 |
| UAMS | 45 | 17,943,403 | 38 | 17,688,119 | 42 | 15,534,504 | 19 | 3,485,668 | 26 | \$11,785,418 |
| UAF | 1 | 25,000 | 5 | 2,293,952 | 9 | 940,945 | 5 | 688,128 | 4 | \$842,231 |
| Total | 70 | \$19,484,502 | 66 | \$21,787,960 | 63 | \$18,757,047 | 34 | \$5,542,160 | 37 | \$13,068,507 |
| Category 4: To conduct nutritional and other research focusing on prevention or treatment of cancer, congenital or hereditary conditions or other related conditions | | | | | | | | | | |
| ACHRI | 3 | 2,368,262 | 7 | 2,301,923 | 4 | 2,637,317 | 7 | 3,293,839 | 6 | \$4,450,030 |
| ASU | 0 | 0 | 4 | 418,625 | 6 | 272,979 | 3 | 158,638 | 0 | 0 |
| UA-Ag | 0 | 0 | 9 | 844,458 | 3 | 1,286,241 | 0 | 0 | 0 | 0 |
| UAMS | 20 | 4,633,910 | 35 | 13,453,887 | 18 | 8,463,395 | 12 | 1,574,685 | 11 | \$3,928,128 |
| UAF | 1 | 340,200 | 2 | 114,434 | 1 | 47,950 | 0 | 0 | 4 | \$499,872 |
| Total | 24 | \$7,342,372 | 57 | \$17,133,333 | 32 | \$12,707,882 | 22 | \$5,027,162 | 21 | \$8,878,030 |
| Category 5: To conduct other research identified by the primary educational and research institutions involved in ABI | | | | | | | | | | |
| ACHRI | 7 | 2,622,256 | 12 | 4,848,905 | 11 | 5,027,005 | 14 | 3,604,981 | 14 | \$5,167,090 |
| ASU | 4 | 132,669 | 18 | 3,715,146 | 8 | 2,374,413 | 8 | 1,462,835 | 11 | \$5,889,671 |
| UA-Ag | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UAMS | 10 | 4,532,011 | 33 | 13,508,445 | 28 | 14,422,974 | 16 | 3,664,542 | 13 | \$5,919,000 |
| UAF | 2 | 683,029 | 8 | 831,256 | 16 | 2,353,503 | 3 | 234,528 | 5 | \$951,706 |
| Total | 23 | \$7,969,965 | 74 | \$22,903,752 | 63 | \$24,677,895 | 41 | \$8,966,886 | 43 | \$17,927,467 |

* Projects may fall into multiple research categories.

The ratio of extramural funding to ABI funding has increased from 3:1 in FY2005 to 7:1 in FY2009 (Table 4.2). While there is some variability in the extent to which the various institutions have leveraged their ABI dollars from year to year, all but one had the highest ratio yet in 2009.

Table 4.2
Amounts of Funding Awarded for ABI Research, by Fiscal Year

| Fiscal Year | ACHRI | ASU | UA-Ag | UAMS | UAF | ABI total |
|--------------------|--------------|--------------|--------------|--------------|--------------|------------------|
| 2005 | | | | | | |
| ABI funding | \$1,180,257 | \$2,148,743 | \$1,678,851 | \$4,422,353 | \$1,540,000 | \$10,970,204 |
| Total funding* | \$5,489,443 | \$2,418,861 | \$3,705,337 | \$27,812,768 | \$5,852,885 | \$45,279,294 |
| Ratio | 4:1 | 1:1 | 1:1 | 5:1 | 3:1 | 3:1 |
| 2006 | | | | | | |
| ABI funding | \$822,053 | \$661,179 | \$1,687,828 | \$3,266,930 | \$906,076 | \$7,344,066 |
| Total funding* | \$5,584,022 | \$5,094,812 | \$4,136,880 | \$27,823,102 | \$3,915,688 | \$46,554,504 |
| Ratio | 6:1 | 7:1 | 2:1 | 8:1 | 3:1 | 5:1 |
| 2007 | | | | | | |
| ABI funding | \$1,179,185 | \$1,011,677 | \$1,524,520 | \$2,129,200 | \$1,390,742 | \$7,235,324 |
| Total funding* | \$6,329,994 | \$3,916,024 | \$2,914,579 | \$23,376,831 | \$3,427,697 | \$39,965,125 |
| Ratio | 4:1 | 3:1 | 1:1 | 10:1 | 2:1 | 5:1 |
| 2008 | | | | | | |
| ABI funding | \$927,596 | \$618,105 | \$1,575,971 | \$2,740,644 | \$1,625,415 | \$7,487,731 |
| Total funding* | \$9,122,915 | \$6,394,457 | \$4,137,846 | \$11,465,539 | \$10,412,931 | \$41,533,688 |
| Ratio I | 9:1 | 9:1 | 2:1 | 3:1 | 5:1 | 4:1 |
| 2009 | | | | | | |
| ABI funding | \$1,122,871 | \$564,553 | \$1,882,774 | \$3,370,306 | \$1,342,245 | \$8,282,749 |
| Total funding* | \$11,670,888 | \$13,888,187 | \$5,522,299 | \$25,211,752 | \$8,313,940 | \$64,607,066 |
| Ratio | 9:1 | 24:1 | 2:1 | 7:1 | 5:1 | 7:1 |

* Total Funding indicates ABI funding and extramural funding combined.

A second objective of ABI's research efforts is to stimulate collaboration among its member institutions. Each member institution contributes to a pool of funds used to make awards for collaborative research projects. Since its inception, ABI has recorded the number of research projects that involve researchers from more than one of the member ABI institutions. The number of collaborative research projects led by the member institutions increased significantly in FY2008 and FY2009 (Table 4.3). The collaborative process provides support to all research institutions, and particularly those with less research infrastructure, so that they are able to lead projects and partner with more established institutions. ACHRI continues to demonstrate exceptional ability in developing collaborative projects.

Table 4.3
ABI Institutions Collaborating on Projects, by Fiscal Year

| Sponsoring Institution | Collaborative Projects Led | ACHRI | ASU | UA-Ag | UAMS | UAF | Other |
|-------------------------------|-----------------------------------|--------------|------------|--------------|-------------|------------|--------------|
| FY2005 | | | | | | | |
| ACHRI | 7 | | | 1 | 7 | 1 | 0 |
| ASU | 6 | | | | 5 | 0 | 2 |
| UA-Ag | 6 | 3 | | | 4 | | 1 |
| UAMS | 6 | 2 | 1 | | | 3 | |
| UAF | 1 | | | | 1 | | 3 |
| Total ABI-funded | 26 | 5 | 1 | 1 | 17 | 4 | 6 |
| FY2006 | | | | | | | |
| ACHRI | 7 | | | 1 | 7 | 1 | 0 |
| ASU | 6 | | | | 5 | 0 | 2 |
| UA-Ag | 6 | 3 | | | 4 | | 1 |
| UAMS | 6 | 2 | 1 | | | 3 | |
| UAF | 1 | | | | 1 | | 3 |
| Total ABI-funded | 26 | 5 | 1 | 1 | 17 | 4 | 6 |
| FY2007 | | | | | | | |
| ACHRI | 14 | | | | 14 | 1 | 0 |
| ASU | 3 | 1 | | 1 | 1 | | 1 |
| UA-Ag | 6 | 1 | | | 4 | 2 | 4 |
| UAMS | 3 | | 1 | | | 2 | 0 |
| UAF | 2 | | | 2 | | | 0 |
| Total ABI-funded | 28 | 2 | 1 | 3 | 19 | 5 | 5 |
| FY2008 | | | | | | | |
| ACHRI | 24 | | | | 24 | 1 | |
| ASU | 10 | 1 | | 5 | 2 | 7 | 5 |
| UA-Ag | 8 | 1 | 3 | | 4 | 4 | 1 |
| UAMS | 1 | | 1 | | | | |
| UAF | 8 | | | 2 | 6 | | 1 |
| Total ABI-funded | 51 | 2 | 4 | 7 | 36 | 12 | 7 |
| FY2009 | | | | | | | |
| ACHRI | 24 | | | | 24 | 1 | |
| ASU | 14 | 1 | | 3 | 4 | 8 | 6 |
| UA-Ag | 13 | 2 | 3 | | 4 | 7 | 11 |
| UAMS | 2 | | 1 | | | | |
| UAF | 11 | | | | 6 | 5 | 1 |
| Total ABI-funded | 64 | 2 | 4 | 3 | 38 | 21 | 18 |

Overall, the percentage of ABI funding being used for collaborative research projects for each institution increased from 21 percent in FY2005 to 32 percent in FY2009 (Table 4.4). At

the same time, the percentage of extramural funding being used to support collaborative research projects more than doubled during the same period, to a total of 33 percent in FY2009. Among the institutions, ACHRI has consistently demonstrated strong collaborative efforts with both ABI and extramural funding.

Table 4.4
Portions of Funding Being Used for Collaborative Research Projects, by Fiscal Year

| Fiscal Year | | Percentage of Research Funding for Collaboration | | | | | Percent of Total Funding |
|-------------|------------------|--|-----|-------|------|-----|--------------------------|
| | | ACHRI | ASU | UA-Ag | UAMS | UAF | |
| 2005 | ABI funds | 93 | 14 | 31 | 5 | 13 | 21 |
| | Extramural funds | 80 | 70 | 32 | 0.3 | 12 | 15 |
| 2006 | ABI funds | 62 | 10 | 20 | 9 | 0 | 16 |
| | Extramural funds | 76 | 8 | 0 | 15 | 0 | 18 |
| 2007 | ABI Funds | 72 | 25 | 46 | 6 | 17 | 30 |
| | Extramural funds | 79 | 3 | 54 | 17 | 10 | 26 |
| 2008 | ABI funds | 94 | 7 | 61 | 0 | 27 | 31 |
| | Extramural funds | 99 | 23 | 76 | 2 | 62 | 50 |
| 2009 | ABI funds | 85 | 7 | 73 | 0 | 20 | 32 |
| | Extramural funds | 94 | 14 | 74 | 6 | 41 | 33 |

Starting with FY2009, ABI began to track the number of positions created by extramural funding. This past fiscal year, ABI funding resulted in 57 nonfaculty FTE positions (Table 4.5). During this same period, extramural funding created 336 FTE positions. For all institutions except for UA-Ag, there were substantially more jobs created with extramural funding compared with ABI funding. Since this is the first time these data have been collected, this information will be used as a baseline to assess progress.

Table 4.5
Jobs Created by ABI Extramural Funding

| Institution | ABI Funded FTE Employment | Extramurally Funded FTE Employment |
|-------------|---------------------------|------------------------------------|
| ACHRI | 7 | 65 |
| ASU | 6 | 54 |
| UA-Ag | 20 | 18 |
| UAF | 11 | 64 |
| UAMS | 13 | 134 |
| Total | 57 | 336 |

Dissemination of Research Results. ABI's other activity area encompasses its efforts to disseminate research results. Since its inception, ABI has tracked the number and type of service and promotional activities, including publications, lectures and seminars, media contacts, and

press releases. The number of research publications, including journal articles, books, and book chapters remained stable through FY2008 before increasing in FY2009 (Table 4.6). Across the member institutions, there were fewer lectures and seminars to disseminate research results in FY2008. In FY2009, activity in this area increased. In-person media contacts and press releases also declined in FY2008 and remained stable in FY2009. Not surprisingly, the more-established and larger institutions conducted more dissemination activities.

Table 4.6
Service and Promotional Activities by Institution, by Fiscal Year

| Fiscal Year | ACHRI | ASU | UA-Ag | UAMS | UAF | ABI Total |
|--------------------------|--------------|------------|--------------|-------------|------------|------------------|
| 2005 | | | | | | |
| Research publications | 77 | 25 | 31 | 87 | 70 | 290 |
| Lectures and seminars | 7 | 9 | 5 | 25 | 6 | 52 |
| In-person media contacts | 24 | 26 | 5 | 12 | 3 | 70 |
| Press releases | 4 | 2 | 2 | 3 | 2 | 13 |
| 2006 | | | | | | |
| Research publications | 92 | 15 | 29 | 96 | 37 | 269 |
| Lectures and seminars | 18 | 22 | 4 | 29 | 3 | 76 |
| In-person media contacts | 7 | 53 | 1 | 8 | 0 | 69 |
| Press releases | 3 | 4 | 0 | 10 | 1 | 18 |
| 2007 | | | | | | |
| Research publications | 90 | 43 | 32 | 134 | 68 | 367 |
| Lectures and seminars | 16 | 31 | 8 | 41 | 22 | 118 |
| In-person media contacts | 7 | 17 | 2 | 8 | 0 | 34 |
| Press releases | 8 | 8 | 0 | 16 | 3 | 35 |
| 2008 | | | | | | |
| Research publications | 95 | 25 | 43 | 139 | 74 | 376 |
| Lectures and seminars | 16 | 16 | 8 | 38 | 15 | 93 |
| In-person media contacts | 14 | 10 | 2 | 3 | 1 | 30 |
| Press releases | 0 | 15 | 0 | 7 | 1 | 23 |
| 2009 | | | | | | |
| Research publications | 107 | 34 | 36 | 189 | 55 | 421 |
| Lectures and seminars | 37 | 31 | 22 | 69 | 15 | 174 |
| In-person media contacts | 14 | 4 | 0 | 13 | 0 | 31 |
| Press releases | 3 | 16 | 1 | 9 | 1 | 30 |

Notably, a large number of ABI investigators who are involved in community and educational outreach programs throughout the state are not included in Table 4.6. Although most of the programs are not directly funded by ABI, the investigators are presenting seminars on their work and giving elementary students, secondary students, and community organizations an opportunity to learn about ABI-supported research through both didactic and hands-on

experiences. These activities play a critical role in educating Arkansans about the ABI and its research mission.

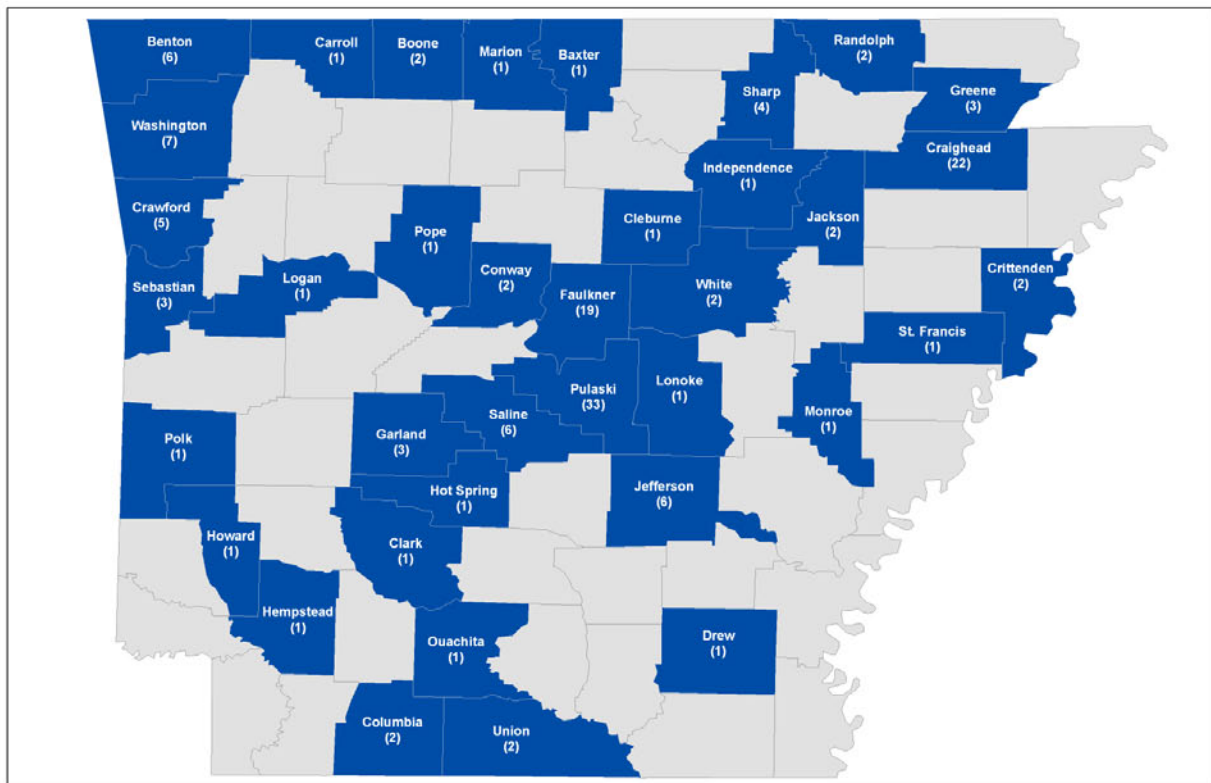
To further assess ABI’s success in disseminating its research results and increasing public knowledge of its activities, ABI began to track the number of Arkansas counties represented by high school, college, or graduate students working in ABI labs. We note that the numbers presented here are more than likely undercounts of the students since many of the ABI researchers do not know or do not report this type of student information. As Table 4.7 indicates, the number of counties represented has increased from 26 in FY2007 to 37 in FY2009.

Table 4.7
Arkansas Counties Represented by Students Working in ABI Labs

| Fiscal Year | Total Number of Counties |
|-------------|--------------------------|
| 2007 | 26 |
| 2008 | 19 |
| 2009 | 37 |

The number of students from each county who were working at ABI in 2009 is shown in Figure 4.2. Thirty-seven of the 75 counties are represented.

Figure 4.2
Counties with Students Working on ABI-Related Projects in 2009



ABI also started to track the number of entrepreneurial activities, including patent filings, patent awards, and start-up companies as an intermediate outcome indicator in this activity area.

ABI was able to provide data for FY2007–2009 for the number of patents filed and received and for FY2009 for start-up companies. The number of patents received has remained stable during this time. During FY2009, ABI researchers were involved in forming three start-up companies, including one to explore the commercialization of conjugated linoleic acid (CLA)–rich oil production and another to manufacture micro/nano devices, and instruments for both the research laboratory and industry.

Table 4.8
ABI Entrepreneurial Activities

| Fiscal Year | Patents Received | Patents Filed | Start-Up Companies |
|--------------------|-------------------------|----------------------|---------------------------|
| 2007 | 2 | 11 | N/A |
| 2008 | 1 | 10 | N/A |
| 2009 | 3 | 8 | 3 |

Progress Toward Achieving Program Goals. Starting with the new evaluation period (beginning in 2008), ABI established five-year goals for the RAND evaluation that track progress in each activity area for this two-year reporting period. Previously, ABI had one research-related goal and two dissemination goals. ABI updated the research and collaboration goal to reflect progress over time and merged the two dissemination goals. Our evaluation found that ABI is on schedule with its goals to increase its funding and the dissemination of research findings (Table 4.9).

Table 4.9
ABI Goals and Status over the Past Two Years

| Goal | Status |
|--|--|
| Research and Collaboration | |
| Increase funding on an annual basis to conduct research (NEW). | ACCOMPLISHED. Since our last report, ABI’s total research funding has increased from just under \$40 million in FY2007 to \$64 million in FY2009. |
| Dissemination | |
| Increase dissemination of research findings, policy-relevant information, and technical assistance to relevant government and community organizations (NEW). | ACCOMPLISHED. In FY2009, ABI’s efforts to disseminate research via research publications, lectures and seminars, and press releases increased. |

COST EVALUATION

This section presents the results of our spending analysis for ABI. To minimize the data-reporting requirements, this spending analysis provides information only for the total expenditures for each institution (Table 4.10). A percentage of the funds received by each institution—\$250,000 each year—supports the ABI central administration. All institutions fully spent the tobacco settlement funds received in the third biennium (FY2006–2007), with the exception of ACHRI, which spent 84 percent of its funds. In the fourth biennium (FY2008–

2009), ACHRI spent 92 percent of its funds. ACHRI, however, is not required to spend all funding as of the end of the year or biennium; its remaining funding is already committed to faculty recruitment in FY2010.

POLICY EVALUATION

As part of the effort to assess the policy context within which the programs operate, we conducted a survey of ABI's stakeholders. The survey was designed to gauge the stakeholders' awareness of and involvement in ABI's activities and to understand how stakeholders perceive the appropriateness of its activity areas and goals. This section summarizes the results for ABI's stakeholders. The targeted group of respondents included ABI investigators, Scientific Coordinating Committee members, Arkansas Science and Technology Authority representatives, Arkansas Research Alliance members, ABI Industry Advisory Committee members, and ABI Science Advisory Committee members. One hundred forty of the 212 stakeholders targeted participated in the survey, yielding a response rate of 66 percent.

Respondents have had between one and seven years of involvement with ABI. Twenty-four percent of respondents joined ABI in the year of inception and an additional 50 percent became involved with ABI between 2004 and 2007. Seventy percent of respondents were ABI investigators and the remaining respondents represented all other groups of stakeholders, including different board and committee members. The involvement of the respondents with ABI activities ranged from daily to annually, with the highest percentage of respondents (36 percent) participating on a quarterly basis. The majority of responding stakeholders had knowledge of the purpose of the goals of ABI, and 80 percent of respondents rated the purpose and goals as very appropriate. Seventy percent of stakeholders believed that ABI is very effective in reaching its goals. Further, most respondents saw ABI as very important in the area in which it works.

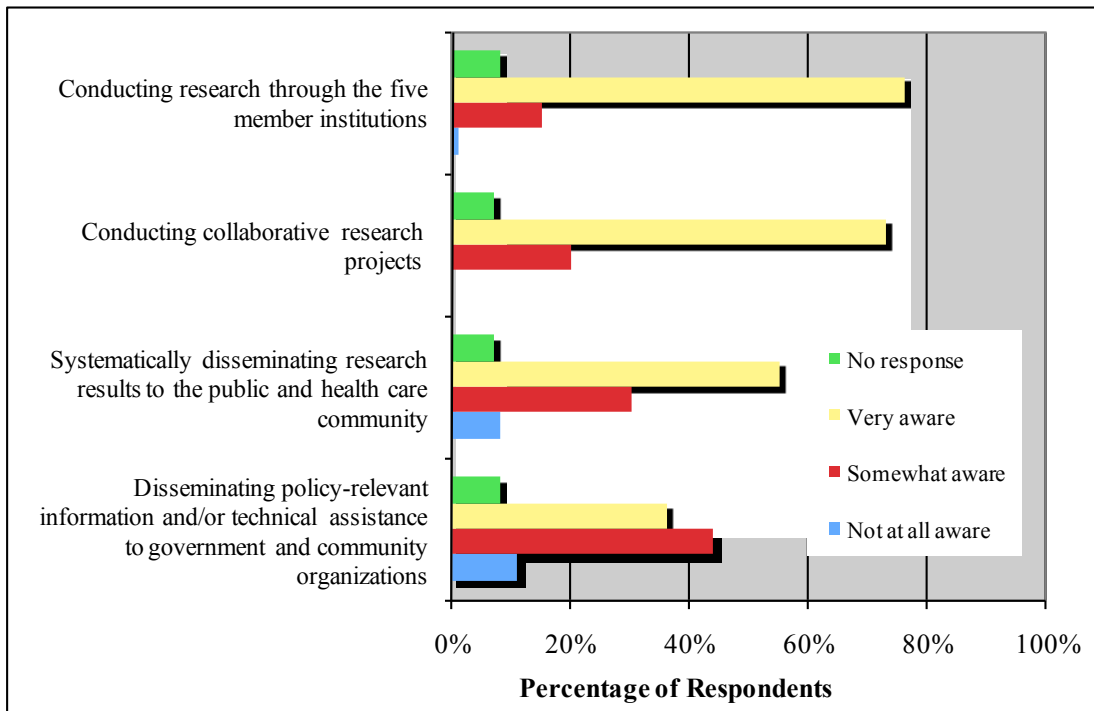
Table 4.10
Tobacco Settlement Funds Received and Spent by the Arkansas Biosciences Institute, by Fiscal Year

| Institution | 2006 | | 2007 | | 2008 | | 2009 | |
|--------------------|---------------------|--------------------|---------------------|---------------------|--------------------|--------------------|---------------------|---------------------|
| | Received | Spent | Received | Spent | Received | Spent | Received | Spent |
| ASU | \$3,162,896 | \$2,376,662 | \$2,856,865 | \$3,696,310 | \$3,005,626 | \$2,978,941 | \$3,439,596 | \$3,505,434 |
| UAMS | 2,478,800 | 2,478,009 | 3,128,279 | 3,129,070 | 2,208,161 | 2,402,335 | 3,862,708 | 3,668,534 |
| ACHRI | 1,476,165 | 1,214,803 | 1,333,336 | 1,139,698 | 1,402,764 | 1,319,334 | 1,605,304 | 1,451,195 |
| UAF | 1,687,828 | 930,183 | 1,524,001 | 2,281,646 | 1,625,415 | 1,332,143 | 1,835,485 | 2,128,757 |
| UA-Ag | 1,687,828 | 1,687,828 | 1,524,520 | 1,524,520 | 1,625,415 | 1,578,126 | 1,835,485 | 1,882,774 |
| Total | \$10,493,517 | \$8,687,485 | \$10,367,001 | \$11,771,244 | \$9,867,381 | \$9,610,879 | \$12,578,578 | \$12,636,694 |
| ABI Central* | \$250,000 | \$212,536 | \$250,000 | \$268,952 | \$250,000 | \$230,082 | \$250,000 | \$234,186 |

*This amount is included in the expenditures of the individual institutions and therefore is not included in the annual total.

Overall, respondents were very aware of the activities in the research and collaboration area, including conducting research through the five member institutions (76 percent) and conducting collaborative research projects (73 percent) (Figure 4.3). The majority of responding stakeholders were also very familiar with the dissemination of research results to the public and health care community (55 percent) but less aware of dissemination of policy-relevant information to government and community organizations than other activity areas (36 percent).

Figure 4.3
Stakeholder Awareness of ABI Activity Areas (n=140)



Most stakeholders (80 percent) were somewhat or very involved in conducting research through the five member institutions (Figure 4.4). Stakeholders were also somewhat or very involved in conducting collaborative research projects (63 percent) and systematically disseminating research to the public and health care community (61 percent). There was much less involvement in activities to disseminate policy-relevant information to the government and community organizations; more than one-half of the respondents (52 percent) were not at all involved in this component of ABI.

The survey also asked respondents to rate the quality of activities in each area (Figure 4.5). More than three-quarters (81 percent) of stakeholders rated the quality of the research conducted through the five member institutions as medium-high or high. Most respondents also rated collaborative research projects (68 percent) and dissemination activities to the public and health care communities (55 percent) as high quality. Dissemination of policy-relevant information received lower quality ratings, with only 34 percent rating the quality of this item as medium-high or high.

Figure 4.4
Stakeholder Involvement in ABI Activity Areas (n=140)

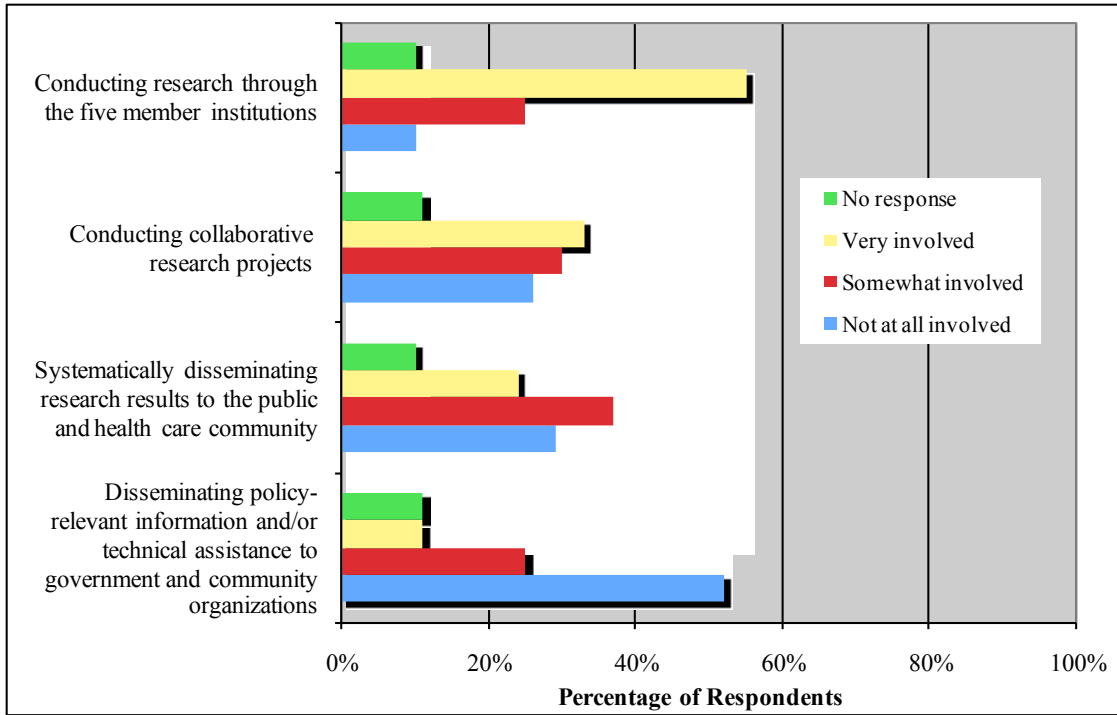
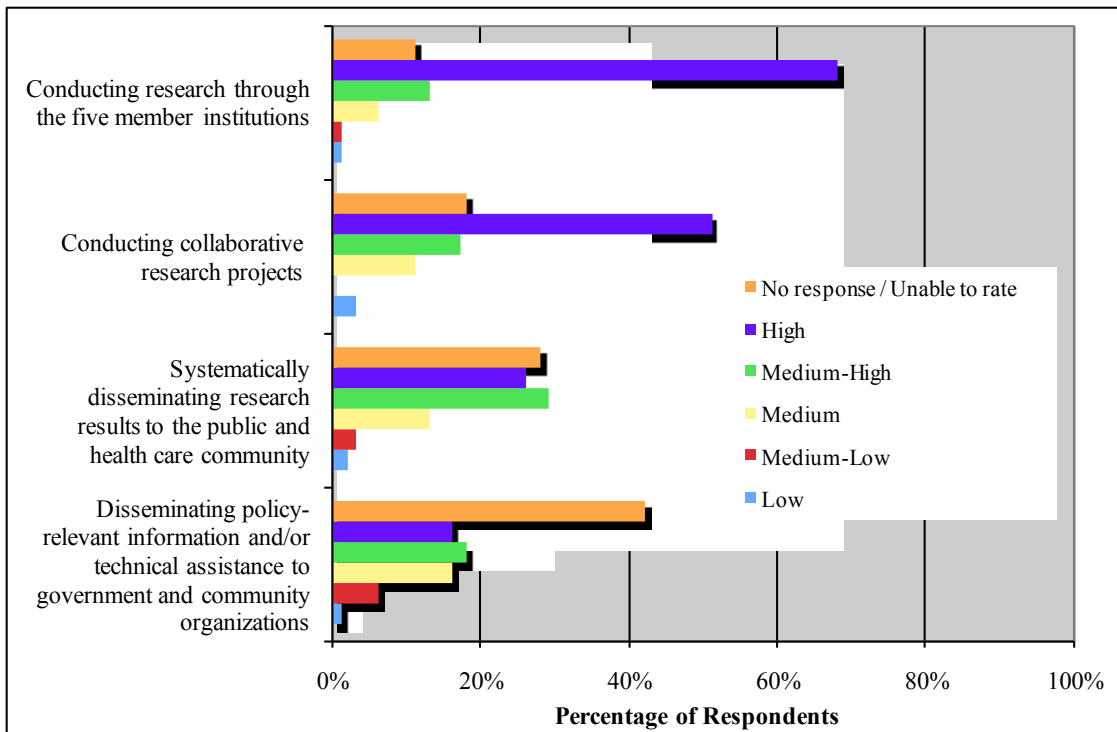
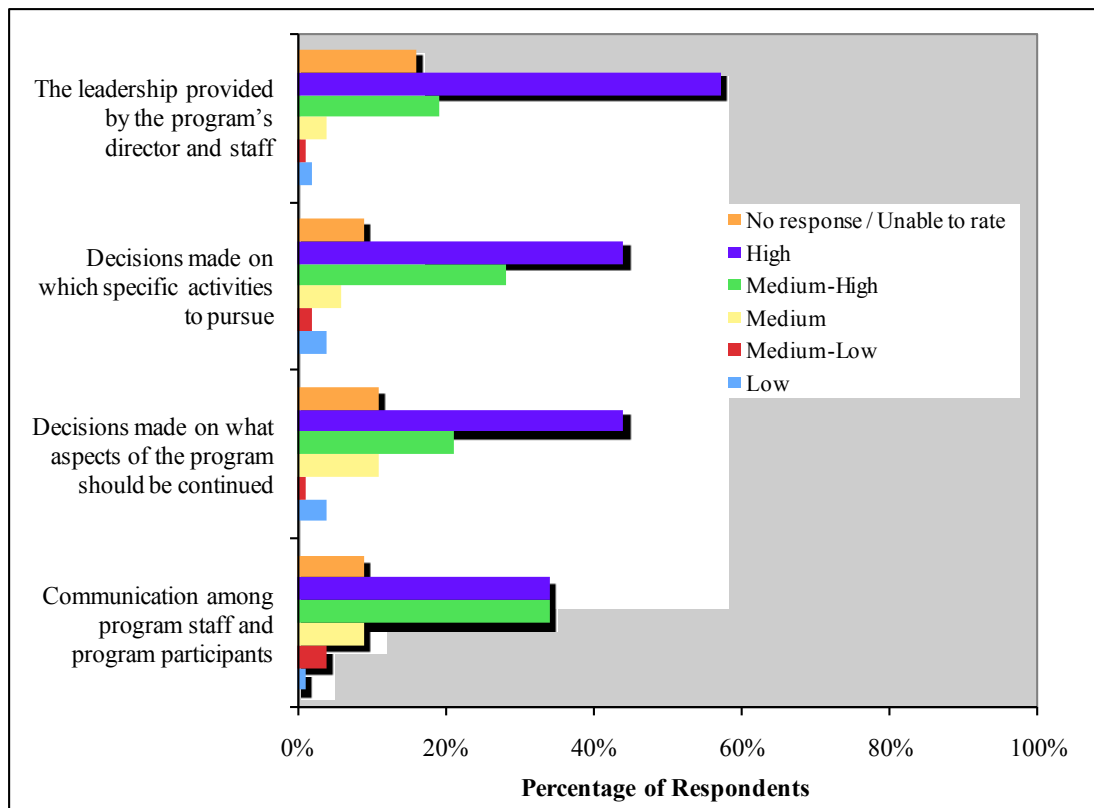


Figure 4.5
Stakeholder Quality Ratings for ABI Activity Areas (n=140)



As shown in Figure 4.6, the majority of stakeholders rated the quality of ABI administration as medium-high or high. Respondents rated the leadership provided by the program’s director and staff highest, with more than three-quarters (76 percent) rating it as medium-high or high quality. Respondents believed that ABI administration has made high-quality decisions on which specific activities to pursue (72 percent) and on what aspects of programs should be continued (65 percent). The quality of communication among program staff and program participants was also rated medium-high or high by responding stakeholders (68 percent).

Figure 4.6
Stakeholder Quality Ratings of ABI Administration (n=140)



The survey also queried stakeholders about collaboration with other tobacco settlement programs. Forty-eight percent of responding stakeholders believed that ABI collaborates with other ATS programs a great deal, while a few respondents reported that ABI does not collaborate. Some respondents (39 percent) were aware of other ATS programs; however, very few were involved with them.

In terms of ABI’s future direction, most respondents (65 percent) believed that ABI should expand and do more. Some of the survey respondents made specific suggestions for ABI, such as improving its current procedures for awarding funding and increasing accountability for those receiving funding. Finally, many of the respondents who believed that ABI should continue with its current level of activity identified financial resources and allocation as a reason not to expand. They commented that if ABI receives additional funding it should expand but if funding remains at current levels the program should not expand.

OUTCOME EVALUATION

As with COPH, the outcome evaluation for ABI focuses on the impact of ABI’s funded research. Using the methodology described in the preceding chapter, we analyzed the journal impact factor rankings for ABI publications in peer-reviewed journals.

Key Findings: For the 2007–2008 academic year, the publication of ABI’s research findings in scholarly journals decreased in both quantity and quality from the preceding year. Both the total number of publications and the number of articles in the top journals decreased for the 2007–2008 academic year.

The quantity and quality of publications in peer-reviewed journals resulting from ABI research did not continue to improve in 2007-2008 (Table 4.11). As shown in Table 4.6, ABI increased the total number of research publications. However, the number of journal articles actually decreased from 328 in 2006–2007 to 306 in 2007–2008. Further, the number of articles in journals with a top-five subject ranking dropped from 90 in 2006–2007 to 67 in 2007–2008, a statistically significant decrease. Given the reduced number of publications, ABI leadership may want to explore the reasons for the decline to find ways to intensify ABI’s publication efforts in the coming years.

Table 4.11
Journal Impact Factor Rankings for ABI Publications

| Ranking | 2002–2003 | 2003–2004 | 2004–2005 | 2005–2006 | 2006–2007 | 2007–2008 |
|----------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Top five | 18 | 32 | 52 | 65 | 90 | 67 |
| Six through 10 | 13 | 8 | 33 | 50 | 35 | 29 |
| Below 10 | 40 | 38 | 107 | 118 | 168 | 151 |
| Not ranked | 19 | 31 | 55 | 33 | 35 | 59 |
| Total | 90 | 109 | 258 | 265 | 328 | 306 |

NOTES: Ranks based on highest within-subject ranking of JIF for each published article. The ranking analysis for 2005–2006, 2006–2007, and 2007–2008 is based on a 40-percent random sample of articles listed in the ABI annual reports and rescaled to reflect total publication activity.

SUMMARY AND RECOMMENDATIONS

ABI’s efforts focus on research and collaboration among its member institutions. For the most part, the number of research projects in the five target research areas decreased or stayed the same during 2008–2009 compared with prior years. However, ABI saw substantial increases in total research funding, to a total of \$64.5 million in FY2009. The ratio of extramural funding to ABI funding has increased substantially in the past two years and now stands at 7:1. ABI has also increased the number of collaborative research projects led by the member institutions to 64 such projects in FY2009. ABI’s other activity area encompasses its efforts to disseminate research results. Since FY2007, ABI increased the number of publications, lectures, and seminars, although in-person media contacts and press releases were similar to prior levels. Looking at the program’s policy context, ABI’s stakeholders were quite involved in its research and collaboration efforts and perceived its research as high quality. While most stakeholders believed that ABI had been effective in reaching its goals, there was also consensus that ABI should expand its efforts. Our assessment of the impact of ABI’s funded research found that the

total number of publications and the number of articles in top journals decreased for the 2007–2008 academic year.

Below, we present three recommendations that come out of our most recent evaluation process.

- **Strengthen efforts to foster collaboration among ABI institutions.**

Establishing greater collaboration is a key component of the success of ABI. We recommend that ABI strengthen its efforts to foster collaboration among its member institutions, especially those with less research infrastructure. Collaboration among the five member organizations has shown growth and potential since ABI's inception. This collaboration should continue, with opportunity focused on those member organizations having less-developed research portfolios in order to capitalize on the increasing number of funding opportunities from federal agencies that require interdisciplinary approaches. It should be noted that successful collaboration may result in fewer total publications as researchers work together more systematically.

- **Continue to obtain grant funding at a level that can support the infrastructure that has been established at the member institutions.**

We recommend that ABI continue to aggressively seek out grant funding at a level that can support a higher infrastructure at all five of its member institutions. The existence of ABI has benefited all the member institutions. Continued funding for research will contribute to the growth of individual member institutions and ABI as a whole.

- **Focus on sustainability at each ABI institution by increasing external funding.**

Not all ABI institutions are equivalent in their reliance on ABI funding. As economic times become less certain, it is important that ABI look to its future as a sustainable institution. To the extent possible, ABI leadership and direction should encourage those ABI institutions that rely most heavily on the tobacco settlement funds to focus on increasing their external funding in order to create a more self-sustaining budget.

Chapter 5

Delta Area Health Education Center

This chapter summarizes the results of our evaluation of Delta AHEC. In the first section, we provide an update on each activity area, including goals, process indicators, and intermediate outcome indicators. The program's cost indicators are presented in the second section, and the results of the policy evaluation appear in the third section. Delta AHEC's outcome indicators are discussed in the fourth section. The fifth section summarizes our findings and provides recommendations for Delta AHEC.

PROGRAM DESCRIPTIONS AND UPDATE

The Area Health Education Center (AHEC) program is under the umbrella of UAMS's Regional Program. In total, there are eight AHEC areas across Arkansas. The centers are intended to provide health care training to rural and underserved areas and to deliver services to these areas directly. The Initiated Act provided funding to UAMS to create the Delta AHEC in 2001. The Delta AHEC primarily serves seven counties in eastern Arkansas: Crittenden, St. Francis, Lee, Phillips, Monroe, Desha, and Chicot; in this reporting period, the Delta AHEC also provided services in 20 other counties in the state. Delta AHEC's main office is in Helena, with a staff of 25, and its satellite offices are in West Memphis (Delta AHEC North) and Lake Village (Delta AHEC South) with staffs of 10 and 3, respectively. In January 2008, the City of Lake Village donated a facility that opened in August 2008 as the Chicot Memorial Hospital/Delta AHEC South Community Outreach Center. The center houses a fully equipped workout facility, a group exercise room, an educational outreach center, a computer lab, classrooms, and a kitchen. Additionally, Delta AHEC welcomed the opening of the Chicot Memorial Hospital in Motion model health screening unit, which travels to churches and businesses to provide screening for diabetes, hearing loss, obesity, high blood pressure, osteoporosis, depression, memory loss, and other chronic diseases. These facilities have expanded the Delta AHEC's capacity to reach Arkansans in the Delta.

The Initiated Act states that the Delta AHEC should deliver the same services as the other facilities in the UAMS AHEC program, including training students in the fields of medicine, nursing, pharmacy and various allied health professions, and offering training to medical residents specializing in family practice. The act suggests that the training should emphasize primary care, covering general health education and basic medical care for the whole family. Since its inception, the Delta AHEC has used Tobacco Settlement funds for efforts in two activity areas: (1) to increase access to health care through recruiting and training health students and professionals to provide care to Delta residents; and (2) to provide services to communities and clients throughout the Delta region. The Delta AHEC has roughly three dozen active programs, which run throughout the year. This section highlights particular programs that illustrate the efforts in each activity area and demonstrate progress within each area during fiscal years 2008 and 2009. The programs highlighted below were selected because of their importance to Delta AHEC's overall mission, the amount of funds they require for operation, or the number of participants they reach. We discuss the current status of each activity area below, including any associated process or outcome indicators.

Services That Increase Access to Health Care Through Recruiting and Training Health Students and Professionals. The Delta AHEC has always focused on increasing access to primary care providers in underserved communities. Over the years, it has employed many strategies for training or recruiting health professionals with varying levels of success, including one-month family medicine residency rotations programs, rural preceptorships, and senior selectives. Our prior evaluation reports noted the difficulties these strategies have encountered because of the loss of funding for the Delta pre-health professions recruiter position. Without funding for this position, efforts to bring a full family medicine residency program to the area had stalled. At the same time, the Delta region lacks the volume of patients needed to support such a program. Other efforts to support recruitment and training of health students and professionals have included supporting advanced nursing degrees, medical student rotations, and programs that aim to increase interest in health professions among high school and undergraduate students. Below, we provide an update on selected activities related to training health students and professionals.

Recruitment of health professionals. During 2009, the Delta AHEC reexamined the goals and indicators for all its activity areas and revised or updated them to better align with its current efforts. In the recruitment area, Delta AHEC does not have the influence necessary to recruit students or professionals to the area. Thus, tracking the number of professionals recruited does not accurately reflect Delta AHEC's work in this area. As a result, RAND will now track participation levels for programs provided to health students and professionals. These programs are indicative of Delta AHEC's efforts to increase interest in the medical profession and to expose the next generation of medical professionals to health care in the Arkansas Delta. Recently, an obstetrician/gynecologist who had completed a preceptorship and senior selective through the Delta AHEC opened a practice in Helena.

K–12 and College Programs. During 2008 and 2009, the Delta AHEC renewed its emphasis on programs that expose high school and undergraduate students to careers in the health professions. The Delta AHEC served a total of 641 and 1,197 students through these programs during 2008 and 2009 (Table 5.1). Programs for K–12 students included Medical Application Science in Health (M*A*S*H), Med Pro Ed, and Health Careers.

The M*A*S*H program, for tenth through twelfth graders, is a two-week program during which students learn CPR, first aid, dissection skills, and also shadow a variety of health professionals. To assess the outcomes from this program, RAND asked the Delta AHEC to access statewide AHEC survey data on student matriculation into health professions to see whether the students who participated in the M*A*S*H program pursue health professions. These analyses, which were run for 2001–2008, included data collected in the year following participants' high school graduation. The survey asked if the students were currently enrolled in college or a school for health professions and whether or not they chose a science or health-related major field of study. Based on these data, 61 percent of those who had participated in the M*A*S*H program were studying in a health-related field or majoring in science. Although students with an interest in medical professions are those likely to pursue such an option, the results are promising and suggest that a high percentage of M*A*S*H program participants do indeed go into health professions. However, unless participants systematically report their entry into college and further their pursuit of a medical career, the full impact of this program will not be known.

K–12 students also participated in Med Pro Ed, taught by Delta AHEC staff, which affords high school students an opportunity to earn college credits for health-related courses. Participation numbers for this program were not collected separately and were instead combined with Comprehensive Health Education for Adolescents & Health Careers.

Table 5.1
Program Participation by Health Students and Professionals, by Fiscal Year

| Program | 2005 | 2006 | 2007 | 2008 | 2009 |
|--|--------------|--------------|--------------|--------------|--------------|
| K–12 programs/college program participants | 538 | 159 | 573 | 641 | 1,197 |
| Medical school program participants | 7 | 13 | 3 | 11 | 7 |
| Nursing program participants | 16 | 19 | 20 | 14 | 12 |
| Continuing education for health care professional program participants | 76 | 466 | 483 | 567 | 868 |
| Medical library encounters for health practitioners | 388 | 343 | 282 | 555 | 586 |
| Medical library encounters for students/residents | 1,136 | 430 | 604 | 586 | 601 |
| CPR for professionals program participants | 1 | 11 | 46 | 97 | 191 |
| Totals | 2,174 | 1,441 | 2,001 | 2,473 | 3,455 |

Medical School Programs. Delta AHEC’s programs for medical students include preceptorships for first- and second-year students, senior selectives for fourth-year students, and an internship program for fourth-year students. There were a total of 18 medical school participants in 2008 and 2009, representing a small increase from 2006–2007 (Table 5.1). The UAMS medical student rural preceptorship offers first- and second-year year students an experience in a rural health care setting and provides the community with a relationship that may result in a health professional permanently locating in the area. The Delta AHEC also reported building momentum in its fourth-year rural internship program, which has been an area of concern in past reports. Specifically, Washington and Lee University in Lexington, Virginia, has reestablished the Delta AHEC as a site for its Shepherd Poverty Alliance summer internship program, which places fourth-year medical students in agencies that work with the economically disadvantaged.

While six of the AHECs have family practice residency programs, Delta AHEC’s efforts to establish a residency program have not been successful. In the fourth quarter of 2008, Delta AHEC partnered with Crittenden Regional Hospital to gather more information regarding the feasibility of establishing a family practice residency program in West Memphis. The partnering institutions invited a consultant from Residency Programs Solutions to assess the feasibility. While the results were reportedly positive toward the administration, leadership, and support for such a program, the assessment confirmed that there were still issues related to patient volume, potential funding, and other concerns. In the end, the process provided additional information that could be used in such an effort in the future.

Nursing Programs. During FYs 2008 and 2009, the Delta AHEC continued its partnership with the UAMS College of Nursing to offer an Internet-based RN-to-Bachelor of Science in Nursing completion program. As in the past, clinical rotations were done locally under the supervision of an advanced practice nurse. This program was designed to be convenient for nurses who often live far from the university so that they can continue working in their hometowns yet pursue advanced degrees that will benefit them and their communities. Participation levels by students in nursing programs declined from a high of 20 in the 2007–2008 academic year to 12 for the 2009–2010 academic year (Table 5.1). Minority participation in the nursing program was only slightly lower than in years past, with African-Americans making up 23 percent of the total. There were no Hispanic nursing program participants in either two-year period. Although current levels of nurse participation are not as high as in the past, the participation numbers suggest that many of those who took advantage of the program in the past may have gone on to complete an advanced program more recently. Delta AHEC staff responded anecdotally that they were having a hard time locating additional nurses in need of the program since many with aspirations to further their nursing degree had already participated. Further, the impact of past graduates in this program is strong in the region, with past graduates working as faculty at the Phillips Community College of Nursing in positions that would have been otherwise vacant due to retirements. Other activity in this area included many nurse practitioners in different specialties (e.g., women’s health, pediatrics, family, family psychology, and nursing administration) who were supported in their studies through Delta AHEC services.

During 2008 and 2009, the Delta AHEC also continued to increase access to health care by supporting health professionals practicing in underserved areas in the Delta through an assortment of strategies, including continuing education programs, access to medical library services, and CPR training for health professionals.

Continuing education programs. Delta AHEC’s continuing education programs served 567 participants in FY2008 and 868 in FY2009 (Table 5.1). This program focuses on providing medical professionals, including nurses, nurse practitioners, physicians, pharmacists, social workers, pharmacy technicians, and health educators, with training related to their health specialties. Although Delta AHEC staff have noted difficulties recruiting participants because of other, more attractive, continuing education opportunities, the number of participants has increased more than 50 percent since the 2006–2007 biennium.

Medical library services. As part of its medical library, the Delta AHEC has for years provided an up-to-date physician information database for physicians in the region. The number of health practitioners using the medical library services has increased substantially over prior years, with 555 health practitioners using the medical library in FY2008 and 586 in FY2009 (Table 5.1). Student and resident encounter numbers were similar to FY2007, with 586 encounters for FY2008 and 601 for FY2009. This service, however, is very expensive. During 2009, Delta AHEC began replacing the existing system with a newer, less expensive one (Dynamed), which provides a similar service. The Delta AHEC librarian has traveled to seven hospitals and several private practices educating physicians about the new system, which will be used in the future.

CPR training for health professionals. The Delta AHEC has continued to provide CPR trainings for health professionals. This service is offered to health professionals at a cost of \$50, which is a savings to participants. Additionally, participants would otherwise have to travel 1–2

hours to Little Rock, Memphis, or Forrest City to receive CPR training. This program grew dramatically with 97 participants in FY2008 and 191 participants in FY2009.

Services to Communities and Clients Throughout the Delta Region. In addition to training and enrichment programs, the Delta AHEC also increased access to health care by providing services and programs directly to consumers. These programs included in-house services to assist clients in getting their prescribed medications, health screenings, and access to technology to provide care remotely through telemedicine. Table 5.2 provides details on the number of participants for a range of services providing by Delta AHEC. Below, we provide an update on progress, changes, and process and outcome indicators for a selection of them.

Table 5.2
Delta AHEC Program Encounters, by Fiscal Year

| Program | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---------------|---------------|---------------|---------------|----------------|
| Community health screenings | 4,850 | 3,872 | 1,905 | 2,581 | 3,849 |
| Diabetes education | 316 | 356 | 1,278 | 3,173 | 2,326 |
| Prescription assistance | 154 | 108 | 238 | 719 | 1,889 |
| Asthma education | 103 | 231 | 539 | 134 | 172 |
| Comprehensive health & nutrition education for adults | 632 | 245 | 536 | 860 | 2,471 |
| Comprehensive health education for adolescents | 7,148 | 6,085 | 3,352 | 4,124 | 3,676 |
| Health education for children | --- | --- | --- | 1,262 | 2,966 |
| CPR for consumers | 470 | 493 | 532 | 358 | 462 |
| Exercise programs (not Helena) | 5,393 | 7,768 | --- | 4,181 | 8,937 |
| Fitness center encounters | --- | --- | 26,089 | 27,913 | 43,928 |
| Fitness center paid memberships | --- | --- | --- | 1,625 | 2,171 |
| Geriatric education | 1,699 | 810 | 200 | 8 | 16 |
| How healthy is your faculty? | 80 | 281 | 790 | 114 | 267 |
| How healthy is your industry? | 65 | 56 | 833 | 555 | 263 |
| Kids for health | 3,903 | 9,184 | 6,878 | 13,250 | 22,204 |
| Nutrition Education | 926 | 1,504 | 399 | 538 | 1,416 |
| Prenatal/healthy and teen parenting: West Memphis | 382 | 1,679 | 2,014 | 2,058 | 988 |
| Sexually transmitted infection education | 139 | --- | 566 | 687 | 237 |
| Sickle cell Project | 38 | 186 | 951 | 2,815 | 2,596 |
| Substance abuse prevention | 260 | 283 | 67 | 27 | --- |
| Tobacco prevention and cessation programs | 670 | 1,364 | 1,390 | 2,307 | 2,740 |
| Total encounters | 27,228 | 34,505 | 48,557 | 67,664 | 101,403 |

NOTES: Programs that appear in bold in the table are described in more detail below. Missing data were either not available or not reported.

Community Health Screenings. The Delta AHEC offers health screenings as a component of many of its health services and programs. Health screenings include cholesterol, glucose, and blood pressure checks. Further, fitness screenings (e.g., Body Mass Index, weight, body fat, blood pressure, cholesterol, and blood sugar) are either a part of many of the fitness services or can be requested by fitness center members and program enrollees and used to benchmark and monitor progress. The on-site screenings enable participants to use multiple services or programs under one roof and to receive more-regular updates on their health status and progress. The Delta AHEC doubled the number of community health screenings it conducted, from just over 1,900 in FY2007 to more than 3,800 in FY2009 (Table 5.2). During 2008–2009, Delta AHEC’s fitness screenings have resulted in 1,533 total pounds lost and 389 total inches lost. A total of 128 participants lowered their blood pressure, and five had lowered cholesterol and blood sugar. Other chronic disease screenings are also available, including for diabetes, sickle cell disease, and HIV/AIDS. From January 2008 to June 2009, the Delta AHEC provided 6,430 health screenings.

Diabetes Education. With support from the Delta Regional Authority, the Delta AHEC was able to expand its Diabetes Education Clinic in 2008 and 2009 with additional staff and teaching tools for the prevention and management of Type 2 diabetes. This program is staffed by a registered nurse and a family nurse practitioner who provide group and individual sessions. Clients can also receive services from other professionals, including a pharmacist and a dietitian. Encounters in the diabetes education program increased dramatically, from 1,278 in FY2007 to 3,173 in FY2008 and 2,326 in FY2009 (Table 5.2).

The Delta AHEC has continued to collect and analyze data to assess the impact of its diabetes education program. As in past reporting periods, the participants in the diabetes program allowed the Delta AHEC staff to draw blood to analyze the percentage of A1c. Blood was drawn at multiple visits, with the average length of time between the first and most recent visits being 51 weeks. Delta AHEC continued to follow the National Diabetes Quality Improvement Alliance recommendation that an A1c below 9 percent be used to indicate high quality of care and the American Diabetes Association recommendation that an A1c of 7 percent be used to indicate glycemic control. Findings from these analyses are reported here. Of the 192 patients with A1c measurements for two or more clinic visits, 47 percent experienced a drop of more than 0.5 percent, (average A1c dropped from 8.8 to 6.3 percent). Eighty percent of patients had A1c measures lower than 9 percent at their first visit; that percentage increased to 89 at the most recent visit. Similarly, the number of patients who showed evidence of controlling their glycemic levels (A1c of less than 7 percent) increased from 46 percent at the first visit to 52 percent at the second visit.

Prescription Assistance. The goal of the Prescription Assistance program is to help uninsured and low-income patients obtain prescription medications at a low or no cost. Through this program, the Delta AHEC assists clients with paperwork and enrollment and helps them to navigate the complicated system. The program consisted of three parts:

1. Working with public and private insurance, including Medicare and Medicaid
2. Working with pharmaceutical companies to provide long-term assistance to qualifying clients
3. Providing vouchers to local pharmacies to pay for medications for clients who are in immediate need.

The Helena Health Foundation also supports the program by giving Delta AHEC \$5,000 to be used for emergency vouchers for clients who qualify. Participation in this program increased sharply, with the number of participants rising from 238 in FY2007 to 719 in FY2008 and 1,889 in FY2009 (Table 5.2). This increase was in spite of staff difficulties that left the program without staffing for a period of two months in 2009 because of a staff firing and the UAMS hiring freeze. Delta AHEC reported that the program saved clients an average of \$642 each year.

How healthy is your faculty/industry? The How Healthy is Your Faculty program focuses on providing school staff in Lee, Phillips, Monroe, and St. Francis Counties with free health screening (pre- and post-tests) for cholesterol, blood pressure, and glucose. Participants with positive screens are referred to their local physicians. Delta AHEC provides counseling and follow-up. Participants who are near the Helena location are also given information on other support services that could be beneficial to them. The How Healthy is Your Industry? program works in the same way, focusing on workers in areas businesses (e.g., Wal-Mart, banks, chemical companies, and other local businesses). Participation in both programs decreased from around 800 encounters for each program in FY2007 to approximately 270 encounters for FY2009 (Table 5.2). This decrease may be the result of several factors. First, in 2008 and 2009 there were reportedly fewer faculty members than there had been in the past to assist by conducting screenings. Additionally, in past years, screeners traveled to other counties, while in this reporting period screening was primarily conducted locally. Second, the How Healthy is your Faculty? program has been operating in the same schools for many years. Delta AHEC staff reported that faculty members are now saying that they have had their screenings done already or have been to other places for screening and therefore do not need another screening through the program. At the same time, many Delta Schools are under academic distress, leaving teachers so busy that they reportedly cannot leave the classroom to attend the program. Scheduling challenges in the industry arm of this program during 2008 and 2009 also led to a reduction in encounters.

Kids for Health. Kids for Health is a health education program for kindergarten through grade 6. Delta AHEC purchased the program and obtained the certification to enable staff to teach the curriculum. The program meets the state standard for health education and fulfills the physical education requirement for classes in which it is conducted. The course involves one 30-minute session per week for each classroom. The video-driven program includes pre- and post-test of knowledge. The content is presented and reinforced through games and activities in different areas, including “Myself,” “My body,” “Hygiene,” “Exercise,” “Drug use,” “Safety,” and “Tobacco use.” The program is conducted for ten weeks in grades K–4 and for five weeks in grades 5 and 6. This program has grown into one of Delta AHEC’s largest, with encounters reaching 22,204 for FY2009, representing a threefold increase from FY2007.

As it did for the last evaluation report, the Delta AHEC provided RAND with analyses of pre- and post-program tests for children in grades K–3 and in grades 4–6. The tests indicate that the program is increasing the health knowledge and reducing the smoking intentions of participating children, especially children in grades K–3. In the most recent school year for which data were available (2008–2009), the average health knowledge score for children in grades K–3 significantly increased for three of the five participating schools. In terms of health behaviors, the program-level data indicate that there were significant changes in positive health behaviors for children in grades 4–6 at only one of the three schools.

Fitness Center and Exercise Programs. It has been three years since the Delta AHEC opened its 31,000-square-foot facility (Dr. P. Vasudevan Wellness Center), owned by the Helena Health Foundation. The building houses a wellness/fitness center, an indoor track, a medical library, four classrooms, a 100-seat auditorium/multipurpose room, a four-room clinic, a kitchen, a conference room, 25 offices and a trail with two playgrounds and fitness stations. The Delta AHEC leases space at a cost of \$350,000 per year. Membership is \$25 a month with a payment scale that slides down to \$5 a month. During the 2008–2009 biennium, the fitness center brought in \$191,727.53 in membership fees. As added benefit, the Delta AHEC rents out the facility for local community use. Total income for the 2008–2009 biennium from these types of short-term rentals was \$17,597.50.

The Delta AHEC has substantially increased its number of fitness center encounters (Table 5.2). After a more modest increase from FY2007 to FY2008, the number of encounters increased by 57 percent to 43,928 from FY2008 to FY2009. The Delta AHEC administrative staff works to make its fitness center facilities accessible by offering a wide array of services for a range of ages at a price that is affordable to most residents. Members enjoy unlimited use of the equipment and exercise classes and a free walking trail membership. Classes include Yoga, aerobics, tai chi, Pilates, spinning, and gymnastics classes for children. Despite reservations about the ability to increase membership, the center's paying membership increased from 1,625 in FY2008 to 2,127 in FY2009. In 2008, racial minorities comprised 40 percent of the total memberships. The Delta AHEC engaged in a number of different outreach activities in 2008 and 2009, including offering a number of free one-month memberships to potential members. It planned to expand this opportunity to professionals (e.g., nurses, teachers) who may come to the fitness center and later learn about opportunities provided through Delta AHEC's other services or even from participants in other programs who would benefit from the fitness center (e.g., diabetes and tobacco cessation program participants).

For its senior fitness and exercise programs, Delta AHEC staff work with AAI to develop age- and ability-appropriate workout programs for seniors. Exercise classes offered to seniors include Peer Exercise Program Promotes Independence, cosponsored by the Arkansas Department of Health, Tai Chi, Forever Fit, Silver Sneakers, and an afternoon dance class. Satisfaction and evaluation surveys collected from the center's senior patrons are used to inform program planning and equipment purchases. On these surveys, the senior participants report benefits ranging from improved blood pressure to better performance in the activities of daily living.

As part of its program offerings in Helena, Delta AHEC conducted its Body Battle program again in 2008 (n = 108) and 2009 (n = 52). This program offers weekly educational sessions on diet and nutrition, as well as exercise tips, incentives, and encouragement. The educational sessions fit soundly within the Delta AHEC mandate and were designed to increase an individual's knowledge about healthy foods and maintaining healthy lifestyle changes after the program ends. Body Battle members earn points for completing each of the three activity parts (weight loss, exercise, educational/fitness class session attendance). Delta AHEC provided incentives for participants, including a \$25 gas card given to the top female and male winners each week. The top three male and female winners at the end of the eight-week program received cash prizes totaling \$850.

To assess outcomes from this program, Delta AHEC analyzed participant data and learned that Body Battle participants visited the fitness center an average of 35 times in FY2008

and 48 times in FY2009. On average, participants decreased their body mass index by 8.4 points in FY2008 and 7.8 points in FY2009. Because of the card scanning system used to track membership and usage, the Delta AHEC has the capacity to compare fitness center usage of Body Battle participants with nonparticipants. Delta AHEC has agreed to analyze these data in the future so that a comparison-group methodology can be used to further assess the program’s impact.

We used de-identified electronic weekly records of Body Battle program participants to measure total weight loss. Although the body battle challenge still has positive impact on the participants’ weight, we found that there were significant reductions both in the total number of participants and in the percentage of participants who had considerable weight loss. The percentage of participants who lost more than six pounds showed a significant decrease from 75 in 2007–2008 to 49 in 2008–2009, and the percentage of participants who lost more than six pounds also significantly decreased from 25 to 13 (Table 5.3).

Table 5.3
Weight Loss for Participants of the Body Battle Challenge

| | 2007–2008 | 2008–2009 | P Value |
|--|------------------|------------------|----------------|
| Percentage of participants who lost more than six pounds | 75 | 49 | <0.001 |
| Percentage of participants who lost more than six pounds | 25 | 13 | <0.001 |
| Total number of participants | 107 | 53 | N/A |

Tobacco Prevention and Cessation Program. This program provides participants with information, counseling, and pharmacological support to either quit smoking or never start. The 2,307 encounters in FY2008 and 2,740 in FY2009 exceeded encounters for the 2006–2007 biennium by more than 25 percent (Table 5.2). Further, there is reportedly a waiting list for the prevention arm of the program. Analyses of the Delta AHEC’s evaluation surveys revealed that 18 percent of participants were able to quit smoking within four weeks of starting the program in FY2008 and 13 percent in FY2009. While this four-week quit rate does represent a success for those who were able to quit, the program’s quit rate appears to be low when compared with other cessation programs.¹

Telemedicine. In 2008, the Delta AHEC assisted with patient follow-up visits to a UAMS cardiologist through telemedicine technology that allows the doctor to consult with patients from miles away. Though the program has started on a small scale, with a total of less than ten patients at the time of the writing of this report, the value of this service is potentially critical to areas, such as the Delta, that have limited ability to draw specialists to build local practices. Cost data were not available. However, this would be an interesting program to monitor in the future for cost versus benefit. As use of this service continues and grows, it will be included in future reports.

¹ R. West. Assessing smoking cessation performance in NHS stop smoking services: The Russell Standard (Clinical), Version 2, April 2005.

Progress Toward Achieving Program Goals. Delta AHEC’s strategic plan includes programmatic goals for each activity area. Each area, stated simply, has the goal of increasing participation. These goals are used to track progress for the RAND evaluation. Table 5.4 summarizes Delta AHEC’s progress toward its goals in each activity area for the two-year reporting period.

**Table 5.4
Delta AHEC Goals and Status over the Past Two Years**

| Goal | Status |
|--|--|
| Services to Increase Access to Health Care | |
| Increase participation in activities related to recruiting and training health students and professionals (NEW). | ACCOMPLISHED. Across the seven types of program in this category, five showed an increase in participation in this two-year period over the last. Growth in these five programs follows from Delta AHEC’s efforts to reach out to professionals and provide the types of educational opportunities they need. The medical school program maintained its participation levels while the nursing program experienced a decline in participation. There are adequate explanations for the lack of growth for the other programs. |
| Services to Communities and Clients | |
| Increase participation in services to communities and clients across the Delta region (NEW). | ACCOMPLISHED. Participation in programs and services increased by an average of 50 percent during FY2008–2009. Of the 19 programs with encounter information, 12 saw increases in encounters from FY2007. The programs with the largest increases included Kids for Health, Community Health Screenings, Diabetes Education, and Prescription Assistance. |
| Partner with tobacco programs to help each other meet program goals (NEW). | IN PROCESS. This is a new goal for Delta AHEC. Delta AHEC has made some progress through its partnership with AAI related to the Geriatric Education program. This partnership can be expanded and new ones developed to help Delta AHEC reach this goal for the next reporting period. |

COST EVALUATION

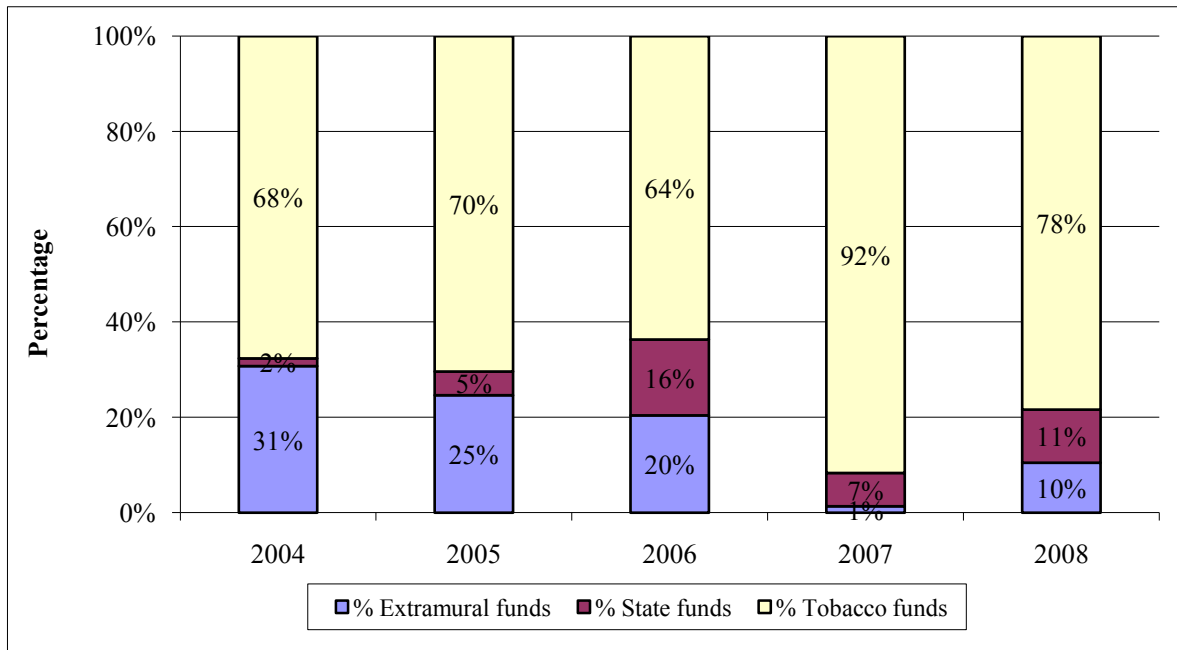
Our spending analysis examined the total annual tobacco settlement funds received and spent by Delta AHEC from FY2005 through FY2009 (Table 5.5). There was a 76 percent decrease in operating costs from FY2005 to FY2006 because 2005 was the year in which the new facility was built and outfitted with furniture and supplies. In 2006 the building opened and there was not a large outlay of funds. Operating costs increased in FY2007, with average spending in FY2007–2009 consistent with the level of spending for operating costs prior to 2006.

**Table 5.5
Tobacco Settlement Funds Received and Spent by the Delta AHEC, by Fiscal Year**

| Item | 2005 | 2006 | 2007 | 2008 | 2009 |
|-------------------------------|-------------|-------------|-------------|-------------|-------------|
| (1) Regular salaries | \$1,118,850 | \$990,676 | \$939,399 | \$939,162 | \$1,220,394 |
| (2) Personal service matching | 280,010 | 253,675 | 240,362 | 245,047 | 325,884 |
| (3) Maintenance & operations | | | | | |
| (A) Operations | 383,178 | 91,609 | 595,724 | 418,236 | 270,171 |
| (B) Travel | 9,706 | 8,479 | 6,458 | 4,613 | 2,272 |
| (C) Professional fees | 0 | | | | |
| (D) Capacity outlay | 124,365 | 20,261 | 35,579 | 2,974 | 0 |
| (E) Data processing | 0 | | | | |
| Total spent | \$1,916,109 | \$1,364,700 | \$1,817,522 | \$1,610,032 | \$1,818,721 |
| Total received | \$1,916,109 | \$1,364,700 | \$1,817,522 | \$1,610,032 | \$1,818,721 |

The Delta AHEC has three streams of funding: Tobacco Settlement funds, grants and donations, and general state funds. From FY2005 through FY2009, tobacco settlement funds accounted for the largest portion of overall spending, representing about two-thirds of Delta AHEC’s overall spending during FY2008 and FY2009 (Figure 5.1). Delta AHEC continues to try to use these funds to leverage funding from extramural sources such as grants, donations, and fees for service. After a steep decline in FY2007, the percentage of Delta AHEC’s spending from extramural funds increased to 10 percent in FY2008. General state funding has accounted for between 2 and 16 percent of spending over the past five years.

**Figure 5.1
Percentage of Delta AHEC Budget from Tobacco Settlement Funds, by Fiscal Year**



Another way to examine the Delta AHEC’s spending is to look at how spending is distributed across the two primary activity areas. Over the past two years, the spending was fairly consistently divided between the two, with the vast majority going to service provision (Table 5.6). This information will serve as a baseline for future analysis.

**Table 5.6
Tobacco Settlement Funds Spent by the Delta AHEC, by Activity Area**

| Activity Area | FY2008 % of Total | FY2009 % of Total |
|---|------------------------------|------------------------------|
| Recruiting and training health students and professionals | 14 | 15 |
| Services to communities and clients | 86 | 85 |

We also looked at average spending for each participant or encounter for each Delta AHEC program for FY2008 and FY2009. Within the recruiting and training activity area, unit costs for the medical and nursing school programs were relatively high in FY2009 (Table 5.7). With the purchase of a less expensive database system, unit costs for the medical library decreased to \$73 per participant. For continuing education, the unit cost of \$32 per participant includes students, residents, and health practitioners. Delta AHEC’s CPR program had unit cost of \$227 per participant in FY2009. Unit costs for Delta AHEC’s services and activities for communities and clients ranged from \$1 per participant for the sex education program to \$102 per participant for the diabetes education program in FY2009. Delta AHEC plans to use this baseline unit cost information to track fluctuations over time and to monitor the efficiency of its staff time and effort.

Table 5.7
Delta AHEC Unit Costs by Program, by Fiscal Year

| Program | 2008 | 2009 |
|--|-------------|-------------|
| Recruiting and training health students and professionals | | |
| K–12 programs/college program participants | \$91 | \$60 |
| Medical school program participants | \$201 | \$1,922 |
| Nursing program participants | \$1,580 | \$1,895 |
| Medical library encounters for students/residents and health practitioners | \$93 | \$73 |
| Continuing education for health care professional participants | \$22 | \$32 |
| CPR for professional participants | \$321 | \$227 |
| Services to communities and clients | | |
| Community health screenings | \$12 | \$12 |
| Diabetes education | \$70 | \$102 |
| Prescription assistance | \$138 | \$37 |
| Comprehensive health & nutrition education for adults | \$91 | \$54 |
| Comprehensive health education for adolescents | \$36 | \$26 |
| Health education for children | \$56 | \$27 |
| CPR for consumers | \$108 | \$94 |
| Exercise programs (not Helena) | \$7 | \$4 |
| Fitness center encounters | \$17 | \$9 |
| How healthy Is Your Faculty? | \$213 | \$95 |
| How Healthy Is Your Industry? | \$44 | \$95 |
| Kids for health | \$3 | \$3 |
| Nutrition education | \$55 | \$22 |
| Prenatal/healthy and teen parenting: West Memphis | \$26 | \$57 |
| Sexually transmitted infection education | --- | \$1 |
| Sickle cell project | \$9 | \$6 |
| Tobacco prevention and cessation programs total | \$50 | \$46 |

NOTE: Missing data were either not available or not reported.

POLICY EVALUATION

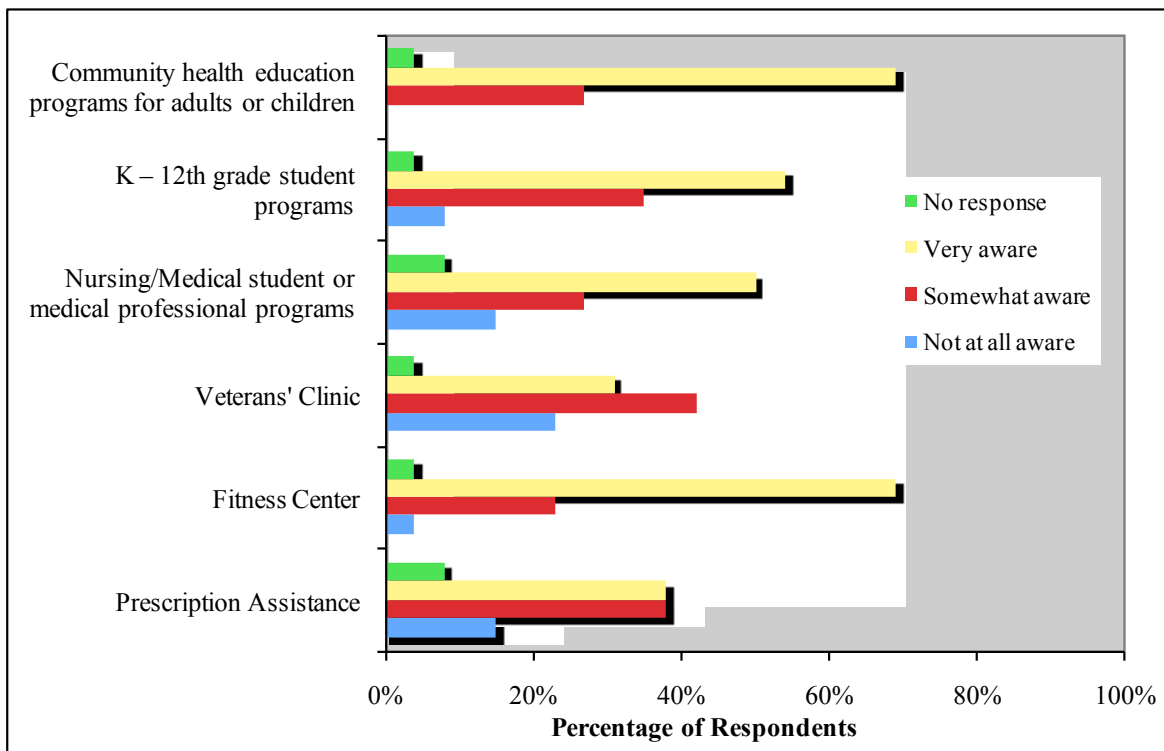
As part of the overall policy evaluation, we surveyed stakeholders for each program to assess the context in which the programs develop and conduct activities in the areas outlined above. The survey focused on how Delta AHEC’s stakeholders perceived the appropriateness and effectiveness of ABI’s goals and activities. This section summarizes results of the survey of Delta AHEC stakeholders. The targeted group of respondents included stakeholders from the Delta AHEC Advisory Board, partners from service activities, partners from education activities, and regional health professional organizations. Twenty-six of 78 stakeholders participated in the survey, yielding a response rate of 33 percent.

Most respondents became involved with the Delta AHEC before 2007, with the majority (81 percent) engaged in activities on a monthly to annual basis. Most stakeholders were participants in or attendees of Delta AHEC programs or representatives from partner agencies. A

few respondents were both program participants and members of partner agencies or board members. All stakeholders reported that they had knowledge of the goals and purpose of Delta AHEC and 69 percent of respondents believed the goals are very appropriate. Eighty-five percent of responding stakeholders rated Delta AHEC’s work as very important and believed that the program is effective in reaching its goals.

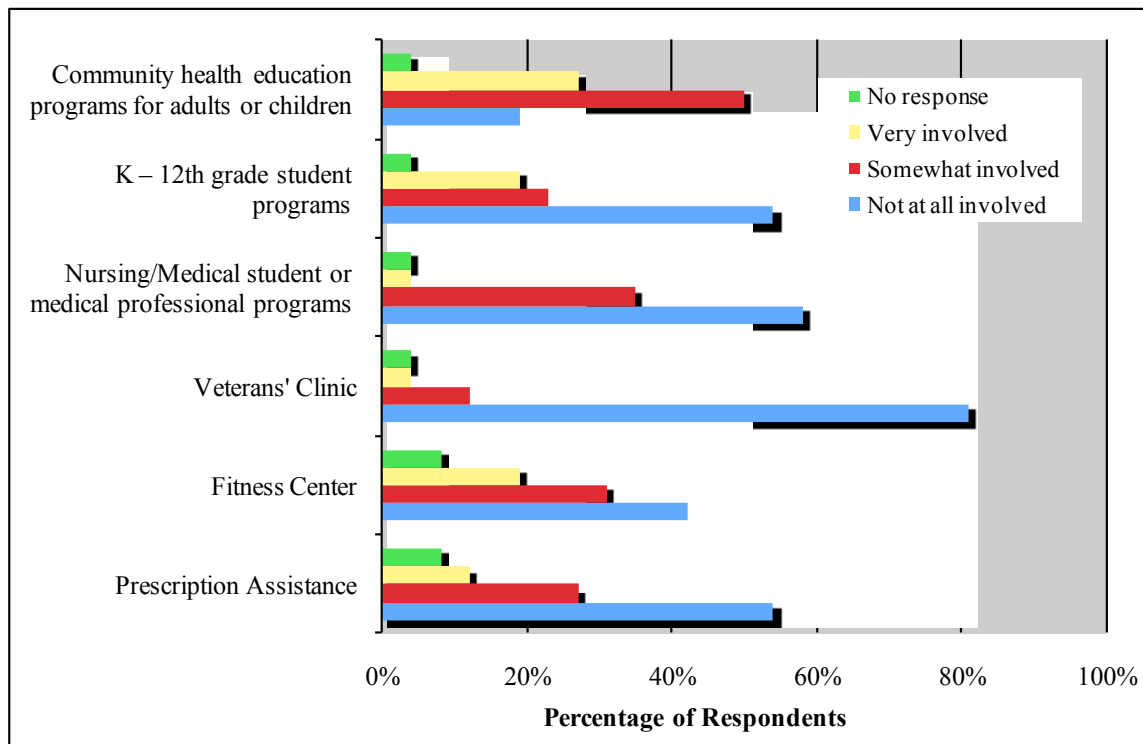
Given the broad array of programs offered by Delta AHEC, we selected a few representative ones for the stakeholder survey. Nearly all stakeholders were aware of these Delta AHEC programs (Figure 5.2). Sixty-nine percent of respondents were very aware of the community health education program for adults and children as well as the fitness center. Just over one-half of respondents were very aware of the K–12 student programs (54 percent), while somewhat fewer were very aware of the nursing/medical student or medical professional programs (50 percent) and the prescription assistance program (38 percent).

Figure 5.2
Stakeholder Awareness of Delta AHEC Activity Areas (n=26)



Stakeholders were most involved in community health education programs for adults and children, with 77 percent somewhat or very involved in these programs (Figure 5.3). Roughly 50 percent of respondents were involved in the fitness center. Fewer than half of respondents were involved in the K–12 student, nursing/medical student, or medical professional programs and the prescription assistance programs. There was less awareness among stakeholders of the Veterans’ clinic program. So it is not surprising that 81 percent of respondents were not all involved with this program.

Figure 5.3
Stakeholder Involvement in Delta AHEC Activity Areas (n=26)



Respondents most frequently rated the overall quality of programming for Delta AHEC activity areas as high (Figure 5.4). Both the community health education programs and the fitness center were rated as high-quality by over 50 percent of respondents. These activity areas also have high rates of stakeholder involvement, and stakeholders who were involved in education programs and the fitness center rated the quality of programming as high. Across the programs, average or medium ratings of quality were most often from stakeholders who were not at all involved with the program. For example, all stakeholders involved in the veterans’ clinic rated the quality of the activity area as medium-high or high while stakeholders who reported they were not involved offered ratings of medium-low and medium.

Overall, stakeholders rated the quality of Delta AHEC administration as high (Figure 5.5). Leadership provided by the program’s director and staff received a high quality rating from 69 percent of respondents. One-half of stakeholders rated the quality of decisions on which activities to pursue (58 percent) and decisions about which aspects of programs to continue (58 percent) as high. Additionally, respondents rated the quality of communication between program staff and program participants as high.

Figure 5.4
Stakeholder Quality Ratings for Activities in Delta AHEC Activity Areas (n=26)

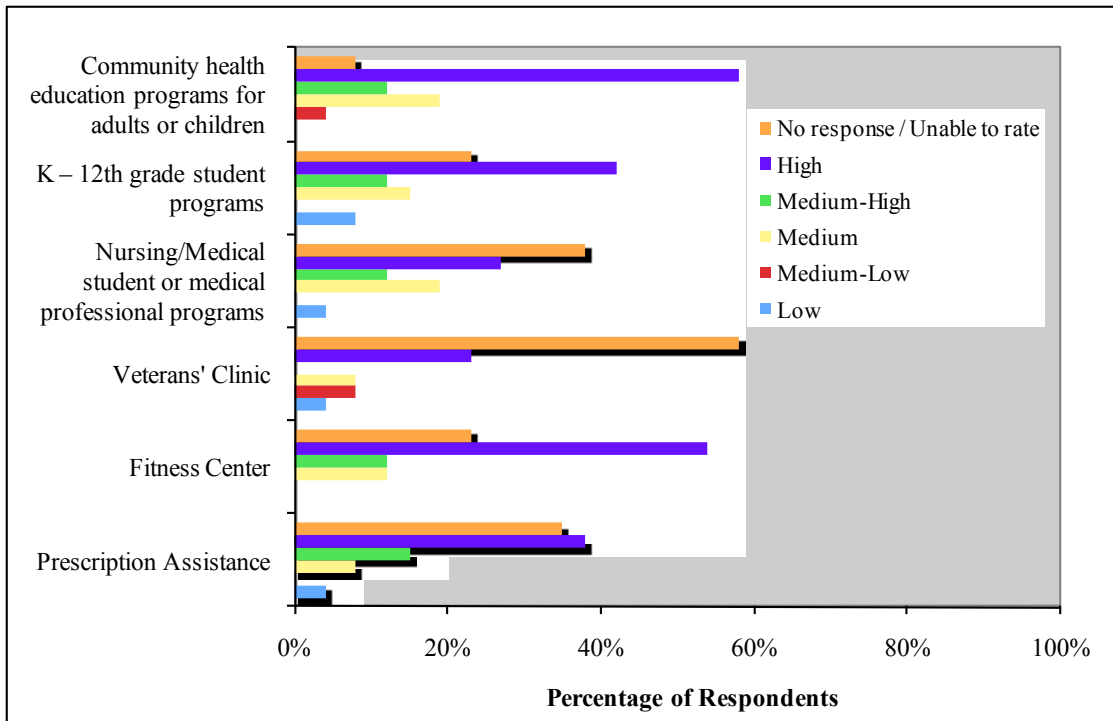
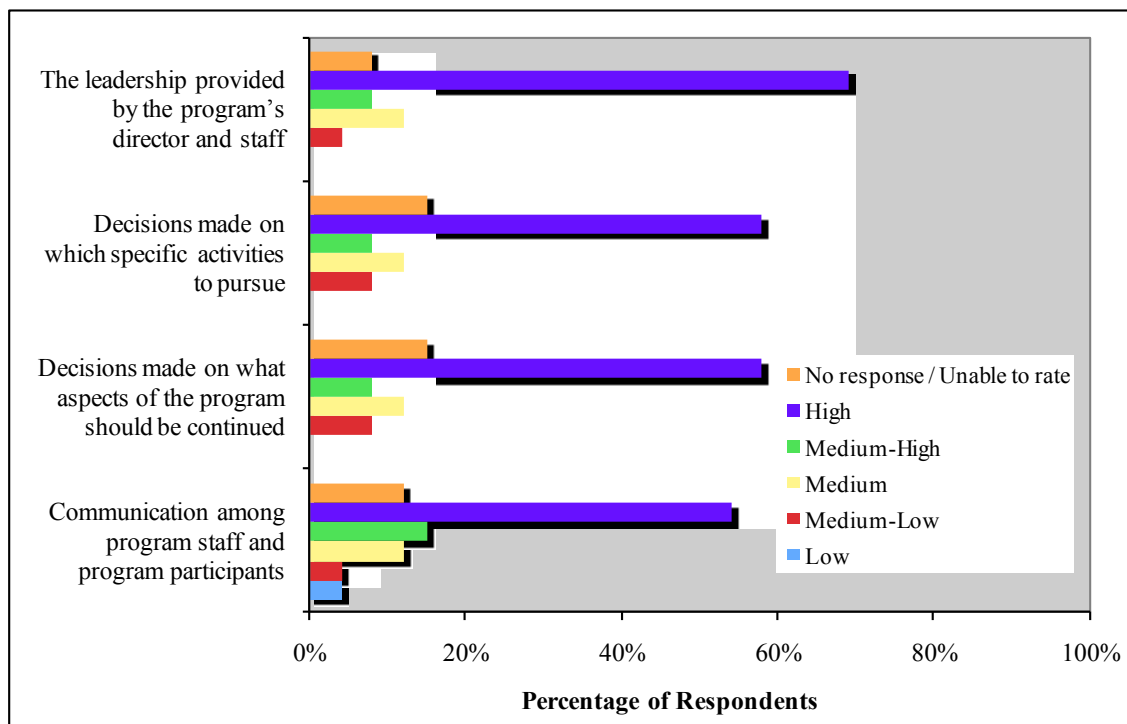


Figure 5.5
Stakeholder Quality Ratings of Delta AHEC Administration (n=26)



Collaboration among programs receiving tobacco settlement funds is a primary focus of the ATSC. Delta AHEC stakeholders were most aware of the Tobacco Prevention and Cessation Program (42 percent aware and 50 percent very aware) and the majority of stakeholders were involved in this program (71 percent). Roughly 20 percent of stakeholders were involved with the Arkansas Aging Initiative, the College of Public Health, Medicaid Expansion Programs, and the Minority Health Initiative. Stakeholders were less aware of the Arkansas Biosciences Institute, and no Delta AHEC stakeholders were involved in this program. Overall, stakeholders perceived that Delta AHEC collaborates a great deal with other ATS programs.

Finally, Delta AHEC stakeholders were divided on how the program should focus its resources in the future. Forty-six percent of survey participants suggested that the Delta AHEC should continue with its current level of activity, whereas 46 percent suggested that the program should expand. A few stakeholders offered suggestions to improve programming by providing access to the fitness center to “minority public school students [because they] have no access to the programs or activities.” In addition, they suggested that the Delta AHEC expand to “develop a special residency program for primary care physicians with an emphasis on rural medicine” and “develop an educational program for Physical Therapy and Physical Therapy Assistant[s].” One stakeholder reported that the Delta AHEC is “one of the community’s most valuable assets.”

OUTCOME EVALUATION

Analysis of Smoking Outcomes in the Delta Region

Key Finding: Contrary to earlier indications, smoking rates for adults and pregnant women are close to the baseline trend. Both of these trends should be monitored in years to come.

As we have done in previous reports, we examined whether the concentration of tobacco settlement programs operating in the Delta region has resulted in more of a change in smoking compared with other regions. In recognition of the needs in the region, the AAI, MHI, COPH and TPCP programs also have a presence in the region and support Delta AHEC’s efforts. With this analysis, we assess whether the aggregation of these health education and promotion activities leads to larger decreases in smoking rates than in the rest of the state.

As in past years, we cannot find any conclusive evidence that smoking in the Delta has changed from the pre-program baseline rates either for the population as a whole or for pregnant women. In past reports, we stated that we had found some weak evidence of deviations from baseline trends, but rates in the past two years for Delta residents do not strengthen this finding. Therefore, we cannot conclude that the aggregate effect of programming in this region has led to lower smoking rates. We continue to recommend that the rates in the Delta be monitored in years to come.

Evaluation Capacity

Key Findings: The Delta AHEC has demonstrated an ability to manage and analyze the data collected from participants in some of its community health education programs and to use these data to monitor program effectiveness.

The Delta AHEC has used tobacco settlement funding to support many health education and training programs, most of which operate out of the Delta AHEC main offices in Helena,

including programs offered from its two satellite offices and out in the community. It has also made notable progress in monitoring the impact of the programs. Using the information collected by the Delta AHEC, we updated our analysis of the outcomes from the three programs included in the last evaluation report. As described earlier, the outcome analyses reveal that the Diabetes Education Clinic continues to have a positive effect on its patients. For the Body Battle Challenge, there were significant reductions both in the total number of participants and in the percentage of participants who had considerable weight loss. For the Kids for Health education program, there were significant increases in students' health knowledge, although the students' health behavior has not changed significantly. Overall, we find that Delta AHEC has strengthened its capacity for collecting and analyzing such data. We encourage the Delta AHEC to continue collecting and analyzing outcomes data for its health education programs, especially for the effects of the Body Battle Challenge and the Kids for Health program.

SUMMARY AND RECOMMENDATIONS

Through its more than three dozen programs and services, the Delta AHEC has strengthened its ability to recruit and train health students and professionals and to provide education and health-related services to communities and clients throughout the Delta region. In FY2009, Delta AHEC spent about 15 percent of its total budget on recruiting and training health students and professionals. During 2008–2009, Delta AHEC reached approximately 1,800 students with its program to expose young people to careers in the health professions. A total of 18 medical school students participated in preceptorships, senior selectives, or internships. Delta AHEC's continuing education programs for medical professionals served more than 1,400 participants during 2008–2009, while its medical library provided services to more than 2,300 health professionals and students. With the vast majority of its budget for community services, Delta AHEC greatly increased the number of community members reached through its health and education services. Overall, there were nearly 68,000 program encounters during 2008 and more than 100,000 during 2009. Delta AHEC's Tobacco Prevention and Cessation Program had more than 5,000 encounters during this reporting period, representing a substantial increase from prior years. Delta AHEC met its goals to increase participation in both its health recruitment and training efforts and its education and health-related services. Delta AHEC's stakeholders rated the quality of its programs and services as quite high but were divided about whether it should maintain its current activity level or expand. In looking at smoking-related outcomes for the Delta region, we found that smoking rates for adults and pregnant women do not differ from the baseline trend.

Below are four recommendations that result from our evaluation of Delta AHEC activities during 2008 and 2009.

- **Determine capacity for each program and program area.**

Delta AHEC's programming and management has developed to the point that is time to begin to understand the capacity of each program for continued growth, as well as how many participants each program can reach or support while maintaining a quality product. For some programs, such determinations can be approached from the perspective of the required staff time, as well as the amount of financial resources needed per participant. Other programs, such as the fitness center, may require staff to study current usage and determine whether or not there is adequate equipment to meet demand.

- **Increase utilization of programs with excess capacity to reach the greatest number of consumers and professionals and achieve optimal unit cost for program offerings.**

Once programmatic capacity has been determined, programs can work to build their participation and membership levels to maximize their capacity to effectively serve residents. This two-step process—determining capacity and maximizing participation—will likely take time. And any evaluation of this process would take into consideration the Delta AHEC’s progress toward this goal.

- **Monitor participants’ improvement with evaluations that include participant and comparison groups by using the existing system to monitor and support evidence-based member behaviors.**

The Delta AHEC already collects data that can be used to monitor fitness center usage for its members. Moving forward, the Delta AHEC could use its existing member database system to monitor and support member behaviors and outcomes. This system can be used to target promotions that increase center usage and ultimately lead to better health outcomes, such as weight loss and increased activity levels. For example, monitoring membership usage and fostering increases in the number of fitness center visits, time in center classes, or time on fitness machines would be a valuable means of supporting members in reaching their fitness goals.

- **Monitor professionals’ educational needs and tailor services to meet those needs.**

Delta AHEC administrators are aware of the fact that the needs of their professional audiences, those who take advantage of their training sessions, are changing and evolving. This recommendation suggests that the Delta AHEC enhance its understanding of professionals’ educational needs through surveys of past and current class attendees or through partnerships with regional health professional organizations. These survey results can be used to tailor training activities to meet those needs.

Chapter 6 Arkansas Aging Initiative

This chapter summarizes the results of our evaluation of the Arkansas Aging Initiative. As defined in the Initiated Act, the goals of the Arkansas Aging Initiative (AAI) are to “establish health care programs statewide that offer interdisciplinary educational programs to better equip local health care professionals in preventive care, early diagnosis, and effective treatment for older Arkansans and to provide access through regional centers² to dependable health care, education resource and support programs for older Arkansans.” The AAI’s mission includes (1) improving the health of older Arkansans through interdisciplinary geriatric care (clinical care) and innovative education programs and (2) influencing health policy affecting older adults.

In the first section of this chapter, we provide the results of the process evaluation component and update each activity area, including information on goals, process indicators, and intermediate outcome indicators. In the second section, we present information on the program’s cost indicators and our analysis of the program’s spending over time. The results of the policy evaluation appear in the third section. The long-term outcome indicators tracked as part of our outcome evaluation of the AAI program are discussed in the next section. In the last section, we summarize the findings from all components of the evaluation and provide recommendations for AAI.

PROGRAM DESCRIPTION AND UPDATE

Since its inception, AAI has developed long-term goals in six activity areas. These six areas have remained consistent even as AAI has developed and updated the subgoals and the objectives supporting them. In 2006, however, AAI revisited its strategic plan and in the process revised its activity areas goals for FY2007 through FY2011 as follows:

1. *Clinical Services:* Older Arkansans will receive evidence- or consensus-based health care by an interdisciplinary team of geriatric providers.
2. *Education:* The AAI will be a primary provider of quality education for the state of Arkansas.
3. *Promotion:* The AAI will employ marketing strategies to build program awareness.
4. *Policy:* The AAI will inform aging policies at the local, state, and/or national levels.
5. *Sustainability:* The AAI will have permanent funding sufficient to continue implementation of its programs.
6. *Research:* The AAI will evaluate selected health, education, and cost outcomes for older adults who receive services.

² Use of the term “satellite” center refers to centers through which the AAI provides similar services as in other Centers on Aging (COAs) but with a smaller number of staff and therefore a reduced capacity to provide educational services. The Bella Vista satellite also includes a senior health clinic (SHC) for clinical care.

AAI's progress during 2008–2009 included several developments and accomplishments. AAI opened a new Center on Aging (COA), the Oaklawn Senior Health Care Center, and received notice of approved funding for replicating the AAI model in the state of Oklahoma through a planning grant from the Donald W. Reynolds Foundation awarded to the University of Oklahoma, with a subgrant to AAI. Although this project is on hold until a chair is hired in the University of Oklahoma College of Medicine Department of Geriatrics, this replication grant shows recognition of AAI's success beyond Arkansas. In addition, AAI continued to build its internal capacity by following through with its COA site-based performance-review process and strengthening the regional advisory committees. Below, we present an update on each activity area, including any associated process and intermediate outcomes indicators.

Clinical Services. The AAI pursues its clinical service goals through its work in eight senior health clinics (SHCs), operated through partnerships with local and regional hospitals. Seven COAs are affiliated with SHCs (year established in parentheses):

1. Schmieding Center for Senior Health and Education Northwest Health System in Springdale (1999)
2. Bella Vista COA Schmieding Center Satellite Center (2002)³
3. West Central COA in Fort Smith (2003)
4. Texarkana Regional COA in Texarkana (2002)
5. South Arkansas COA in El Dorado (2001)
6. South Central COA Jefferson Regional Medical Center in Pine Bluff (2003)
7. Delta COA Crittenden Regional Hospital in West Memphis⁴ (2003)
8. COA Northeast St. Bernard Healthcare in Jonesboro (2002).

Through these sites, the AAI provides clinical services to older Arkansans. AAI is working to bring SHCs to each of its COA locations. Since its inception, AAI has had a goal of bringing interdisciplinary geriatric clinical services to within 60 miles of 100 percent of the older Arkansans in the state. At this point AAI is reaching an estimated 90 percent of senior Arkansans.

Clinical Encounters. AAI continues to track the number of visits to the SHCs to assess its progress (Table 6.1). According to the most recent data, visits to SHCs have increased 23 percent since 2007. There were a total of 42,345 visits in FY2008 and 42,222 visits in FY2009. In the previous reporting period, AAI had experienced decreases in the number of visits because funding losses led to staff and provider reductions in Jonesboro and a clinic had closed in Bentonville. The recent increases represent the largest annual total number of clinic visits since AAI's inception.

³ The Bella Vista Health Resource Center COA was expanded in 2008.

⁴ The Delta COA moved to a new location within the Crittenden County Memorial Hospital.

Table 6.1
Total AAI Clinical Encounters, by Fiscal Year

| | 2005 | 2006 | 2005 | 2008 | 2009 |
|---------------------|-------------|-------------|-------------|-------------|-------------|
| Clinical encounters | 36,528 | 33,252 | 34,374 | 42,345 | 42,222 |

FTEs. Up until this point, indicators of annual clinical encounters were adequate to monitor increases in access to care for the SHCs. However, AAI central administrators reported that a critical factor hampering continued increases in access to geriatric care is the limited availability of geriatricians, advanced practice nurses (APNs), social workers, and other health care professionals who specialize in geriatrics. Despite AAI’s success in locating COAs and SHCs across the state, there were concerns among AAI administrators that the annual number of encounters may be reaching its upper limit as SHCs reach their capacity for seeing patients. AAI administrators were also concerned about whether the current mix of professionals is optimal for providing care to the greatest number of older residents. Staffing clinical teams with varying mixes of advanced practice nurses (Arkansans. For these reasons, AAI began to track the number of FTE positions for APNs and physicians (MDs) in the SHCs. FTEs, coupled with information on the average time it takes to provide quality care, can assist in determining whether the number of clinical staff members is adequate given the number of patients in need of care. For 2009, there were a total of 11.25 FTEs for MDs and 4.8 for APNs in the AAI SHCs. However, not all this time is solely devoted to the clinics. MDs who work in the SHCs are hired through the sponsoring hospital. Therefore, some of their time is devoted to visiting hospital patients in other locations (e.g., in hospitals, at nursing homes, and during house calls). In the future, RAND would like to monitor FTEs solely for time spent in the clinics as a clearer indicator of the clinics’ capacity to serve patients. AAI expects to adjust these numbers in the future to account more accurately for time spent in the SHCs as opposed to other locations. AAI plans to combine the information on the number of medical professionals with the number of annual encounters to help assess progress in access to care at the SHCs.

Standards of Care. As part of its clinical services efforts, AAI has been working with COA-affiliated nursing homes across the state. The nursing homes provide a means of reaching older Arkansans through an existing network of operators who share the AAI’s mission to serve this population. To this end, the AAI has focused a great deal of its efforts on the Advancing Excellence in America’s Nursing Homes Campaign, which began two years ago. The goal of the campaign is to promote excellence in care and increase both resident and employee satisfaction. The campaign primarily focuses on continuous quality improvement practices, such as reducing falls among nursing home patients. It also builds relationships that center on a collective interest in improved quality, attaining better clinical outcomes, increasing customer satisfaction, maintaining high staff retention rates, and developing a payment system that supports quality care.

Early in FY2008, the Arkansas Office of Long Term Care awarded the first of three contracts funded through the state’s civil money penalty funds to the John A. Hartford Center for Geriatric Nursing Excellence to support the work of the Arkansas Advancing Excellence in America’s Nursing Homes. As a part of the contract, AAI received funds to engage the COA Education Directors and Outreach Coordinators to assist nursing home facilities in the state to implement the three goals selected by the facility. Additionally, all AAI Education Directors and

Outreach Coordinators were trained to become trainers in the Partners in Caregiving Program. This program is designed to promote communication between staff, residents, and family members. To date, 60 percent of Arkansas' nursing homes (137 of 228) have participated in the training and 462 attendees have completed the program. This high degree of coverage in such a short time period was possible primarily because of the AAI's infrastructure and relationships the COAs have established with the nursing homes over the years.

Education. AAI's educational resources and services across the state are provided through the COAs mentioned above as well as one regional COA, Oaklawn Senior Healthcare Center COA in Hot Springs (2009), and three satellite centers: Delta COA Helena-West Helena Satellite Center (2008); Harrison COA Schmieding Center Satellite (2002); and Mruk Family COA Schmieding Satellite Center (formerly the Mountain Home COA, 2004). Through these locations, the AAI has achieved its goal of providing geographical access to 100 percent of senior Arkansans with geriatric education.

In addition to providing geographical access to older Arkansans, the AAI focuses on providing educational services to health care professionals, paraprofessionals, health care students, and the community. From FY2005 through FY2009, there was a 47 percent increase in the total number of educational encounters (Table 6.2). More recently, the total number of encounters increased from 44,380 in FY2007 to 70,618 in FY2009. Most of the overall increase in education encounters is accounted for by increases among community members. Between FY2005 and FY2009, the number of educational encounters for community members increased by 54 percent. The percentage of educational encounters with minority community members ranged from 23 and 32 percent during each quarter of FY2008 and FY2009, an increase from the 16 to 24 percent reported for each quarter during the prior two years. For FY2009, AAI's number of education encounters with health care professionals was virtually identical to the number in FY2007. The number of educational encounters with health and social service students declined in FY2008 and FY2009. Education encounters with paraprofessionals declined markedly during FY2008 before increasing in FY2009 to match the level in FY2007. According to AAI, the stability in the number of educational encounters with health care professionals, health and social service students, and paraprofessionals over the past two years is a result of AAI's focus on improving the quality of the training provided rather than the number of educational encounters. Specifically, AAI focused on the quality of training by selecting two topics each year, developing evidence-based programming, and implementing those programs statewide. AAI also targeted nursing home staff rather than the broader body of health professionals.

Table 6.2
Total AAI Education Encounters for Each Target Population, by Fiscal Year

| Target Population | 2005 | 2006 | 2007 | 2008 | 2009 |
|---|---------------|---------------|---------------|---------------|---------------|
| Community members | 38,936 | 37,646 | 33,716 | 50,599 | 60,066 |
| Health care professionals | 5,307 | 3,962 | 4,074 | 4,384 | 4,084 |
| Health and social service students | 572 | 1,183 | 1,529 | 1,187 | 1,299 |
| Paraprofessionals (active and students) | 3,175 | 2,094 | 5,061 | 4,208 | 5,169 |
| Total | 47,990 | 44,885 | 44,380 | 60,378 | 70,618 |

AAI's education efforts also include building capacity within the COAs to train health care providers in the use of evidence-based guidelines for chronic disease self-management, chronic care, and falls prevention. In addition to supporting all the COA Education Directors in becoming certified Master Trainers in one or more of these programs, AAI administrators developed a program-wide goal for COAs to institute at least two statewide evidence-based guidelines in each SHC. During 2008–2009, four of the eight SHCs reported having implemented at least one guideline in their facilities or within affiliated nursing homes with two of those SHCs reporting three guidelines implemented.

Promotion. AAI's goal for the promotion activity area is to increase AAI's visibility. To assess progress in this area, AAI tracks the number of articles and presentations targeting professional groups and the number of presentations and publications produced by the AAI for the public. During FY2008–2009, AAI produced 20 articles or presentations for professional groups and 571 publications for the general public. This indicator is establishing a baseline that will be followed in future years. Promotional activities also occur through the Regional Community Advisory Committees. For example, some of these committees have been involved with exploring funding opportunities through grants and foundations, building partnerships with other public and private agencies sharing a common mission to improve the health and welfare of Arkansas' senior citizens; relating the programmatic needs of seniors to the resources and mission of the COAs; and maintaining dialogue with community, government and civic leaders about the mission and needs of the COAs, as well as many other activities.

Policy. AAI's goal for its policy activities is to inform aging policies at the local, state, and national levels. The recent 87th Arkansas General Assembly adopted a resolution "Commending the Arkansas Aging Initiative for its statewide program and comprehensive geriatric health care and education for senior citizens living in rural Arkansas" (Senate Resolution 13 and House Resolution 1017) in recognition of AAI's work. To assess progress in this area, AAI is deliberate in its discussion of contacts with legislators as an indicator of progress in this area. It has asked and continues to ask its sites to track their contacts with legislators as well as the focal area of interest of these contacts, the recommendations AAI made, and any outcome from the contacts. During the FY2009 legislative session, AAI staff reported meeting with legislators twice during each week. AAI's efforts during the legislative sessions were associated with 150,000 in General Improvement Funds for the Texarkana Regional COA to support the use of telemedicine to increase access for rural Arkansans to medical care. In addition, AAI focused on providing information and recommendations to help inform legislators' decisions on relevant policies. For example, AAI recommended that legislators increase support for those who works with geriatric populations, including funding and other support for students in the health professions entering the field of geriatrics.

AAI central administrators are members of Partners in Planning, a committee whose goal is to convene leaders from across the state to develop a Master Plan for Healthy Aging for Arkansas seniors. During this reporting period, AAI's relationships with legislators and leaders who are members of the Partners in Planning was associated with continuation of this work, including regular quarterly meetings of the larger group. During these meetings, the group finalized the five-year Strategic Plan of the Master Plan for Arkansas in late in 2007. AAI followed up on this work with a presentation to the Governor's Round Table on Health. The Arkansas Department of Health has assumed the leading role in future endeavors to convene this group.

Sustainability. AAI staff and regional advisory committee members work to extend the services the AAI provides by leveraging additional funds. AAI's five-year goal for its sustainability activities is to generate at least \$1.7 million annually in additional funding beyond its tobacco settlement funds. AAI tracks the various types of additional funds it receives, including leveraged funds such as grants, volunteer hours, professional speakers, and donations. Donations include gifts of meeting space, use of audiovisual and other office equipment, refreshments, postage, office supplies, printing, advertisement, and similar gifts. In FY2008 and FY2009, AAI reported a total of \$4.5 million in leveraged funds. The largest portion of this amount, approximately \$3 million, came from a three-year grant for the Schmieding Home Caregiving Program, which will train individuals to care for older adults, particularly those who live in their own homes.

Research. In the research activity area, AAI worked on quality improvement, program evaluation, and outcome evaluation.

Quality improvement. Toward the end of 2007, the AAI central administration followed RAND's recommendation and instituted a process for improving the quality of its services and monitoring progress at the COAs. This process involves AAI working with each COA to monitor and assess staff performance on a periodic basis. During this reporting period, medical directors from the SHCs as well as the education directors from the COAs reported regularly to the AAI central administration, including developing site-based planning, budgeting, and personnel evaluations. AAI also conducted annual site visits, including meetings with the education and medical directors during 2008 and 2009.

Program evaluation. Due to the untimely death of the principal investigator, the development of a program-wide AAI evaluation plan moved more slowly than anticipated. Under new leadership, the team has moved forward with an evaluation plan to (1) document the progress toward program objectives, (2) support measurement of program activities, (3) improve the programs, and (4) define formative and summative program outcomes. AAI also continued its work to evaluate a subset of the educational programs. To this end, AAI conducted a series of evaluation studies of its evidence-based community education programs. These evaluations found that the Chronic Disease Self-Management program was highly effective and should therefore replace the Active Living Every Day program. This change has been implemented and the program has been expanded throughout the state. The Chronic Disease model focuses on information technology, evidence-based practice, and medical home care.

Outcome evaluation. AAI has partnered with COPH to conduct the "Evaluation of the Impact of the Arkansas Aging Initiative on Quality of Care for Seniors." Funded by a \$125,000 grant from the Murphy Rural Aging Research Center, the evaluation will use secondary data to document the impact of AAI on access to care and quality of care for Arkansas seniors. The COPH investigators plan to measure access and quality for seniors served through the seven AAI senior centers, compare access and quality for seniors served by AAI centers versus other sources of care, and compare access and quality for seniors before and after implementation of AAI centers.

Progress Toward Achieving Program Goals. As described above, AAI retained the long-term goal for each activity area that had been laid out in its strategic plan. Table 6.3 describes AAI's progress over the past two years for each goal.

**Table 6.3
AAI Goals and Status over the Past Two Years**

| Goals | Status |
|---|---|
| Clinical Services | |
| Older Arkansans will receive evidence- or consensus-based health care by an interdisciplinary team of geriatric providers (EXISTING). | ACCOMPLISHED. AAI has met its strategic goal of 90 percent coverage by FY2011. |
| Education | |
| AAI will be a primary provider of quality education for the state of Arkansas (EXISTING). | ACCOMPLISHED. During the past two years, AAI increased the total number of educational encounters by 59 percent. Educational encounters with community members accounted for most of this increase. We were unable to assess the quality of AAI's education efforts. |
| Promotion | |
| The AAI will employ marketing strategies to build program awareness (EXISTING). | UNABLE TO ASSESS. The data collected for 2008–2009 will serve as a baseline to assess progress moving forward. |
| Policy | |
| AAI will inform aging policies at the local, state, and/or national levels (EXISTING). | ACCOMPLISHED. AAI has increased its visibility with legislators through more regularly scheduled meetings and has begun tracking these efforts to monitor for consistency (i.e., administrators reported that staff spent time twice weekly in conversations with legislators). |
| Sustainability | |
| AAI will have permanent funding sufficient to continue implementation of its programs (EXISTING). | ACCOMPLISHED. AAI has been successful in raising additional funding as evidenced by large grants, such as a \$3 million grant to the Schmieding Home Caregiving Program. Another \$1.5 million in smaller donations, grants, and other sources further indicate growth in this area. |
| Research | |
| AAI will evaluate selected health, education, and cost outcomes for older adults who are provided services (EXISTING). | IN PROCESS. AAI central administration has developed and implemented its quality improvement process. In addition, it has partnered with COPH and other institutions to continue to build its capacity for research and evaluation. |

COST EVALUATION

In evaluating AAI's costs, we are providing the total tobacco settlement funds received and spent by the AAI for FY2005 through FY2009. These data are reported by individual COA in Table 6.4 and by appropriation line item in Table 6.5. In FY2008 and FY2009, AAI spent the exact amount of funds it received. In FY2008, total spending decreased slightly. However, in FY2009, AAI's total spending increased by 53 percent. Spending by all COAs decreased in FY2008, followed by an increase in FY2009. The increase in FY2009 was primarily due to a substantial increase in operating expenses from an average of \$351,175 over the prior four years to \$767,516 in FY2009. The increase in operating expenses resulted from conservative spending in FY2008 after uncertainty regarding FY2009 funding levels and lower-than-anticipated spending for salary and fringe benefits.

An additional way to examine AAI's spending is to look at how spending is distributed across the six activity areas. While AAI was unable to provide a breakdown of spending by activity area, it estimated that 90 percent of its spending is devoted to education (e.g., operating the COAs), 4 percent to fundraising and activities that promote sustainability, and 2 percent each to policy activities, promotion activities, and research activities. Clinical services are reported to be no expense to the AAI since these are operated through partnering hospitals.

POLICY EVALUATION

This section summarizes the results of a survey of AAI stakeholders in December 2009. The survey was undertaken to help understand the context in which AAI operates. The survey asked stakeholders representing each of the activity areas described above about their perceptions of AAI activities, goals, and future direction. The targeted group of respondents included stakeholders from the Regional Community Advisory Committee, nursing home partners, Centers on Aging, and partnering legislators. Sixty-five of the 272 stakeholders who were sent the survey participated, yielding a response rate of 24 percent. The survey responses provide insight into how much the respondents feel they know about the AAI's activities related to education, clinical services, and policy, as well as the quality and appropriateness of its work.

Respondents reported that their involvement with AAI ranged from one to seven years, dating back to AAI's inception in 2002. Most stakeholders were program participants or partner agency administration or staff. Others were grantee/program administration or staff, consortium or task force members, and board members. While the level of stakeholder engagement ranged from weekly to annually, most respondents participated in AAI meetings or activities on a monthly or quarterly basis (42 percent).

Sixty-nine percent of respondents had knowledge of the purpose and goals of AAI and perceived these goals as appropriate; and 48 percent rated the goals as very appropriate. Stakeholders reported that AAI is effective in reaching its goals and that its work is important—26 percent of respondents rated the work as somewhat important and 51 percent rated it as very important.

**Table 6.4
Tobacco Settlement Funds Received and Spent by AAI, by each COA**

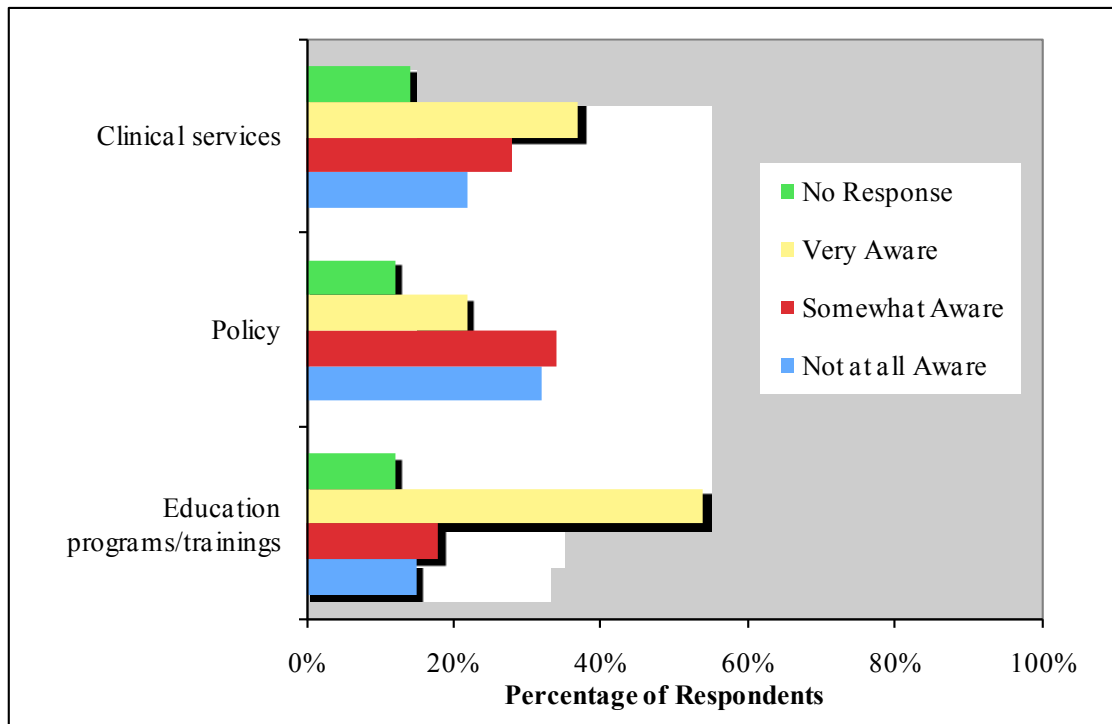
| COA | FY2006 | | FY2007 | | FY2008 | | FY2009 | |
|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| | Received | Spent | Received | Spent | Received | Spent | Received | Spent |
| Central admin. | \$293,790 | \$277,518 | \$234,169 | \$245,171 | \$173,364 | \$173,364 | \$332,152 | \$332,152 |
| Schmieding | 193,264 | 193,264 | 173,204 | 173,204 | 169,493 | 169,493 | 264,305 | 264,305 |
| S. Arkansas | 165,865 | 165,865 | 190,008 | 190,008 | 150,461 | 150,461 | 218,466 | 218,466 |
| Northeast | 166,001 | 166,001 | 205,640 | 205,640 | 175,828 | 175,828 | 217,185 | 217,185 |
| Texarkana | 178,395 | 178,395 | 189,357 | 189,357 | 143,419 | 143,419 | 257,984 | 257,984 |
| Helena | 136,297 | 136,297 | 169,660 | 174,161 | 132,882 | 132,882 | 236,578 | 236,578 |
| South Central | 152,050 | 152,050 | 215,317 | 215,736 | 167,824 | 167,824 | 225,916 | 225,916 |
| Fort Smith | 174,883 | 174,883 | 192,457 | 192,807 | 170,079 | 170,079 | 247,684 | 247,684 |
| Evaluation | 76,548 | 76,548 | 75,317 | 75,317 | 69,680 | 69,680 | 75,370 | 75,370 |
| Annual total | \$1,537,093 | \$1,520,821 | \$1,645,129 | \$1,656,131 | \$1,353,030 | \$1,353,030 | \$2,075,640 | \$2,075,640 |

**Table 6.5
AAI Tobacco Settlement Funds Spent, by Appropriation Line Item and Fiscal Year**

| Line Item | FY2005 | FY2006 | FY2007 | FY2008 | FY2009 |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|
| Regular salaries, personal matching | \$1,425,301 | \$1,234,639 | \$1,168,784 | \$1,041,485 | \$1,277,244 |
| Maintenance & operations: | | | | | |
| Operating expense | 385,747 | 256,034 | 461,347 | 301,572 | 767,516 |
| Conference, travel | 26,168 | 26,059 | 28,671 | 9,972 | 26,847 |
| Professional fees | 125,000 | 0 | 0 | 0 | 0 |
| Capacity outlay | 20,702 | 4,089 | 2,599 | 0 | 4,033 |
| Data processing | 0 | 0 | 0 | 0 | 0 |
| Total spent | \$1,982,918 | \$1,520,821 | \$1,661,401 | \$1,353,029 | \$2,075,641 |
| Total received | \$1,693,068 | \$1,537,093 | \$1,645,129 | \$1,353,029 | \$2,075,641 |

Respondents reported the greatest awareness of the education area: Seventy percent were at least “somewhat aware” of AAI’s education activities (Figure 6.1). Clinical and policy services received lower ratings of programmatic awareness (62 percent and 56 percent, respectively).

Figure 6.1
Stakeholder Awareness of AAI Activity Areas (n=65)



Awareness ratings were consistent with stakeholder reports of their personal involvement, with the highest reports being found among education programs and trainings (63 percent reported that they were somewhat or very involved in these activities; Figure 6.2). At the same time, around 30 percent of respondents reported these levels of involvement for clinical services and policy-related activities.

The quality of programming for all activity areas fell into the medium-high to high range (Figure 6.3). Nearly 60 percent of respondents rated the quality of education programs as high. Most respondents rated the quality of clinical services in the medium-high to high range (41 percent). As expected, participants responding “not at all involved” often did not rate the quality of activities in an area. Therefore, more than one-half (55 percent) of respondents were unable to rate the quality of AAI’s policy-related activities.

Figure 6.2
Stakeholder Involvement in AAI Activity Areas (n=65)

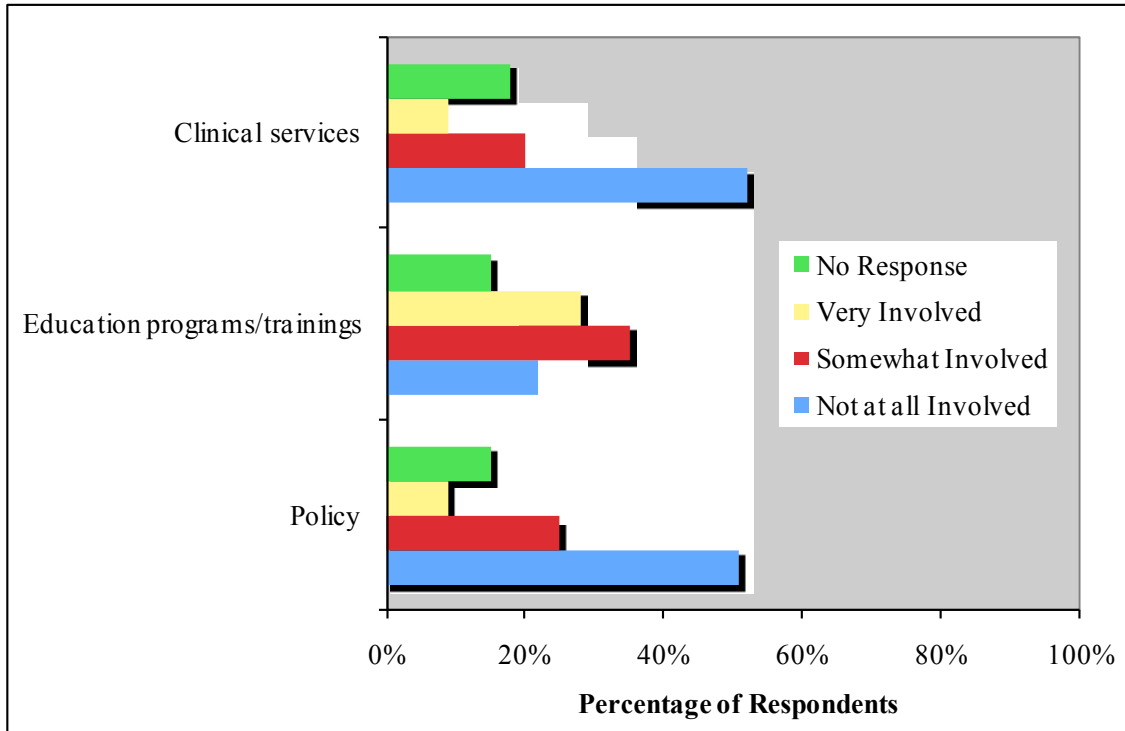
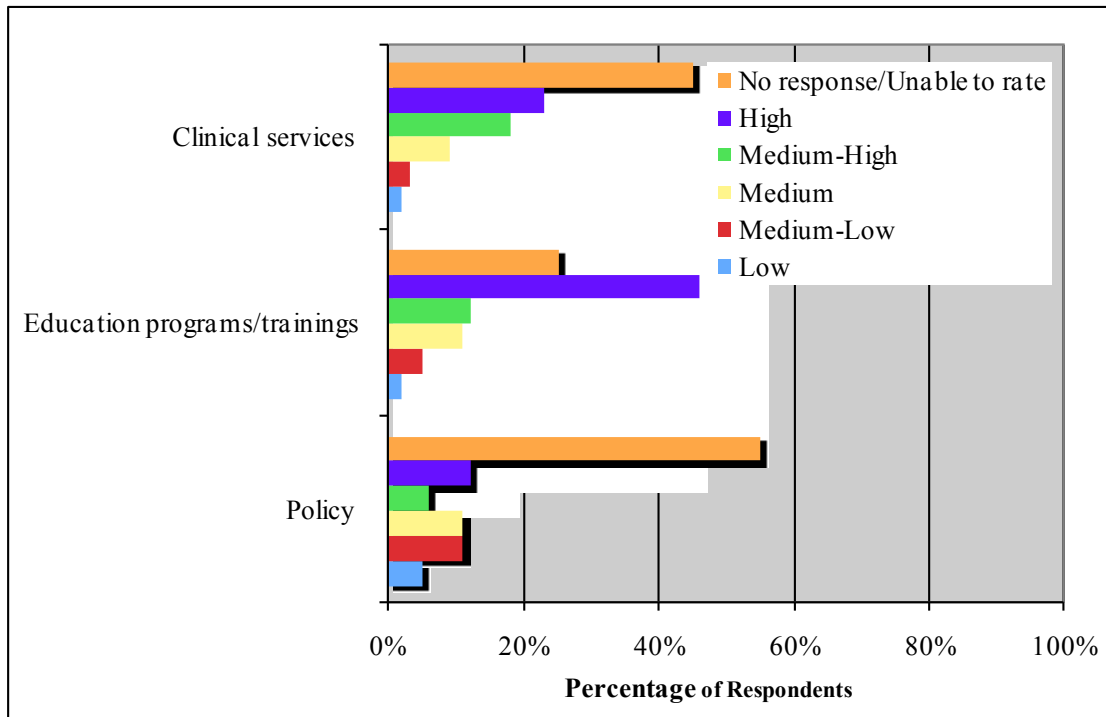


Figure 6.3
Stakeholder Quality Ratings for AAI Activity Areas (n=65)



Although the survey also asked respondents about the quality of the program's administration, a significant number of stakeholders did not respond to these questions. While the survey also asked respondents about the quality of activities in each area and the quality of the program's administration, close to one-half of respondents did not respond to these questions, so those data are not presented.

The survey concluded with questions about collaboration among programs receiving tobacco settlement funds. While more than 50 percent of the AAI stakeholders who responded were aware of Delta AHEC, COPH, MEP, and MHI, AAI survey respondents were most aware of TPCP. Between 30 to 40 percent of the AAI respondents were involved in Delta AHEC, MHI, and TPCP. Overall, stakeholders perceived that AAI does collaborate and coordinate with other ATS programs, with 34 percent reporting a great deal of collaboration.

Finally, most stakeholders (approximately 50 percent) believed that AAI should expand and do more in the future. Others reported the program should continue with its current level of activity but noted that if AAI receives additional funding it should expand its programming. A few respondents suggested that AAI increase its recruitment efforts by contracting with other community organizations that have a "strong and local presence."

OUTCOME EVALUATION

This section summarizes progress toward the long-term outcome indicators tracked for the AAI.

Avoidable Hospitalizations

Key Finding: After declining in prior years, avoidable hospitalization rates among elders in Arkansas counties with COAs have stabilized.

Among the many consequences of poor access to primary care services is an increased likelihood of avoidable hospitalizations. In its seminal study of access to health care in America, the Institute of Medicine (1993) argued that timely and appropriate outpatient care would reduce the likelihood of hospitalizations for ambulatory care-sensitive conditions.

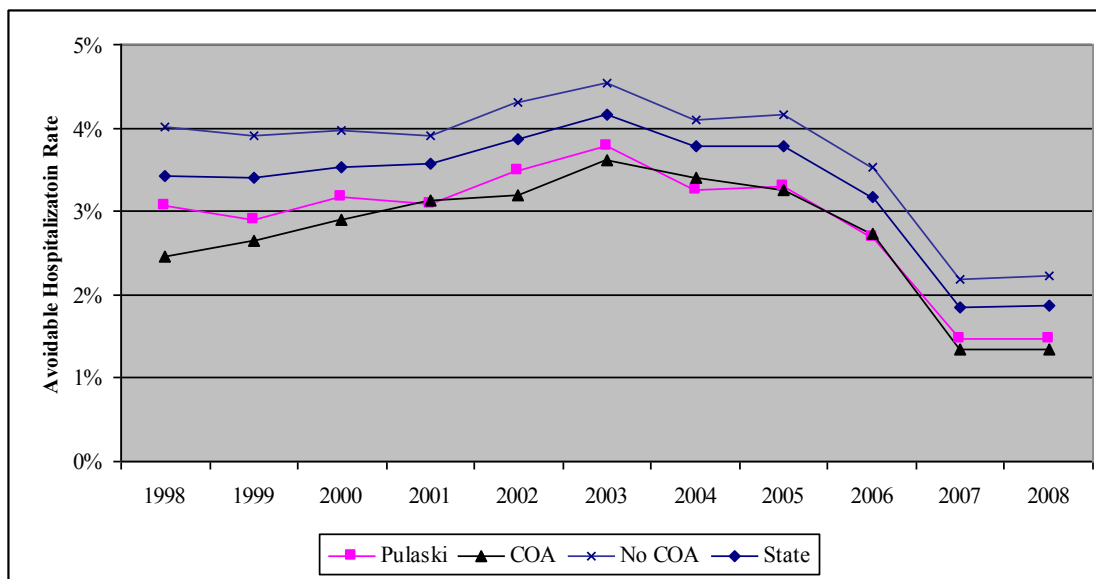
We employed the definition of avoidable hospitalizations developed by McCall et al. (2001). They identified fifteen ambulatory-care sensitive conditions and developed three groups of avoidable hospitalizations from their work: chronic, acute, and preventable (Table 6.6). A hospital stay was deemed avoidable if a code for one of these diagnoses was listed on the discharge abstract as the primary diagnosis for that stay. For each beneficiary, the total number of avoidable hospitalizations for chronic, acute, and preventive conditions was obtained from the hospital discharge file. We identified the population age 65 and older that had one or more avoidable hospitalizations in each year from 1998 through 2008.

Table 6.6
Avoidable Hospitalization Conditions

| Chronic Conditions | Preventable Conditions | Acute Conditions |
|--|-------------------------------|--|
| Asthma/chronic obstructive pulmonary disease Seizure disorder Congestive heart failure Diabetes Hypertension | Malnutrition Influenza | Cellulitis Dehydration Gastric or duodenal ulcer Urinary tract infection Bacterial pneumonia Severe ear, nose, or throat infection Hypoglycemia Hypokalemia |

Our analysis of the most recent data indicates that the rate of avoidable hospitalizations for older Arkansans has stabilized across the state in the past two years (Figure 6.4). The four lines in Figure 6.4 represent counties with COAs, counties without COAs, the entire state, and Pulaski County. Pulaski County is examined separately because it contains Little Rock, which is the only metropolitan city in the state, and because it is not a part of one of the AHEC regions. Prior to 2003, the trend upward had been steeper for counties with COAs than for counties without COAs. Therefore, the downward trend since 2003 is similar in counties with and without COAs and represents a larger deviation from baseline for the counties with COAs. This finding is consistent with establishment of the COAs, as eight were established between 2002 and 2004. However, during 2007–2008, the rate of avoidable hospitalizations flattened across the state. Arkansas’ declining trend in avoidable hospitalizations between 2003 and 2007 is consistent national trends (Stranges and Friedman, 2009). We will continue to monitor these trends as more data accumulate, especially to assess if the decline in the counties with COAs differs significantly from that in the counties without COAs.

Figure 6.4
Rate of Avoidable Hospitalization for Preventable and Acute Conditions



AAI-Initiated Outcome Analysis

Key Finding: AAI has made progress in developing an overall evaluation plan, integrating program evaluation into its activities, and raising extramural funds for outcome analysis of its education programs.

In past evaluation reports, we have observed that the AAI was making advances in collecting and analyzing participant data and in designing additional studies with collaborators. These efforts have produced one completed study and several grant and conference presentations, and have laid the groundwork for AAI to build evaluation in its activities more systematically.

As noted earlier, the untimely death of the lead researcher stalled progress toward this goal. However, AAI recently moved forward with the development of an overall evaluation plan by contracting with a UAMS researcher to develop and implement a comprehensive evaluation of the AAI system. This plan will focus on each of the regional COAs as part of the overall system. The evaluation plan will be based on AAI's strategic plan and will include an outcome evaluation component. Findings from this evaluation as well as additional updates will be provided in future reports.

As mentioned earlier, AAI partnered with the Arkansas Department of Health and the Arkansas Department of Human Services Division of Aging to implement and investigate the impact of the Active Living Every Day program, which was developed to empower older adults to take greater control of their own health. The AAI directors were all trained in the program (as we reported previously in Schultz et al., 2008), and two were trained in the Chronic Disease Self Management program, which also focuses on increasing self-efficacy and can be taught by lay persons who also face chronic conditions. Following AAI's evaluation of these two programs, the Active Living Every day program was eliminated and the Chronic Disease Self Management program took its place. Based on AAI's analysis of the impact of the Chronic Disease Self Management program, AAI has now expanded the program throughout the state. The program is a major first step in implementing Wagner's Chronic Care Model through the AAI (See Wagner, 1998). AAI administrators repeatedly mentioned their desire to meet the needs of an aging society and chronic care is one of the most pronounced needs for this population. Specifically, the approach presented in Wagner's Chronic Care Model embraces information technology, evidence based-practice, and the medical home, and is a program that has been tested for ten years. Thus, it stands as an evidence-based standard of care.

As noted earlier, AAI has also partnered with COPH to conduct secondary data analysis to determine the impact of AAI's efforts on access to care and quality of care. The results of this study, expected in June 2010, should provide insight into the impact of the COAs.

SUMMARY AND RECOMMENDATIONS

AAI's activities during the past two years have resulted in increased access to quality, evidence-based education and clinical services for older Arkansans. The Senior Health centers provided clinical services at more than 42,000 visits each year during 2008–2009, representing a nearly 25 percent increase from prior years. AAI also increased its educational activities, with nearly 60,000 education encounters with community members, health professionals, paraprofessionals, and students in FY2008 and more than 70,000 in FY2009. Through its promotion and policy work, AAI continued its efforts to increase visibility and inform aging

policies at the local, state, and national levels. AAI has made substantial progress in its efforts to secure additional funds to supplement its tobacco settlement funding. For FY2008 and FY2009, AAI received more than \$4.5 million in additional funds. The vast majority of AAI's spending is dedicated to its education efforts, with very small portions supporting its other activity areas. The majority of the stakeholders with an interest in AAI's work rated the quality of its efforts as high. After declining since its peak in 2003, the avoidable hospitalization rate among elders in Arkansas counties with Centers on Aging has stabilized.

Below are six recommendations that result from our evaluation of AAI activities during 2008 and 2009.

- **Clinical Services. Develop and implement an assessment of the optimal mix of professionals needed to maximize encounters in the most cost-effective manner to maintain high-quality care for seniors.**

We recommend that AAI follow through with its intention to improve its understanding of the optimal mix of health professionals working at the SHCs. We feel that this knowledge will improve the SHCs' productivity and can be used to justify costs as well as to maintain cost-effective and high-quality teams. Further, this type of information is a first step to understanding the ways in which staffing impacts clinical encounter levels.

- **Education. Continue to make progress in training COAs in use of evidence-based guidelines and developing partnerships with nursing homes.**

We recommend that AAI continue its work with nursing homes through the network of COAs across the state. AAI has already shown the efficacy of this method through its ability to quickly implement the Partners in Caregiving Program in 60 percent of nursing homes in the state.

- **Promotion. Maintain work with strong Regional Community Advisory Committees and continue promotion efforts through media outlets and professional publications, focusing on involvement in policy and clinical services.**

According to findings from the stakeholder survey, AAI's policy and clinical services are less well known than its other activity areas. We recommend that the AAI use its strong presence in its Regional Advisory Committees, as well its publications, to educate residents about its work in improving public policy related to older Arkansans and to raise the profile of its clinical activities.

- **Policy. Continue monitoring contact with legislators. Focus on a finite set of legislative issues and provide timely information for lawmakers making decisions relevant to AAI target populations.**

This reporting period was the first that AAI was asked to track its contact with legislators. We recommend that AAI's staff members at each COA contribute to this tracking and report their legislative contacts to the AAI central office so that central administrators can strategically follow up on particular policy efforts, particularly at the state level. Further, we recommend that AAI determine a focal set of policy areas and legislative issues relevant to older Arkansans.

- **Sustainability: Develop a plan for sustainability that includes identifying multiple reimbursement streams, and continue to seek grants that leverage funding to expand services.**

AAI has already begun developing a sustainability plan with the UAMS chancellor. We recommend that this effort be made a priority over the next two years.

- **Research: Continue growth in research activities focusing on publishing completed findings and reporting the use of programmatic evaluations.**

As a leader in geriatric health education, AAI can and should maintain and increase its visibility in the national discussion through presentations and publications to professional organizations, in addition to its publications written to educate its clients. We recommend that AAI continue to build on the baseline of publications established in this reporting period. Further, AAI should continue with its joint efforts with UAMS and COPH to develop rigorous outcome evaluations of AAI education initiatives for both health professionals and community members.

Chapter 7

Minority Health Initiative

This chapter summarizes the results of our evaluation of MHI. The first section provides an update on each activity area, including goals, process indicators, and intermediate outcome indicators. In the second section, we discuss the results of our cost evaluation; the results of the policy evaluation appear in the third section. The fourth section discusses MHI's outcome evaluation. The fifth section summarizes the findings and provides recommendations for MHI.

PROGRAM DESCRIPTION AND UPDATE

The Initiated Act mandated that the Arkansas Minority Health Commission implement MHI as one of its Targeted State Needs programs. The MHI was established to reduce hypertension, strokes, and other disorders that disproportionately affect minority groups in the state by performing activities relevant to diseases and disorders in the following four areas:

- Increasing awareness
- Providing screening or access to screening
- Developing intervention strategies
- Developing and maintaining a database that will include biographical data, screening data, costs, and outcomes.

These activity areas have remained the same since 2005,⁵ although some 2009 legislation clarified MHI's charge. For example, two laws (Acts 358 and 574 of 2009) further expanded MHI's work to include a comprehensive survey of racial disparities in health care, to be repeated every five years. The acts also strengthened MHI's public policy outreach initiative by clarifying its role to provide updates on health disparities to the governor and legislature and to make recommendations pertaining to public policy issues. In addition, Act 1489 of 2009 encourages an analysis of disparities in the health labor workforce.

In response to the legislation and to RAND's prior recommendations, MHI developed a five-year strategic plan for FY2010 through FY2014, which was completed during the first six months of FY2010. This document stated that the MHI would "ensure all minority Arkansans access to health care that is equal to the care provided to other citizens of the state and to seek ways to provide education, address issues, and prevent diseases and conditions that are prevalent among minority populations."

With this strategic plan, MHI established the following goals for FY2010–FY2014:

1. Increase the annual number of minority Arkansans screened through MHI programs.

⁵ In 2005, an amendment was passed to change the line item in the appropriations regarding funds for the provision of "drugs and medicine" to "screening, monitoring, treatment, and outreach" (SB 80).

2. Increase the annual number of minority Arkansans educated regarding disparities in health and health care and equity to health and health care services.
3. Establish collaborative stakeholder networks in five counties each year to address health care equity, health workforce diversity issues, and minority health disparities.
4. Establish a comprehensive system among agencies of coordination and collaboration surrounding minority health disparities.
5. Influence public policy toward an equitable health care system for all Arkansans
6. Establish a free online navigation and resource guide to give the public access to relevant sources on minority health care in Arkansas.
7. Upgrade MHI's computer storage and maintenance system to facilitate the navigation system, increased data sets from outreach events and workforce diversity legislation requiring analysis of large data sets.

To achieve these goals, MHI has designed and implemented a series of strategies to (1) increase awareness of diseases and disorders disproportionately critical to minorities, (2) provide screening or access to screening, (3) develop intervention strategies including policy initiatives, and (4) develop and maintain a biographical, screening, costs, and outcomes database.

Before and during the strategic planning process, MHI also made programmatic and activity changes in response to suggestions from the ATSC as well as recommendations from the RAND evaluation. Following RAND recommendations in 2007, MHI recalibrated programs and activities to address MHI's high unit costs and to define its agenda more precisely. Specifically, in 2008, MHI focused on completing evaluations for finished projects (Northwest Arkansas Blood pressure screening study), continuing the efforts that had proved successful in the past (e.g., Quarterly Health Fairs), and partnering with other agencies through its grant-making activities. In 2009, the AMHC board decided on a more targeted approach that focuses on two health areas critical to minorities: HIV/AIDS and sickle cell anemia.

Also during 2008–2009, MHI maintained its Professional Service Contracts mechanism to fund innovative pilot and demonstration projects and research studies with partners that provide specialized services that meet its mission and goals. MHI funded five pilot intervention programs through its FY2008 Professional Services Contract mechanism. Each grantee received funding totaling approximately \$25,000:

1. UAMS AHEC—Northeast Health Recruitment for Minorities
2. UAMS Breast Cancer Programs
3. UAMS Prostate Cancer Programs
4. UAMS Regional Programs Medical Interpreter Training Program
5. UAMS AHEC—Southwest Chronic Care Model in Minority Health.

In addition to the Professional Service Contracts mechanism, MHI developed a request for applications mechanism to fund its outreach initiatives focused on HIV/AIDS and

sickle cell anemia. In 2009, MHI named this effort Outreach Initiative Grants and began using the application process to select recipients. MHI plans to use the Professional Service Contracts mechanism to identify future intervention strategies and pilot projects, along with requests for applications (RFAs) for Outreach Initiative Grants, as appropriate.

Seven grants were funded through the RFA mechanism in FY2009. FY2009 grantees received their funding (approximately \$50,000 each) at the end of the reporting period. Therefore, outcomes for these grants will be included in the next report. Grantees funded through this mechanism furthered MHI’s mandate in the Initiated Act to (1) increase awareness, (2) provide screening, and/or (3) develop interventions. Many of the activities contributed to multiple areas of MHI’s mandate. In the rest of this section, we describe activities in these three areas but also denote when an activity or program addresses multiple areas.

Aside from the awareness, screening, and intervention areas, MHI also worked in the areas of monitoring and evaluation, policy, and collaboration during this reporting period. The current status of each activity area is discussed below, including any associated process or outcome indicators.

Awareness. Four of the Outreach Initiative Grantee programs primarily focused on increasing awareness of disorders disproportionately critical to minorities (A). These programs also provided screening (S) or implemented an intervention (I) (Table 7.1).

**Table 7.1
Participation in MHI Awareness Activities, by Activity Area**

| Program | Indicator | Number of Participants | A | S | I |
|---|---|-------------------------------|----------|----------|----------|
| UAMS AHEC—Northeast Health Recruitment for Minorities | Number of participants | 23 | x | | x |
| AR Cancer Coalition’s Ovarian Task Force | Number of educational inserts distributed | 98,230 | x | | x |
| UAMS Breast Cancer Program | Number educated or screened | 2,069 | x | x | x |
| UAMS Prostate Cancer Program | Number trained, educated, or screened | 438 | x | x | x |

Note: Programs with a raising awareness component (A), screening component (S); and intervention component (I) are indicated with an “x” in the appropriate column.

UAMS AHEC—Northeast Health Recruitment for Minorities. The UAMS AHEC Northeast Health Recruitment for Minorities project was funded from June 2008 to April 2009. The project was designed to raise awareness of health disparities among minority populations, to expose high school students from ethnic minority backgrounds to information concerning health careers and training, and to increase interest in health careers among this population. Further, the program aimed to provide participants with the knowledge of prerequisites necessary to achieve their health career goals. Overall, 23 students participated. MHI collected data from each participant before and after the program and reported increases

in participants' understanding of health career options (11 percent), training requirements (25 percent), and job duties (15 percent). Qualitative data revealed that participants' career choices were more varied at the end of the project than at the beginning and that the workshops motivated participants to set higher goals, to take their science and math classes more seriously, and to improve their study skills.

Arkansas Cancer Coalition's Ovarian Task Force. The MHI has partnered with the ovarian cancer task force to raise awareness in minority women across the state of Arkansas regarding the signs and symptoms of ovarian cancer. This partnership resulted in the mail distribution of more than 98,000 symptom cards to minority communities in the Pulaski and Jefferson County areas. In response to the symptom cards, MHI received only 37 requests for additional information about ovarian cancer. Aside from these few contacts, MHI does not know the extent to which the symptom cards were read and acted upon, since the ability to track this type of mailing is limited. The current MHI administration is aware that this response rate is very low and, through its strategic planning process, has implemented monitoring processes for all its programs in the future.

UAMS Breast and Prostate Cancer Programs. These programs, funded from May 2008 to July 2009, provided African American women and men with early detection screening and information about breast or prostate cancer, including current treatment options for all stages of the disease. The Breast Cancer Program, which targeted women in counties without certified mammography facilities, educated a total of 1,790 women. Its efforts resulted in 279 screenings; 52 percent (145) of results were abnormal and required additional follow up before making a final diagnosis (Table 7.2). Currently two patients are receiving breast cancer treatment. The Prostate Cancer Program educated a total of 397 men and resulted in 107 screenings; four results were abnormal and those participants were referred for further follow up (Table 7.3). Moreover, the Prostate Cancer Program also built capacity in area churches through sessions that provided training to members, who then were able to continue to educate their fellow members once the program was complete.

**Table 7.2
Breast Cancer Patient Education and Navigation for FY2009**

| Activities | Number of Women |
|---|------------------------|
| Educated about breast cancer | 1,790 |
| Screened for breast cancer with exam or mammogram | 279 |
| Positive screens | 145 |
| Referred because of positive screen | 145 |
| Referred because of age | 148 |

**Table 7.3
Prostate Cancer Patient Education and Navigation for FY2009**

| Activities | Number of Men |
|-------------------------------------|----------------------|
| Educated about prostate cancer | 397 |
| Screened for prostate cancer | 107 |
| Positive screens | 4 |
| Referred because of positive screen | 4 |

HIV/AIDS Programs. Seven of the MHI's FY2009 grantees are focused on raising awareness of HIV/AIDS. These \$50,000 grants began in April 2009 and will end in March 2010. Although MHI has asked grantees to track the number of participants and screenings for HIV/AIDS, these data were not available for this report. The following organizations received grants:

- The Alliance on Community Health received a grant for its Southern Arkansas AIDS Project. This community mobilization program's goal is to reduce unintended pregnancy and HIV by providing gender-relevant and culturally sensitive social skill training to African American and Hispanic women.
- Future Builders, Inc. received a grant for the "It's Your Choice Program," aimed at reducing risky behaviors in the African American homeless population by providing education and intervention sessions along with HIV/AIDS screening in church day centers in Pulaski County.
- Jefferson Comprehensive Care Systems received a grant for the SISTER project to provide social skill training for African American females at historically black colleges and universities in Pulaski and Jefferson Counties to decrease high-risk sexual behavior among this population.
- The Tri County Rural Health Network will be utilizing its grant in Lee, Phillips, Monroe, and St. Francis Counties to provide HIV/AIDS education and referral services to racial minorities and at-risk citizens and to conduct community summits in each county.
- Black Community Developers of Pulaski County was awarded a grant for its Play Safe program, which provides HIV prevention education to youths and parents through visual and performing arts, written word, group presentations and workshops, and job readiness and life skills.
- The Arkansas Human Development Corporation aims to educate the Hispanic population about HIV/AIDS and to increase awareness and screening with its grant to serve five counties.
- Brothas and Sistas, Inc. aims to provide prevention, education, and testing to the lesbian, gay, bisexual and transgender population in the community and club setting in Pulaski County.

Media exposure. In FY2009, MHI began tracking its media efforts, including the types of information published or aired and the costs of those efforts. Overall, MHI spent a total of \$287,550 on media outreach during FY2008 and FY2009 in a variety of forms, including online and print newspapers, magazines, radio, and television. For example, MHI airs its Minority Health Today program weekly on two stations. The show focuses on minority health disparity issues (e.g., heart disease, hypertension, stroke, HIV/AIDS, and obesity). For the radio, MHI provides public service announcements, as well as advertisements, that highlight health issues in 30- and 60-second spots. In FY2010, the medical director at MHI will be hosting an "Ask the Doctor" segment on minority radio stations to increase awareness and education. MHI has also developed a communications strategic plan to help make MHI more visible in communities throughout the state.

Screening. During FY2008 and FY2009, MHI continued to provide screening or access to screening for minority Arkansans. MHI focused on completing the Northwest Arkansas Blood Pressure Screening Study, continuing efforts that had proved successful in the past (e.g., Quarterly Health Fairs), and responding to RAND and ATSC recommendations to partner with other agencies through grant-making to maximize its impact.

Northwest Arkansas Blood Pressure Screening Study. This study was designed to screen 4th and 10th grade students' blood pressure levels and provide those at risk for high blood pressure with health education materials to lower their risk. The study involved collaboration between school district personnel and health providers to provide a more comprehensive health education program. Consistent with its mission to reach multiple groups of racial minorities, MHI used this study to expand hypertension screening and awareness into the Hispanic and Marshallese populations. During FY2008, 481 fourth- and tenth-grade students underwent school-based blood pressure screening (Table 7.4). Participants with elevated blood pressure at the first screening visit had their blood pressure checked again by the school nurse. If the students' blood pressure was still elevated after two follow-up checks by the school nurse, the parents were notified and referrals were made to a primary care physician for further evaluation. Seven children with undiagnosed hypertension were identified through the study. The study also revealed barriers to accessing health care for treatment and follow-up. Results from this study were presented at the Arkansas Health Disparities Conference in April 2008 in Springdale. MHI also plans to publish the findings in an academic journal and develop an implementation manual for other school districts. In addition, MHI worked with the Arkansas Children's Hospital to ensure accurate follow-up with participants and others in need of blood pressure monitoring in the schools by facilitating the calibration of the school district's blood pressure monitoring equipment.

**Table 7.4
Participation in MHI Screening Activities, by Fiscal Year**

| Program | Indicator | 2005 | 2006 | 2007 | 2008 | 2009 |
|--------------------------------|--|-------------|-------------|-------------|-------------|-------------|
| Blood pressure screening study | Number of participants | --- | --- | --- | 481 | 0 |
| Community health fairs | Number of participants | NA | NA | NA | 9,046 | 491 |
| | Blood pressure and cholesterol screens | 1,479 | 4,607 | 7,013 | 1,765 | 450 |
| | Glucose screens | 649 | 2,119 | 3,074 | 900 | 310 |
| | Cancer screens | 86 | 644 | 1,030 | 113 | 0 |
| | HIV | 255 | 414 | 1,170 | 316 | 46 |
| | Other (flu, vision, dental) | 295 | 655 | 580 | 515 | 0 |
| | Total screens | 2,764 | 8,439 | 12,867 | 4,090 | 806 |

AMHC's Community Health Fairs. Since its inception in July 2001, MHI has either sponsored or participated in health fairs in communities across the state. The purpose of these fairs is to provide educational materials and screening for cardiovascular disease, diabetes, cancer (e.g. breast, prostate, ovarian), HIV, and other problems (e.g. vision, dental). MHI

participated in 36 health fairs in FY2008 and FY2009 compared with 113 in the prior two fiscal years. As shown in Table 7.4, the number of health fair participants also decreased from just over 9,000 in FY2008 to around 500 in FY2009, while the number of screens decreased from just over 4,000 to around 800. While data on the number of health fair participants are not available for prior years, there were almost 13,000 screenings during FY2007. The decline in health fairs, participants, and screens is largely attributable to transitions at MHI that influenced its ability to support health fairs. In addition, compensatory time for mostly weekend events was reevaluated.

Arkansas Colorectal Cancer Prevention, Early Detection, and Treatment Program. This state-sponsored program was funded through the Department of Human Services to provide screenings for underinsured and uninsured low-income Arkansans. MHI along with a diverse group of advocates, assisted with the drafting of this legislation, which the Arkansas General Assembly passed in 2009. While MHI continues to support this effort, no funds were appropriated for the program, so the group is currently working to break up the bill for partial implementation.

Pilots or Interventions. MHI conducted several intervention or pilot studies during this reporting period. MHI also completed outcome analysis on several intervention studies during the past two years. The results of these analyses are described in the outcome evaluation section of this chapter.

“Southern Ain’t Fried Sundays” (SAFS). Dating back to 2004, SAFS is one of the MHI’s earliest programs. This program was designed to educate African American churches and organizations about healthier alternatives to preparing and cooking southern-style foods. SAFS also provides a means for MHI to educate the African American community about the signs and symptoms of stroke, diabetes, and heart attacks. Nine churches participated in the program in FY2008 and 44 churches participated in FY2009 (Table 7.5). MHI completed an evaluation of all SAFS participants (n = 159). The evaluation found that the program influenced the way that 69 percent of the respondents cooked. In June 2009, SAFS was suspended for restructuring and will be retooled into a year-round program. The restructuring will consider strategies for expanding the program to target participants outside of the church as well as to Hispanic communities. Suggestions include developing a Spanish version of the SAFS cookbook with traditional Spanish and Latin American dishes. The revised SAFS program is expected to start again in the summer of FY2011. In the interim, MHI provided support for the Search Your Heart program, which is an optional component of SAFS that includes a nine-week curriculum focusing on physical activity, nutrition, and health education.

UAMS Regional Programs Medical Interpreter Training Program. The Medical Interpreter Training Program was granted \$24,850 as one of the FY2008 Outreach Initiative grantees. This program serves the Spanish-speaking population in Calhoun, Union, Bradley, Ouachita, Hot Springs, Lafayette, Hempstead, and Desha counties. Its goal is to increase the number of trained medical interpreters and to support local health care facilities with training courses on how to effectively utilize medical interpreters. During the early stages of implementation, the program faced some challenges, including low participation and slow uptake in the medical community. In response, the grantee changed the program selection criteria so that non-health care workers could also participate and expanded the service area to include Benson and Washington counties’ Hispanic and Marshallese communities. As

shown in Table 7.5, 33 participants were trained in FY2009. Of these trainees, 12 received Medical Interpreter certificates and found work as medical interpreters. Twenty others are working as bilingual employees in health care facilities in Northwest Arkansas. These data serve as process indicators of the program’s success.

**Table 7.5
Participation in MHI Intervention Activities, by Fiscal Year**

| ACTIVITY | 2008 | 2009 | A | S | I |
|---|-------------|-------------|----------|----------|----------|
| Southern Ain’t Fried Sundays | 9* | 44* | x | | x |
| UAMS Regional Programs Medical Interpreter Training Program | --- | 33 | | | x |
| UAMS AHEC - Southwest Chronic Care Model in Minority Health | --- | 120 | | x | x |

Note: Programs with a raising awareness component (A), screening component (S); and intervention component (I) are indicated with an “x” in the appropriate column.

*This number represents churches, not individuals.

UAMS AHEC—Southwest Chronic Care Model in Minority Health. During FY2008, the DeQueen Minority Care Clinic was granted \$22,265 through the Outreach Initiative Grants mechanism for its UAMS AHEC – Southwest Chronic Care Model in Minority Care Clinic. This project established a Chronic Care Model in the DeQueen Minority Care Clinic for underserved populations in an effort to expand the clinic’s effectiveness in its provision of care to the Hispanic population to address diabetes, hypertension, and obesity. The project served a total of 120 patients during FY2008. A total of 115 participants were diagnosed with hypertension. In addition, 74 percent of the participants were diagnosed with diabetes and 15 percent were diagnosed with other chronic conditions. The program conducted follow-up with 120 of the participants and found a 4.3 percent improvement in weight loss.

Sickle Cell Support Services. In April 2009, MHI funded the Sickle Cell Support Services program with \$17,285 to enhance the well-being of sickle cell patients and families in the state of Arkansas. This program provides educational materials on sickle cell disease through health fairs and blood drives to educate the public on sickle cell disease and the sickle cell trait. The program hosts sickle cell workshops to educate health care providers, sickle cell patients, and their families. Health care providers add to the presentation by speaking on such topics such as the importance of genetic counseling, health insurance, and developing a good relationships with primary health care providers. Beginning in FY2010, the program is hosting a Sickle Cell Camp for youths aged 9–13 with sickle cell disease. The camp provides educational and support services to 24 program participants. MHI plans to continue this alliance and continue to track the number of program participants.

Monitoring and Evaluation. In response to RAND’s recommendation, MHI has strengthened its quality management processes. MHI now has a staff person paired with each Outreach Initiative grantee and program. These staff members are responsible for requesting grantees’ quarterly evaluation reports that provide enrollment and program updates. The grantees are also submitting monthly and quarterly reports on their progress. MHI’s monitoring and evaluation activities also included analyzing the state health-related

workforce data, completing the Marianna Examination Study on Hypertension, and conducting the Arkansas Cardiovascular Health Survey. Each of these is described below.

State Health-Related Data. MHI's responsibilities to gather, develop, store, and analyze data increased during this reporting period because of Acts 1489, 574 and 358 of 2009, which were passed by the Arkansas General Assembly. MHI now receives data yearly from all state health-related licensing boards and commissions on race, gender, place of birth, age, ethnicity, city and county of residence, and the institution at which licensees received their professional education and training. MHI is also mandated to develop, implement, maintain, and disseminate a comprehensive survey on racial and ethnic minority disparities in health and health care. Since AMHC's information technology system is not equipped to handle this volume of data, MHI has partnered with the Department of Information Systems to expand its capacity for data storage, management, and analysis systems to meet the increased demand this survey will place on its systems. MHI also develops and maintains its own database to document and monitor consumer contacts, website inquiries, events with nonprofit and faith-based organizations across the state, and quarterly health fair and public forum registrations. Also, as required by the Initiated Act, MHI's improved data system will allow it to more efficiently capture biographical data, screening data, costs, and outcomes. MHI expects that the new database system will automate the current health fair registration process to capture data electronically and instantly onsite at the MHI's numerous events across the state. AMHC utilizes the data collected to produce quarterly reports, annual reports, and executive director updates to the governor, legislature, ATSC, RAND and the public. The database allows MHI to produce letters and notifications to minority communities about future events, as well as to provide information regarding statewide health-related concerns (e.g. H1N1).

Marianna Examination Study on Hypertension. This study was funded by MHI to conduct a population-based representative examination survey focusing on hypertension and cardiovascular disease risk factors in the City of Marianna during 2005–2006. The primary goal of the study was to determine the prevalence of diagnosed and undiagnosed hypertension, the proportion of persons with diagnosed hypertension who are receiving anti-hypertensive medications, and the proportion of persons with diagnosed hypertension whose blood pressure is controlled to goal levels. Secondary goals included determining the prevalence of other cardiovascular disease risk factors, and developing baseline data that could support a longitudinal study in this community. As noted in our last report, early findings from the first 160 participants were presented at the 2006 American Society of Nephrology Annual Meeting. MHI expects a final report on the project to be completed and released in April 2010. The delay is attributable to leadership transitions at MHI. New leadership that came onboard in June 2009 has mandated final reporting on impact and outcomes.

Arkansas Cardiovascular Health Survey (ARCHES). The ARCHES study is a statewide representative examination survey funded during 2005–2008 by a CDC grant to a researcher in the Arkansas Department of Health. The survey's goal was to provide critical information about the prevalence of cardiovascular disease risk factors throughout the state, with an emphasis on comparing prevalence rates between African Americans and Caucasians. The ARCHES participant protocol included a detailed questionnaire, a physical examination, and a large battery of blood and urine tests that were collected in 1,500

randomly selected Arkansas adults. MHI supported the ARCHES study by providing 25-percent salary support for the lead researcher and in-kind salary support for another researcher. The ARCHES study has completed data collection from all 1,385 participants. Results are now in the hands of the Health Department, which is responsible for the publication of the findings.

Children's Blood Pressure Screening Project. With MHI funding, a pilot blood pressure screening program was implemented during 2005–2006 in the Marianna School District in collaboration with Arkansas Children's Hospital. These data grew into a database containing age, race, gender, measured blood pressure, body-mass index, arm circumference, and blood pressure cuff size. Analysis of the data obtained from this pilot study led to the Northwest Arkansas Blood Pressure Screening Study.

Policy. Based on the strategic planning process described earlier, MHI has increased its support for staff and board member involvement in policy-related task forces and coalitions. The strategic planning process highlighted how policy work, as an intervention strategy pursuant to the Initiated Act, can broaden MHI's impact and help MHI reach its goals of improving health and access to quality health for minorities in Arkansas. Further, Act 912 of 1991 mandates that MHI study gaps in services and make recommendations. To fulfill this mandate, MHI has increased its policy work during this evaluation period.

According to MHI, participation in task forces not solely related to minority issues allows advocacy for minority Arkansans in those venues. Additionally, there are other benefits to MHI participation. For example, the Acute Stroke Care Task Force has developed a conceptual framework for a model stroke program in the state and a telemedicine stroke treatment program and has supported the legislation that created the State Trauma Registry. These are tasks that MHI alone is unlikely to influence. However, MHI's collaborative partnership with the task force allowed minority constituency voices to be audible in the process. Similarly, in 2008 the Arkansas Minority HIV/AIDS Task Force made legislative proposals to (1) expand Medicaid coverage for individuals with HIV/AIDS and (2) promote statewide syringe exchanges. If these recommendations are followed, their reach across the state could be broad and cost-effective, considering the \$4,000 investment MHI has made over the course of two years (FY2008 and FY2009). Finally, MHI's participation in such groups provides additional exposure for its request for application mechanism among those active in HIV/AIDS prevention and intervention and other diseases that disproportionately affect minorities. Below is a summary of MHI's policy initiative involvement for FY2008 and FY2009:

HIV/AIDS Policy Initiatives. In response to its focus on HIV/AIDS, MHI has been involved with a number of HIV/AIDS policy initiatives.

- **Arkansas Minority HIV/AIDS Task Force.** This task force was developed to examine ways to strengthen prevention and treatment of HIV/AIDS among minorities in Arkansas. In 2008, the task force held several public hearings across the state to assess the concerns of the public and to discuss HIV/AIDS trends and impact on the minority populations in the state. Following the public forums, the task force submitted a report to the legislature that included its recommendations. Since the report's completion, several organizations have been funded to focus on prevention, and the task force has partnered with Harvard University's

WilmerHale Legal Services Center to assess the current state of HIV/AIDS in Arkansas through the Harvard SHARP (State Healthcare Access Research Project) program. The task force will unveil its second report in March 2010, which details statewide needs related to HIV/AIDS.

- **Black AIDS Institute.** MHI supported a staff member's participation as a fellow in the Black AIDS Institute's African American HIV University in 2008. This program is a comprehensive training and capacity-building fellowship program by the Black AIDS Institute aimed at strengthening black organizations' capacity to address the HIV/AIDS epidemic in minority communities. This training led to MHI staff completing a community needs assessment for Pulaski and Jefferson counties that focused on HIV/AIDS and building a coalition consisting of various community-based organizations and AIDS service organizations across the state. Events were organized on World AIDS Day 2008 to increase HIV awareness.
- **HIV/AIDS Prevention Coalition.** In partnership with the Arkansas Minority HIV/AIDS Task Force, MHI organized the Arkansas HIV/AIDS Prevention Coalition in August 2008. The Coalition promotes collaboration among various groups with a goal to focus on target audiences who are not infected with HIV including African-American women, youth, and the Hispanic population. The HIV/AIDS prevention coalition sponsored several events in 2008 to educate and increase HIV awareness, including a youth rally, a Compassion Day in collaboration with the faith-based community, activities related to World AIDS Day, and an HIV prevention capacity-building workshop for community-based organization.

Other Policy Initiatives. MHI also became involved in task forces for acute stroke care and sickle cell disease during this evaluation period.

- **Acute Stroke Care Task Force.** The Arkansas Acute Stroke Care Task Force was established through Act 663 during the regular session of the 85th General Assembly and started meeting in January 2007. The Stroke Care Task Force is charged with coordinating statewide efforts to combat the debilitating effects of strokes on Arkansans and to improve health care for stroke victims. The AMHC medical director represents the AMHC on the Acute Stroke Task Force and chairs the task force subcommittee on policy and standards, bringing a public health and minority health perspective to the group. The task force has monthly meetings and has recently implemented a hospital survey to assess capacity for stroke care and supported the legislation that created the Trauma System. Currently, the task force is developing a stroke registry that will be housed at the Department of Health as well as a telemedicine pilot program focusing on neurology.
- **Legislative Sickle Cell Task Force.** Act 1191 of 2009 created the Legislative Task Force on Sickle Cell Disease. The Arkansas Minority Health Commission's executive director serves on this task force. The task force was created to examine how the State of Arkansas responds to sickle cell disease, determine best practices to treat the disease, recommend more-efficient methods for treating the disease, recommend how to obtain federal funding, and recommend to the General Assembly specific changes to the law that will improve treatment of sickle cell

disease and the provision of special education to children with the disease. This new commission has met three times since its inception and has developed demographic and geographic data to understand the current state of sickle cell disease in Arkansas.

Collaboration. During 2008–2009, MHI partnered with nearly 150 entities through its programs and activities. Some of these partnerships include the other tobacco settlement programs. For example, Delta AHEC, TPCP, and ABI have all appeared on at least one segment of the *Minority Health Today* television program. With Delta AHEC, MHI has forged an effort to develop a pilot program that increases awareness of health information and resources. The goal is to improve health in seven Delta counties through increased utilization of existing health services by minority community members. In addition, MHI is collaborating with AAI to develop intervention programs for senior residents of the Delta Center on Aging Senior Health Clinic with a nutritional, physical activity and disease self-management program that focuses on the elderly population under physician supervision. MHI is also continuing to work with COPH in conducting teaching and research activities focused on racial and ethnic disparities. More recently, MHI has started a new collaborative relationship with TPCP to increase awareness among those infected with HIV/AIDS of the increased risks associated with the combination of HIV and smoking.

Progress Toward Achieving Program Goals. MHI programmatic goals for the RAND evaluation include continuing progress toward the goals of the Initiated Act as well as goals developed during its strategic planning process. Since all but one of the specific programmatic goals were established during this reporting period, data collected for the 2008–2009 period will service as a baseline to assess progress forwarding the future (Table 7.6).

Table 7.6
MHI Goals and Plans for FY2010 and FY2011

| Goal | Status |
|--|---|
| Screening | |
| Increase the annual number of minority Arkansans screened through MHI programs (REVISED). | NOT MET. During 2008–2009, the number of health fairs, participants, and screens all declined markedly from prior years. These decreases are largely attributable to transitions at MHI that influenced its ability to support health fairs. |
| Awareness | |
| Increase the annual number of minority Arkansans educated regarding disparities in health and health care and equity to health and health care services (NEW). | UNABLE TO ASSESS. While MHI has had activity in this area in prior years, the specific activities for the new reporting period were new, so the data for 2008–2009 will serve as a baseline to assess progress moving forward. |

Table 7.6, continued
MHI Goals and Plans for FY2010 and FY2011

| Intervention | |
|--|--|
| Establish collaborative stakeholder networks in five counties each year to address health care equity, health workforce diversity issues, and minority health disparities (NEW). | UNABLE TO ASSESS. MHI established goals for this new activity area partway through 2009. The data collected for 2009 will serve as a baseline to assess progress moving forward. |
| Establish a comprehensive system among agencies of coordination and collaboration surrounding minority health disparities (NEW). | UNABLE TO ASSESS. MHI established goals for this new activity area partway through 2009. The data collected for 2009 will serve as a baseline to assess progress moving forward. |
| Policy | |
| Influence public policy toward an equitable health care system for all Arkansans (NEW). | UNABLE TO ASSESS. MHI established goals for this new activity area partway through 2009. The data collected for 2009 will serve as a baseline to assess progress moving forward. |
| Database | |
| Establish a free online navigation and resource guide to give the public access to relevant sources on minority health care in Arkansas (NEW). | UNABLE TO ASSESS. MHI established a goal for this new activity area partway through 2009. The data collected for 2009 will serve as a baseline to assess progress moving forward. |

COST EVALUATION

Our cost evaluation for MHI includes an examination of the total annual tobacco settlement funds received and spent by the AMHC from FY 2005 through FY 2009 (Table 7.7). Total spending declined in FY 2008, as the amount received decreased. In FY 2009, spending increased, and the most significant increase in expenditures was for Screening, Monitoring, Treating and Outreach. As discussed earlier, the MHI is moving away from professional service contracts in favor of RFAs for services that meet its goals, and that is reflected in the decline in professional fees, which have ranged from a high of 73 percent of total spending in 2005 to a low of 22 percent in 2009.

We also examined spending for each professional contract for FY 2007 through FY 2009 (Table 7.8). The contracts and spending from 2007 through 2009 reflect the programmatic changes within MHI described earlier. The largest contract historically, the Community Health Centers contract, was not renewed in FY2007, resulting in a nearly 50 percent reduction in total contract spending that year. The new contracts in FYs 2008 and 2009 were all one-year contracts and reflect a shift in focus toward funding of cancer and sickle cell anemia screening, awareness, and interventions. In FY2009, the vast majority of contract spending was for awareness activities. However, it should be noted that while

contracts have been grouped according to the primary activity areas, many of the contracts address multiple activity areas.

**Table 7.7
Tobacco Settlement Funds Received and Spent by MHI, by Fiscal Year**

| Item | 2005 | 2006 | 2007 | 2008 | 2009 |
|-------------------------------|-------------|-------------|-------------|-------------|-------------|
| (1) Regular salaries | \$125,743 | \$135,828 | \$142,416 | \$128,180 | \$172,296 |
| (2) Personal service matching | 46,134 | 50,312 | 48,089 | 50,255 | 56,922 |
| (3) Maintenance & operations | | | | | |
| (A) Operations | 680,336 | 300,679 | 340,900 | 309,036 | 337,588 |
| (B) Travel | 2,994 | 731 | 5,098 | 2,721 | 2,300 |
| (C) Professional fees | 649,896 | 567,923 | 577,185 | 410,993 | 314,148 |
| (D) Capacity outlay | 18,645 | 0 | 14,838 | 0 | 0 |
| (E) Data processing | 0 | 0 | 0 | 0 | 0 |
| Total spent | 700,089 | 507,056 | 260,927 | 303,995 | 539,193 |
| Total received | 2,223,837 | 1,562,527 | 1,389,453 | 1,205,182 | 1,422,447 |

The spending analysis for MHI involved calculating unit costs for programs within MHI’s awareness, screening, and intervention activity areas for FY2008 and FY2009. MHI programs are basically of two types: (1) programs for which unit costs decrease as participation increases and (2) programs for which unit costs remain about the same with each additional participant. Programs within the awareness activity area were those for which unit costs decreased as participation increased. Unit costs for the UAMS medical recruitment program were high in FY2009 (Table 7.9). At the same time, the MHI-sponsored UAMS Breast Cancer and Prostate Cancer programs experienced much lower unit costs (\$12 and \$57 per participant, respectively). Both of these programs could have achieved lower unit costs if participation had been higher. However it appears, based on the program goals, that the UAMS AHEC—Northeast Health Recruitment program, sponsored by the MHI Outreach Initiative grants could have benefited a great deal from higher participation levels to bring down the unit cost from over a thousand dollars per person to a more acceptable rate. At the same time, the service the UAMS breast and prostate cancer programs provided maintained low unit cost over and above their indescribable value to those who screened positive and went on to receive treatment. Concomitantly, while the unit costs for the Ovarian Task Force program were quite low, the main activity driving this low cost was dissemination of inserts on ovarian cancer to nearly 100,000 residents. However, there was no way to determine how many individuals acted on the information. Therefore, even the extremely low unit cost cannot be validated as a good use of funds. For screening activities, the unit costs capture education as well as actual screening and referrals. Here too, unit cost decreases based largely on participation. For FY2008, the cost per participant was roughly \$1, since there were more than 9,000 attendees at the health fairs. The unit cost increased to over \$32 for FY2009, when there were only approximately 500 participants. Overall, participation levels are the critical factor driving unit cost for MHI’s programs and activities.

Table 7.8
MHI Spending on Professional Contracts, by Fiscal Year

| Contract | Contract Description | 2007 Contract | 2007 Spending | 2008 Contract | 2008 Spending | 2009 Contract | 2009 Spending |
|---|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Screening MEBILL SERVICES | Screening and Assistance to Minority Patients | | | \$15,000 | \$15,000 | | |
| UAMS | Breast Cancer Patient Education and Navigation | | | | | \$24,000 | \$24,000 |
| UAMS | Prostate Cancer Patient Education, Screening | | | | | \$24,999 | \$24,999 |
| Awareness College of Public Health UALR Institute of Govt. UAMS AHEC Advantage Communications UAMS AHEC Jones Center for Families | Health Disparities Study Arkansas Racial Attitudes Survey Health Recruitment for Minorities Marketing and Advertising Health Disparities in Delta AHEC Health Handbook | \$56,041 | \$57,719 | \$64,962 | \$53,064 | \$39,873 \$72,264 | \$31,158 \$72,264 |
| | | | | \$24,999 | \$24,999 | \$24,800 | \$24,800 |
| | | | | | | \$24,400 | \$24,400 |
| | | | | | | \$24,749 | \$24,749 |
| Developing Interventions Univ of AR Coop. Ext. Service UAMS UAMS AHEC The Design Group Sickle Cell Support Services UAMS Division of Nephrology | Implementing Eating and Moving Program Medical Interpreter Training Program Chronic Care Model in Minority Health “Sunday Ain’t Fried” development and design Program for Sickle Cell Patients Nurse-Hypertension Initiative | \$99,941 | \$117,872 ¹ | \$121,408 | \$121,408 | | |
| | | | | \$24,850 | \$24,850 | | |
| | | | | \$22,265 | \$22,265 | \$24,500 | \$24,500 |
| | | | | | | \$17,285 | \$17,285 |
| | | \$274,130 | \$264,936 | \$99,453 | \$95,082 | | |

Table 7.8, continued
MHI Spending on Professional Contracts, by Fiscal Year

| Contract | Contract Description | 2007 Contract | 2007 Spending | 2008 Contract | 2008 Spending | 2009 Contract | 2009 Spending |
|--------------------------------------|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Other | | | | | | | |
| UAMS College of Public Health | Medical Director and Nurse ² | | | \$187,750 | \$104,474 | \$271,225 | \$218,706 |
| Arkansas Dept. of Health | Epidemiologic and Statistical Service | \$32,380 | \$32,380 | \$32,380 | \$32,380 | | |
| Arkansas Dept. of Health | STAR Health Pilot Project | | | | | \$100,000 | \$100,000 |
| UAMS College of Public Health | Department of Biostatistics | | | | | \$12,500 | \$9,374 |
| Arkansas Medical and Dental Pharmacy | Miller Endowed Scholarship | | | \$24,999 | \$24,999 | \$24,999 | \$24,999 |
| Sister A Joy | Community Based and Research Projects | | | | | \$24,265 | \$24,265 |
| TOTAL | | \$462,492 | \$472,907 | \$632,960 | \$533,415 | \$734,359 | \$669,999 |

¹ Includes \$17,931 of unused funds from the previous year.

²A new medical director was hired in September 2007, but no funds were paid under the contract until February 2008. In 2009 the contracts of the medical director and nurse were combined.

Table 7.9
MHI Unit Costs by Program, by Fiscal Year

| Program | 2008 | 2009 |
|---|-------------|-------------|
| Awareness | | |
| UAMS AHEC—Northeast Health Recruitment for Minorities | --- | \$1,087 |
| AR Cancer Coalition’s Ovarian Task Force | --- | \$0.08 |
| UAMS Breast Cancer Program | --- | \$12 |
| UAMS Prostate Cancer Program | --- | \$57 |
| Screening | | |
| Northwest Arkansas BP Screening | \$16 | --- |
| MHI’s Health Fairs | \$1 | \$32 |
| Intervention | | |
| UAMS Regional Programs Medical Interpreter Training Program | --- | \$753 |
| UAMS AHEC— Southwest Chronic Care Model in Minority Health | --- | \$186 |
| Search Your Heart | NA | \$6 |
| Southern Ain’t Fried Sundays | \$1,136 | --- |
| Sickle Cell Support Services | --- | \$94 |

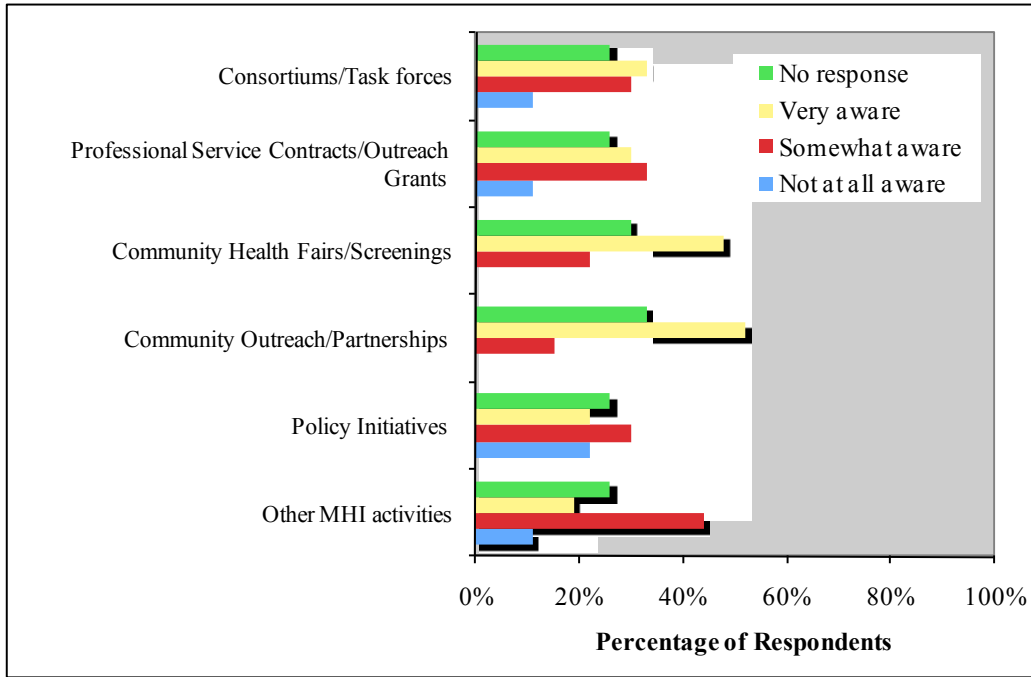
POLICY EVALUATION

The policy evaluation included a stakeholder survey to help understand the context in which the MHI program operates. The survey asked stakeholders for their perspectives on MHI’s activity areas, goals, and future direction. This section summarizes the results of the survey of MHI stakeholders. The targeted group of respondents included AMHC commissioners, task force, consortium, and institute partners; grantees; intervention partners; and health fair partners. Twenty-seven of 66 stakeholders participated in the survey, yielding a 41 percent response rate. Given the small number of respondents, generalization from these data are necessarily limited.

For some respondents (15 percent), involvement in MHI began with the program’s inception in 2002; a majority became involved in MHI between 2005 and 2009. Most respondents were from public or government organizations (41 percent), and many others are from community or neighborhood and advocacy organizations (19 percent). Most stakeholders participated in MHI meetings or activities on a quarterly basis (26 percent). Respondents had some knowledge of the purpose and goals of MHI; 41 percent had a great deal of knowledge. According to responding stakeholders, the purpose and goals of MHI were very appropriate and most believed the program is effective in reaching its goals (59 percent).

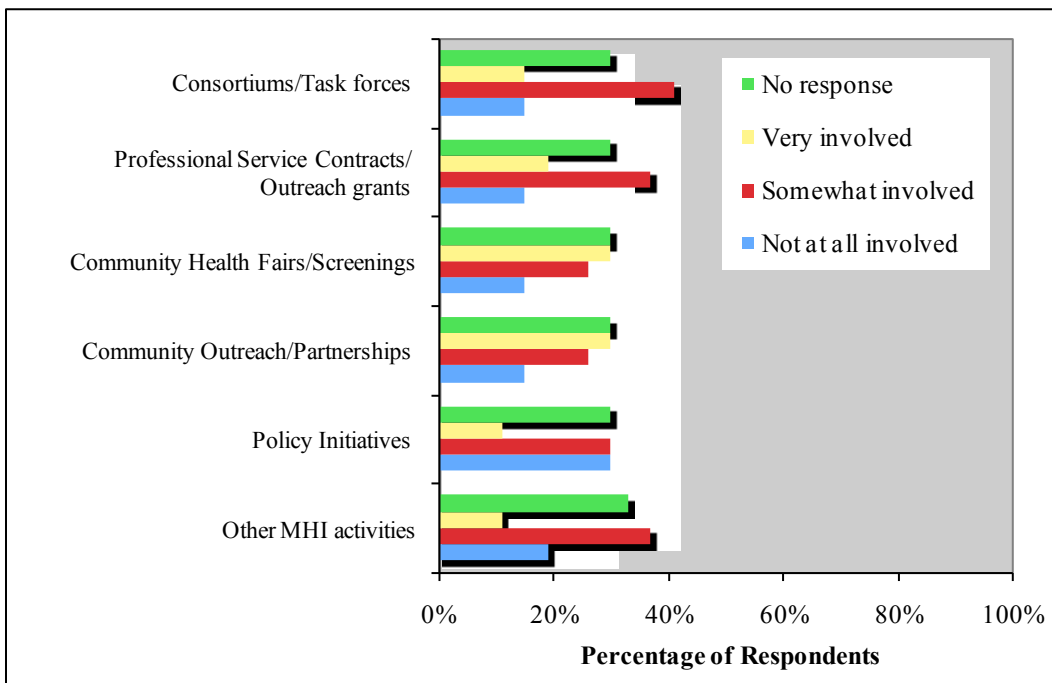
Most respondents were somewhat to very aware of all MHI activity areas (Figure 7.1). They were most aware of the community outreach activities and screening activities, with about one-half of respondents very aware of these efforts. Responding stakeholders were somewhat less aware of consortiums, professional service contracts, and other MHI activities.

Figure 7.1
Stakeholder Awareness of MHI Activity Areas (n=26)



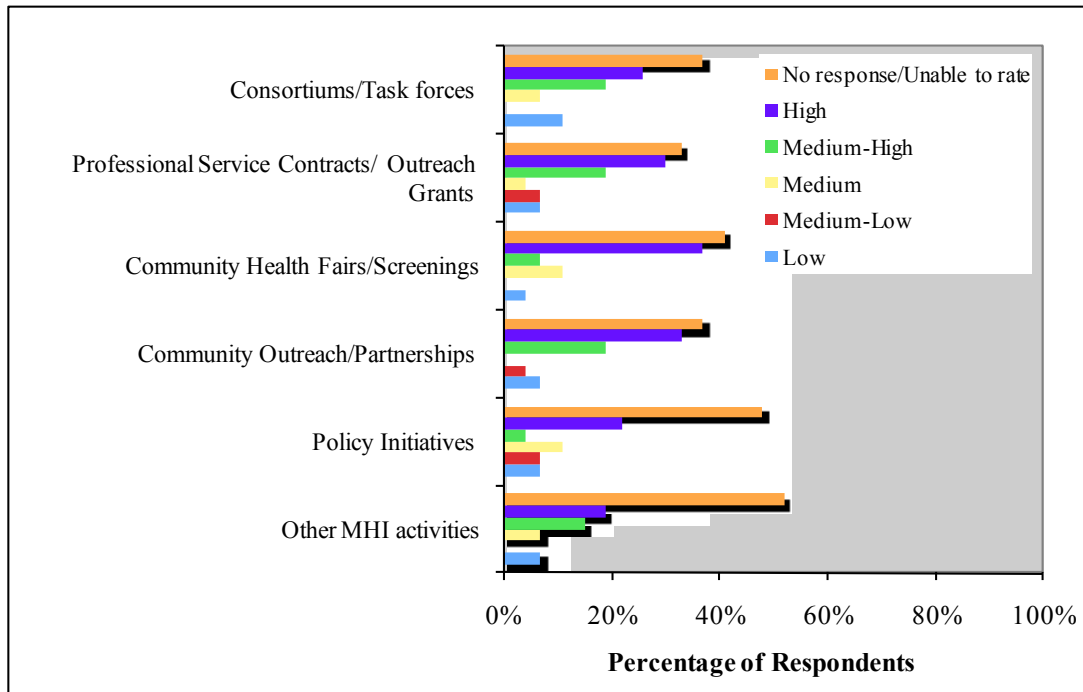
Almost one-third of respondents were very involved with the community health fair and outreach areas (Figure 7.2). However, given the small sample size, these data should be interpreted with caution.

Figure 7.2
Stakeholder Involvement in MHI Activity Areas (n=26)



While stakeholders rated the overall quality of MHI activities as high, the sample of those who were able to rate quality is quite small (Figure 7.3). Across activity areas, stakeholders who were not involved in an activity were less likely to rate its quality. Missing responses were highest for policy initiatives and other MHI activities, which are areas where stakeholders have lower awareness and levels of involvement.

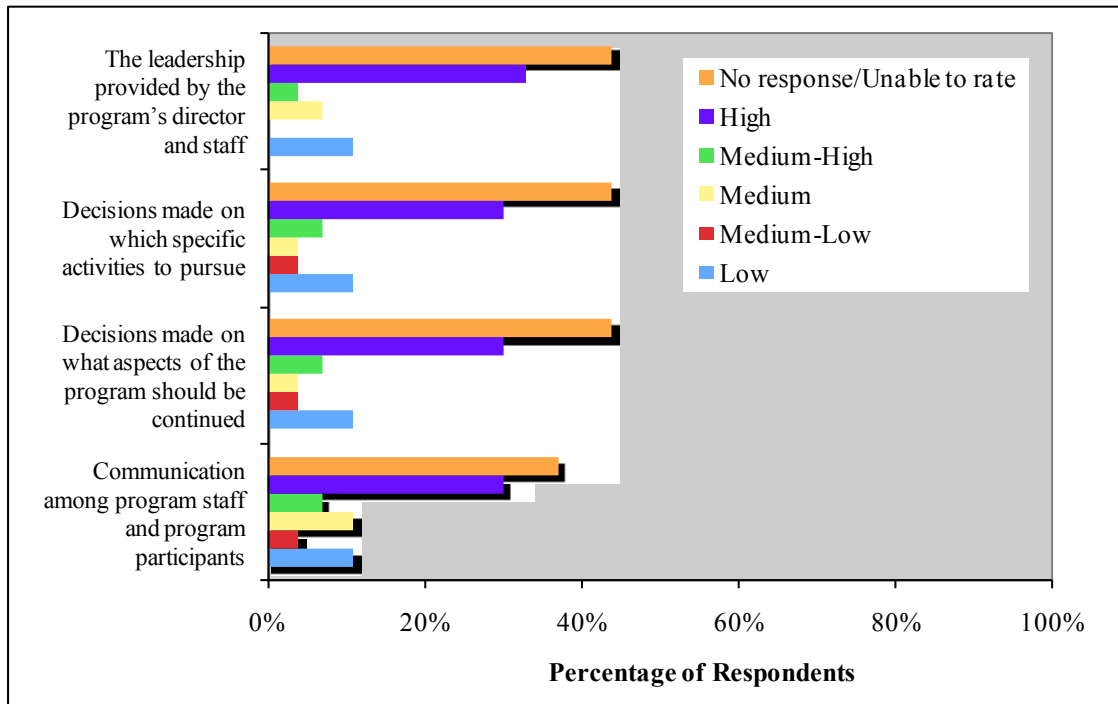
Figure 7.3
Stakeholder Quality Ratings for Activities in MHI Activity Areas (n=26)



While the survey also asked respondents about the quality of the program’s administration, a notable number of stakeholders did not respond to these questions. Overall, 37 percent rated each area of administration as medium-high to high (Figure 7.4).

Collaboration among programs receiving tobacco settlement funds is a primary focus of the ATSC. According to the survey results, stakeholders perceived that MHI collaborates and coordinates somewhat with other ATS programs. Nearly one-fifth (19 percent) of survey respondents said that MHI collaborates and coordinates a great deal. The majority of stakeholders for MHI reported that they were somewhat (32 percent) to very (35 percent) aware of other ATS programs. Respondents were most aware of the Delta AHEC, COPH, and TPCP. They were least aware of ABI. Although stakeholders were aware of other tobacco settlement programs, they were not involved with them.

Figure 7.4
Stakeholder Quality Ratings of MHI Administration (n=26)



Thirty percent of stakeholders suggested that MHI expand its program in the future. The remaining 19 percent of respondents were split between recommending that MHI continue with its current level of activity or contract and do less. One respondent suggested that MHI work more with minority-owned or -led organizations or businesses. In terms of continuing at current levels, several respondents suggested that MHI focus current programs on other minority communities (i.e., Asian and Hispanic) or increase its focus on the advocacy and policy activity areas. Generally, respondents thought MHI should expand but reported that the program could concentrate its current work on other communities and use community resources more effectively.

OUTCOME EVALUATION

MHI’s outcome evaluation focuses on two issues: outcome analysis for individual grants and programs and MHI’s capacity to collect and analyze outcome data about its programs.

Outcomes for Individual Grants or Programs

Key Finding. MHI’s evaluation of the After School Childhood Nutrition Education and Exercise Program found that there were no statistically significant differences in pre- and post-intervention body mass index and blood pressure among the students participating in the program.

As discussed above, MHI completed analysis of outcomes for three of the programs it funded through its 2008 Outreach Initiative Grants and three other MHI programs that have ended. Outcomes data for SAFS and the Northwest Arkansas Blood Pressure Screening Study

were reported earlier in the chapter and outcomes for the After School Childhood Nutrition Education and Exercise Program (ASCNEEP) are presented below.

ASCNEEP was a pilot program that focused on low-income, black youth in Little Rock. The goals of the program were to increase knowledge of healthy choices, the percentage of healthy snacks children consumed, the percentage of children's diets consisting of fruits, and the percentage of time children spent participating in physical activity. The program was administered in two schools with a total of 91 students. In analyzing the data on pre- and post-intervention body mass index and blood pressure, MHI found that there were no statistically significant differences in measures before and after the program. In the future, MHI reports plans to include weight loss as an outcome measure for the program and to conduct a longitudinal study to track participants through high school. The longitudinal study is expected to include measures of nutrition education, weight loss, and activity levels. MHI plans to use these data to support suggestions to the legislature for policy recommendations to include longer and more frequent exercise periods within the school week.

Capacity to Collect and Analyze Outcome Data

Key Finding: MHI increased its ability to collect and analyze data on outcomes for more programs than it has in the past. MHI can now build on this effort by increasing its internal capacity to support grantees in their evaluation efforts and in using their findings to improve future programming.

During this reporting period, MHI increased its ability to collect and analyze data, providing RAND with more outcomes data than it has in the past. MHI made efforts to integrate outcome evaluation whenever it was appropriate to the activity, although it is not appropriate for all types of activities, such as the Medical Interpreter Program, for which process measures indicating the number of participants working as interpreters in the area are equally important to understanding the program's effects. These analyses, coupled with the participation and cost data MHI was already collecting, can be used to determine the effects of its programs and activities, but only for those participants in the program. Additionally, MHI needs to build its capacity to support its grantees in their evaluation efforts and also assist grantees in using the evaluation data to improve future programming. If provided, this service would be a valuable benefit, perhaps drawing even more to compete for MHI grants.

In addition to continuing to collect outcomes, participation, and cost data, the next step is to build program-level capacity among grantees and MHI's management capacity to ensure that the data MHI receives are accurate and that the analyses adequately assess the programs' viability based on the benefit they provide compared with the cost. Additionally, introducing longer-term outcomes would also improve the quality of the discourse around participant outcomes.

SUMMARY AND RECOMMENDATIONS

At the end of 2009, MHI completed a strategic planning process that identified access to health care, education, and prevention as its priority areas. MHI developed awareness, screening, and intervention strategies to address these priorities. Through its awareness activities, MHI educated, trained, or screened approximately 2,500 community members and distributed nearly 100,000 educational inserts during FY2009. MHI's participation in Community Health Fairs was its primary strategy for providing screening to minority populations. During FY2008–2009, MHI

participated in 36 health fairs with almost 10,000 participants. At these fairs, nearly 5,000 health fair participants were provided with blood pressure, cholesterol, glucose, and cancer screens. For its intervention and pilot work, MHI supported intervention or pilot projects to educate African American churches and organizations about healthy eating and cooking; to train Spanish-speaking medical interpreters and support health care centers in using medical interpreters; to expand a minority health clinic's capacity to provide care for chronic conditions, such as diabetes, hypertension, and obesity; and to provide educational materials on sickle cell disease to health care providers, sickle cell patients, and their families. During 2008–2009, in response to RAND's recommendation, MHI increased its involvement in policy-related task forces and coalitions to broaden MHI's impact and help it reach its goals. In analyzing MHI's spending, RAND found that unit costs were largely driven by participation levels, with relatively higher unit costs for intervention strategies and lower unit costs for awareness and screening activities. MHI's stakeholders agreed about the appropriateness of its purpose and goals and believed that the program is effectively reaching its goals. MHI has expanded its capacity to assess the outcomes from its programs and plans to use this information for future program planning.

Many of MHI's programs entail components across multiple activity areas. Therefore, the recommendations that result from our evaluation of MHI activities during 2008 and 2009 pertain to the Screening, Awareness, and Interventions activity areas:

- **Maintain legislative focus on HIV/AIDS, sickle cell disease, health workforce, and system navigation issues.**

MHI's legislative work appears to be a good value, given the minimal cost to the organization. Therefore, we encourage MHI to continue to build the collaborations and connections necessary to affect legislation relevant to improving the health of minority Arkansans. However, we caution against spreading work too broadly across issue areas. Rather, we stand by our past recommendation to focus on a short list of health issues.

- **Continue to strategically fund pilot and demonstration programs.**

MHI can enhance capacity in existing agencies through its outreach initiative grants and professional service contracts. We suggest that MHI continue these initiatives to meet its mandate to increase screening, awareness, and interventions.

- **Use the Outreach Initiative Grants as well as other opportunities to partner with other tobacco programs to reach program goals.**

For years, RAND has suggested that ATS programs work together to afford the highest impact for tobacco funds. We recognize that these partnerships are beginning to form and recommend that MHI should place emphasis on using its grant-making mechanisms to support strategic partnerships with other tobacco programs. That said, we encourage MHI to maintain its standards and follow its documented procedures in selecting grantees that further its mandate.

- **Continue to forge collaborations with agencies and programs that have completed successful evaluations and with researchers who can bring needed expertise to these efforts.**

As MHI continues to build its capacity to monitor progress and in providing funding and monitoring to programs serving minority populations in the state, we recommend that MHI continue to work with individuals and agencies that can provide technical assistance to improve its internal capacity to design program evaluations and collect and analyze data.

- **Take the next step with outreach grantees to ensure proper reporting and evaluation and monitoring.**

We recommend that MHI shore up its monitoring and evaluation system based on its growing experience with the RFA process and grantee monitoring. Specifically, we suggest that MHI engage in a debriefing and process improvement procedure after each stage of the grant cycle to discuss the areas of success and challenge as well as opportunities for improvement. For example, stages may include advertising the requests for applications; application screening, scoring, and selection; grant monitoring and program evaluation; and grantees' efforts to disseminate/publicize outcomes via diverse media outlets.

- **Seek supplemental funding for programs and services.**

We recommend that MHI apply for supplemental funding, with the goal of developing strategic partnerships as well as a strong track record that will afford it the funding history to be sustainable as tobacco funds decrease in the future.

Chapter 8

Medicaid Expansion Programs

This chapter summarizes the results of our multifaceted evaluation of the Medicaid Expansion Programs (MEP). In the first section, we provide an update on each program, including goals, process indicators, and intermediate outcome indicators. The programs' cost indicators are presented in the second section, while the results of the policy evaluation appear in the next section. Long-term outcome indicators are discussed in the fourth section. The fifth section summarizes the findings and provides recommendations for the MEP.

PROGRAM DESCRIPTION AND UPDATE

The goal of the Department of Human Services MEP is to “expand access to health care through targeted Medicaid expansions, thereby improving the health of eligible Arkansans.” The MEP includes the following four efforts:

- **Pregnant Women’s Expansion Program.** This program expands Medicaid coverage and benefits to pregnant women.
- **AR-Seniors Program.** This program expands noninstitutional coverage and benefits to Medicare beneficiaries age 65 and over.
- **Medicaid-Reimbursed Hospital Care Program.** This program offers expanded inpatient and outpatient hospital reimbursements and benefits to adults age 19–64.
- **ARHealthNetworks.** This program provides a limited benefits package to adults age 19 to 64.

During 2008 and 2009, there were a number of external events with implications for the Medicaid programs. First, program officials continue to watch national health care reform efforts closely, pulling data to look at the possible impact of different plans. Second, officials are also watching the impact of the recession on their programs. For example, the number of individuals receiving unemployment benefits in Arkansas has increased from 20,000 to 55,000 per month. The Department of Human Services expects that as people exhaust their unemployment benefits, demand for public services, including Medicaid, will increase. As a result of both increased demand for services and annual growth, the agency now projects a Medicaid funding shortfall even when the trust fund monies and the MEP balance are taken into account. The agency is currently developing a plan to reduce annual Medicaid expenditures by \$400 million.

Third, officials are disbursing stimulus money and other resources from the federal recovery efforts. The Department of Human Services was approved to use money from the stimulus package to modernize and transform its service delivery system. These efforts are aimed at improving program access and creating a more cost-efficient eligibility process. These changes impact the Division of County Operations, including both the regular Medicaid programs and the MEP. Specifically, the Department of Human Services is using the stimulus money to (1) build a 100-person central processing and call center that will be ready in 2010; (2) use document imaging to convert all paper records to electronic records, including a back-scan of older records; and (3) add 112 additional positions through December 2010 to clear all processing backlogs. The federal stimulus money also increased the match rate for Medicaid dollars, which enhances the impact of the tobacco settlement money.

Other agency-wide efforts include an expansion of the Access Arkansas online system to include the Medicare savings programs. Also, the Division of County Operations has begun to receive a data tape from the Social Security Administration that will automatically identify individuals who are potentially eligible for low-income subsidies. The MEP benefits from these and others efforts that make the general Medicaid programs more efficient.

We provide an update on each program below, including process indicators or goals related to each program. Given that the Medicaid budget is subject to unanticipated changes, it is difficult for the Department of Human Services to plan beyond the next budget cycle. As a result, the Medicaid program revisits its goals every two years. The current two-year goal period started at the beginning of calendar year 2009, partway through the period reported here.

Pregnant Women’s Expansion Program. The Pregnant Women’s Expansion program provides access to Medicaid services for pregnant women with income between 133 percent and 200 percent of the federal poverty level. After the program’s inception in the second half of 2001, enrollment increased and then stabilized at an average of about 1,780 participants during each six-month period (Table 8.1). Enrollment peaked during the first half of 2009 at 2,150 enrollees. The percentage of eligible women participating in the program increased to 55 percent in the first half of 2009 before stabilizing at around 47 percent. However, the size of the population that is potentially eligible for the program has not been recalculated since 2002, so the reach of the program may be different if the number of women potentially eligible has changed.

Table 8.1
Eligible Enrollees Using Expanded Pregnancy Benefits (2005–2009)

| Six-Month Period | Enrollees | Percentage of Eligible Women Participating^a |
|-------------------------|------------------|---|
| January–June 2005 | 1,746 | 44.8 |
| July–December 2005 | 1,731 | 44.4 |
| January–June 2006 | 1,859 | 47.7 |
| July–December 2006 | 1,833 | 47.0 |
| January–June 2007 | 1,857 | 47.6 |
| July–December 2007 | 1,753 | 44.9 |
| January–June 2008 | 1,813 | 46.5 |
| July–December 2008 | 1,941 | 49.8 |
| January–June 2009 | 2,150 | 55.1 |
| July–December 2009 | 1,850 | 47.4 |

^aThe denominator used to calculate this percentage is based on a 2002 Department of Health annual estimate of 7,800 potentially eligible individuals, which was divided by 2 to reflect the six-month time periods used to track this indicator.

Through 2008, the enrollment goal for the Pregnant Women’s Expansion Program was a 15 percent annual increase. Since its first full year of operation (2002), the program has not met this enrollment goal in any year. MEP’s lack of outreach efforts to inform potentially eligible participants about the program and its benefits may have contributed to its inability to meet the

enrollment goal. While revisiting the program’s goals and indicators during 2009, MEP decided not to establish another enrollment goal for the program. Since the Medicaid program pays for 62 percent of all births in the state each year, MEP does not believe there are pregnant women below 200 percent of the poverty level who are without coverage.

Because of the stability of its enrollment, MEP shifted its focus from enrollment to assessing the prenatal care received by eligible women. Under the current system, if a pregnant woman receives two or more prenatal visits, then the provider bills a single fee that masks the range of services utilized. With this limitation, MEP began tracking the number of enrollees who received at least two prenatal care visits and the number who received prenatal vitamins in 2008 (Table 8.2). On average, 463 women received at least two prenatal visits during each six-month period of 2008 and 2009. Between 12 and 15 percent of the enrolled women filled a prescription for prenatal vitamins at least once. MEP is also considering examining how early in their pregnancies enrollees are seeking prenatal care.

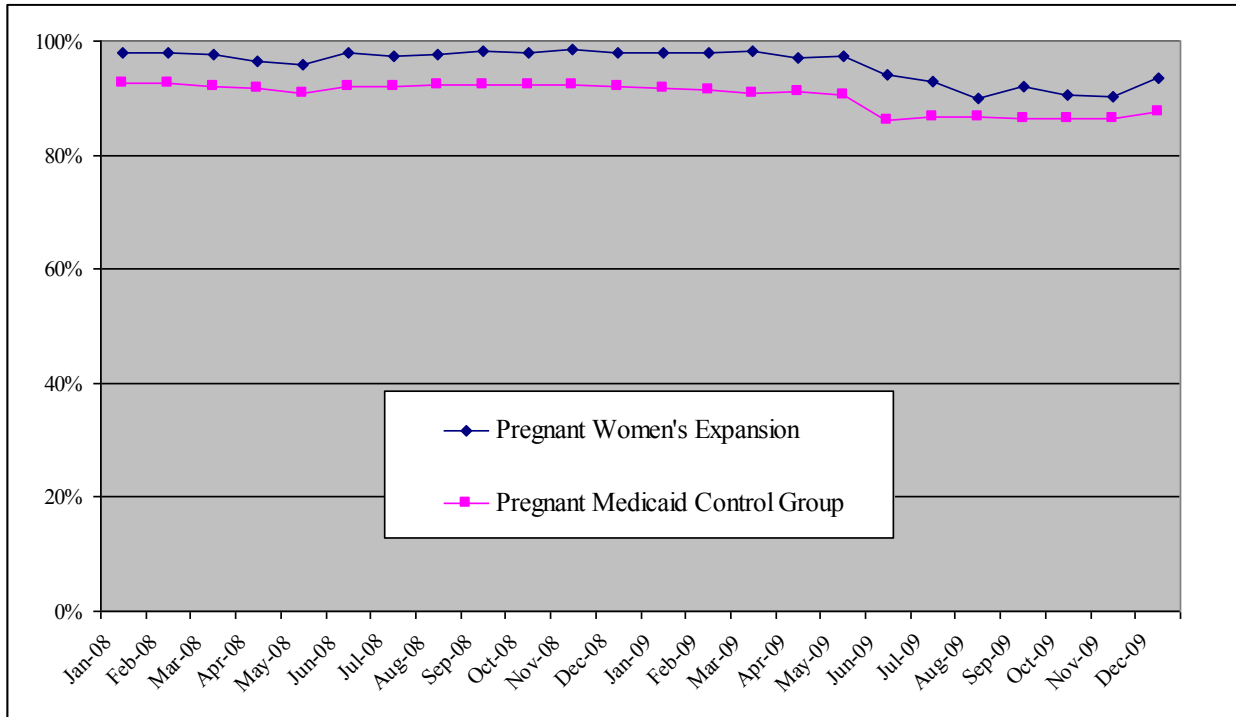
Table 8.2
Types of Services Used by Eligible Women

| Six-Month Period | Number Receiving at Least Two Prenatal Visits | Percentage Receiving Prenatal Vitamins |
|-------------------------|--|---|
| January–June 2008 | 496 | 15 |
| July–December 2008 | 396 | 13 |
| January–June 2009 | 518 | 12 |
| July–December 2009 | 443 | 12 |

MEP also tracks service utilization of program enrollees and compares their utilization to that of the average pregnant Medicaid beneficiary not enrolled in the program. The goal of the comparison is to have enrollees utilize services at least at the same level as the average pregnant Medicaid beneficiary not enrolled. This goal is derived from a concern that individuals enrolled in the Pregnant Women’s Expansion program were not using services at the same rate as others, due in part to a lack of knowledge about the services for which they were eligible. To assess service utilization, we compared pregnant women enrolled in MEP with pregnant women enrolled in regular Medicaid whose income was below 133 percent of the federal poverty level (referred to as the control group). We compared average utilization over time, measured as the percentage of enrollees who used at least one service during the month.

Overall, service utilization for the women enrolled in the Pregnant Women’s Expansion program was very similar to that of the average pregnant Medicaid beneficiary (Figure 8.1). During 2008 and 2009, the utilization rate for women in both groups averaged 98 percent. This represents a marked increase from prior years, when utilization averaged 61 percent for women enrolled in the Pregnant Women’s Expansion Program and 41 percent for the control group.

Figure 8.1
Percentage of Pregnant Women’s Expansion Program Enrollees Who Used at Least One Service, CY 2008–2009



AR-Seniors. The AR-Seniors program expands Medicaid benefits to Medicare beneficiaries deemed eligible for Qualified Medicare Beneficiary status and with incomes at or below 80 percent of the federal poverty level. Once an individual’s income falls to 80 percent of the federal poverty level or lower, he or she becomes eligible for the AR-Seniors program and can receive the full array of Medicaid benefits. Table 8.3 presents the total enrollment in the program by six-month period as well as the proportion of all potentially eligible individuals who are actually enrolled. Since FY2005, enrollment in AR-Seniors program has remained steady, meaning that the program has been unable to meet its goal of increasing enrollment by 15 percent annually. The slower-than-expected growth is partially attributable to the lack of any formal outreach programs for the AR-Seniors initiative and to barriers to program enrollment related to the identification process. Those who might be eligible for the AR-Seniors program may not be easily identified, since seniors must first enroll as Qualified Medicare Beneficiaries before enrolling in AR-Seniors. MEP expects that the current economic situation and efforts related to the federal stimulus package may increase enrollment, although the 2009 enrollment numbers do not support this expectation. In January 2010, the Department of Human Services started a new collaborative effort with the federal Social Security Administration to accept Medicare Savings applications from individuals found eligible for the Medicare Part-D Low Income Subsidy via routine data transfers. This is expected to increase identification of eligible seniors.

In terms of the proportion of eligible participants reached by the AR-Seniors Program, we calculated the proportion with two different denominators. The first denominator is based on a 2002 Medicaid estimate of the eligible Qualified Medicare Beneficiary (QMB) population

(approximately 5,000 enrollees). Based on this denominator, the AR-Seniors program is over capacity, since current enrollment is over 5,000 enrollees (Table 8.3). The second denominator comes from the Arkansas census data and Medicaid and Supplemental Security Income (SSI) enrollments. Using these data, it is estimated that there were just over 56,000 adults age 65 and older in 2005 whose income was at or below 80 percent of the federal poverty level. We subtracted from that number those who were already eligible for Medicaid because of SSI eligibility and those already in an institution with incomes up to 300 percent of the SSI limit (these two populations are not eligible for AR-Seniors). The resulting denominator is 59,664 seniors who could be eligible for the AR-Seniors program (Table 8.3). Based on this denominator, the program has remained at just over 17 percent capacity since the beginning FY2006. It is important to note that neither of the denominators has been updated since 2002.

**Table 8.3
Eligible Elderly Persons Using Expanded Medicaid Coverage (2005–2009)**

| Six-Month Period | Number | Percentage of Eligible QMBs^a | Percentage of Total Eligibles^b |
|-------------------------|---------------|--|--|
| January–June 2005 | 4,946 | 98.9 | 16.6 |
| July–December 2005 | 5,147 | 102.0 | 17.3 |
| January–June 2006 | 5,324 | 106.5 | 17.8 |
| July–December 2006 | 5,083 | 101.7 | 17.0 |
| January–June 2007 | 5,096 | 101.9 | 17.1 |
| July–December 2007 | 5,157 | 103.1 | 17.3 |
| January–June 2008 | 5,432 | 108.6 | 18.2 |
| July–December 2008 | 5,220 | 104.4 | 17.5 |
| January–June 2009 | 5,272 | 105.4 | 17.7 |
| July–December 2009 | 5,087 | 101.7 | 17.1 |

^a Denominator estimated by the Arkansas Medicaid program based on number of individuals in Arkansas enrolled as QMBs (10,000 annual enrollees).

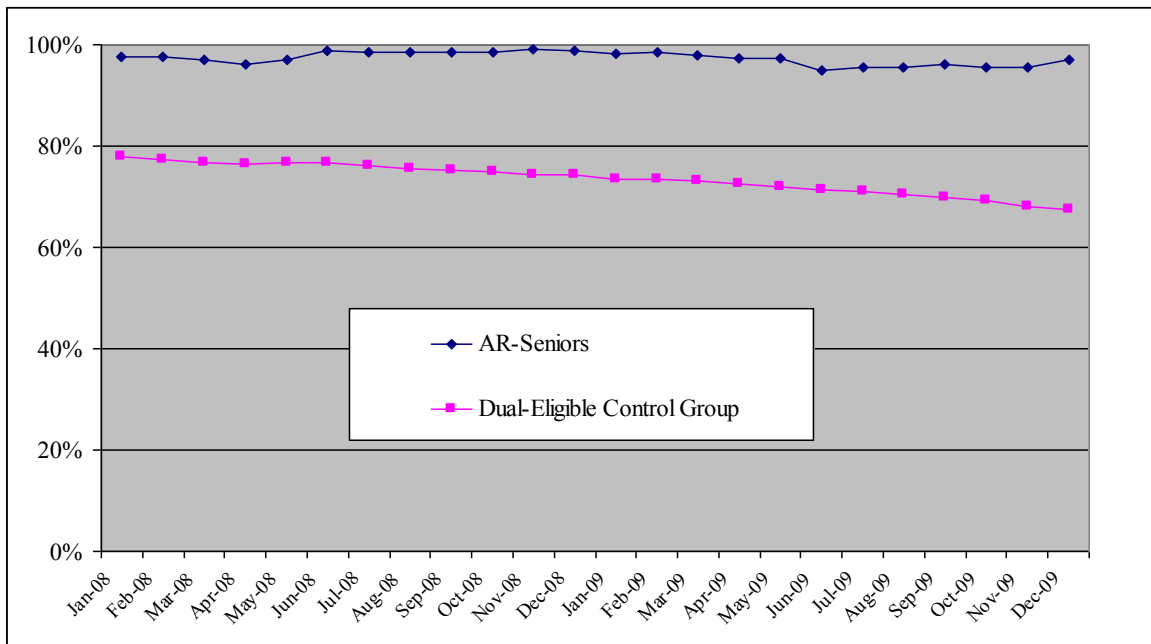
^b Denominator obtained from the Arkansas Census data in the PUMS 1% file, SSI enrollment, and Medicaid files. We subtracted from the Census estimates the portion of the aged population (65+) already on SSI as of December 2005 because they are eligible for Medicaid through normal channels and the number of aged beneficiaries in a long-term care institution with incomes up to 300 percent of the SSI limit as of December 2005. The resulting denominator is 59,664, which was divided by 2 to reflect the six-month time periods used to track this indicator.

Based on RAND’s recommendation, MEP also plans to begin looking at service utilization for the AR-Seniors program. Originally, one of the most attractive features of the program was the prescription drug coverage. But with the availability of Medicare Part D prescription drug coverage, MEP indicated that the most frequently used service is personal care assistance. Moving forward, this information can be used to compare service use by participants in this program with use among regular Medicaid enrollees and to help with outreach and education efforts.

MEP’s goals for the AR-Senior Program also include having beneficiaries who are currently enrolled in the AR-Seniors program utilize services at the same or higher levels as the average dually eligible beneficiary not enrolled in the AR-Seniors program. This goal derived

from a concern that individuals enrolled in the AR-Seniors program were not using services at the same rate as others, due in part to a lack of knowledge about which services they were eligible for. To evaluate progress toward this goal, we examined average monthly utilization over time for individuals enrolled in AR-Seniors compared with dually-eligible older adults (both Medicare and Medicaid eligible) who were automatically enrolled due to Supplemental Security Income eligibility (Figure 8.2). During 2008–2009, an average of 97 percent of AR-Seniors enrollees used at least one service. This compares to an average of 74 percent among those in the control group. As with the 2006-2007 period, the trend lines are fairly flat, suggesting that the differences in utilization are stable. Based on these analyses, AR-Seniors enrollees appear to be using services at higher rates than other dually-eligible individuals, which is a reversal from the prior two years when the AR-Seniors group had lower utilization.

Figure 8.2
Percentage of AR-Seniors Enrollees Who Used at Least One Service,
by Month, CY 2006–2009



Medicaid-Reimbursed Hospital Care Program. This program expands Medicaid-reimbursed hospital care and reduces uncompensated care, cost sharing, and patient liability for hospital stays of Medicaid beneficiaries age 19 to 64. The number of beneficiaries declined markedly over the last two year (Table 8.4). By the end of 2009, the number of beneficiaries had declined nearly 50 percent from around 17,200 at the end of 2007 to about 9,200. Moving forward, MEP plans to start looking at the percentage of beneficiaries who used the maximum number of days during each period.

Table 8.4
Medicaid Enrollees Using Expanded Inpatient Benefits (2005–2009)

| Six-Month Period | Number of Beneficiaries |
|--------------------|-------------------------|
| January–June 2005 | 22,815 |
| July–December 2005 | 19,203 |
| January–June 2006 | 17,983 |
| July–December 2006 | 15,841 |
| January–June 2007 | 20,449 |
| July–December 2007 | 17,218 |
| January–June 2008 | 13,222 |
| July–December 2008 | 8,668 |
| January–June 2009 | 9,416 |
| July–December 2009 | 9,281 |

ARHealthNetworks. ARHealthNetworks offer a limited benefits package to employees and their families age 19 to 64 with income at or below 200 percent of the federal poverty level working in small businesses (firms with up to 500 employees). As of August 1, 2009, ARHealthNetworks was expanded to include sole proprietors or self-employed individuals as long as they had a qualifying tax status. The benefit package includes a maximum of seven inpatient days per year, two outpatient hospital services per year, up to six outpatient physician visits per year, laboratory and X-ray services associated with a physician visit, and up to two prescriptions per month, using a three-tiered formulary. In late 2008, ARHealthNetworks simplified its pricing so that subsidized members pay \$25 a month and unsubsidized members pay \$200 per month. The subsidized participants are funded via a state subsidy funded by MEP’s tobacco settlement allocation. The amount of the state subsidy varies depending on whether the participant is a parent or a childless adult, since the federal match rate differs for these two groups. MEP enrolls participants using a third-party administrator—NovaSys Health—whose contract includes a capitated monthly rate per participant to cover administrative costs, in addition to an annual marketing and outreach budget of \$200,000 for radio spots, billboards, newspaper advertisements, and community events.

The program is being implemented in two phases. At the end of Phase I, on September 30, 2008, ARHealthNetworks had enrolled just over 6,400 participants, representing 43 percent of the 15,000-person enrollment cap set by the Center for Medicaid Services. In Phase II, the enrollment cap expanded to an additional 35,000. Currently, ARHealthNetwork’s enrollment of 9,554 participants represents 27 percent of the enrollment cap (Table 8.6). During 2008–2009, the program’s monthly average rose from less than 500 participants per month to over 1,500 participants. Between 2 and 4 percent of the employees drop out of the program during each six-month period for various reasons.

During 2008–2009, the number of employers increased from 895 during the first half of 2008 to 2,421 for the second half of 2009, with a disenrollment rate of about 1 percent during each six-month period (Table 8.5). The 9,554 subsidized enrollees by the end of December 2009 were employed by 2,421 companies. The average group size of 3.9 subsidized enrollees per

employer indicates that ARHealthNetworks has been attractive to smaller companies. Some of the administrative requirements, such as a 100-percent participation rate for eligible employees, the need to verify eligibility and citizenship (since the program involves a federal subsidy), and the cost to the employee, make it easier for smaller companies to participate. Even though the cost-sharing is modest, employers have found that some individuals are not willing to pay even a small amount to gain health insurance.

Table 8.5
ARHealthNetworks Program Enrollment

| Six-Month Period | Subsidized Participants in Program | Number of Participating Employers | Disenrollment Rate (Employees) (%) | Disenrollment Rate (Employers) (%) |
|-------------------------|---|--|---|---|
| January–June 2007 | 462 | 134 | 2.5 | 2.1 |
| July–December 2007 | 2,143 | 568 | 2.8 | 0.9 |
| January–June 2008 | 2,896 | 895 | 3.4 | 1.5 |
| July–December 2008 | 5,634 | 1,306 | 3.7 | 1.2 |
| January–June 2009 | 7,376 | 1,726 | 3.4 | 1.0 |
| July–December 2009 | 9,554 | 2,421 | 3.5 | 0.6 |

With ARHealthNetworks, MEP also followed through with RAND’s recommendation to assess eligible participants’ service usage by looking at the percentage of participants who used the maximum number of different categories of benefits over a 12-month period. Data were available only for 2008 because of the time needed for 2009 claims to be submitted and paid. Overall, 19 percent of participants used the maximum number of physician services, 17 percent used the maximum outpatient services benefit, and 14 percent used all the inpatient hospital days allowed under the benefit plan (Table 8.6). A smaller percentage of the participants (2 percent) used all the prescription drug benefits, which includes two prescriptions per month.

Table 8.6
Maximum Service Usage by Eligible Participants

| Year | Percentage of Beneficiaries Using Maximum Benefits | | | |
|-------------|---|----------------------------|--------------------------------|----------------------|
| | Physician Services | Outpatient Services | Inpatient Hospital Days | Prescriptions |
| 2008 | 19 | 17 | 14 | 2 |

Progress Toward Achieving Program Goals. MEP revised several of its goals and established other new programmatic goals for the RAND evaluation that took effect during this evaluation period. Given that the Medicaid budget is subject to unanticipated changes, it is difficult for the Department of Human Services to plan beyond the next budget cycle. As a result, MEP works with two-year goals, rather than longer-term, five-year goals. Table 8.7 summarizes progress toward these goals. Overall, MEP accomplished three of its programmatic goals for this reporting period.

Table 8.7
MEP Goals and Status over the Past Two Years

| Goal | Status |
|--|---|
| Pregnant Women's Expansion Program | |
| Percentage of enrolled women who receive at least two prenatal visits will increase (NEW). | UNABLE TO ASSESS. This new goal was established partway through 2009. The data collected for 2008–2009 will serve as a baseline to assess progress moving forward. |
| Beneficiaries currently enrolled in the Pregnant Women's Expansion program will utilize services at least at the same level as the average pregnant Medicaid beneficiary (EXISTING). | ACCOMPLISHED. MEP met this goal, with nearly all the enrollees in the Pregnant Women's Expansion program and the average pregnant Medicaid beneficiary utilizing at least one service. |
| AR-Seniors Program | |
| Enrollment in the AR-Seniors program will increase by 15 percent annually (REVISED). | NOT MET. MEP set a goal of increasing annual enrollment by 15 percent. From 2007 to 2008, enrollment in the AR-Seniors Program increased by only 1 percent. For 2009, program enrollment actually decreased. There are several possible explanations for the stability in the program's enrollment, including a lack of outreach and problems identifying potential eligibles. |
| Beneficiaries currently enrolled in the AR-Seniors program will utilize services at least at the same level as the average dually eligible beneficiary (EXISTING). | ACCOMPLISHED. MEP met this goal, with the vast majority of AR-Seniors enrollees receiving at least one service while only 74 percent of the dually-eligible control group had received at least one service. |
| ARHealthNetworks | |
| Enrollment in ARHealthNetworks will increase by 75 new employers annually and 400 new members per month (NEW). | ACCOMPLISHED. MEP far exceeded its goals for the ARHealthNetworks. For 2008, the number of participating employers increased by more than 700 employers. Between 2008 and 2009, ARHealthNetworks gained another 1,115 employers. In terms of new members, MEP averaged 291 additional members per month during 2008 and 327 during 2009. |

COST EVALUATION

This section summarizes the indicators tracked for the cost evaluation of the MEP, including trends in spending of tobacco settlement funds and federal matching funds over time, program-level spending of tobacco settlement funds, and a new assessment of unit costs for each of the programs.

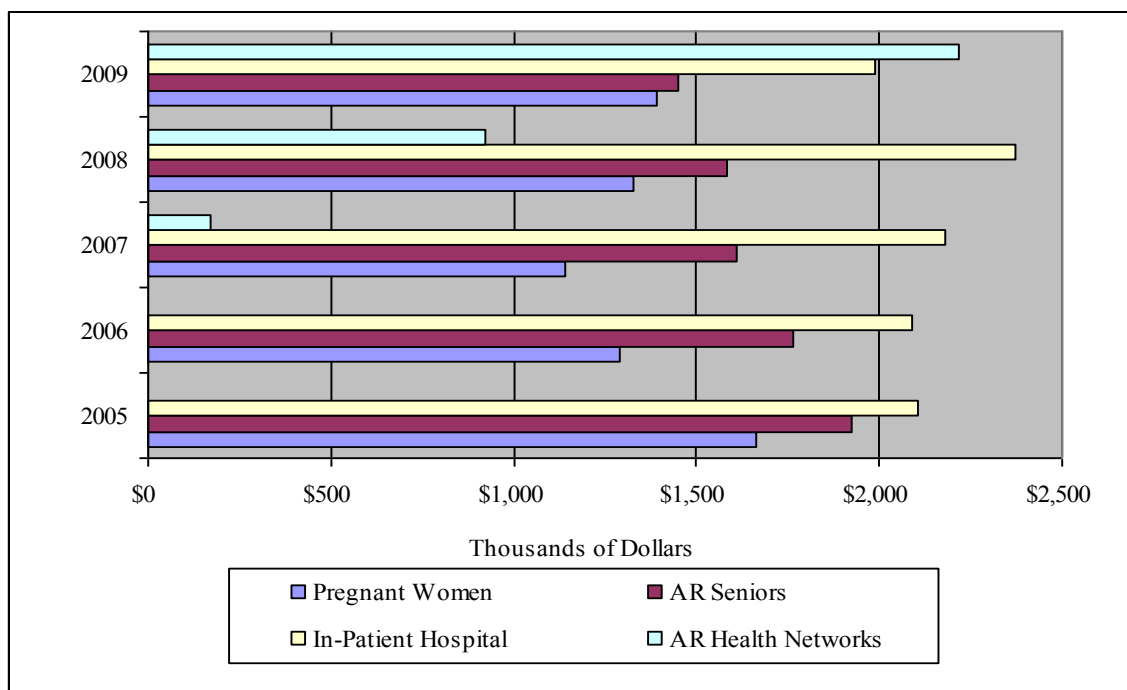
Table 8.8
Total MEP Spending, by Fiscal Year

| Item | 2005 | 2006 | 2007 | 2008 | 2009 |
|--|---------------------|---------------------|---------------------|-------------------|-------------------|
| Section 3: County Operations | | | | | |
| (1) Regular salaries | \$440,236 | \$462,935 | \$500,858 | 483,469 | 483,160 |
| (2) Personal service matching | 284,699 | 322,789 | 326,389 | 341,345 | 347,001 |
| (3) Maintenance and general operation | 4,258 | 3,058 | --- | 297 | 36 |
| (4) Purchase Data Processing | 9,811 | 11,076 | 10,078 | 8,022 | 4,584 |
| <i>Total County Operations</i> | \$739,004 | \$799,858 | \$837,325 | \$833,134 | \$834,782 |
| Section 4: Medicaid Program Management | | | | | |
| (1) Regular salaries | 25,176 | 39,546 | 47,637 | 75,427 | 50,359 |
| (2) Personal service matching | 11,622 | 15,849 | 17,371 | 24,377 | 18,154 |
| (3) Maintenance and general operation | 3,168 | 3,395 | 3,104 | 5,863 | 5,706 |
| <i>Total Medicaid Program Management</i> | \$39,966 | \$58,790 | \$68,112 | \$105,667 | \$74,219 |
| Section 5: Medical Services | | | | | |
| (1) Prescription drugs | 5,355,719 | 3,754,056 | 2,785,373 | 2,717,597 | 2,642,542 |
| (2) Hospital and medical services | 13,707,834 | 16,196,206 | 16,447,328 | 20,337,702 | 25,431,288 |
| <i>Total Medical Services</i> | \$19,063,553 | \$19,950,262 | \$19,232,701 | 23,055,299 | 28,073,830 |
| <i>Annual Total</i> | \$19,842,523 | \$20,808,909 | \$20,138,438 | 23,994,101 | 28,982,831 |

MEP’s total spending includes its appropriated tobacco settlement funds and the federal matching funds that the tobacco settlement funds generate (Table 8.8). From FY2005 through FY2009, the additional staff and overhead required for MEP is minimal compared with the medical services expenses; very little has been spent on regular salaries, fringe benefits, and maintenance and operations. Total spending for MEP increased substantially during 2008–2009. Total spending for FY2008 was 19 percent higher than in FY2007. Similarly, spending increased 21 percent from FY2008 to FY2009. Most of the increase occurred in the hospital and medical services category. Due to the current financial crisis, state agencies have reduced their operating budgets for FY2010 and FY2011, which includes funding reductions in the Medicaid program. The Medicaid program is projecting a budget shortfall even after taking into account the MEP account balance that has accumulated over the last several years. The Department of Human Services is working with program stakeholders to develop a strategy to reduce Medicaid expenditures by \$400 million.

Spending on the Pregnant Women’s Expansion Program decreased in FY2006 and FY2007 and then rebounded in FY2008 and FY2009 but not to the level of spending in FY2005 (Figure 8.3). Overall, FY2009 spending on the Pregnant Women’s Expansion Program was 16 percent lower than in FY2005. For AR-Seniors, spending decreased slightly in both FYs 2008 and 2009, such that FY2009 spending for the program was 25 percent less than in FY2005. Spending for the inpatient hospital program stayed fairly steady from FY2005 through FY2009 with slight increases and decreases from year to year. MEP spends about \$1.8 million on this program quarterly with about \$500,000 of that coming from the tobacco settlement funding. The ARHealthNetworks program began operations in FY2007 and spent approximately \$781,000. It has grown dramatically in two years with spending of \$2.2 million in FY2009, exceeding the amounts spent for all three of the other programs.

Figure 8.3
MEP Spending by Program, by Fiscal Year



For the first time, we examined the average spending for each individual served by three of the expansion programs for FY2008 and FY2009. In calculating the unit costs, we used the total unduplicated recipient count for the fiscal year divided by total spending for the program during that fiscal year. The spending numbers used for the calculation do not include the federal matching dollars, only the amount of tobacco settlement dollars spent. For the Pregnant Women’s Expansion Program the unit cost remained stable in FYs 2008 and 2009 at close to \$460 per enrollee (Table 8.9). Unit costs for the AR-Seniors program were lower, at about \$250 per enrollee. For ARHealthNetworks, unit costs rose from \$241 in FY2008 to \$268 in FY2009. Since this is the first time we have analyzed program spending in this way, these unit costs will serve as a baseline for future analysis.

Table 8.9
MEP Unit Costs by Program

| Program | 2008 | 2009 |
|------------------------------------|-------------|-------------|
| Pregnant Women’s Expansion Program | \$456 | \$458 |
| AR Seniors | \$262 | \$243 |
| ARHealthNetworks | \$241 | \$268 |

POLICY EVALUATION

The policy evaluation is designed to help understand the context in which the tobacco settlement programs develop and conduct activities in the areas outlined above. During 2009, we surveyed a group of MEP stakeholders to assess how MEP’s activities, goals, and progress are perceived by those with an interest in its programs. The targeted group of respondents for the MEP includes representatives from county health offices, provider practices, community health agencies or centers, senior health centers, hospitals, Chambers of Commerce, trade associations, and civic groups. Forty-nine of the 490 stakeholders participated in the survey, yielding a response rate of 10 percent. Given the very low response rate, generalizations from these data are necessarily limited.

Most respondents became involved with MEP in 2002 and many others in 2007. Twenty-nine percent of respondents are health department administrators and 11 percent are other types of administrators. Stakeholders participate in meetings or activities quarterly or annually (22 and 20 percent respectively). Respondents had some knowledge of the purpose and goals of MEP and they perceived the purpose and goals as somewhat appropriate. The majority of stakeholders who responded rated MEP’s work as very or somewhat important. According to respondents, MEP is somewhat effective in reaching its goals.

In terms of stakeholders’ awareness of each MEP activity area, respondents were much more familiar with the Pregnant Women’s Expansion Program (62 percent) and ARHealthNetworks (59 percent) than with AR-Seniors (47 percent) or the Hospital Program (37 percent) (Figure 8.4).

Nearly one-half (44 percent) of respondents were involved in the Pregnant Women’s Expansion Program (Figure 8.5). Survey participants were less involved with ARHealthNetworks (36 percent), AR-Seniors Program (24 percent), and the Hospital Program (16 percent).

Figure 8.4
Stakeholder Awareness of MEP Activity Areas (n=49)

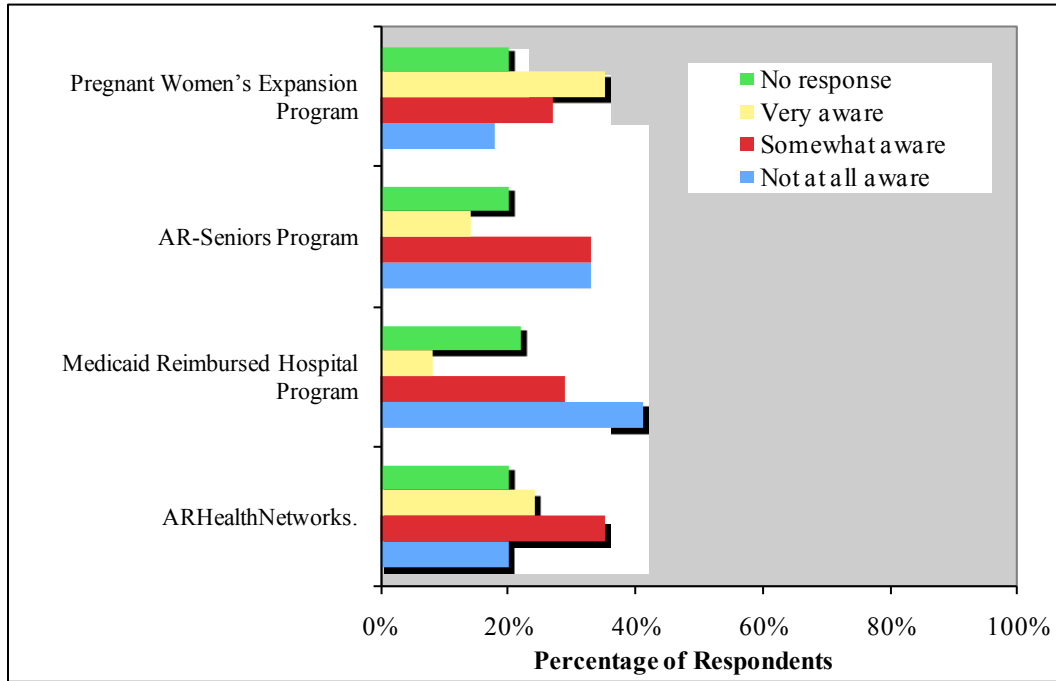
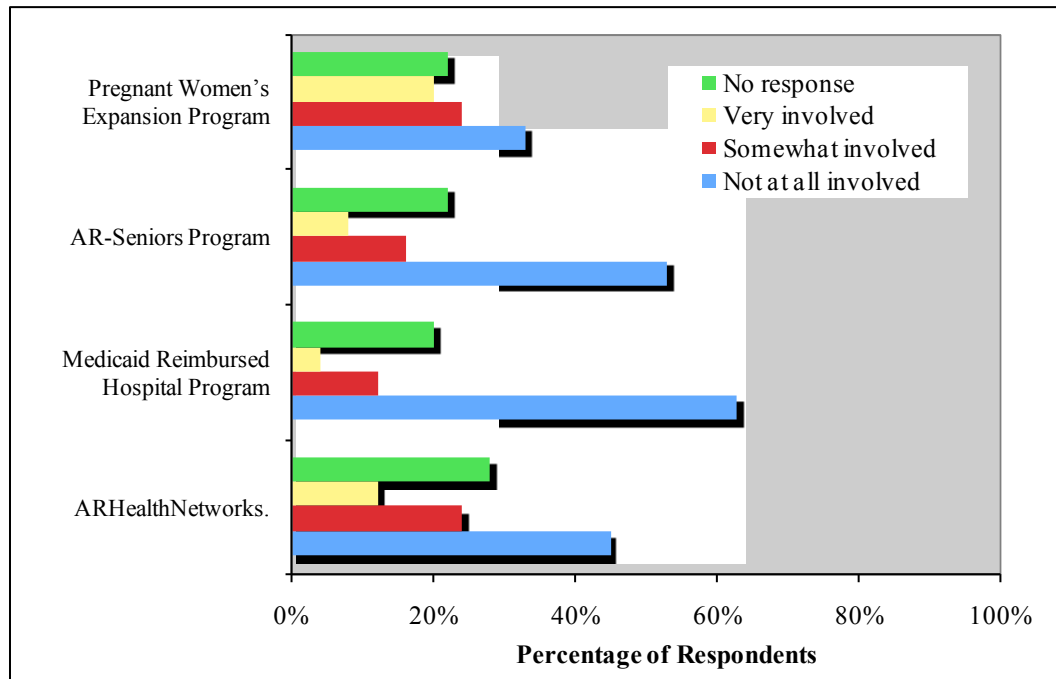


Figure 8.5
Stakeholder Involvement in MEP Activity Areas (n=49)



Although the survey also asked respondents about the quality of activities in each area and the quality of the program's administration, the majority of respondents did not respond to these questions, so these data are not presented.

Collaboration among programs receiving tobacco settlement funds is a primary focus of the ATSC. The MEP survey respondents reported they were somewhat aware of the other ATS programs, but the majority of respondents were not involved in the other programs. Respondents were most aware of the TPCP, with approximately 50 percent also involved with TPCP. Overall, stakeholders perceived that MEP does collaborate and coordinate with other tobacco settlement programs, with 22 percent reporting at least some degree of collaboration.

Finally, the majority of respondents believed that MEP should expand to do more in the future. Some stakeholders, 12 percent, felt the program should continue with its current level of activity. Some of the survey respondents made specific suggestions for MEP, including determining the capacity in the provider community to serve more Medicaid patients, increasing publicity to increase program enrollment, and improving the enrollment process for the different programs.

OUTCOME EVALUATION

This section summarizes progress toward the long-term outcome indicators tracked for each program.

Pregnant Women's Expansion Program

Key Findings: We continue to find that the expansion of benefits for pregnant women has not increased prenatal care. In fact, there appears to have been a recent decrease in adequate prenatal care among women who are eligible for this benefit.

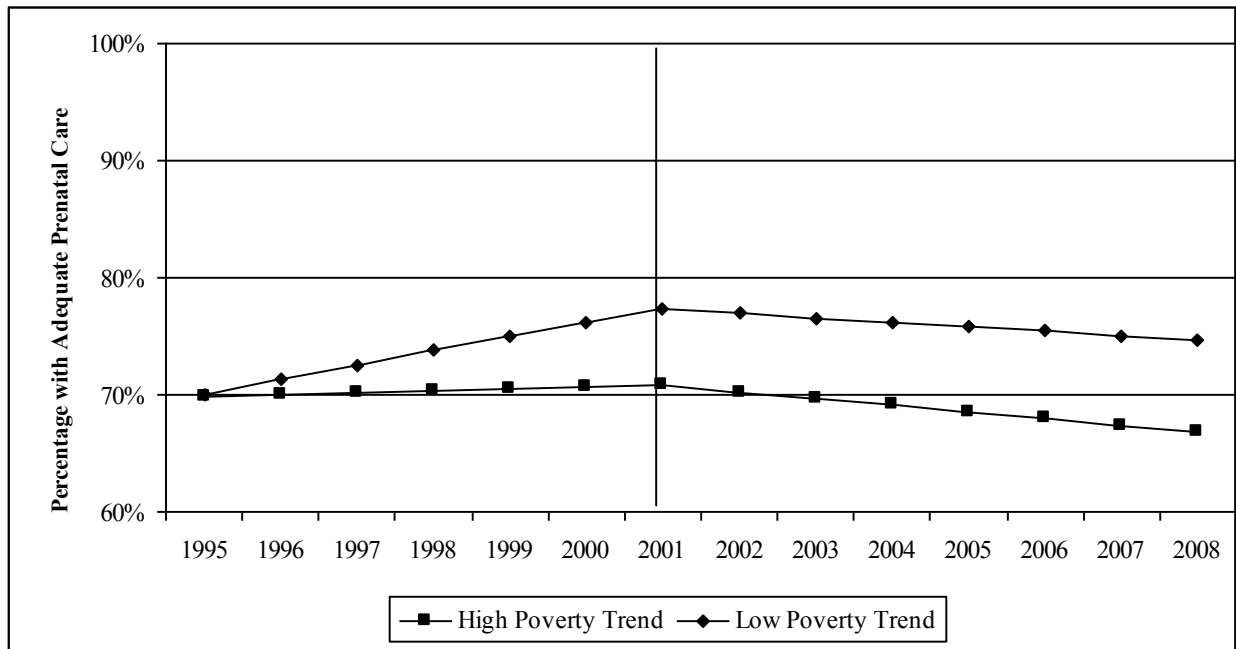
For the Pregnant Women's Expansion Program, we examined the extent to which expanding benefits to pregnant women whose income is between 133 percent and 200 percent of the federal poverty level led to better prenatal care for pregnant women in Arkansas. The analysis presented here examines whether the benefit led to additional care rather than to a shift to Medicaid from other payment sources.

Adequate prenatal care was defined as having at least 10 prenatal care visits during the pregnancy. For information on prenatal visit utilization, we used the number of prenatal visits that were self-reported on birth certificates at the time of delivery. The birth certificate data do not contain information on Medicaid status, so we used county-level data on poverty status as a proxy for concentrations of Medicaid recipients. (There also were no county-level data on the percentage of the population receiving the expanded Medicaid benefits for pregnant women.) The Census Bureau provides estimates of the percentage of each county's population that is in each of several categories defined by the ratio of income to the poverty level. Using the categories that are most closely aligned with the benefit change, we calculated the percentage of the population in each county with income between 125 percent and 200 percent of the federal poverty level. We then examined whether there were increases in the percentage of women who had adequate prenatal care and whether any increases were positively related to the percentage of the county population in this poverty category.

Using data for all pregnant women in all counties in the state, we estimated trends for the baseline and program periods. Then we projected trends for representative counties at the 10th

and 90th percentiles of poverty levels for the county distribution, as shown in Figure 8.6. The 10th percentile represents a county with 13.9 percent of people in the poverty range targeted by the Medicaid expansion; the 90th percentile represents a county with 20.7 percent of people in that range.

Figure 8.6
Adequate Prenatal Care in Counties with High and Low Poverty Rates, 1995–2008



Consistent with our last report covering through 2007, we find that rates of women receiving adequate prenatal care continue to decrease in counties with higher percentages of people in the defined poverty category (Figure 8.6). During the baseline period (1995–2001), the percentages of pregnant women receiving adequate prenatal care were relatively constant over time in counties with higher percentages of people in the defined poverty range. At the same time, the percentages receiving adequate prenatal care increased over time in counties with lower percentages of people in the poverty range. When the tobacco settlement programs started, the trends reversed: Between 2001 and 2005, the amount of prenatal care increased slightly in counties having more women in the targeted poverty range, and the gap in prenatal care between the counties with more women in the targeted poverty range and the counties with fewer women in the targeted poverty range became narrower. However, since 2005, this trend has reversed, and the gap between the two groups grew wider during 2008. This finding leads to concerns about whether changing economic conditions might have affected this segment of the population most severely and led to increased need for prenatal care. It is also important to note that not only is this gap increasing but prenatal care for both groups is decreasing, suggesting that all pregnancies are at increased risk.

AR-Seniors Program

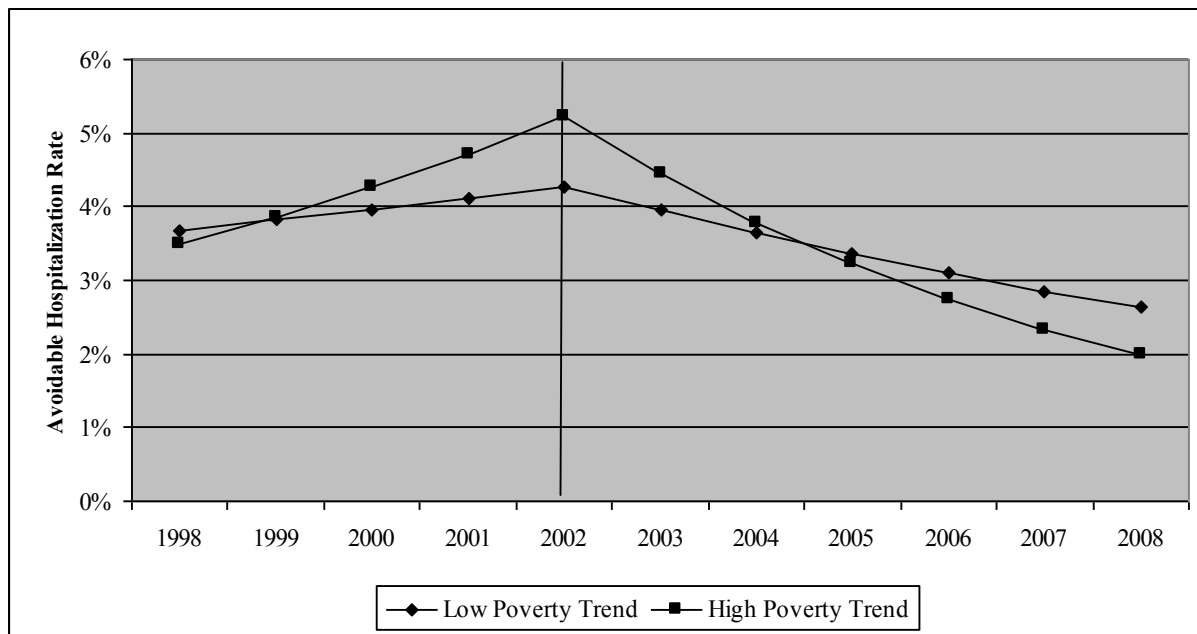
Key Findings: *Two additional years of data confirm our previous finding that the ARSeniors program has accelerated the decline in avoidable hospitalizations among the elderly, especially in high-poverty counties.*

Because increased access to quality medical care is expected to improve the health status of elderly Arkansans, the AR-Senior Program was developed to extend Medicaid benefits to people age 65 years and older who had incomes below 75 percent of the federal poverty level. For these analyses, we used the same methodology described in Chapter 6 on AAI to assess avoidable hospitalizations among the elderly in counties with Centers on Aging.

Here, we examine whether the number of avoidable hospitalizations was affected by the implementation of the AR-Seniors program. A greater decline in avoidable hospitalizations in locations with more eligible seniors would be evidence that the benefit was contributing to improved health outcomes. We performed a county-level analysis that estimated the baseline trend in avoidable hospitalizations among the elderly and examined whether there was a deviation from that trend that is related to the percentage of county residents with income less than 75 percent of the poverty level. We calculated the estimated baseline trends in avoidable hospitalizations for the older population in representative counties with high and low rates of poverty, where a high-poverty county had 14.8 percent of the population with income below 75 percent of the federal poverty level (90th percentile) and a low-poverty county has 6.5 percent of the population with income below 75 percent of the federal poverty level (10th percentile). We also estimated trends in avoidable hospitalization rates for preventable or acute conditions following implementation of the AR-Seniors benefit for those representative counties.

Before the AR-Seniors program started at the end of 2002, there was substantial increase in avoidable hospitalization rate in high-poverty counties, while there was relatively modest increase the rate in low-poverty counties (Figure 8.7). Following the implementation of the benefit expansion, the rates decreased in all counties. The decrease in the high-poverty counties was statistically greater than that in the low-poverty counties. This analysis provides evidence that the AR-Seniors program contributed to improved health outcomes.

Figure 8.7
Percentage of Elderly with at Least One Avoidable Hospitalization for Prevention and Acute Conditions, Counties with High and Low Poverty Rates



Medicaid-Reimbursed Hospital Care Program

Key Findings: An additional year of data supports our previous finding that part of the expanded hospital benefit is associated with increased access to hospital care for conditions requiring very short stays. The part that reimburses for hospital days 21 through 24 appears to reduce the amount of unreimbursed care rather than to increase the total amount of care.

The expansion of the hospital benefit in November 2001 increased the amount that Medicaid could compensate hospitals by reducing the copayment for the first hospital day of the benefit year from 22 percent to 10 percent and by extending the maximum number of reimbursable inpatient days per year from 20 to 24 days. The impact on health outcomes for Arkansans from this benefit is difficult to predict and measure. Charges that are not reimbursed by Medicaid are the responsibility of the patient; however, in practice hospitals collect a very small fraction of these unreimbursed charges from the patients.

If hospitals, doctors, and patients took the amount of Medicaid coverage into account when deciding among health care options, it is possible that the expanded payment could lead to more days of hospital care. Alternatively, the benefit expansion could lead to a decrease in out-of-pocket payments by Medicaid recipients or a decrease in the amount of unreimbursed care provided by hospitals, without having any significant impact on days of hospitalization. In this analysis, we used state hospital discharge data to examine whether the benefit expansion had a direct impact on number of days of hospitalization for Medicaid recipients.

For this analysis, we hypothesized that if the reduced Medicaid copayment were having an effect on hospital utilization, it would occur primarily as an increase in the number of short hospital stays. If a condition is serious enough to merit a long hospital stay, it is unlikely to be influenced by a relatively small change in the cost of the first day of hospitalization. To test this hypothesis, we examined the distribution of cumulative hospital days for all patients for whom Medicaid is the primary payer for at least one hospital stay, to assess whether there had been an increase in the fraction of Medicaid hospital stays of very short duration. Then we compared the Medicaid trends with the trend for patients who had not received Medicaid.

Prior to the reduction of the first day copay at the end of 2001, we see that the proportion of one-day stays decreased while the proportion of two-day stays increased for Medicaid patients (Figure 8.8). After the copay reduction, there was no further decrease in the proportion of one-day stays. This is consistent with what would be expected if patients, doctors, and hospitals were responsive to the higher payments for the first day and increased admissions for conditions requiring a very short stay.

To examine the effect of extending hospital benefits from 20 to 24 days per year, we looked at the number of inpatient days for people who had at least 19 days of hospitalization. We examined whether the increased benefit increased the proportion of those people who had between 21 and 24 days of total hospitalization. There is no evidence that stays between 21 and 24 days are becoming more common for Medicaid recipients (Figure 8.9). Indeed, the opposite of the expected effect is seen. Non-Medicaid patients rather than Medicaid patients are more likely to use days 21 through 24 of hospitalization. Therefore, we conclude that the extended coverage is not increasing the amount of hospitalization for the very ill.

Figure 8.8
Ratio of Medicaid to Other Hospital Stays by Length of Stay

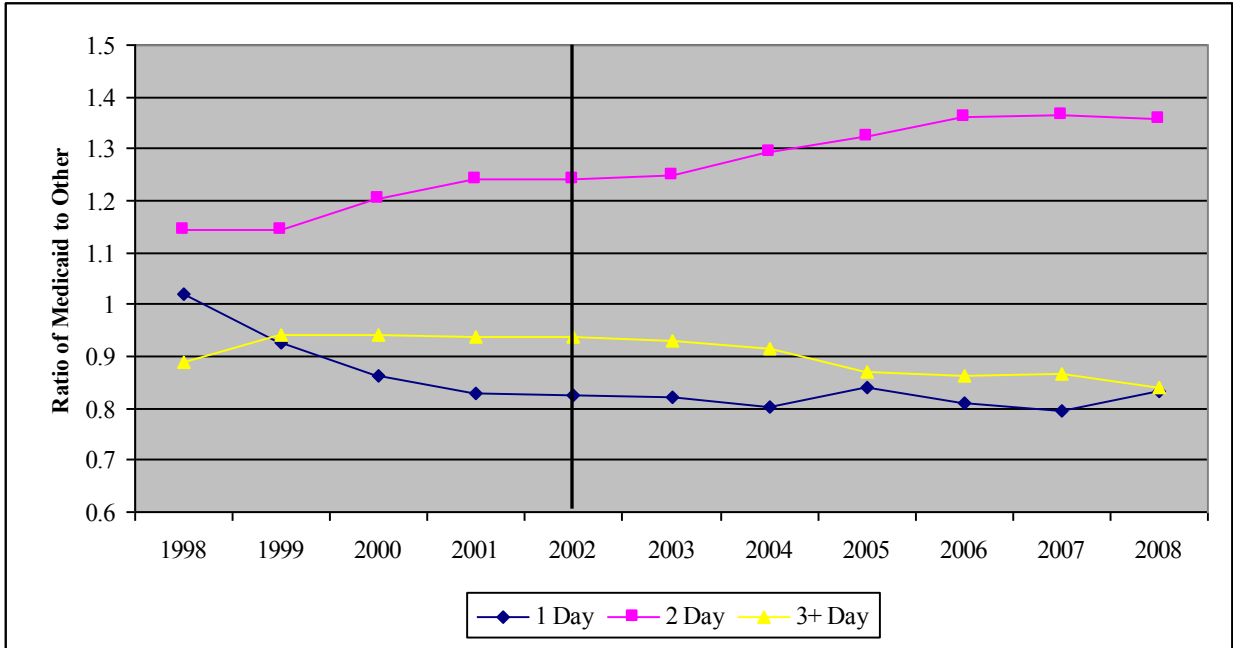
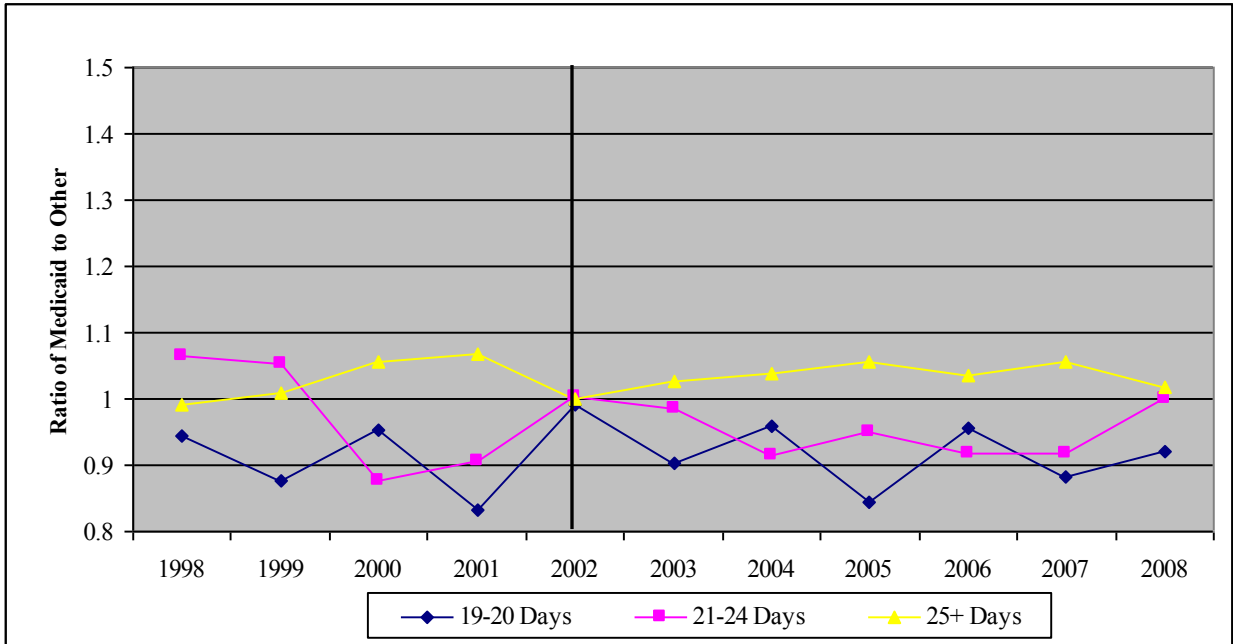


Figure 8.9
Ratio of Medicaid to Other Hospital Stays by Length of Stays



These analyses lead us to conclude that the expansion of Medicaid hospital payments appears to have had a minor effect on the number of persons receiving hospital care for conditions requiring a very short stay. The lack of impact on long stays suggests that the benefit

expansion is offsetting some previously unreimbursed costs for hospitals for patients who stay in the hospital longer than 20 days.

SUMMARY AND RECOMMENDATIONS

With its four expansion programs, MEP provides access to health care for vulnerable populations in Arkansas. By the end of 2009, the ARHealthNetworks had enrollment of 9,554 small business employees age 19–64 with income at or below 200 percent of the federal poverty level. During 2008–2009, the program’s monthly average rose from less than 500 participants per month to over 1,500 participants per month. Aside from the ARHealthNetworks program, enrollment in the Medicaid programs remained at consistent levels throughout 2008 and 2009. The MEP Pregnant Women’s Expansion Program provided access to Medicaid services to an average of 1,939 pregnant women with income between 133 percent and 200 percent of the federal poverty level during each six-month period of 2008–2009. More than 450 of those women received at least two prenatal visits during each of those periods. Through its AR-Seniors program, MEP expanded Medicaid benefits to an average of 5,253 Medicare beneficiaries per six-month period in 2008–2009. The spending analysis found that spending on the ARHealthNetworks program increased substantially, reflecting its expanded enrollment. At the same time, spending in FY2009 on the Pregnant Women’s Expansion Program and the AR-Seniors program was considerably below FY2005 levels. The analysis of outcomes for MEP found that the AR-Seniors program has contributed to a decline in avoidable hospitalizations among the elderly, particularly in high-poverty counties. Although the expanded hospital benefits provided by the Medicaid Reimbursed Hospital Care Program appear to have increased access to hospital care for conditions requiring very short stays, the expansion of benefits for pregnant women through the Pregnant Women’s Expansion Program is not related to increased prenatal care.

Below are five recommendations that result from our evaluation of MEP activities during 2008 and 2009.

- **Determine the extent of need for each component of MEP and each program’s effectiveness in meeting that need.**

For the Pregnant Women’s Expansion and AR-Seniors Programs, MEP has been using a 2002 estimate of the potentially eligible population to calculate the program’s reach. To better understand the size of the eligible population and the program’s current reach, MEP should revisit the calculations it uses to determine the potentially eligible population for both of these programs. If the size of the eligible population has changed since 2002, the relative success of these programs in reaching this population may be different from what is reported here.

- **Assess and track service use for the Pregnant Women’s Expansion Program and the AR-Seniors Program.**

During this reporting period, MEP provided information on service use for the Pregnant Women’s Expansion and AR-Seniors programs. Moving forward, this service use information can be used to compare to service use among the regular Medicaid program and to help with outreach and education efforts.

- **Improve the enrollment process.**

To help ease the enrollment process, MEP should focus on eliminating barriers to enrollment and ensure timely and accurate processing of applications.

- **Increase capacity for conducting education and outreach to increase service utilization and enrollment for the programs.**

As noted by some respondents to the stakeholder survey, MEP needs to expand its outreach and education activities to ensure that there is greater awareness of each program's availability and benefits. To date, MEP has not prioritized the allocation of resources for education and outreach and does not have the staff capacity to conduct these activities. For example, given its new focus on prenatal care, MEP should conduct outreach to educate potential and current enrollees in the Pregnant Women's Expansion Program about the importance of prenatal care. MEP should also coordinate with agency-wide efforts to increase enrollment to reach both regular and expansion program participants.

- **Develop partnerships with other tobacco settlement programs or other state or local organizations to educate and conduct outreach in communities (continuation of recommendation from prior evaluation report).**

Although MEP has engaged in limited collaborative efforts, there are opportunities to partner with other tobacco settlement programs on outreach and education activities that would promote the programs.

Chapter 9

Tobacco Prevention and Cessation Program

This chapter summarizes the results of our evaluation of the Tobacco Prevention and Cessation Program (TPCP). The Arkansas Department of Health's Tobacco Prevention and Cessation Program supports programming funded by the Initiated Act and the CDC under the TPCP. The first section provides the results of the process evaluation component, with an update on each activity area, including goals, process indicators, and intermediate outcome indicators. In the second section, we present information on the program's cost indicators and our analysis of the program's spending over time. The results of the policy evaluation appear in the next section. The long-term outcome indicators tracked as part of our outcome evaluation of TPCP are discussed in the fourth section. In the fifth section, we summarize the findings from all components of the evaluation and provide recommendations for TPCP.

PROCESS EVALUATION: PROGRAM DESCRIPTION AND UPDATE

TPCP developed its activity areas according to the nine program components that the CDC recommends for statewide tobacco control programs (CDC, 2007):

1. Community prevention programs
2. School education and prevention programs
3. Enforcement of youth tobacco control laws
4. Tobacco cessation programs
5. Public awareness and health promotion campaign
6. Statewide programs
7. Tobacco related disease prevention programs
8. Minority initiatives
9. Monitoring and evaluation.

In 2007, the CDC changed its Best Practices Guidelines for statewide tobacco control programs, so that the activity areas are now recommended to be encompassed by the following five components (CDC, 2007):

1. State and Community Interventions
2. Health Communication Interventions
3. Cessation Interventions
4. Surveillance and Evaluation
5. Administration and Management.

During 2008–2009, TPCP underwent a number of organizational changes. Early in 2009, the Department of Health was restructured so that TPCP now falls under the Department of Health's central administration. TPCP's activities are organized under four sections: administration and management, health communications and cessation interventions, state and community interventions, and surveillance and evaluation. Throughout this period, TPCP has

had issues with staff turnover and filling vacant positions, which may have hampered its ability to move more quickly on some of the quality management and reporting improvements.

TPCP undertook a strategic planning effort in 2009, with the assistance of an independent contractor. The contractor brought together partners to discuss an overall strategic plan as well as a plan for the cessation component. TPCP served in an advisory capacity during this process. The strategic plan was finalized in September of 2009 and identified three goal areas: preventing tobacco use among youth and young adults, eliminating secondhand smoke exposure, and promoting cessation. Within each goal area, the plan outlines progress indicators, objectives, and action steps. Also during this time, TPCP revised and updated the process, cost, and outcome indicators tracked as part of the RAND evaluation, but it has not yet established programmatic goals for each activity area. The next step is to capitalize on the strategic planning work to define programmatic goals in each activity area for the evaluation.

In the rest of this section, we provide an update on each of the nine activity areas. During 2009, TPCP revised and updated the indicators used to assess progress toward the mandates of the Initiated Act and added process indicators for some of the programs that had not been included in the past. The current status of each area and any associated process and intermediate outcomes indicators are discussed below.

Community Prevention. During 2007 and 2008, TPCP continued to fund community coalitions that focus on educating different groups in the community on the Clean Indoor Air Act and the dangers of smoking and secondhand smoke. The community coalitions also work to strengthen anti-tobacco policies in schools, businesses, hospitals, public festivals, and whole cities. In FY2009, TPCP funded 22 community coalitions with \$1.3 million, and in FY2010 it funded 19 with another \$1.3 million.

To assess the progress of the community coalition grantees, we tracked the number of community-level community changes reported by each community coalition grantee. Community changes are new or modified programs, policies, or practices in the community facilitated by the coalition that reduce risk factors for tobacco use (e.g., a no smoking policy). During 2008 and 2009, coalition efforts led to 249 community changes, including businesses that agreed to display anti-tobacco posters or materials, community members who agreed to maintain smoke-free homes, and schools that instituted smoke-free policies (Table 9.1). There was an increase in the number of community changes reported during 2008 before the total dropped to about one-third of the 2008 level for 2009. Further, some of the activities reported by the coalitions in this category appear to be efforts toward a policy change rather than the policy change itself. While TPCP has conducted training on using the web-based system for progress reporting, there appear to be inconsistencies across grantees and over time in how activities are categorized and reported.

For 2008–2009, we had also planned to provide a more in-depth assessment of the types of community changes reported into the system, including how many community members pledged to maintain smoke-free homes or attended meetings, how many businesses or schools instituted tobacco policies, and how many health clinics provided support and resources for cessations. However, TPCP was unable to provide these data from the current reporting system.

Table 9.1
Community Prevention and Coordinated School Health Grantee Community Changes

| Calendar Year | Number of Community Changes |
|---|-----------------------------|
| Community Prevention Grantees | |
| 2005 | 102 |
| 2006 | 152 |
| 2007 | 149 |
| 2008 | 184 |
| 2009 | 65 |
| Coordinated School Health Grantees | |
| 2008 | 11 |
| 2009 | 16 |

School Education and Prevention. Starting in FY2008, TPCP partnered with the Department of Education’s Coordinated School Health initiative to provide a grant of \$75,000 to selected school districts. The Coordinated School Health model consists of eight interactive components—Health Education, Physical Education, Health Services, Nutrition Services, Counseling and Psychological Services, Healthy School Environment, Health Promotion for Staff, and Family/Community Involvement. With this partnership, TPCP provides funding for many of the school district programs as well as technical support on tobacco-related issues. The Department of Education funds the remainder of the Coordinated School Health programs. TPCP requires its grantees to cover four of the eight components (Family/Community Involvement, Health Education, Healthy School Environment, and Health Promotion for Staff) and include one health-related goal and one tobacco-related goal for each component. In FY2009, TPCP funded 17 school-based grants with most consisting of \$75,000, for a total of \$1.2 million. For FY2010, TPCP gave grants of \$75,000 each to 20 of the 33 school districts with Coordinated School Health programs (a total grant amount of \$1.5 million). These Coordinated School Health grantees will also be funded for FY2011. After that, if TPCP decides not to continue with the Coordinated School Health grants, then it will need to find another avenue for its school prevention efforts.

We have been tracking the community changes of the Coordinated School Health grantees since 2008. All the TPCP-supported Coordinated School Health grantees participate in the web-based reporting system. The types of activities reported by the Coordinated School Health programs in the community change category are similar to those of the community coalition grantees. From 2008 to 2009, the activity level reported by the Coordinated School Health grantees increased from 11 to 16 community changes (Table 9.1).

The Arkansas Prevention Needs Assessment is an annual survey of 6th-, 8th-, 10th-, and 12th-grade students in participating school districts. The Arkansas Prevention Needs Assessment survey includes questions related to substance use and tobacco use and the risk and protective factors related to these behaviors. The Arkansas Prevention Needs Assessment offers another opportunity to assess the success of TPCP’s school prevention efforts by examining trends over time in those districts with TPCP-funded Coordinated School Health programs. However, school

districts are not required to report these data, so TPCP has not been able to compile the survey results for the relevant school districts.

Enforcement. Enforcement of laws that restrict sales of tobacco products to youth is an important part of a comprehensive strategy to reduce young people’s use of tobacco. To be most effective, however, laws to restrict minors’ access to tobacco products must be combined with merchant education and a comprehensive tobacco control program that reduces the availability of tobacco through social sources and limits the appeal of tobacco products. TPCP funds the Arkansas Tobacco Control Board to do enforcement, compliance checks, and merchant training sessions regarding sales of tobacco products to youth. During 2008–2009, TPCP worked with the Arkansas Tobacco Control Board to ensure that the enforcement activities remained focused on youth compliance and to encourage collaboration between the Arkansas Tobacco Control Board and the community coalitions on training and enforcement activities.

After declining somewhat during FY2008, the number of compliance checks rose during FY2009 (Table 9.2). The compliance checks are new checks, follow-up(s) from complaints that Arkansas Tobacco Control Board receives, or rechecks of previous violators. The average violation rates declined to 6.8 percent for FY2008 before climbing back to 7.8 percent in FY2009. The violation rates are well below 20 percent, which is the benchmark used by Synar (assessed by the Alcohol and Drug Abuse Prevention program in Arkansas).⁶ Because the goal of these checks is to target stores suspected to be in violation, we would expect to see higher violation rates than those obtained in the Synar data. The Alcohol and Drug Abuse Prevention program found a Synar violation rate of 4.8 percent in federal FY2009, which is well below the benchmark of 20 percent.⁷

Table 9.2
Enforcement Compliance Checks and Violation Rate

| Fiscal Year | Number of Checks | Percentage in Violation |
|-------------|------------------|-------------------------|
| 2005 | 8,043 | 9.2 |
| 2006 | 4,593 | 6.4 |
| 2007 | 5,324 | 7.4 |
| 2008 | 5,022 | 6.4 |
| 2009 | 5,257 | 7.8 |
| 2010* | 1,832 | 7.5 |

* Data for July–December 2009 only.

⁶The Synar Amendment, enacted by the U.S. Congress in 1992, requires random inspection of tobacco retailers to determine compliance with laws prohibiting sales to minors. Data from these inspections provide information regarding the success of a state in preventing such violations.

⁷The Synar data were collected in the summers of 2008 and 2009 and published in reports dated the following year.

During 2008 and 2009, the Arkansas Tobacco Control Board continued its efforts to provide education about compliance with the law to all merchants who sell tobacco. In FY2008, the Arkansas Tobacco Control Board conducted training sessions for 1,616 employees in 620 stores, which represented a large increase from the prior two years. For FY2009, the Arkansas Tobacco Control Board completed training sessions with 859 employees in 253 stores. There was a nearly 50 percent decrease in the number of employees trained during FY2009.

Cessation. The CDC Best Practice Guidelines (2007) stress cessation as a critical component of a tobacco control strategy. While prevention interventions are most important to keep youth from ever using tobacco products, cessation services are needed to address the health needs of current tobacco users. These types of services greatly reduce the risk of premature death due to tobacco use (Solberg et al., 2006; U.S. Department of Health and Human Services [DHHS], 2000). Quitlines have been found to be effective in helping smokers quit, with higher success rates realized with multiple sessions (Stead, Perera, and Lancaster T 2009). Quitlines have been spurred by studies demonstrating their efficacy, the establishment of the U.S. DHHS clinical process guidelines, and federal funding to establish or expand the services (Cummins et al., 2007). While both prevention and cessation are needed to achieve maximal impact on tobacco-related mortality rates, smoking cessation interventions have a more immediate impact on reduced morbidity (Henningfield and Slade, 1998).

Until late in 2008, TPCP's cessation efforts included a statewide Quitline and the Cessation Network. Starting on October 1, 2008, Free & Clear took over the contract for the Quitline, and the Cessation Network ceased to operate. All callers are offered either a single-call intervention or a multiple-call intervention, both with nicotine replacement therapy. With the new Quitline vendor, TPCP saw an immediate increase in the number of calls. While TPCP had tweaked its media campaign to highlight the Quitline's free nicotine replacement therapy, the marked increase in calls was unexpected. During the spring of 2009, a media campaign promoting the Quitline and increases in both tobacco industry prices and state/federal taxes combined to create a surge in calls to the Quitline. During the first six months of 2009, 18,136 calls were made to the Quitline, with 16,736 of the callers enrolling in either the single-call or multiple-call program (Table 9.3). Because of the rapid increase in calls during this period, TPCP had to scale back its Quitline services to offer only a single call and two weeks of nicotine patches. A few months later, the Quitline was able to go back to offering the full five-call program plus nicotine patches and lozenges and to expand to serve 16–17-year-olds. By the end of 2009, the call volume had stabilized. There were 8,930 calls during the last six months, with a total of 7,348 individuals enrolling in one of the two programs (Table 9.3). It is difficult to compare call and enrollment totals with the prior Quitline because there was no single-call option in that program. However, it appears that the new Quitline program is serving many more people with the multiple-call program than were previously being served. For fully funded cessations programs, the CDC has set a goal for statewide quitlines to reach 6 percent of smokers. Using 2008 Behavioral Risk Factor Surveillance System (BRFSS) data to estimate the number of smokers in Arkansas, we found that the Quitline had reached 3.8 percent of smokers in the first half of 2009 and 1.9 percent during the second half of the year.

Table 9.3
Cessation Program Enrollment

| Time Period | Calls | Enrollees |
|--------------------|--------------|------------------|
| January–June 2009 | 18,136 | 16,736 |
| July–December 2009 | 8,930 | 7,348 |

TPCP evaluates its Quitline program by tracking the 30-day abstinence rate for both the single-call and multiple-call programs through follow-up surveys of program enrollees at four months and seven months (Table 9.4). Following the North American Quitline Consortium’s recommendations, TPCP utilizes the seven-month period and the Minimal Data Set as the standard. Since its inception, the cumulative quit rate at the four-month follow-up was 35 percent for those in the multiple-call program with nicotine replacement therapy and 22 percent for those without nicotine replacement therapy. The four-month quit rates for the single-call program were 30 percent for those with nicotine replacement therapy and 11 percent for those without it. Across both programs, quit rates were higher at the seven-month follow-up. At the seven-month follow-up, quit rates for the multiple-call program were 37 percent for those with nicotine replacement therapy and 28 percent for others. For the single-call program, one-third of respondents on nicotine replacement therapy had been abstinent for 30 or more days while 19 percent of those without nicotine replacement therapy had quit at the seven-month follow-up. These quit rates reflect only those stated to have quit of those enrolled (i.e., whether or not they completed treatment). These quit rates compare favorably to those achieved by another state which also offered a single session or five sessions and nicotine replacement or no nicotine replacement and measured results at 12 months (Hollis, McAfee, and Fellows, 2006).

Table 9.4
Percentage of Cessation Program Respondents Who Were Abstinent 30 or More Days

| Quitline Program | Four-Month Follow-Up | | Seven-Month Follow-Up | |
|-------------------------|-------------------------------------|--|-------------------------------------|--|
| | Nicotine Replacement Therapy | No Nicotine Replacement Therapy | Nicotine Replacement Therapy | No Nicotine Replacement Therapy |
| Single Call | 30 | 11 | 33 | 19 |
| Multiple Call | 35 | 22 | 37 | 28 |

As noted above, TPCP no longer funds the face-to-face Cessation Network. During the 2009 legislative session, \$2 million was allocated from the TPCP budget to fund drug courts—through the Arkansas Department of Human Services’ Office of Alcohol and Drug Abuse Prevention for juvenile drug courts and through the Arkansas Department of Community Corrections for adult drug courts. Both drug courts are required to include tobacco cessation as part of their treatment programs. During 2009, TPCP coordinated the use of these funds to train 77 counselors in a cessation intervention developed by the University of Massachusetts. As a result of the funding stipulation, both the Office of Alcohol and Drug Abuse Prevention and the Department of Community Corrections require that all their contracted providers for Drug Court services receive the cessation intervention training. Because of this opportunity, training in the cessation intervention will extend beyond drug court participants to include all those receiving

services through the Department of Community Corrections. TPCP is currently working to develop a train-the-trainer effort for 20 Department of Corrections trainers. TPCP will be separately funding an evaluation of the adult drug court activities, which is scheduled to start July 1, 2010.

Public Awareness/Health Communications. Media campaigns have been documented to reduce smoking among current smokers and to prevent initiation among nonsmokers (Vallone et al., 2010; Farrelly et al., 2005; Siegel and Biener, 2000; Sly, Trapido, and Ray, 2001). Such campaigns are even more effective when implemented along with other elements of an effective tobacco control strategy. Guidance from the U.S. Department of Health and Human Services states that health communications need to have sufficient reach, frequency, and duration to be effective, that all media should be pretested with the target audience, and that effects of the media campaign should be continuously monitored (U.S. DHHS, 2000).

TPCP continued to contract with the media agency Cranford, Johnson, Robinson, Woods to develop its print, radio, and TV media, partnerships, and sponsorships of local events around the state. Over time, the number of community events directly funded by TPCP has ranged from 14 to 34 with a total of 28 community events in 2009 (Table 9.5). During 2008 and 2009, TPCP primarily focused its public awareness activities on the Quitline campaign. After scaling back during the early portion of Free & Clear’s Quitline contract, TPCP aired a new advertisement for the Quitline in the early part of 2009 that generated such an increase in call volume that the campaign had to be pulled. The public service announcements and media spots increased substantially in 2009 to 650. During 2009, TPCP also developed a public awareness effort targeted at pregnant women who smoke, conducted an outreach campaign to educate the public about Act 13, and produced a comprehensive education kit for the county health officers to use in county education campaigns.

**Table 9.5
Public Awareness Media and Community Events**

| Calendar Year | Community Events | Public Service Announcements/ Media Coverage |
|----------------------|-------------------------|---|
| 2005 | 29 | 136 |
| 2006 | 34 | 194 |
| 2007 | 14 | 283* |
| 2008 | 26 | 176 |
| 2009 | 28 | 650 |

*Data were available only for the January–June 2007 time period.

TPCP also tracks the percentage of media ad funds leveraged as donated funds from the media companies. This includes free print and television advertisements and public relations coverage of TPCP activities, sponsorships, and other partnerships that significantly enhance the actual campaign budget. Since 2007, the amount of donated coverage increased from .62 times the amount of paid coverage to 1.15 times the amount of paid coverage in 2009 (Table 9.6).

Table 9.6
Public Awareness Media Advertisement Costs and Donated Funds

| Calendar Year | Paid by TPCP | Donated | Leverage Ratio (Donated/Paid)* |
|----------------------|---------------------|----------------|---------------------------------------|
| 2005 | \$1,427,831 | \$1,658,041 | 1.16 |
| 2006 | \$1,329,405 | \$1,721,704 | 1.30 |
| 2007 | \$758,025 | \$470,787 | 0.62 |
| 2008 | \$744,226 | \$552,802 | 0.74 |
| 2009 | \$1,068,696 | \$1,224,994 | 1.15 |

* This leveraged amount is actually an underestimate because much of the spending is front-loaded and should increase as the campaigns progress.

Another media recall survey conducted by TPCP in 2008 showed that 89 percent of all teens recalled seeing, reading, or hearing advertising from the campaign on either an unaided or aided basis (Table 9.7). Over time, the recall percentages have remained quite stable among teenagers. Recall has increased among adults, from 44 percent in 2002 to 77 percent in 2008.

Table 9.7
Percentage of Survey Respondents Who Reported They Recalled the Media Campaign

| Time period | | All Teens | Non-Caucasian Teens | Adults |
|---------------------------|-------------------|------------------|----------------------------|---------------|
| October– November 2002 | Number surveyed | 401 | 400 | 400 |
| | Percentage recall | 73% | 73% | 44% |
| August 2003 | Number surveyed | 400 | 404 | 400 |
| | Percentage recall | 87% | 89% | 63% |
| September 2004 | Number surveyed | 402 | 405 | 404 |
| | Percentage recall | 92% | 91% | 75% |
| January 2006 | Number surveyed | 150 | 80 | 600 |
| | Percentage recall | 91% | 98% | 76% |
| January 2007 | Number surveyed | 150 | 60 | 400 |
| | Percentage recall | 89% | 93% | 83% |
| December 2008 | Number surveyed | 400 | 135 | 800 |
| | Percentage recall | 89% | 86% | 77% |

Statewide Programs. TPCP supports three statewide programs through unsolicited grants: the Coalition for a Tobacco Free Arkansas at \$125,000, the Arkansas Cancer Coalition at \$125,000, and the Family Service Agency’s Youth Leadership initiative at \$175,000. Recently, TPCP issued a Request for Applications for a Statewide Coalition for Tobacco Prevention & Cessation Program. There was only one applicant, and the proposal was found to be nonresponsive. For FY2011, TPCP plans to issue a separate RFA for each statewide coalition and to provide support to ensure that applicants are responsive to the requirements.

The Coalition for a Tobacco Free Arkansas is a network of coalitions around the state with a shared mission to decrease tobacco use in Arkansas. The Coalition provides education and training to support community efforts, including an annual statewide conference focused on community mobilization and public awareness. It also provides training on anti-tobacco practices and policies for the community-based grantees, distributes information on tobacco control issues in the state, and tracks tobacco policies and regulations. During 2008 and 2009, the Coalition for a Tobacco Free Arkansas focused its efforts on Act 13 (smoking ban in cars with children) and compliance with the Clean Indoor Air Act (Act 8). As part of its effort to improve quality management during this period, TPCP now requires the coalition to submit a work plan and report its activities and progress to the web-based reporting system. Starting in July 2009, we began to track the Coalition's activities as part of the process evaluation. From July to December 2009, the Coalition for a Tobacco Free Arkansas distributed Act 13 flyers to four daycare centers, found three Act 13 violations, supported the community coalitions in performing 58 Act 8 compliance checks, and supported one business in voluntarily giving up its Act 8 exemption.

The Family Service Agency's Youth Leadership initiative is a statewide anti-tobacco youth movement focused on preventing the initiation of tobacco use among youth. A grant is provided to the Family Service Agency to support the Y.E.S! teams and the Tobacco Control Youth Board in tobacco control efforts. Y.E.S! uses advertisements, public service announcements, peer networks, and events to communicate its antismoking messages. Currently there are 39 Y.E.S! team leaders with nearly 1,600 Y.E.S! team members throughout the state.

The Arkansas Cancer Coalition is a statewide network of organizations and individuals committed to reducing the cancer burden in Arkansas. Until the recent cigarette tax increase, the Arkansas Cancer Coalition received most of its funds from TPCP. The Arkansas Cancer Coalition will now receive some funds from the additional tax revenue. The Arkansas Cancer Coalition has made tobacco control a strong component of their strategic plan. More broadly, the Arkansas Cancer Coalition informs professionals and the general public of the status of cancer control in the state, raises awareness and education levels among professionals and the public, assesses current resources for cancer control, and attempts to fill identified gaps. The Arkansas Cancer Coalition is also charged with ensuring the implementation of the Arkansas Cancer Plan. This statewide comprehensive cancer control plan is being implemented through the work of interest groups and the collaborative efforts of partners. The Arkansas Cancer Plan serves as a framework for action for Arkansas individuals and organizations in the fight against cancer. Beginning, in 2009, we began to track the Arkansas Cancer Coalition's activities. During 2009, the Arkansas Cancer Coalition developed 9 newsletters articles, conducted nine school cancer workshops, distributed just over 1,000 packets of cancer plan promotional materials, distributed 181 school resource kits, and distributed 104 new member packets.

Tobacco-Related Disease Prevention Programs. Tobacco use increases the risk for a number of chronic diseases such as cancer, heart disease, stroke, and asthma. Therefore, the CDC recommends that tobacco control activities be integrated with prevention efforts for tobacco-related chronic diseases (CDC, 1999). For this component, TPCP continues to transfer funds to the Trails for Life Grant Program and the BreastCare Program.

TPCP funds the Trails for Life Grant Program through a memorandum of agreement with the Department of Parks and Tourism to provide funding to construct walking trails. In FY2008, Trails for Life awarded 12 grants for 3.25 miles of hiking trails (Table 9.8). In FY2009, there was a decrease in the overall program with seven grants totaling \$245,000 to build 1.75 miles of

hiking trails. Since its inception, the program has awarded 60 grants totaling over \$2 million to build 13.25 miles of hiking trails.

TPCP provides \$500,000 annually to the Breast Cancer Control Fund for the BreastCare Program, which is also partially funded by cigarette tax revenues. The BreastCare Program's mission is to reduce death and disease from breast and cervical cancer by providing screening, diagnostic, and treatment services to low-income women and those with little or no health insurance. During FY2009, the BreastCare program provided 17,185 mammograms and 7,152 Pap tests, representing a notable increase from the prior year (Table 9.9). Through the BreastCare program, 200 women were diagnosed or treated for breast or cervical cancer during FY2009.

**Table 9.8
Trails for Life Grant Program**

| Fiscal Year | Number of Grants | Total Amount of Grant Awards | Number of Miles of Hiking Trails |
|--------------------|-------------------------|-------------------------------------|---|
| 2005 | 7 | \$210,000 | 1.5 |
| 2006 | 8 | \$280,000 | 2.1 |
| 2007 | 6 | \$215,000 | 2.75 |
| 2008 | 12 | \$415,000 | 3.25 |
| 2009 | 7 | \$245,000 | 1.75 |

**Table 9.9
BreastCare Program Activities**

| Fiscal Year | Number of Mammograms | Number of Pap Tests | Number of Women Diagnosed/Treated for Breast or Cervical Cancer |
|--------------------|-----------------------------|----------------------------|--|
| 2005 | 13,609 | 9,036 | 298 |
| 2006 | 13,107 | 8,948 | 291 |
| 2007 | 17,305 | 6,907 | 479 |
| 2008 | 14,464 | 6,080 | 289 |
| 2009 | 17,185 | 7,152 | 200 |

To assess its progress, the BreastCare program tracks the number of women using the program by fiscal year, as well as the percentage of potentially eligible women who used the program. After peaking at over 18,000 in FY2007, the number of women served decreased to 12,561 in FY2009 (Table 9.10). The percentage of eligible women served by the program also decreased to 26 percent of the eligible population.

Table 9.10
Eligible Women Using BreastCare Program

| Fiscal Year | Number | Percentage |
|-------------|--------|------------|
| 2005 | 14,339 | 18 |
| 2006 | 16,704 | 21 |
| 2007 | 18,291 | 32 |
| 2008 | 14,962 | 31 |
| 2009 | 12,561 | 26 |

Minority Initiatives. Minority populations traditionally have less access to prevention and treatment services, and there is clear evidence that the disproportionate tobacco-related disease burden experienced by minority communities requires specific attention. As required by the Initiated Act, TPCP continues to fund a Minority Initiative program administered by the University of Arkansas, Pine Bluff. TPCP’s Minority Initiative has two components: the Minority Initiative Sub-Recipient Grant Office (MISGRO) and the Master of Science in Addiction program. During 2009, TPCP worked with the University of Arkansas, Pine Bluff, on annual training of MISGRO grantees, grantee reporting in the web-based reporting system, the functioning of the Minority Initiative’s advisory board, and coordination of MISGRO activities with other TPCP grantees.

The MISGRO grants provide education to minority communities with the goal of reducing morbidity and mortality associated with tobacco use in minority communities. The grantees also work to increase awareness within the minority community regarding laws restricting sales of tobacco products to minors and to reduce the impact of tobacco industry advertising and marketing on the minority community. For FY2009, MISGRO funded 25 grants for a total of approximately \$885,000. The average grant size was about \$35,000, with a low of \$2,500 and a high of \$85,000. For FY2010, MISGRO funded 17 grants with about \$980,000. The grants ranged from \$31,000 to \$84,000 and averaged \$58,000.

During 2009, we began to track the community changes that the MISGRO grantees submitted to the web-based reporting system. During the first half of 2009, MISGRO grantees reported that their activities resulted in 17 community changes, including working with health care providers to provide education on tobacco-related health disparities, obtaining pledges from community members to maintain smoke-free homes, and educating community members about the dangers of secondhand smoke (Table 9.11). As with the community and school grantees, there are inconsistencies in how activities are categorized and reported. A new set of grantees started on July 1, 2009; together, they reported five community changes before the end of the year.

Table 9.11
MISGRO Community Changes

| Year | Number of Community Changes | Number of Community Members Impacted |
|--------------------|------------------------------------|---|
| January–June 2008 | 3 | 96 |
| July–December 2008 | 4 | 27 |
| January–June 2009 | 17 | 86 |
| July–December 2009 | 5 | 46 |

The Master’s Program in Addiction Studies at the University of Arkansas, Pine Bluff, includes a 36-hour Master of Science degree curriculum of classroom instruction and field experience. The curriculum helps prepare students for licensure or certification by boards such as the Arkansas State Board of Examiners of Alcoholism and Drug Abuse counselors, the Arkansas Prevention Certification Board, and the Arkansas Substance Abuse Certification Board. Previously, we had tracked only the number of graduates from the program and the percentage of graduates who obtained addiction-related jobs. We are now tracking the number of applicants, the number who accepted and enrolled, and the total enrollment. The University of Arkansas, Pine Bluff, was able to provide retrospective data for these indicators going back to the program’s inception. Over time, the number of applicants has ranged from 13 to 26, with an average of 21 per academic year (Table 9.12). The number who accepted and enrolled has averaged 9 per academic year with a range of 6 to 13. The program’s total enrollment has been on a downward trend in recent years, with a current enrollment of 16 students. The Addiction Studies Program graduated ten students during the 2008–2009 academic year, the last year for which data are available.

Table 9.12
Addiction Studies Program Applicants, Enrollment, and Graduates

| Academic Year | Number of Applicants | Number Accepted and Enrolled | Total Enrolled During the Academic Year | Number of Graduates |
|----------------------|-----------------------------|-------------------------------------|--|----------------------------|
| 2003–2004 | 22 | 8 | 34 | 21 |
| 2004–2005 | 24 | 12 | 17 | 8 |
| 2005–2006 | 25 | 10 | 29 | 9 |
| 2006–2007 | 14 | 8 | 26 | 10 |
| 2007–2008 | 26 | 13 | 25 | 7 |
| 2008–2009 | 13 | 6 | 21 | 10 |
| 2009–2010 | 21 | 9 | 16 | N/A |

During this evaluation period, we also began tracking information related to the program’s faculty and courses. The Addiction Studies Program has consistently had two to three full-time faculty and one to two adjunct faculty (Table 9.13). Since its inception, the program has

offered 12 in-person courses each academic year. Over the past several years, the program has added online courses and currently offers three online courses.

Table 9.13
Addiction Studies Program Faculty and Courses

| Academic Year | Number of Full- Time Faculty | Number of Adjunct Faculty | Number of In-Person Courses | Number of Online Courses |
|----------------------|-------------------------------------|----------------------------------|------------------------------------|---------------------------------|
| 2004–2005 | 2 | 1 | 12 | 0 |
| 2005–2006 | 3 | 0 | 12 | 0 |
| 2006–2007 | 3 | 0 | 12 | 0 |
| 2007–2008 | 2 | 1 | 12 | 1 |
| 2008–2009 | 2 | 2 | 12 | 2 |
| 2009–2010 | 2 | 2 | 12 | 3 |

Over time, an average of 67 percent of the Addiction Studies Program graduates obtained an addiction-related job (Table 9.14). For the most recent academic year, 60 percent of the graduates obtained an addiction-related job, including working as substance abuse counselors or caseworkers at treatment agencies or correctional facilities or as research assistants working on addiction-related research. Overall, very few graduates have received a certificate or license.

Table 9.14
Addiction Studies Program Graduate Outcomes

| Academic Year | Percentage of Graduates who Obtained an Addiction-Related Jobs | Number of Graduates who Obtained Certification or Licensure |
|----------------------|---|--|
| 2003–2004 | 76 | 3 |
| 2004–2005 | 63 | 2 |
| 2005–2006 | 67 | 0 |
| 2006–2007 | 70 | 3 |
| 2007–2008 | 57 | 1 |
| 2008–2009 | 60 | 0 |

Monitoring and Evaluation. To address the monitoring and evaluation component, TPCP has been working to formalize its quality management process and to integrate evaluation into each activity area. In terms of the quality management process, any organization that receives TPCP money is required to provide quarterly progress reports. Based on these progress reports, TPCP staff produce summary reports and then send the grantee or contractor a letter with an assessment of progress and recommendations. TPCP acknowledges that there is much room for improvement in the quality of information submitted and its ability to use the progress reports to provide constructive feedback, monitor progress, and inform decisions about program direction. In terms of financial reporting, TPCP recently hired a field auditor to review financial records for all subcontracts and grants.

Related to its quality management process, TPCP is launching a new web-based reporting system in 2010 that will include all programs and grantees that receive money from TPCP. The system will require that those reporting into the system have SMART (Specific Measurable Attainable Relevant Timebound) objectives laid out in their work plans, with quarterly progress reports. With the new web-based system, TPCP expects to be able to better monitor progress, budgets, and spending and produce quarterly reports.

To support its quality management efforts and the new web-based system, TPCP has conducted a training series for the latest set of community prevention and cessation program grantees on evaluation, outcomes, and work plans. The purpose of the training is to ensure that the grantees develop appropriate work plans, identify measurable outcomes for their activities, and understand how budgets and activities are linked to achieving outcomes.

For its evaluation component, TPCP has continued to participate in evaluations conducted by an independent evaluation contractor. For TPCP, the evaluation tracks such performance indicators as anti-tobacco policies and programs, enforcement, and adult and youth tobacco use. The latest evaluation report provides recommendations on ways to improve data collection and reporting in each area.

Progress Toward Achieving Program Goals. In our previous report, we indicated that TPCP had largely accomplished the programmatic goals it had set in 2005 for the RAND evaluation. As mentioned earlier, we worked with TPCP during 2008 and 2009 to revise and update the process, cost, and outcome indicators tracked as part of the evaluation. During this time, TPCP worked toward five goals related to tobacco prevention and cessation (Table 9.15).

With its recently completed strategic planning process, TPCP has established new programmatic goals for the 2009–2014 time period. We will measure progress toward these five goals in the next report.

- Goal 1: Reduce the youth tobacco use to 17.5 percent by 2014.
- Goal 2: Reduce adult tobacco use to 17.5 percent by 2014.
- Goal 3: Reduce tobacco use by pregnant women to 12.5 percent by 2014.
- Goal 4: Reduce employee exposure to secondhand smoke in workplaces to 2 percent by 2014.
- Goal 5: Have statewide comprehensive clean indoor air legislation by 2014.

**Table 9.15
TPCP Goals and Status over the Past Two Years**

| Goal | Status |
|--|--|
| Prevent youth and young adult initiation of tobacco use. | IN PROCESS. TPCP’s CSH grantees and its Youth Leadership Initiative are working toward preventing youth tobacco use. While the CSH grantees reported a small number of community changes, the Youth Leadership Initiative grew to 39 Y.E.S! team leaders and nearly 1,600 Y.E.S! team members throughout the state. |
| Promote quitting among adults and youth. | IN PROCESS. The new Quitline program fielded more than 27,000 calls during 2009 with 89 percent of the callers enrolling in either the single-call or multiple-call program. Follow-up with program participants at 7 months found that 37 of those enrolled in the multiple-call program and who had nicotine replacement therapy had remained abstinent for 30 days. For those in the multiple-call program without nicotine replacement therapy, the quit rate was 28 percent at 7 months. |
| Eliminate exposure to secondhand smoke. | IN PROCESS. TPCP work on compliance with Act 13, which prohibits smoking in cars with children. |
| Identify and eliminate tobacco-related disparities among population groups | UNABLE TO ASSESS. TPCP’s Minority Initiative worked toward reducing morbidity and mortality associated with tobacco use in minority communities through its MISGRO grants. However, we were unable to assess progress toward this goal. |
| Increase the number of communities with stronger smoke-free environment laws than the state legislation. | ACCOMPLISHED. For 2008–2009, three communities (Fayetteville, Eldorado, Pine Bluff) enacted stronger smoke-free environment laws than the state legislation. |
| Increase the percent of Arkansas workers with a smoke-free work environment | IN PROCESS. As described in the outcome evaluation section, Arkansas saw a significant increase between 2001 and 2006 in the proportion of people reporting that smoking is not allowed in indoor common areas at their workplaces. However, Arkansas still lagged other states in the proportion of people reporting that smoking is not allowed in any areas at their workplaces. |

COST EVALUATION

For our cost evaluation, we are still tracking the total annual amount of tobacco settlement funds spent by TPCP using the spending categories delineated by the appropriations legislation, but we have added an analysis of spending by activity area and an examination of unit costs for selected programs. TPCP may spend more than it receives in a given fiscal year, due to its ability to carry over funds from previous years. While the other tobacco settlement programs are not allowed to carry over funds between bienniums, the appropriations bill was amended to allow TPCP to carry over funds without asking for approval. Since TPCP’s

inception, creating a spending budget for each fiscal year has been more challenging than for the other tobacco settlement programs. TPCP is the only program that is required to estimate how much it expects to receive, borrow, and spend the estimated amount, and then get paid back by the funds. TPCP's funding is further complicated by the fact that appropriations represent the upper limit of approved spending. In FY2008, total spending was down 6 percent with a 6 percent decrease in spending on prevention and cessation because of a decrease in the amount appropriated (Table 9.16). With a higher appropriation in FY2009, prevention and cessation spending rebounded to the level of prior years with total TPCP spending increasing 11 percent.

A considerable portion of TPCP's funds are allocated, primarily by legislative action, to programs that are not directly focused on tobacco cessation and prevention, including the breast cancer control fund, the Trails for Life program, and the nutrition and physical activity program (Act 1220). The percentage of tobacco funds spent on non-tobacco related cessation and prevention activities has remained fairly consistent each fiscal year.

For the first time, we examined TPCP's spending by activity area for FY2008 and 2009 (Table 9.17). These data will serve as a baseline for analysis in future years. Overall, in FY2009, TPCP spent 24 percent of its total budget on cessation and 18 percent on community prevention programs. TPCP's public awareness activities used 9 percent of the total budget. As mentioned earlier, TPCP's is required to fund the chronic disease prevention programs (including the Trails for Life Grant Program and the BreastCare program) and the Minority Initiatives; together, these accounted for 20 percent of the total budget in FY2009. It should be noted that the vast majority of the Minority Initiative budget goes to the MISGRO program, which funds community grantees working on tobacco prevention and cessation.

We also examined unit costs for select TPCP activities (Table 9.18). For its enforcement activities, the unit cost per compliance check increased slightly from \$212 in FY2008 to \$220 in FY2009. Within the chronic disease prevention program, the cost per mile for the Trails for Life program nearly doubled, from just under \$77,000 to almost \$143,000 per mile. The Minority Initiative's Addiction Studies program spent about \$23,500 per graduate in FY2008 and just under \$26,000 per graduate in FY2009. Moving forward, we plan to use these data as a baseline of comparison and to expand the unit costs analysis to the other activity areas.

Table 9.16
Tobacco Settlement Funds Spent by TPCP, by Fiscal Year

| Line Item | 2005 | 2006 | 2007 | 2008 | 2009 |
|--|--------------|--------------|--------------|--------------|--------------|
| (1) Regular salaries | \$1,351,567 | \$1,100,578 | \$1,492,457 | \$1,451,909 | \$1,560,402 |
| (2) Extra help | 15,465 | 7,140 | 27,561 | 20,336 | 14,583 |
| (3) Personal service matching | 377,779 | 348,326 | 417,768 | 422,287 | 415,133 |
| (4) Maintenance & operations | | | | | |
| (A) Operations | 215,248 | 279,240 | 424,368 | 188,905 | 244,568 |
| (B) Travel | 12,576 | 5,824 | 8,810 | 28,670 | 21,162 |
| (C) Professional fees | 1,184,642 | 557,654 | 1,201,124 | 1,451,732 | 1,026,701 |
| (D) Capital outlay | 0 | | 0 | 0 | 15,699 |
| (E) Indirect cost transfer | 0 | 0 | 0 | 0 | 749,268 |
| (5) Prevention and cessation programs | 10,189,268 | 10,177,436 | 10,456,376 | 9,856,735 | 10,428,464 |
| (6) Nutrition & physical activity program | 794,521 | 349,701 | 559,245 | 317,700 | 776,372 |
| (7) Transfer to breast cancer control fund | 500,000 | 500,000 | 500,000 | 500,000 | 500,000 |
| Total Spent | \$14,641,067 | \$13,325,897 | \$15,087,707 | \$14,238,274 | \$15,752,352 |
| Total received | \$16,984,867 | \$13,729,247 | \$14,444,148 | \$16,529,681 | \$18,242,815 |
| Carry-over funds | \$4,226,343 | \$7,207,746 | \$6,836,885 | \$9,081,178 | \$11,746,617 |

**Table 9.17
Tobacco Settlement Funds Spent by TPCP, by Activity Area, by Fiscal Year**

| Activity Area | Percentage of Total Spending | |
|--|-------------------------------------|-------------|
| | 2008 | 2009 |
| Community prevention programs | 19 | 18 |
| School education and prevention programs | 9 | 7 |
| Enforcement | 7 | 7 |
| Cessation | 23 | 24 |
| Public awareness | 10 | 9 |
| Statewide programs | 3 | 3 |
| Chronic disease prevention programs | 8 | 10 |
| Minority Initiatives | 13 | 10 |
| Administration | 4 | 9 |
| Surveillance/evaluation | 4 | 3 |

**Table 9.18
TPCP Unit Costs by Activity Area**

| Activity Area | FY2008 | FY2009 |
|---|---------------|---------------|
| Enforcement | | |
| Compliance checks (cost per check) | \$212 | \$220 |
| Chronic disease prevention programs | | |
| Trails for Life (cost per mile) | \$76,923 | \$142,857 |
| Minority Initiatives | | |
| Addiction Studies Program (cost per graduate) | \$23,503 | \$25,900 |

POLICY EVALUATION

During this reporting period, RAND conducted a survey of TPCP’s stakeholders as part of its policy evaluation. The purpose of the survey was to assess the awareness and involvement of TPCP’s stakeholders in each activity area and to provide feedback to the program about how stakeholders perceived program efforts. This section summarizes the results of the survey of TPCP stakeholders. The targeted group of respondents included stakeholders for each activity area, including the TPCP advisory board, Hometown Health regional directors and coordinators, school district superintendents and Coordinated School Health coordinators, the Arkansas Cancer Coalition board, the Coalition for a Tobacco Free Arkansas board, and Arkansas Minority Health Commission commissioners. The overall response rate was 50 percent, which included 60 of the 116 stakeholders targeted for TPCP and 2 of the 9 stakeholders shared with MHI who responded to questions about both programs.

Most stakeholders became involved with TPCP during its inception year, 2002, with the majority becoming involved between 2002 and 2006. Nearly one-half of responding stakeholders (51 percent) represent public or government agencies and 23 percent represent academic

institutions. TPCP stakeholders are advisory board members, agency or organization staff, or community health nurses. Most respondents reported engaging in TPCP meetings or activities on a daily to monthly basis and had a great deal of knowledge of the purpose and goals of TPCP. Almost all respondents (97 percent) perceived the program’s purpose and goals as appropriate and rated the program as effective in reaching its goals. According to respondents, TPCP is very important in its area of work.

A majority of stakeholders were aware of each TPCP activity area (Figure 9.1). Respondents were very familiar (71 percent) with the school education and prevention activities. The community prevention and cessation program and the cessation program were also well known among stakeholders with 66 and 69 percent of respondents, respectively, very aware of these activity areas. Around one-half of stakeholders were very aware of the other activity areas.

Involvement in the different activity areas varied, with more than one-half (56 percent) of stakeholders very involved in TPCP’s school education and prevention activities (Figure 9.2). A substantial minority of respondents were very involved with the community prevention and cessation program (39 percent) and cessation program (35 percent). Although respondents were somewhat to very aware of all TPCP activity areas, they were less involved in chronic disease prevention program and the Minority Initiatives than other activity areas. Respondents were least involved with the enforcement activities, with 58 percent indicating that they were not at all involved in this area.

Figure 9.1
Stakeholder Awareness of TPCP Activity Areas (n=62)

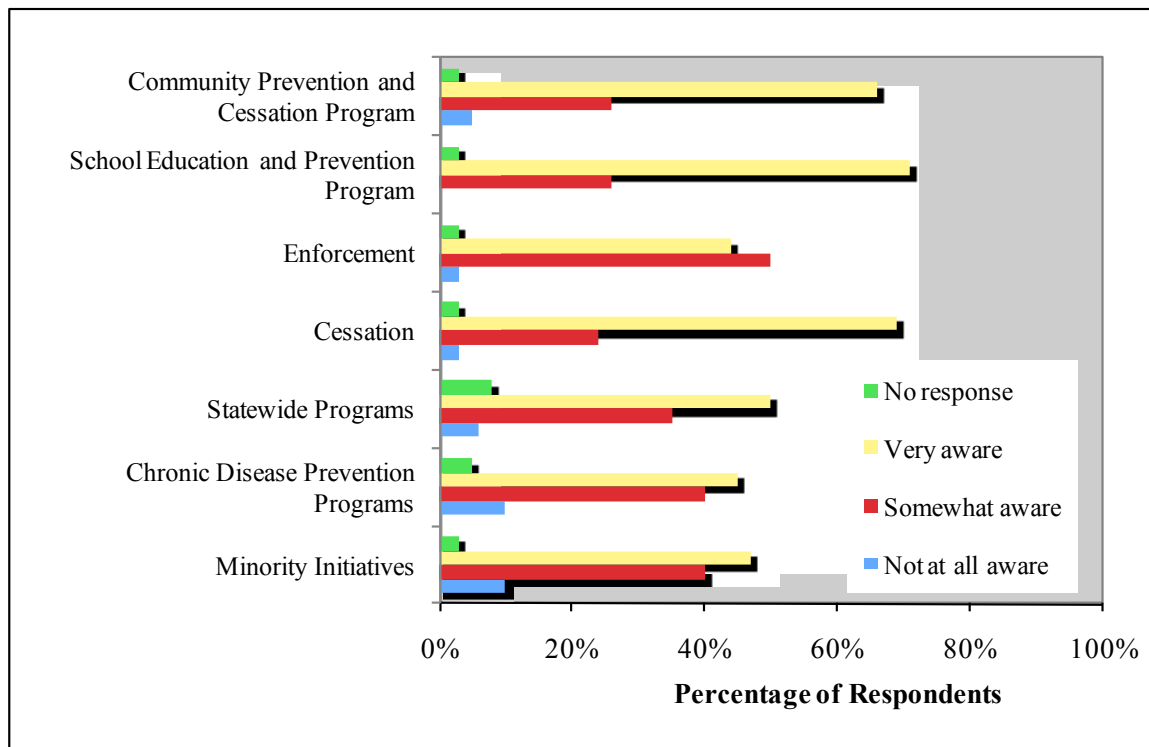
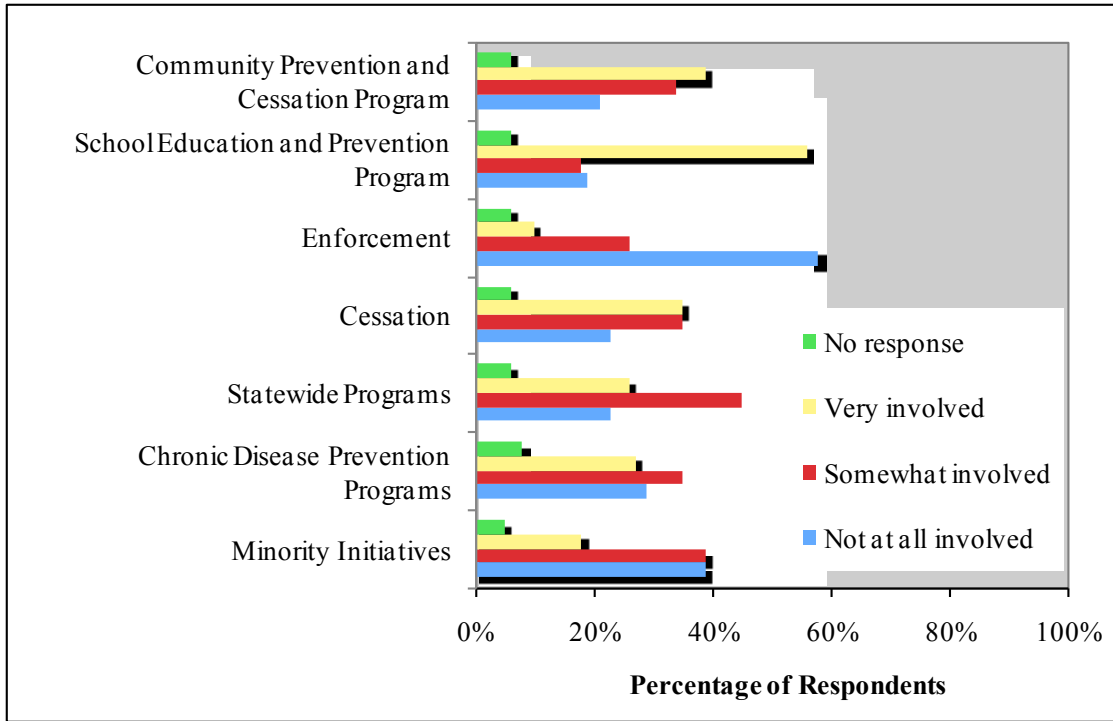


Figure 9.2
Stakeholder Involvement in TPCP Activity Areas (n=62)



The survey also asked stakeholders to rate the quality of programming in each activity area (Figure 9.3). Fifty-two percent of respondents rated school education and prevention activities and cessation activities as high quality. As noted above, stakeholders were also most aware of and involved in these activity areas. The quality of the minority initiatives was rated somewhat lower than other activity areas, with just over one-quarter (26 percent) rating the quality as high. Overall, very few respondents, 6 percent or fewer, rated the quality of programming in the medium-low to low range for each activity area.

Stakeholders rated the overall quality of TPCP administration as medium-high to high (Figure 9.4). Respondent rated the leadership provided by the program’s director and staff slightly higher (39 percent) than the quality of decisions made on which activities to pursue (35 percent) and what aspects of programs to continue (34 percent). Although ratings for communication are in the medium-high range, some survey respondents noted a need for more effective communication.

Figure 9.3
Stakeholder Quality Ratings for TPCP Activity Areas (n=62)

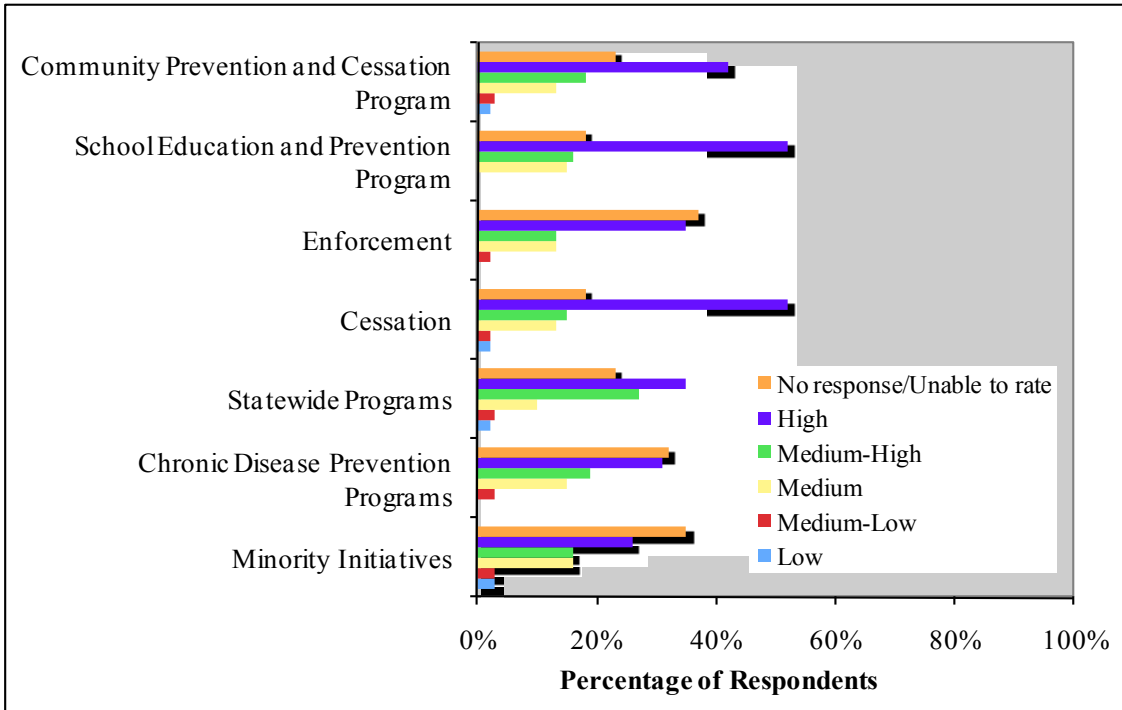
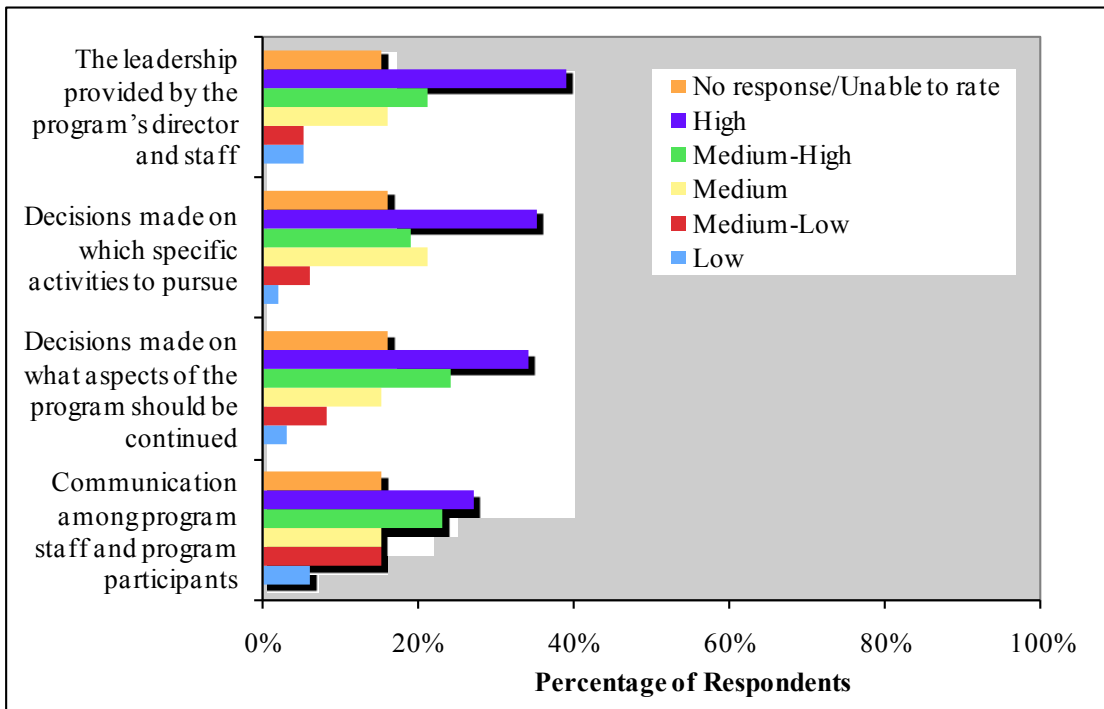


Figure 9.4
Stakeholder Quality Ratings of TPCP Administration (n=62)



In terms of collaboration among programs receiving tobacco settlement funds, the majority of TPCP stakeholders were aware of the other tobacco settlement programs. Respondents were most aware of COPH and MHI with over 55 percent of respondents indicating they were very aware of these programs. They are less aware of ABI compared with all other programs; over one-third (34%) were not at all aware of ABI. Despite this awareness of the other programs, most TPCP respondents are not very involved with the other programs. From 34 to 87 percent of respondents are not at all involved with each of the other programs. Although stakeholders perceived that TPCP collaborates and coordinates a great deal, respondents also noted there is room for improving collaboration both among the TPCP activity areas and with other tobacco settlement programs.

Finally, 66 percent of stakeholders believed that TPCP should expand its activities and do more in the future. Funding is a key factor in expanding; stakeholders indicated that inadequate funding prevents TPCP from expanding its activities and programs.

OUTCOME EVALUATION

This section summarizes some of the outcome evaluation results for TPCP. Although the smoking rates presented in Chapter 10 of this report are the primary long-term outcome indicators for TPCP, in this section we examine three other outcome indicators: smoking policies, enforcement, and the geographic distribution of TPCP grants.

Smoking Policies

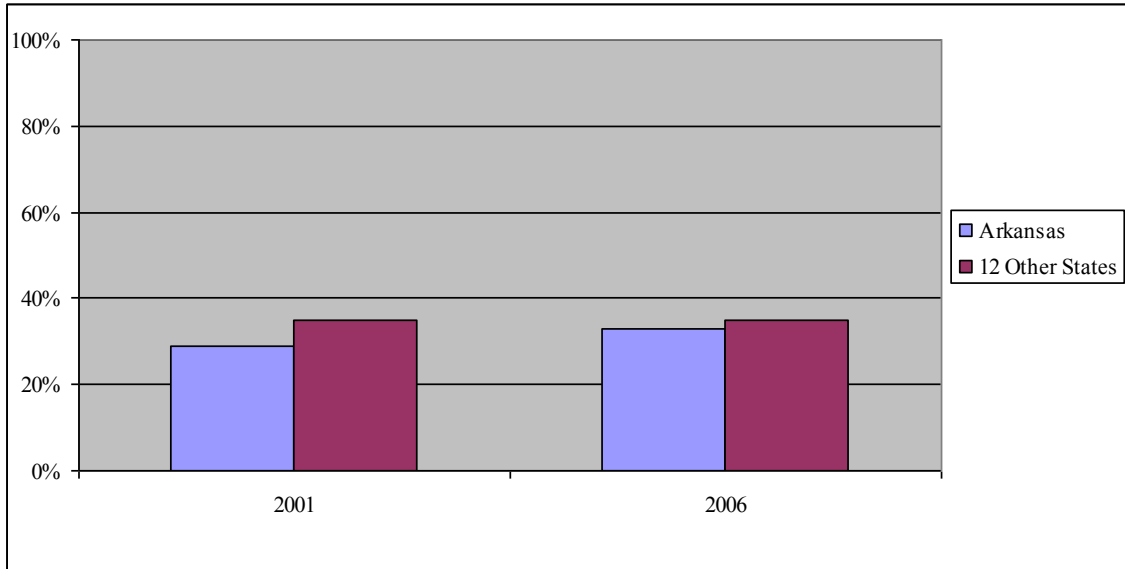
Key Finding: Compared with 12 other states, Arkansas saw a significant increase between 2001 and 2006 in the proportion of people reporting that smoking is not allowed in indoor common areas at their workplaces. However, Arkansas still lagged behind on two other indicators: the proportion of people reporting that smoking is not allowed in any areas at their workplaces and the proportion of people reporting that smoking is not allowed in their homes.

One intermediate outcome of the TPCP is the change in smoking policies at workplaces and in homes. To examine changes in smoking policies at workplaces and homes, we analyzed data from the BRFSS between 2001—the time when the tobacco settlement programs started—and 2006, the most recent year for which data are available. For these analyses, we conducted a difference-in-difference analysis of the changes between Arkansas and the 12 other states that participated in the BRFSS module on smoking policies in both 2001 and 2006 (Arizona, Indiana, Louisiana, Missouri, New Hampshire, New Jersey, Oklahoma, Pennsylvania, Virginia, West Virginia, Wisconsin, and Wyoming). We also adjusted for changes in population characteristics over time to allow for more meaningful comparisons.

Between 2001 and 2006, a significantly higher proportions of respondents reported that smoking is not allowed in indoor common areas in their workplaces (Figure 9.5). The gap between Arkansas and the 12 other comparison states on this measure has narrowed as other states have implemented clean indoor air policies. However, there were no changes between 2001 and 2006 in Arkansas or the comparison states in the proportion of people reporting that smoking is not allowed at any areas in their workplaces (Figure 9.6). On this measure, Arkansas still had a lower proportion in 2006 than the other states. Both Arkansas and the 12 other states experienced a significant increase between 2001 and 2006 in the proportion of people reporting that smoking is not allowed in their homes (Figure 9.7). However, the increase in Arkansas was not larger than that the other states, and Arkansas still lagged behind on this measure. Since

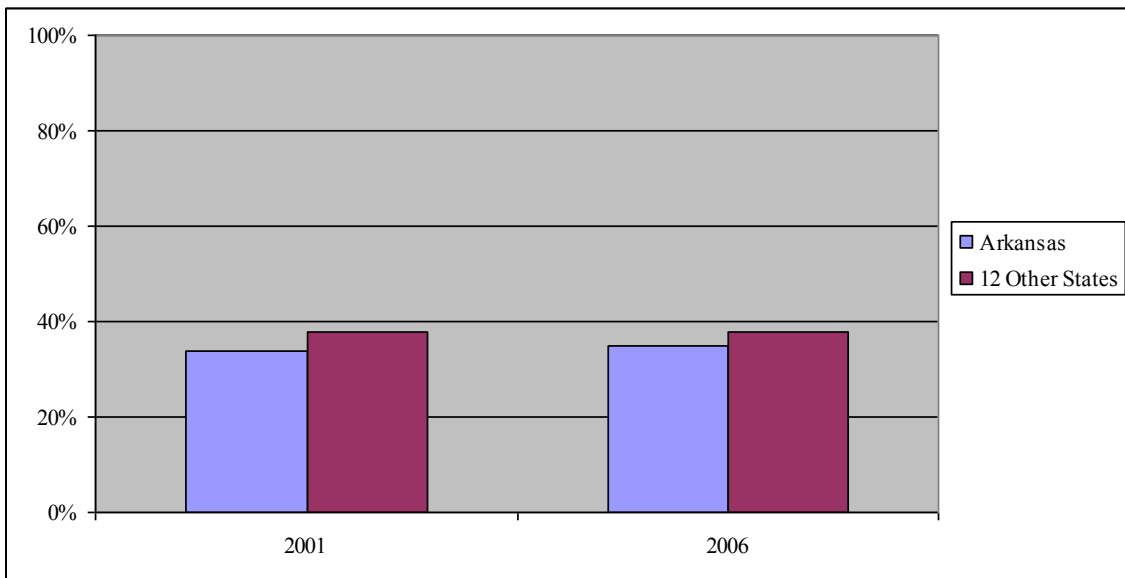
Arkansas plans to participate in the 2010 BRFSS module on smoking policy, we will be able to estimate the impact of the Clean Indoor Air Act on smoking policies at workplaces and at homes in the next report.

Figure 9.5
Proportion Reporting that Smoking Is Not Allowed
in Indoor Common Areas at Their Workplaces, Adjusted for Demographic Changes



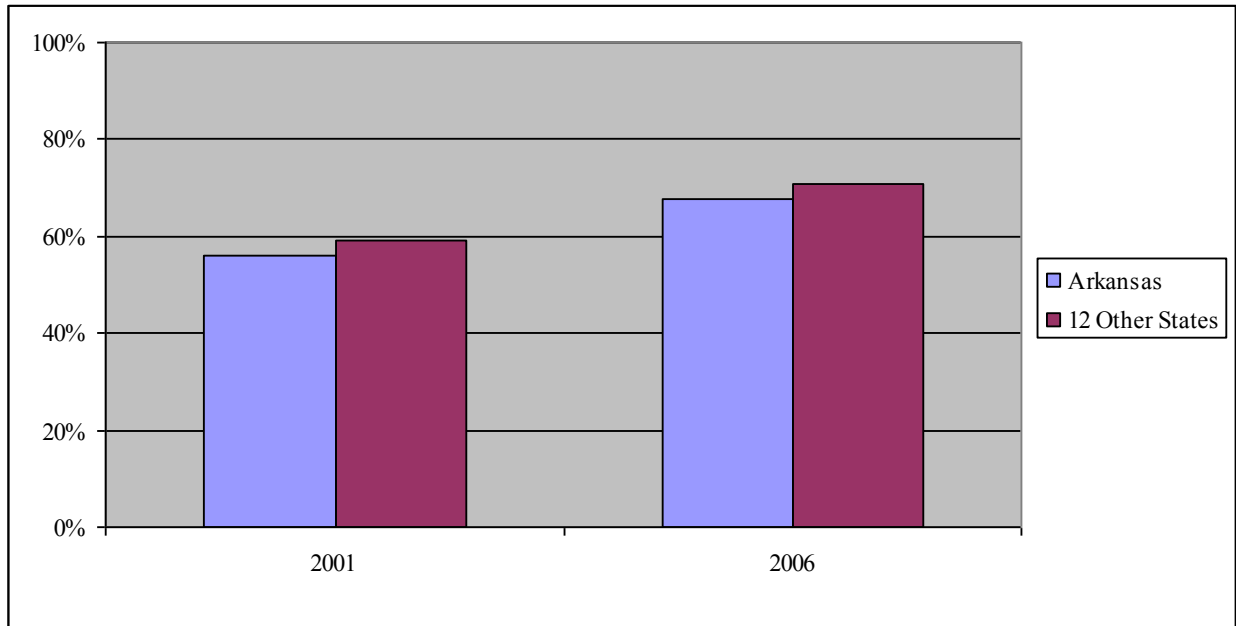
SOURCE: RAND analysis of BRFSS data for Arkansas and 12 comparison states.

Figure 9.6
Proportion Reporting that Smoking Is Not Allowed in Any Work Areas,
Adjusted for Demographics Changes



SOURCE: RAND analysis of BRFSS data for Arkansas and 12 comparison states.

Figure 9.7
Proportion Reporting That Smoking Is Not Allowed Anywhere Inside Their Homes,
Adjusted for Demographic Changes



Source: RAND analysis of BRFSS data for Arkansas and 12 comparison states.

Enforcement

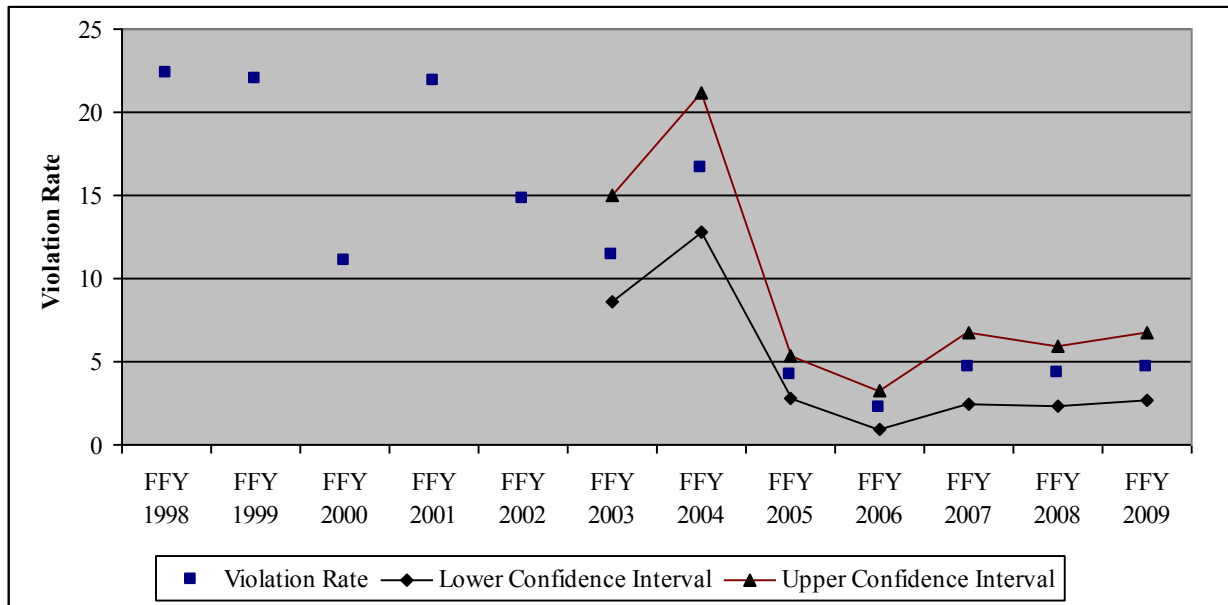
Key Finding: Following a dramatic decline from federal fiscal year (FFY)2004 to FFY2006, the violation rate for laws forbidding sales to minors has stabilized.

One measure of the effectiveness of TPCP’s educational and outreach efforts is compliance with laws that forbid the sale of tobacco products to minors. The Synar data show merchant compliance as measured by inspections carried out by undercover underage purchasers. These inspections are carried out at randomly selected stores with the goal of providing an unbiased estimate of the compliance rate among merchants within the state. In their early years, the Synar inspections produced violation rates that varied widely from year to year. Some of these variations were due to changes in the methods used to perform the inspections and process the resulting data. However, the data collection and analysis methods have remained virtually unchanged since 2004, allowing us to conclude that the dramatic drop represents a real decrease in the violation rate (Figure 9.8).⁸ Although the violation rate has increased slightly in the three years since FFY 2006, this increase was within the margin of error shown by the confidence

⁸This finding was verified by auditors from the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA), who visited the Division of Health after the FFY 2006 measures were released. (Telephone conversation with John Senner, Director, Arkansas Division of Health, Center for Health Statistics, May 11, 2006).

intervals (CIs), suggesting that there was no statistically significant change during the past three years.⁹

Figure 9.8
Synar Violation Rates, by Federal Fiscal Year



NOTES: Inspections occur during the summer of the preceding calendar year. For example, the FFY2004 violation rate is calculated from inspections primarily conducted during May and June 2003. Only upper CIs are provided in the published reports. Lower CIs are RAND estimates based on interval implied by published upper CIs.

SOURCES: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration (SAMHSA); Arkansas Annual Synar Reports for FFY2001–FFY2009 (Center for Substance Abuse Prevention).

Geographic Distribution of TPCP Grants

Key Finding: *Although there are large regional variations in per-capita TPCP spending, this variation is not associated with differences in smoking rates.*

A third outcome area tracked for TPCP is the geographic distribution of TPCP grants. As described previously, TPCP provides grants to local communities through the community coalition grants, Coordinated School Health program grants, and MISGRO grants. In Table 9.19, we show the Arkansas counties included in each Area Health Education Center (AHEC) region. We then show the regional distribution of TPCP grant awards for each of these regions from 2001 to 2009 (Figure 9.9). In prior reports, we showed that spending varied considerably across

⁹The state reports its Synar data to the federal government by federal fiscal years. Therefore, we also use federal fiscal year (October–September) in presenting results of our analyses of the Synar data; all other analyses are reported by Arkansas fiscal year (July–June).

the regions. This pattern continues, with per-capita expenditures in the Southwest region approximately twice as high as in the Delta, Pulaski, Pine Bluff, Northeast or Northwest regions. The latest data suggest that the most recent distribution increased the inequities, with regions such as the Southwest and Fort Smith receiving an even larger portion of grant dollars (Figure 9.9).

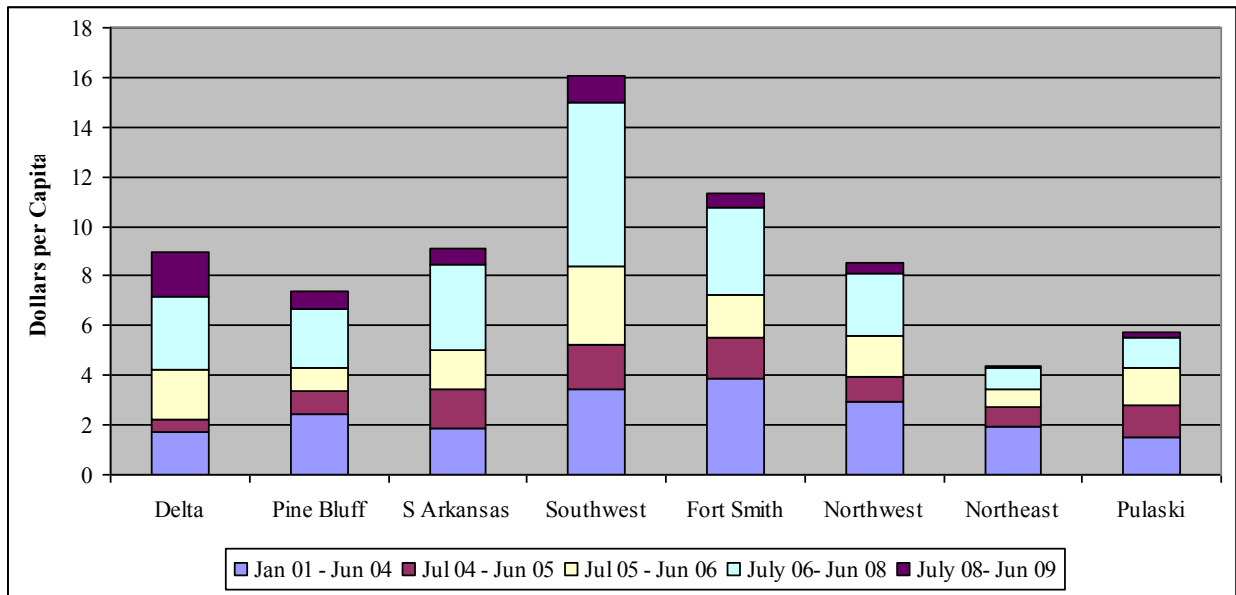
Further, our analysis suggests that smoking rate rates are not significantly associated with the regional variation in per-capita TPCP spending. We will continue to monitor TPCP regional spending and its relationship to smoking rates in the region in the coming years. We will also examine whether there are regional variations in per-user spending.

Table 9.19
Arkansas Counties by AHEC Region*

| Region 1 Delta | Region 2 Pine Bluff | Region 3 S. Arkansas | Region 4 Southwest |
|--|--|--|---|
| Chicot Crittenden Desha Lee Monroe Phillips St. Francis | Arkansas Cleveland Drew Garland Grant Hot Spring Jefferson Lincoln Lonoke Prairie Saline | Ashley Bradley Calhoun Columbia Dallas Ouachita Union | Clark Hempstead Howard Lafayette Little River Miller Nevada Pike Sevier |
| Region 5 Fort Smith | Region 6 Northwest | Region 7 Northeast | Region 8 Pulaski |
| Conway Crawford Faulkner Franklin Johnson Logan Montgomery Perry Polk Pope Scott Sebastian Van Buren Yell | Baxter Benton Boone Carroll Izard Madison Marion Newton Searcy Stone Washington | Clay Cleburne Craighead Cross Fulton Greene Independence Jackson Lawrence Mississippi Poinsett Randolph Sharp White Woodruff | Pulaski |

* In 2007, a new AHEC was created. The new North Central AHEC includes counties that were formerly part of Northwest, Northeast, and Fort Smith AHECs. For continuity with earlier reports, we continue to use the groupings listed above.

Figure 9.9
Per-Capita Grant Dollars for the TPCP Community Coalition, Coordinated School Health,
and MISGRO Grants, January 2001–June 2009



SUMMARY AND RECOMMENDATIONS

Overall, TPCP continues to actively pursue prevention and cessation efforts in accordance with the CDC program components. Through its community prevention, school, and MISGRO grant programs, TPCP funded a total of 56 community or school-based organizations in FY2010 to conduct prevention, education, and outreach activities in communities throughout Arkansas. The Arkansas Tobacco Control Board made over 5,200 compliance checks during 2009 with an uptick in the violation rate during the past two years. The new Quitline program fielded more than 27,000 calls during 2009 with 89 percent of the callers enrolling in either the single-call or multiple-call program. Follow-up with program participants at seven months found that 37 of those enrolled in the multiple-call program and who had nicotine replacement therapy had remained abstinent for 30 days. For those in the multiple-call program without nicotine replacement therapy, the quit rate was 28 percent at seven months. For its public awareness efforts, TPCP increased its media budget to promote the new Quitline and attracted a large amount of free media contributions, even though the media campaign has received less funding over time. Overall, TPCP spending increased by 11 percent in FY2009, reflecting an increase in its appropriation; cessation programs and activities represented 24 percent of the total budget. The percentage of tobacco funds spent on non-tobacco related activities remained at about 12 percent of TPCP’s total spending. Overall, TPCP’s stakeholders considered the program’s purpose and goals as appropriate and rated TPCP as effective in reaching its goals. In terms of outcomes, Arkansas’ smoking-related outcomes are presented in the next chapter. Other outcomes for TPCP include those related to smoking policies, enforcement, and the geographic distribution of grants. For smoking policies, the latest survey data indicate that the proportion of people reporting that smoking is not allowed in workplace indoor common areas increased significantly compared with other states. Recent enforcement data indicate that the violation rate for laws forbidding sales to minors has stabilized at 5 percent. Finally, while there are large

regional variations in per-capita TPCP spending, this variation is not associated with differences in smoking rates.

Below we present four new recommendations based on our evaluation of TPCP's activities during 2008 and 2009.

- **Strengthen the web-based reporting system.**

Acknowledging the shortfalls in its existing web-based reporting system, TPCP recently entered into a contract to develop a new web-based reporting system. TPCP has also started to require that all its grantees and contractors develop work plans and report on progress toward goals and objectives using the web-based system. Both of these are steps toward a web-based reporting system that is integrated with quality management processes (see recommendation below). In developing the new system, TPCP should ensure consistency *across* programs reporting on similar activities and *within* programs reporting over time. For example, many of the grantees report activities in different areas such as services, community actions, and community changes. The descriptions of these categories as well as the units of measurement should be recalibrated to improve TPCP's ability to monitor progress over time.

- **Utilize program-level reporting into the web-based reporting system in an improved quality feedback mechanism.**

In addition to improving the web-based reporting system itself, TPCP should better utilize the information entered into the reporting system as part of its quality management process. Although TPCP has developed a process for summarizing the grantee quarterly progress reports, rating progress, and providing feedback to grantees, it still needs to strengthen the quality of the feedback provided. Using information from the new web-based reporting system, TPCP should produce reports for each grantee or contractor that detail the number and types of activities and track these activities over time to ensure that the grantees are maintaining an adequate activity level. TPCP should also use the information to compare grantee groups, assess relative productivity, and determine areas of overlap. To capitalize on its investment in the new reporting system, TPCP needs to ensure that it has the staff capacity to fully utilize it.

- **Strengthen communication, coordination, and collaboration between TPCP and agencies, organizations, and grantees in the communities.**

TPCP stakeholders who responded to the stakeholder survey noted a need for improved community and collaboration between TPCP and the agencies and organizations working in the community. In some cases, multiple TPCP grantees are working within a community. By educating community partners about the breadth of TPCP activities, improving communication among these partners, and expanding the number of partnerships, TPCP can encourage more collaboration and better coordination of its community-based activities.

- **Consider refocusing the work in the school education and prevention activity area on activities within schools aimed at reducing youth tobacco use.**

In FY2007, TPCP entered into a partnership with the Arkansas Department of Education to fund some Coordinated School Health programs under its school education and prevention activity area. Although the collaboration with Coordinated School Health provided an opportunity to integrate with a larger health-related program, there have been concerns that Coordinated School Health may not be the appropriate approach to addressing youth tobacco use. Coordinated School Health programs work on multiple components of health within

schools, so their ability to focus on tobacco is somewhat limited. Because the Coordinated School Health program may be transitioned to the Department of Education, TPCP should reconsider how to approach its work in the youth and schools prevention areas.

Four of the recommendations from our prior evaluation report are still relevant.

- **Strengthen involvement of TPCP advisory committee in planning and decisionmaking.**

TPCP has a core active advisory group; however, it needs to engage more committee members in becoming involved beyond merely attending the quarterly meetings. The advisory committee has expressed an interest in developing a strategic plan to help guide its work. This strategic planning process could help formalize the committee's activities, provide mechanisms for involving the committee in decisionmaking, and outline a communication and collaboration plan.

- **Raise funding for the five components of a comprehensive statewide tobacco control strategy to the level recommended for Arkansas by the CDC either through either additional funds over and above those provided by the MSA or through reallocation of funds from non-tobacco programs.**

We also continue to urge that the CDC-recommended spending levels for Arkansas be met. According to the latest estimates, Arkansas spends about 54 percent of the amount the CDC recommends. While Arkansas ranks ninth nationally on this metric, it still lags far behind what the CDC has determined is the amount necessary to reduce smoking and improve the health of Arkansans. TPCP's stakeholders in the community recognize this as a problem as well. According to the stakeholder survey, funding limitations prevent TPCP from having a broader impact in the community. We recognize that this recommendation would require funds over and above those currently provided by the MSA.

- **Reevaluate funded programs that are not within the scope of tobacco prevention and cessation programming, as defined by the CDC guidelines, for their value in contributing to reduction of smoking and tobacco-related disease.**

We continue to recommend that programs that are not likely to have an impact on tobacco use (e.g., BreastCare program, Trails for Life program, Act 1220, Addiction Studies component of the Minority Health Initiative) be supported with other funds. While these programs are potentially valuable, using tobacco funds to support them weakens the anti-tobacco effort.

- **Change the process that TPCP must use to budget its funds to be in line with the other tobacco settlement programs.**

Budgeting is more complicated for TPCP because the legislature shifted TPCP's first year of funding into an Arkansas Rainy Day fund. As a result of this, TPCP was placed in the position of having to borrow funds to support its tobacco prevention and cessation activities, which then are repaid in the next cycle of tobacco settlement funding. Therefore, TPCP must hold a significant amount of money in reserve to guard against not having enough to meet all its financial demands. Although this money can be rolled over, this situation delays TPCP's ability to use its funding, which weakens its impacts on smoking behaviors.

Chapter 10

Smoking-Related Outcomes

This chapter presents our findings regarding the effect of the programs on smoking prevalence and on other behaviors and outcomes related to smoking. With additional data since our last report, we are able to extend our analyses for the following outcomes:

- **Adult Smoking Behavior.** We analyze trends through 2008 in the percentage of adults, young adults, and pregnant women in Arkansas who smoke using data from the Behavioral Risk Factor Surveillance System.
- **Youth Smoking Behavior.** We extend our analysis of smoking by high school students and pregnant teenagers with new data through 2009 from the Youth Risk Behavior Surveillance System.
- **Cigarette Sales.** We update our analysis on cigarette sales in Arkansas through 2008.
- **Smoking-Related Health Indicators.** We analyze trends in the incidence of smoking-related health conditions, including low birth weight, heart conditions, stroke, pulmonary conditions, and diabetes.

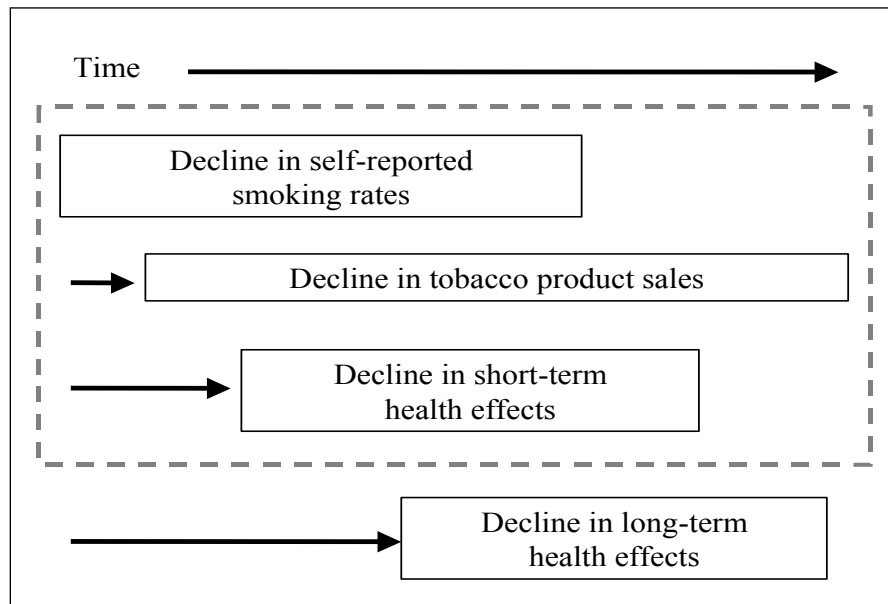
In the remainder of this chapter, we review the overall outcome evaluation approach before presenting findings for each outcome area listed above. In the concluding section, we summarize the findings of our analyses of these smoking-related outcomes.

OUTCOME ANALYSIS APPROACH

To assess the effects of the Arkansas Tobacco Settlement policies and programs for smoking control, we examine changes in overall smoking behavior and smoking-related health indicators across the state's population, which are influenced collectively by the policies and programs, including tobacco taxes, smoke-free environment laws, and the tobacco settlement programs. While TPCP is the only program completely dedicated to smoking prevention and cessation, it does receive about 30 percent of Arkansas' MSA funds.

The conceptual framework of our assessment defines a continuum of outcomes over time that should occur in response to education and outreach programs and treatment interventions to reduce smoking rates (Figure 10.1). Based on this model, the first outcome we should observe is a decline in self-reported smoking. Next, the decline in the smoking rate would be validated by a reduction in sales of tobacco products. Further, as the smoking rate decreases, we should see reductions in short-term health conditions related to smoking, such as low birthweight infants or hospital stays due to asthma or other pulmonary conditions. Finally, effects on longer-term health status such as reduced incidence of cancer, emphysema or heart disease, would occur later.

Figure 10.1
Conceptual Model of Behavioral Responses for Smoking Cessation



We recognized that assessment of program impacts requires us to take into account other factors that might influence the outcome beyond the efforts undertaken by a program. Examples of other factors include the following:

- Broader (nationwide or regional) trends that are independent of local program effort
- Continuation of trends that predate the program and reflect effects of earlier actions or interventions
- Changes in the demographic composition of the population
- Efforts by related programs.

If we do not consider these other factors, we may incorrectly attribute the changes in an outcome to the program when in fact the changes are due to one of these other factors. Whenever possible, the outcome analyses presented here account for these factors.

The assessment of program impact also requires us to show the statistical precision of our results. When we use survey data, we report not only the size of the effect but also the degree of certainty. As discussed below, the degree of certainty is reported as a margin of error (+/- so many percent), as a confidence interval (the narrower the interval, the more precise the estimate), or as a statistical significance level on a hypothesis test (whether or not the finding is reliable or could occur by chance). Without statistical information about the precision, the reader will not know whether an impact reflects changes in the underlying outcome or merely variability in the data or model.

It is worth noting that we focus our outcome analyses on the entire target population in Arkansas rather than on program participants alone. For example, we examine changes in smoking rate for all adults in Arkansas rather than for a group who participated in a particular

prevention or cessation program. There are several reasons for this approach. First, some efforts, such as the Quitline, media campaigns, or other educational outreach efforts, do not have participants per se but rather are targeted at everyone in a particular population. In such cases, the entire target population must be the focus of the outcome analysis. Second, some program components, either alone or in combination with other program components that have similar goals, have sufficient size that an impact should be measurable at the population level. In such cases, it is important to demonstrate the program's effects on the population broadly. Third, many programs have an impact that extends beyond the immediate participants. For example, programs that attempt to change the behavior of program participants through education can affect the behavior and health outcomes of other people who are in contact with the immediate participants. Finally, and perhaps most important from an evaluation standpoint, it is very difficult to distinguish between pre-program tendencies and the impact of the program under study if we consider only outcomes for program participants. The people who participate in a specific program frequently are the most motivated individuals in the population, and many of them would improve their outcomes even without participating in the program. Only through comparison with a control group or through careful statistical modeling is it possible to determine whether the outcomes for a group of program participants are due to the program or simply reflect a high level of motivation on the part of program enrollees. However, in this case, creating a randomized control group is neither cost-effective nor politically feasible. We also do not attempt to collect voluminous background information on participants to use in statistical modeling because doing so is expensive and intrusive. Therefore, we focus our outcome evaluation on programs that we judge to be large enough to have a measurable impact on an identifiable target population and for which we have population outcome measures. In adopting this approach, we acknowledge that we might not be able to detect small effects on the participants, but we gain the ability to measure more accurately the general effects that are the ultimate objective of the programs.

More information on the outcome evaluation methods and approach is found in Appendix B.

SMOKING RATES

Adult Smoking Behavior

In this section, we examine statewide trends in adult smoking behaviors and assess the extent to which there have been changes in those trends since the inception of the programs supported by the tobacco settlement funds. Because the programs are still less than ten years old, we focus our analysis on the earliest outcomes that we expect to observe, including the adult self-reported smoking rate, as portrayed in Figure 10.1.

Key finding: Although the adult smoking rate in 2008 was unchanged from the prior year, it was below what would have been expected based on the trend that started before the 2002 tobacco settlement programming. The smoking rate for women continues to be statistically significantly lower than the baseline trend, but the smoking rate for adult men does not differ from the baseline trend. While the smoking rate for young adults did not decrease in 2008, it remained below the baseline trend for this population. For 2008, there were small but significant decreases in the percentage of pregnant women who reported smoking, and the smoking rate for this group continued to be lower than the baseline trend.

Percentage of Adults Who Smoke

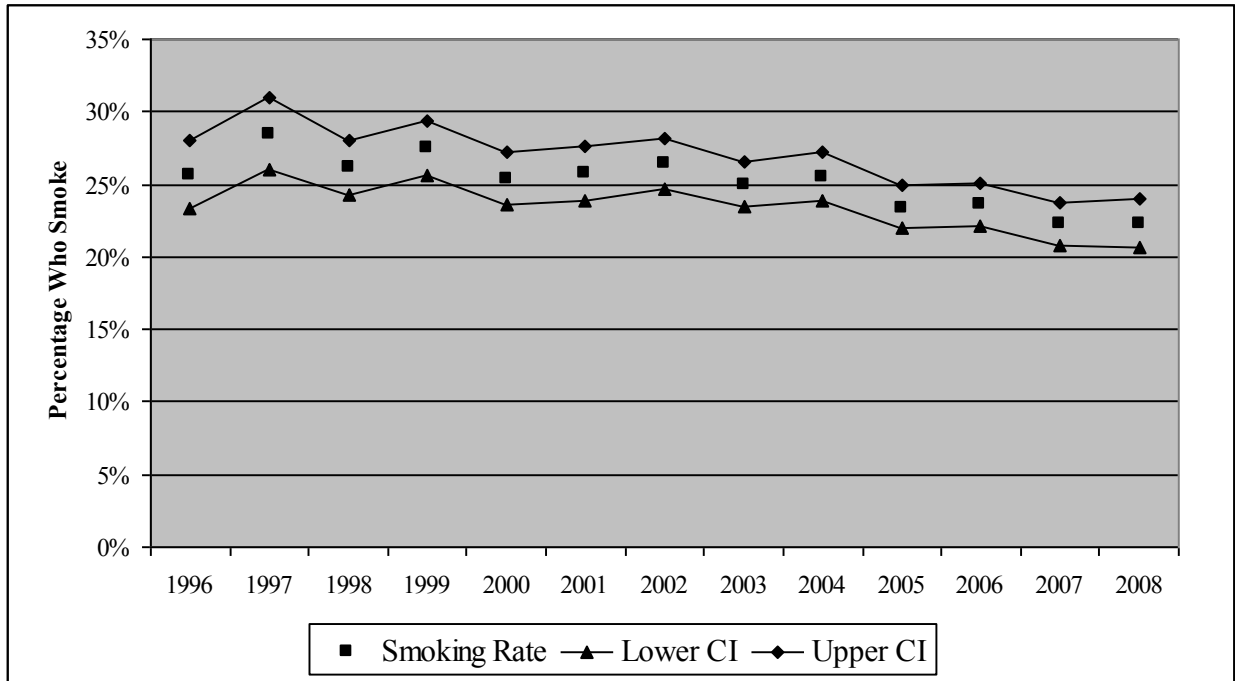
The most common measure of smoking behavior is the prevalence of adult smoking as measured by the BRFSS. The BRFSS is an annual telephone survey of randomly selected adults throughout the country that is coordinated by the CDC. The precision of the information available from this survey depends on the number of people who are surveyed. With an increase in the sample size in Arkansas from less than 2,000 in 1995 to more than 5,000 in 2008, the precision of the survey estimates has also improved.

Based on the BRFSS survey data, there is a slight downward trend in the estimated percentages rate of adults in Arkansas who reported smoking each year from 1996 through 2008 (Figure 10.2). This rate is the percentage of adult Arkansans who reported that they smoke “everyday” or “some days” in response to the survey question, “Do you now smoke cigarettes everyday, some days, or not at all?” We also report the upper and lower limits of the 95 percent confidence intervals for these estimates.¹⁰ The adult prevalence estimates for the most recent four years, 2005–2008, were lower than the estimates for any of the preceding years. Since the upper confidence limit for the 2008 smoking rate of 22 percent was less than the lower confidence limit for several of the years up until 2002, this suggests a statistically significant decline in adult smoking.

Aside from looking at trends in smoking rates, we also examined how changes in smoking rates since the beginning of the tobacco settlement programming compare to what would have happened to smoking rates if these programs had not been established (Figure 10.3). The observed smoking rate is adjusted for demographic characteristics, such as age, gender, and race. This adjustment accounts for the fact that the observed changes (or lack of changes) over time in the rate could be explained simply by changes in demographics, rather than by changes in smoking behaviors. The adjusted smoking rates of about 26 percent in 2005–2008 were slightly below the smoking rate that would be expected if the pre-2002 baseline trend had continued, although the difference is not statistically significant.

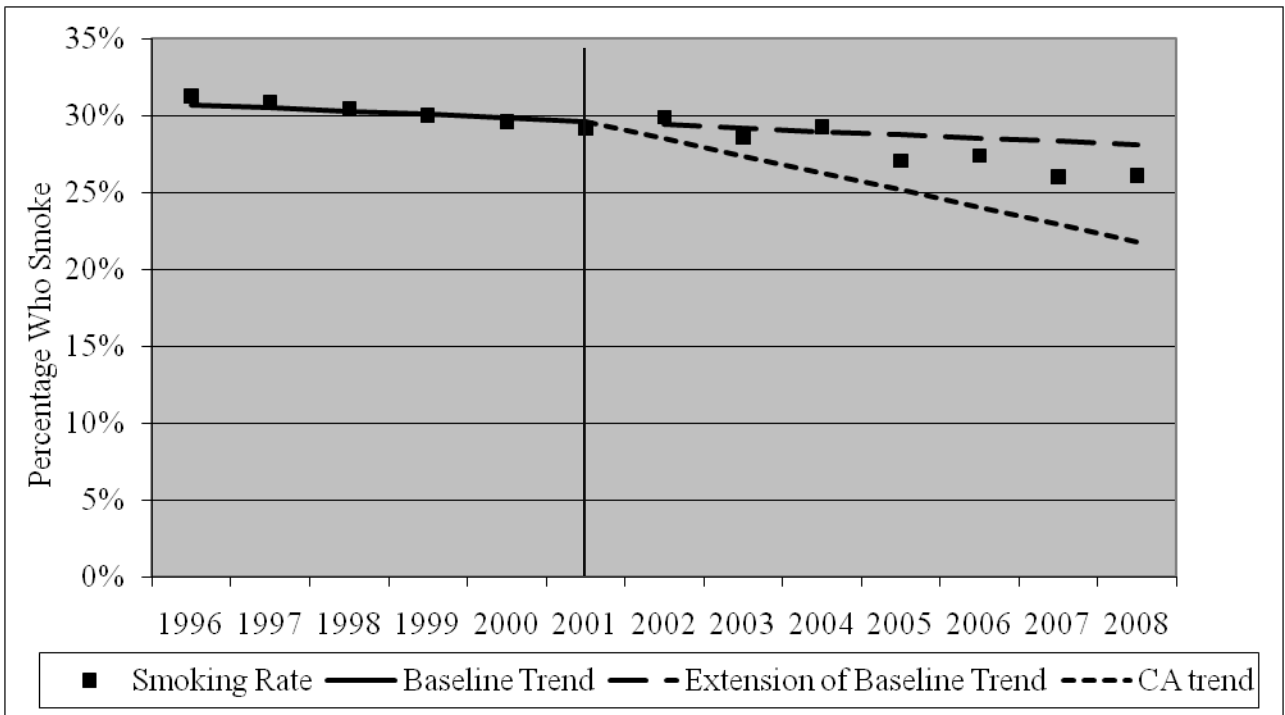
¹⁰These confidence intervals define a range within which estimated values would fall 95 percent of the time for survey samples if the survey were repeated over and over again, that is, where there is 95 percent confidence that the true value lies within that range. Estimates with wider confidence intervals must be interpreted with caution because apparent differences in values might not be statistically significant.

Figure 10.2
Smoking Rate of Adults Age 18 and Over in Arkansas, 1996–2008



SOURCE: RAND analysis of BRFSS microdata files. Rates are not adjusted for changes in demographic characteristics.

Figure 10.3
Smoking Rate of Adults Age 18 and Over in Arkansas, Adjusted for Demographic Changes



SOURCE: RAND analysis of BFRSS microdata files.

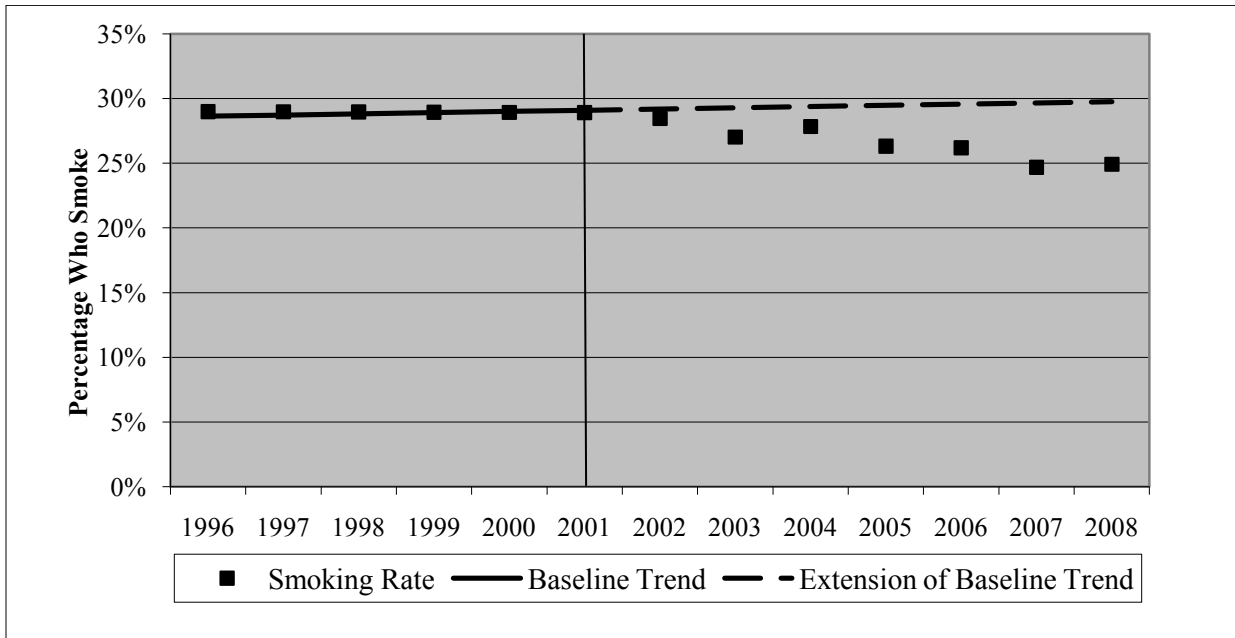
The hypothetical trend line in Figure 10.3 indicates what the predicted smoking rates would be if Arkansas' anti-smoking programs and policies were as successful as those in California, which has one of the most successful statewide tobacco control programs in the country to date. California experienced a 0.9 percent per year acceleration in its downward smoking trend during the first ten years of its program (California Department of Health Services, 2006). By including a hypothetical trend line based on California's results, we provide a prediction of the potential impact of a similarly successful program in Arkansas. As the trend line indicates, the impact would be very small in the first few years, but the cumulative effect would cut smoking rates by almost one-third after ten years.

As time passes, the increased spread between the lines improves our ability to determine whether Arkansas is continuing pre-program trends or is realizing gains from its investment of tobacco settlement funds in the seven programs. As of the end of 2008, the difference from pre-program trends was not large enough to allow us to conclude that Arkansas was on a new path. Although the adjusted rates in the past four years were slightly lower than the pre-program trend, they were significantly higher than what would have been observed if Arkansas had experienced decreases similar to those in California.

Differences in Smoking Rates for Men and Women

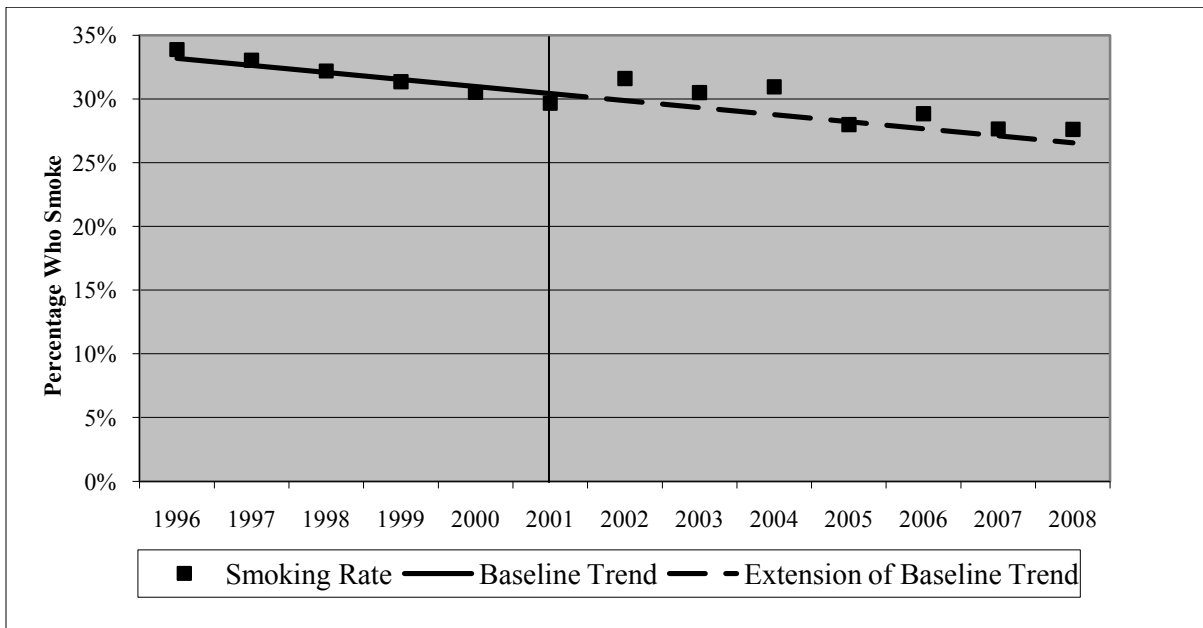
We also examined the adult smoking rate by gender, adjusted for changes in population characteristics over time to allow for more meaningful comparisons. Since 2002, there has been a consistent downward trend in smoking rates among women age 18 and older (Figure 10.4). Adjusted for demographic changes, the smoking rate for women in 2008, 25 percent, was statistically significantly below what would be expected from baseline trends. However, the smoking rate for men, 28 percent (also adjusted for demographic changes), does not differ from the baseline trend (Figure 10.5). The differing results for men and women are explained in part by a downward trend in smoking rates for men prior to program initiation, whereas smoking rates for women were level. However, the downward trend for women suggests that tobacco control programming is more effective for women than for men.

Figure 10.4
Smoking Rate of Women Age 18 and Over in Arkansas,
Adjusted for Demographic Changes



SOURCE: RAND analysis of BRFSS microdata files.

Figure 10.5
Smoking Rate of Men Age 18 and Over in Arkansas,
Adjusted for Demographic Changes

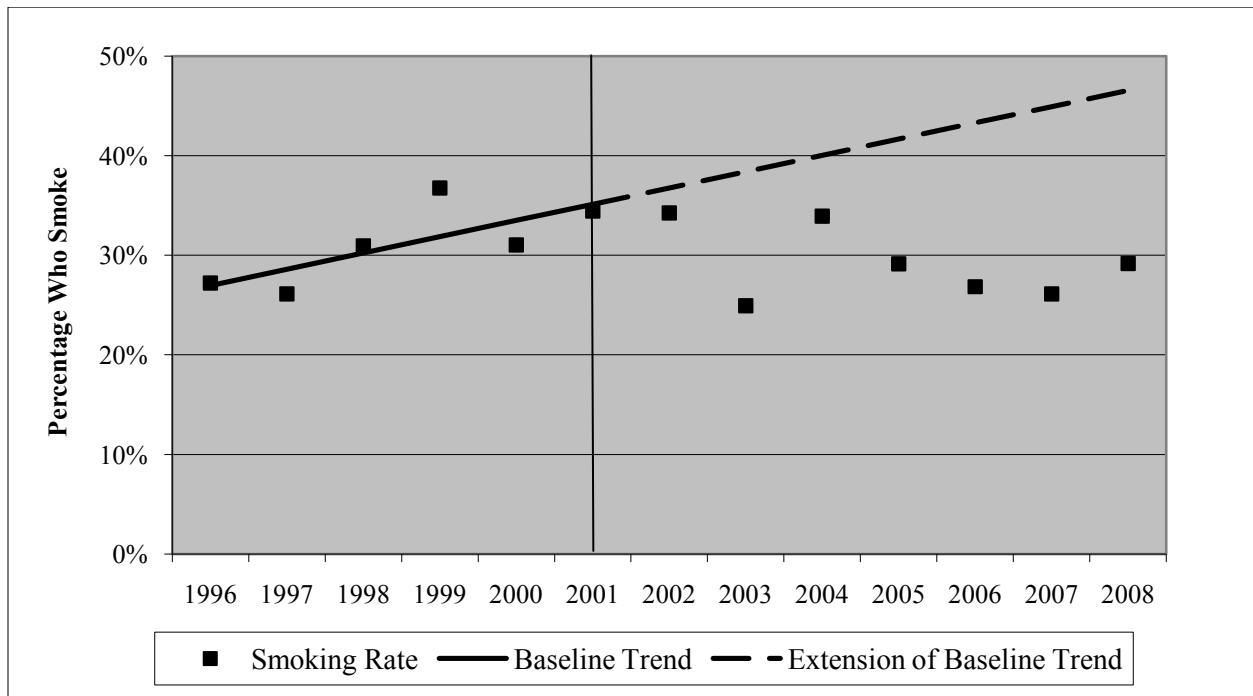


SOURCE: RAND analysis of BRFSS microdata files.

Percentage of Young Adults Who Smoke

We also looked at the smoking rate among young adults age 18 to 24 because (1) previous studies have shown that this group of people is more likely to be influenced by tobacco control programs than older adults and (2) changes in smoking behavior among this group of people are likely to have long-term positive effects on health outcomes. Smoking was increasing for young adults before the initiation of tobacco settlement programming (Figure 10.6). The rate decreased through 2007, but the latest data show no further decreases: The smoking rate for young adults age 18–24 is 29 percent. While this could be due to the imprecision of these survey estimates, the rate should be monitored to make sure that continued progress is made among this population. However, the 2008 rate was still significantly lower than the rate in 2001, when the tobacco control program started.

Figure 10.6
Smoking Rate of Young Adults (18–24) in Arkansas,
Adjusted for Demographic Changes



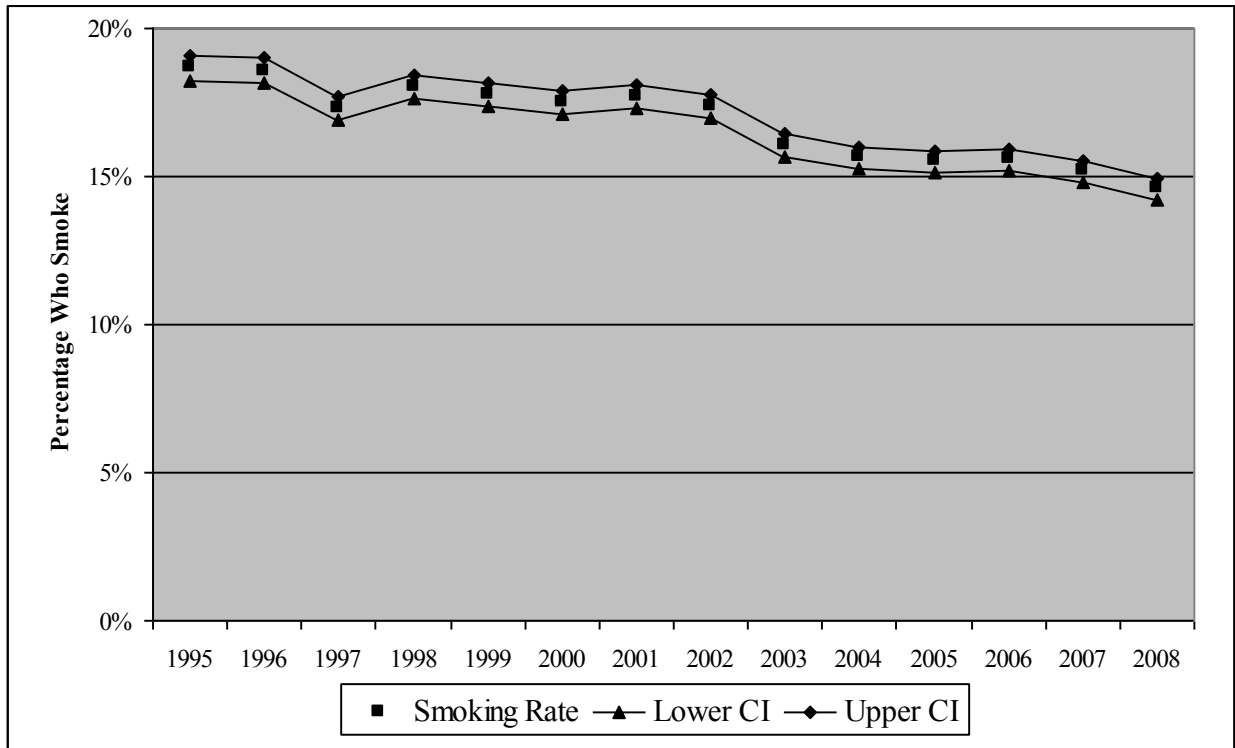
SOURCE: RAND analysis of BRFSS microdata files.

Percentage of Pregnant Women Who Smoke

We also examined smoking rates for pregnant women because smoking poses great medical risks during pregnancy, especially to the fetus. Furthermore, good data are available to analyze smoking patterns because every woman who delivers a child is asked whether she smoked during the pregnancy as part of the application for a birth certificate. Since pregnant women are exposed to many of the same programming influences as the general population (e.g., education, media campaigns, cessation programs), the information collected about their behavior can be used to provide insights on smoking outcomes that are unobtainable from the more limited data on the general population. However, one must be cautious about generalizing too readily from the population of pregnant women to the general population.

According to information reported on birth certificate applications, there was a slight downward trend in the percentage of pregnant women who smoked from the mid-1990s until 2004 (Figure 10.7). The smoking rate for pregnant women reached a plateau in 2004 and remained virtually unchanged until 2008. In 2008, the smoking rate for pregnant women dropped by half a percentage point to 14.5 percent, which is a statistically significant decrease from the prior year.

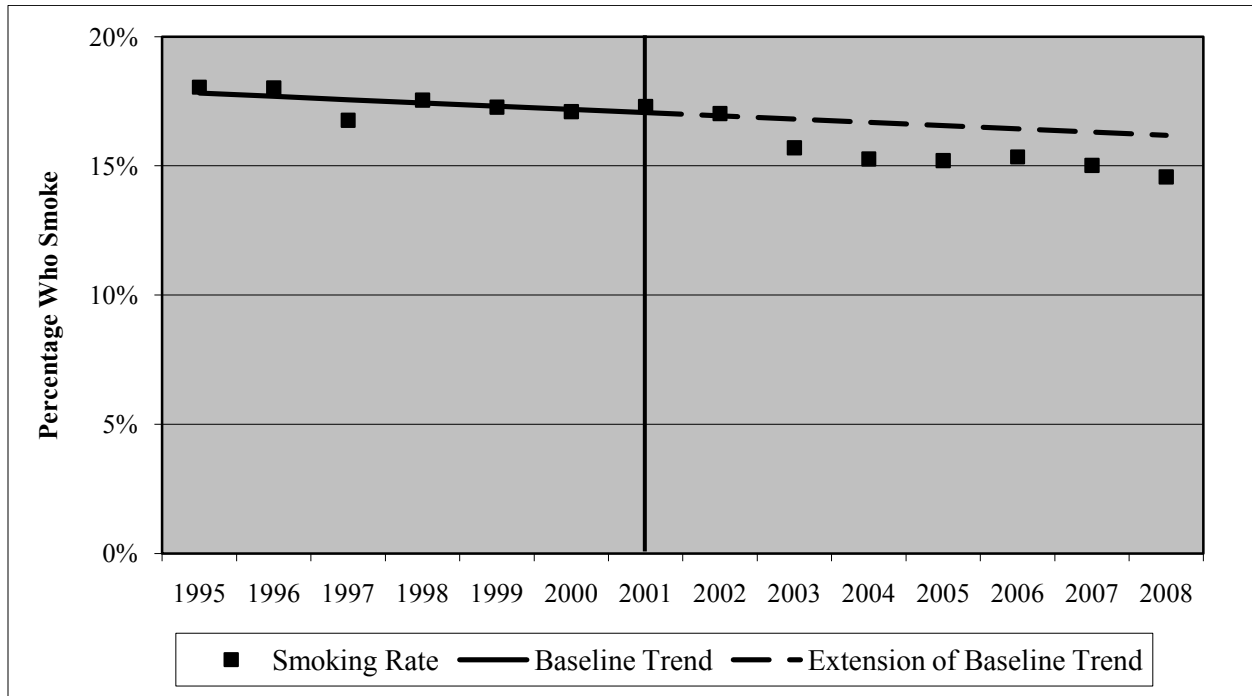
Figure 10.7
Smoking Rate of Pregnant Women in Arkansas, 1995–2008



SOURCE: RAND analysis of Birth Certificate microdata files.

For pregnant women’s smoking rate, we also estimated a baseline trend in smoking prevalence before the tobacco settlement programs began, adjusting for changes in demographics, to show what the smoking rate would have been if that baseline trend had continued. As discussed above for the prevalence of adult smokers, observed changes (or lack of changes) over time in the percentage of pregnant women who smoke could be explained simply by changes in their demographics, rather than by changes in smoking behaviors. From 1995 to 2002, the smoking rate decreased by one percentage point overall, which was a statistically significant decline (Figure 10.8). After remaining flat from 2003 to 2007, there was a statistically significant decrease of 1.5 percentage points below the baseline trend in 2008.

Figure 10.8
Smoking Rate of Pregnant Women in Arkansas,
Adjusted for Demographic Changes



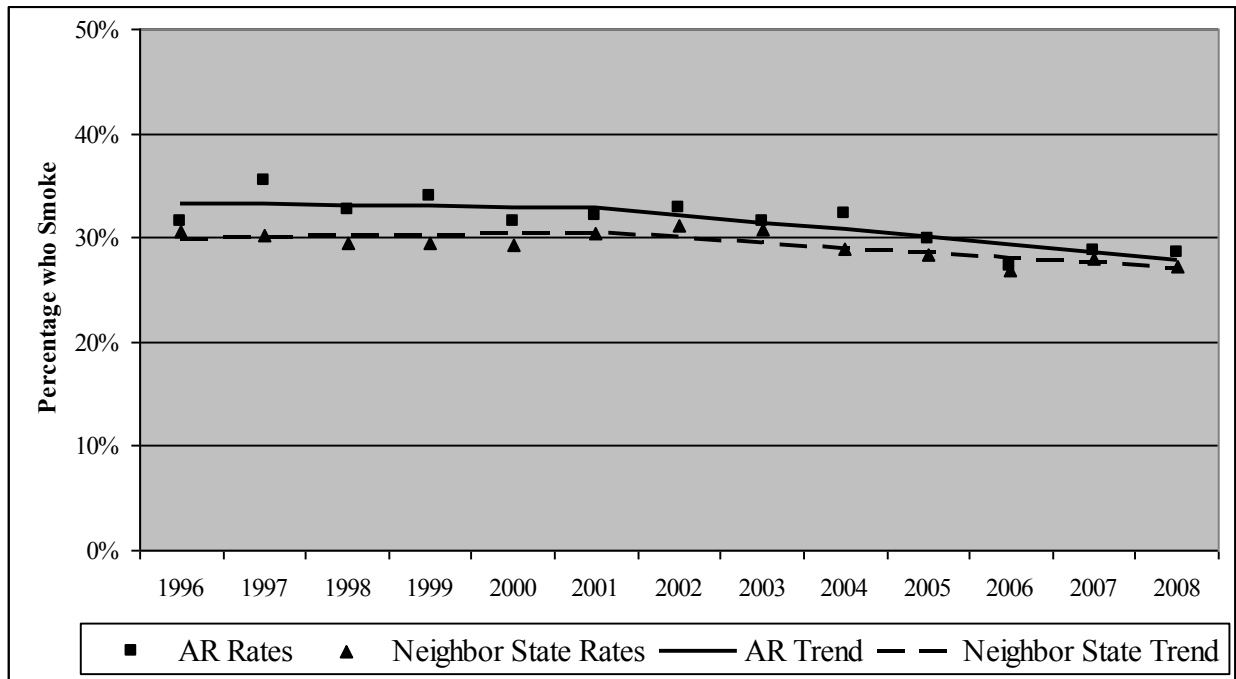
SOURCE: RAND analysis of Birth Certificate microdata files.

Comparisons to Neighboring States

Our analysis also looked at Arkansas’ adult smoking rates in comparison to those in six states that share a border with Arkansas. The smoking rate in the neighboring states started to trend downward in 2001 (Figure 10.9). In comparison, Arkansas’ adult smoking rate in 2001 was higher than the average rate in the neighboring states. After 2001, Arkansas’ rate decreased significantly more rapidly than rates in the six neighboring states. By 2008, the difference in smoking rates between Arkansas and its neighboring states had been substantially reduced. The smoking rates for neighboring states ranged from a low of 21.7 in Texas to a high of 28.9 in Missouri, with Arkansas’ rate in the middle of this range. This suggests that tobacco control programs in Arkansas make a difference in smoking rates, despite regional or national factors, such as changes in cigarette advertising efforts and national anti-smoking campaigns.

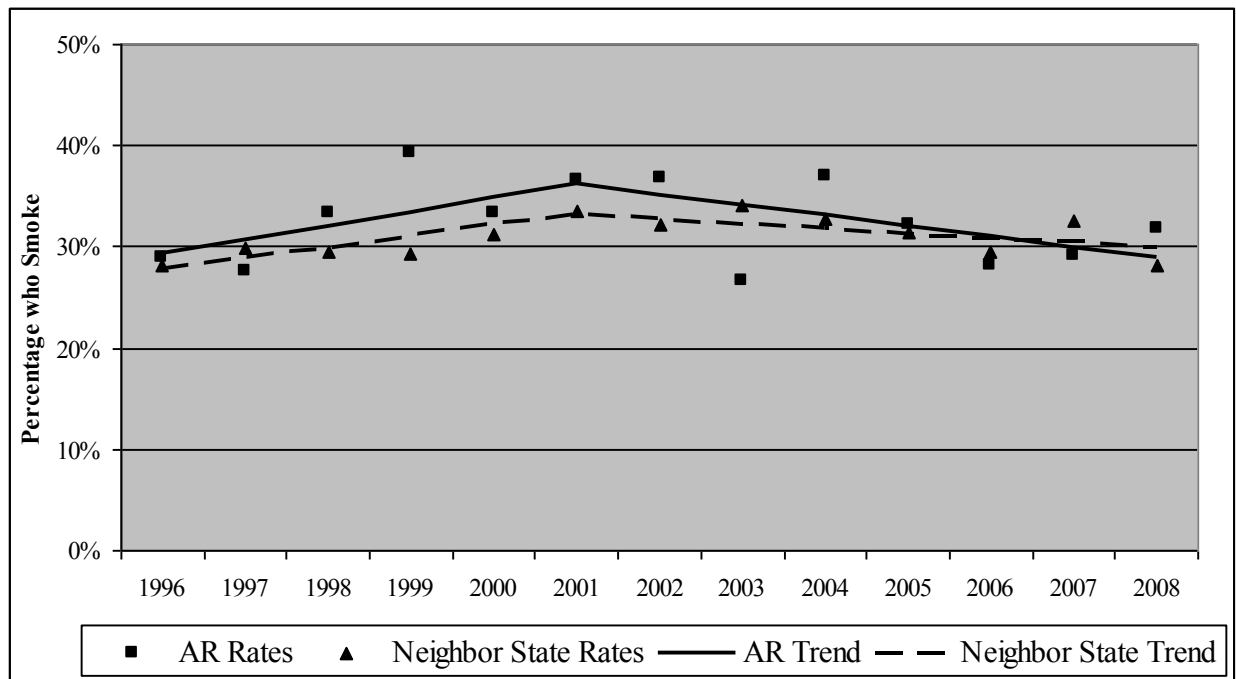
We also compared the changes in smoking rates for young adults in Arkansas with those in the six neighboring states. The downward trend in the smoking rate for young adults in Arkansas is larger than in the neighboring states (Figure 10.10). However, the difference is not statistically significant, so we cannot say that Arkansas has made greater progress in lowering smoking rates among young adults than have the surrounding states. While this difference could be due to the imprecision of these survey estimates, the trend should be monitored to make sure that continued progress is made among this population.

Figure 10.9
Smoking Rate of Adults Age 18 and Over in Arkansas and in Neighboring States, Adjusted for Demographic Changes



SOURCE: RAND analysis of BRFSS microdata files.

Figure 10.10
Smoking Rate of Young Adults Age 18–25 in Arkansas and Neighboring States, Adjusted for Demographic Changes



SOURCE: RAND analysis of BRFSS microdata files.

Youth Smoking Behavior

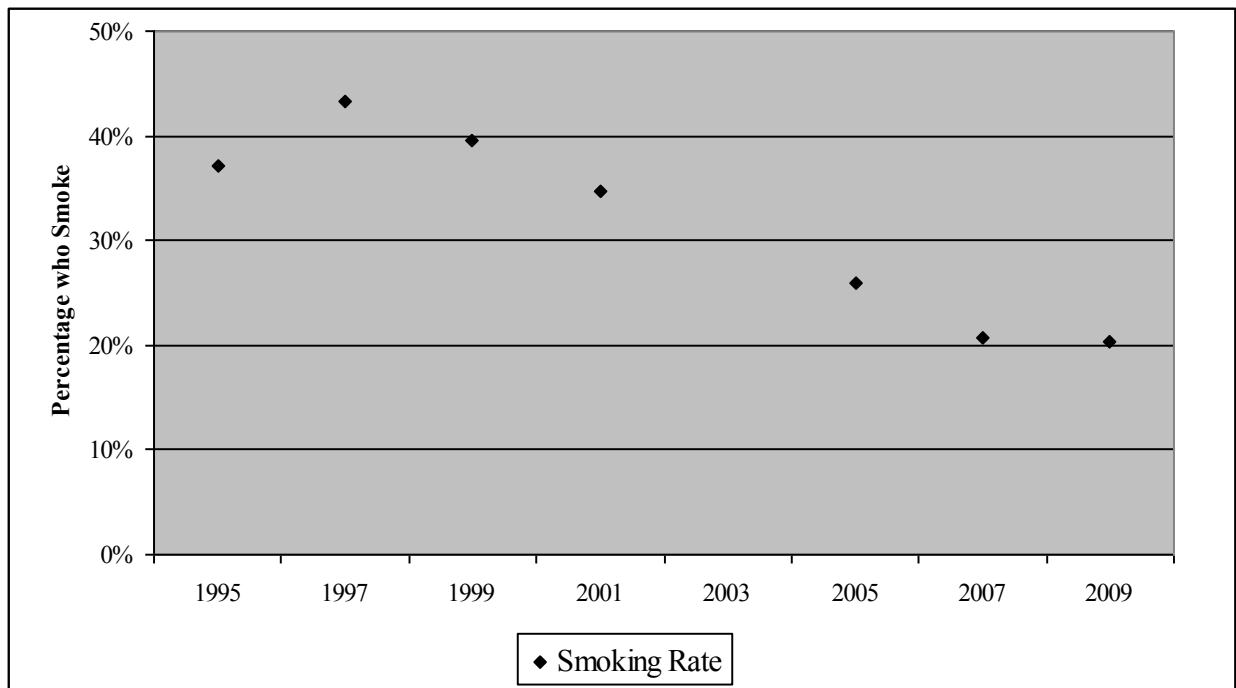
Key Finding: *The youth smoking rate in Arkansas remained below the baseline trend for both high school students and pregnant teenagers (age 14 to 19).*

Reductions in smoking among young people are particularly advantageous because, as this population ages, these reductions will provide health dividends to the state for years to come. This optimistic conclusion is based on the assumption that young people will not initiate or resume smoking when they are older; such an assumption is supported by evidence in the literature.

For youth smoking rates, we use the Youth Risk Behavior Surveillance System (YRBSS), which monitors priority health-risk behaviors among youth and young adults. The YRBSS is a national school-based survey conducted by the CDC and state, territorial, tribal, and local education and health agencies. We also used the 2000–2008 birth certificate data to analyze smoking behavior among the pregnant teenagers.

Smoking appears to have been on the decline for youth prior to the initiation of programming in 2001 (Figure 10.11). The observed youth smoking rates from 2005 through 2009 continued this trend. Overall, the high school student smoking rate has declined by over 40 percent to 20 percent since 2000, a statistically significant reduction. The 2009 YRBSS did not include middle school students, so we were unable to observe any changes in the smoking rate for this group.

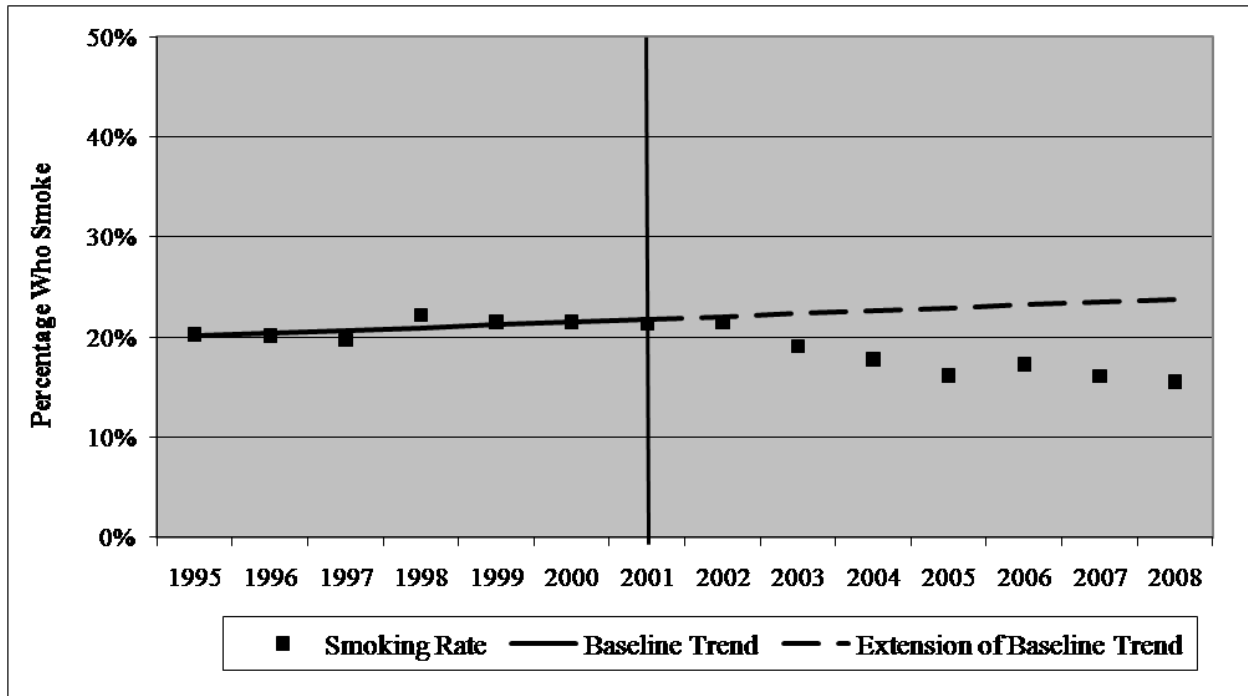
Figure 10.11
Smoking Rate of High School Students in Arkansas, 1995–2009



SOURCE: Arkansas YRBSS reports.

The smoking rate for pregnant teenagers continued to decrease (Figure 10.12). In 2008, the smoking rate of just under 16 percent represented a statistically significant decrease of 27 percent from the smoking rate in 2000.

Figure 10.12
Smoking Rate of Pregnant Teens Age 14–19 in Arkansas,
Adjusted for Demographic Changes



SOURCE: RAND analysis of birth certificate microdata files.

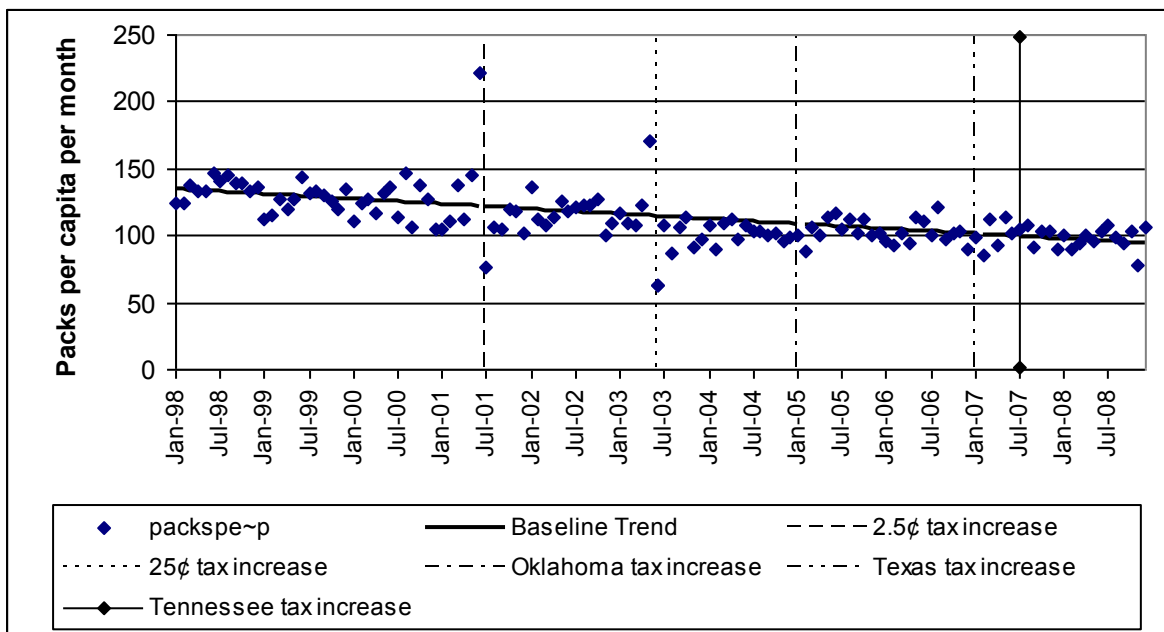
CIGARETTE SALES

Key Finding: *The most recent data for 2008 show that cigarette sales increased slightly and did not differ from the baseline trend. This reversal likely reflects increased purchases from residents of three neighboring states (Oklahoma, Texas, and Tennessee) due to the recent large cigarette tax increase in those states.*

Information on cigarette tax receipts can be used to estimate cigarette sales and consumption rates. However, the use of tax receipts to calculate cigarette consumption is complicated by sales to residents from neighboring states as well as by variation in tax rates along state borders. When a neighboring state raises taxes to exceed those of Arkansas, our calculation of “packs per capita” sales also increases because of changes in between-state purchasing patterns and because of the elimination of border variances. On March 1, 2009, Arkansas raised its cigarette tax to \$1.15 per pack. Despite this marked increase, Arkansas’ cigarette tax is still below the national average of \$1.34 per pack. In particular, Texas, one of the six neighboring states, raised its taxes in 2007 to \$1.41 per pack, a rate higher than that of Arkansas, even after the 2009 increase.

Figure 10.13 shows the estimated per-capita cigarette sales in Arkansas throughout this period. As the denominator for the consumption rate, we used the total state adult population, which we measured as the population over age 18. The individual points on the graph are the cigarette sales per capita for each month. The vertical lines on the graph identify the dates that state excise tax increases went into effect, both in Arkansas and three neighboring states. Using the cigarette consumption data points for the pretax increase period of January 1998 through June 2001, we estimated a baseline trend line of cigarette consumption per capita. This trend line, when projected into future time periods, is an estimate of what cigarette consumption would have been in subsequent years if the baseline trends had continued without the introduction of tax changes or tobacco prevention and cessation interventions. Overall, cigarette consumption per capita has been declining since 1998. However, cigarette sales per capita in 2008 reverted to the baseline trend. Because the sale data for 2009 are not yet available, it is unclear how Arkansas per-capita sales are affected by the new federal and state cigarette taxes.

Figure 10.13
Number of Cigarette Packs Sold per Arkansan, Age 18 and Over, 1998–2008



SOURCE: RAND analysis of monthly tax receipts (provided by Office of Excise Tax Administration, Arkansas Department of Finance) and population estimates from the U.S. Census Bureau.

SMOKING-RELATED HEALTH INDICATORS

Key Finding: For health conditions that are related to smoking, the latest data for 2008 show that incidence rates for hospitalizations for strokes and heart attacks were significantly reduced below the baseline trend.

As part of our outcome analysis, we also examined hospital discharges for conditions related to smoking. Although we did not observe reduced smoking among the adult population in general, it is possible that reductions in smoking by people with serious health conditions has led to healthier outcomes among this group. It is also possible that reductions in secondhand smoke brought about by attitude and policy changes have had positive health benefits. As we did in

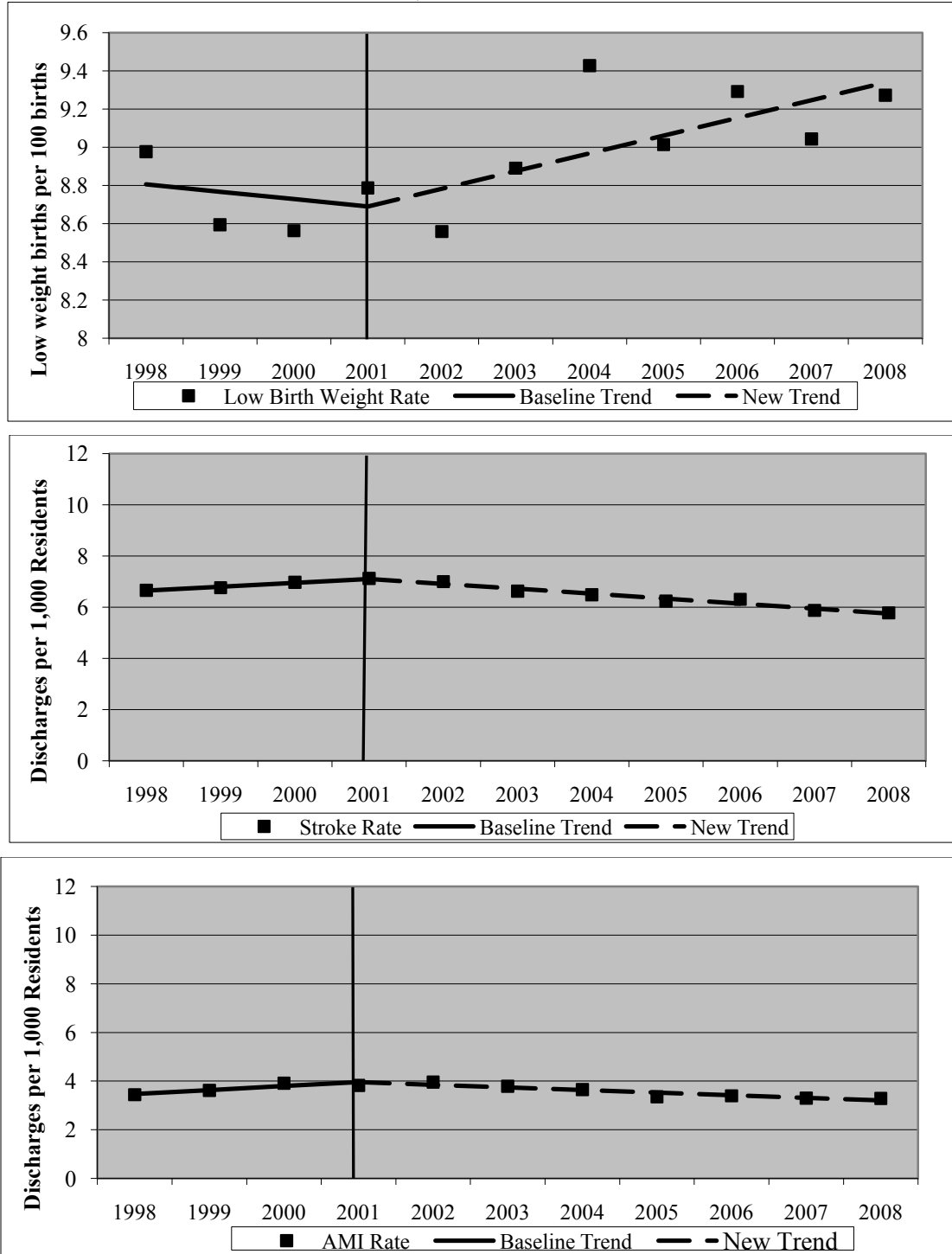
prior reports, we examined five short-term health indicators that we expect to respond very quickly to reductions in smoking.

- **Low-weight births.** Maternal smoking contributes to approximately one-quarter of all low-weight births (Lightwood, Phibbs, and Glantz, 1999) and increases the relative risk of admission to a neonatal intensive care unit by 20 percent (Adams et al., 2002). Reductions in maternal smoking can have an immediate impact on the number of low-weight births (i.e., the number of births per 100 total births weighing less than 2,500 grams).
- **Heart conditions.** Research has shown a dramatic drop in the relative risk for strokes and heart attacks (acute myocardial infarctions, or AMI) during the first four years following smoking cessation (Lightwood and Glantz, 1997) and a 36 percent reduction in the risk for mortality among patients with coronary artery disease (Critchley and Capewell, 2003).
- **Pulmonary conditions.** Smoking is the strongest independent risk factor for pneumonia (Nuorti et al., 2000). Asthma has been shown to be aggravated in smokers (Shavit et al., 2007) and by secondhand smoke in nonsmokers (Floreani, 1999) and to impair the smoker's response to oral corticosteroid treatment (Chaudhuri et al., 2003).
- **Diabetes.** Prior research has demonstrated that smoking is associated with an increased risk of diabetes for both men and women (Willi et al, 2007).

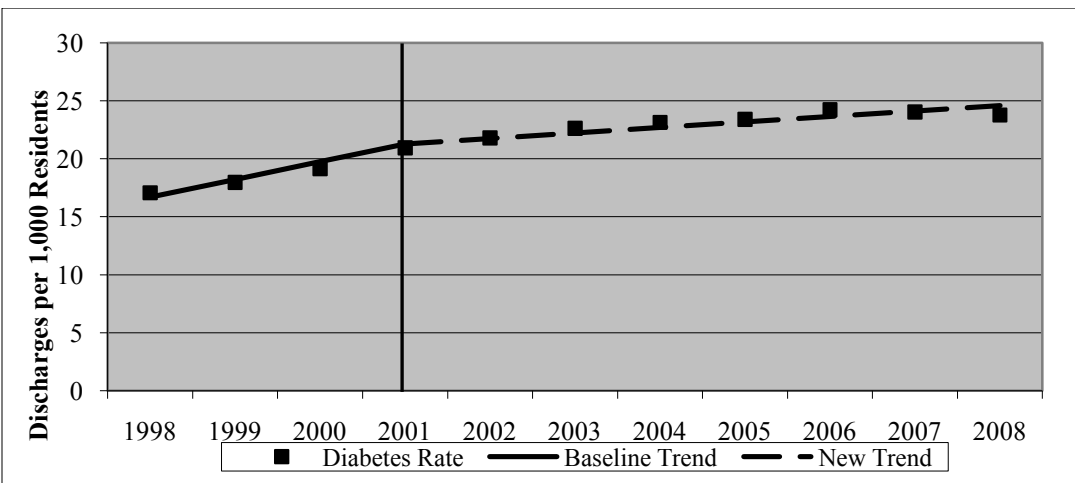
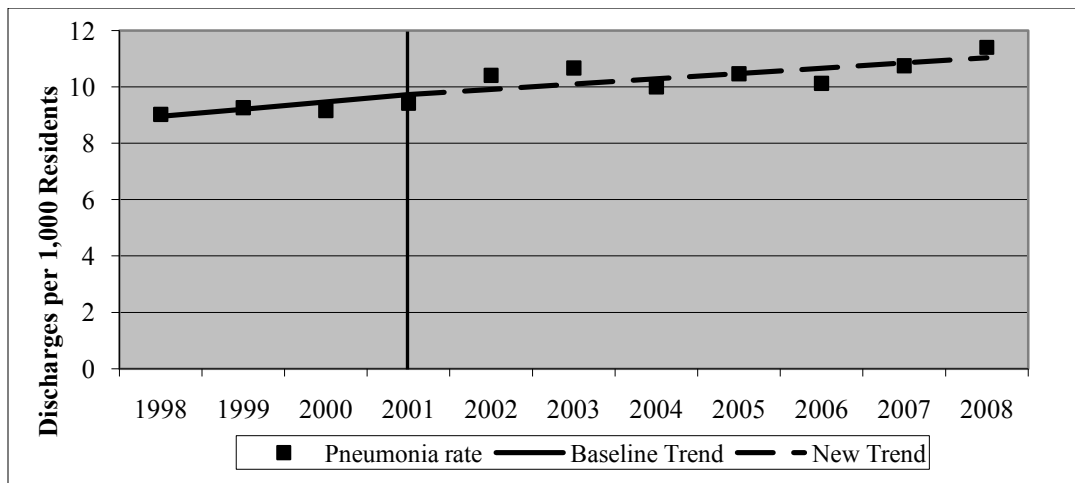
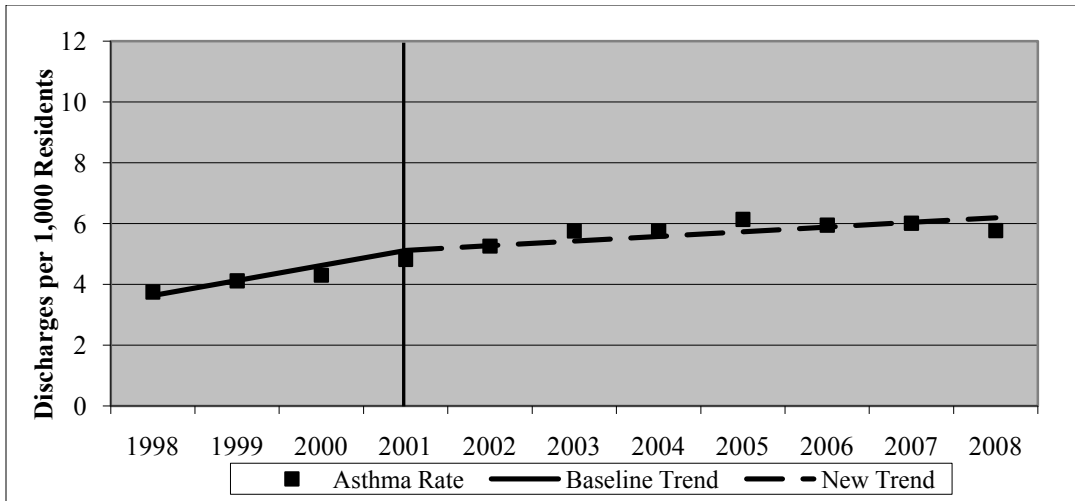
In 2004, we provided baseline trends using data from 1998 through 2001 and an estimated change in trend starting in 2002 for these measures, and we recommended that they be followed for at least the next ten years. These outcome indicators can be used to confirm imprecise survey-based estimates of smoking reduction and to document the positive benefits from tobacco prevention and cessation programming. Adding the 2007 and 2008 data, we continue to find significant downward trends in hospitalizations for stroke and AMI. After declining earlier in the study period hospital discharges for low-weight births increased for the first time (Figure 10.14). The rates of asthma, diabetes, and pneumonia have not turned down in Arkansas following the initiation of tobacco settlement programming, although upward trends in these rates have been reduced.

Of course, all these conditions are influenced by other factors as well. While promising, the downward trends should not be considered as definitive evidence of the impact of tobacco settlement programming. Because the 2007–2008 hospital discharge data for the United States are not available at the time of writing this report, we are not able to present the comparable trends for the United States as a whole. Such comparison can provide some evidence as to whether the changes observed in Arkansas are likely to be due to recent programming or to factors that affect the country more generally. We suggest that these rates for Arkansas and the nation be monitored in the future to provide continuing evidence regarding the impact of smoking control activities.

Figure 10.14
Short-Term Health Indicators, Baseline Trends and Current Deviations



SOURCE: RAND analysis of hospital discharge data, birth certificate data and Census data.
 NOTE: The marks for stroke, AMI, asthma and pneumonia show the number of hospital discharges in each year per 1,000 people with the diagnosis. The marks for low birth weight show the number of low-birth-weight births in each year per 100 total births. The baseline trend lines for each condition were estimated from the first four years of data (1998–2001).



SOURCE: RAND analysis of hospital discharge data, birth certificate data and census data.

NOTE: The marks for stroke, AMI, asthma and pneumonia show the number of hospital discharges in each year per 1,000 people for the diagnosis. The marks for low birth weight show the number of low-birth-weight births in each year per 100 total births. The baseline trend lines for each condition were estimated from the first four years of data (1998–2001).

SUMMARY OF FINDINGS ON SMOKING-RELATED OUTCOMES

Our analysis of smoking behavior in Arkansas provides evidence of the continued effectiveness of the Arkansas Tobacco Settlement Program, led by TPCP's efforts to improve smoking outcomes, especially for the most vulnerable populations, such as young people and pregnant women. Our main findings regarding smoking outcomes are summarized as follows:

Adult Smoking Behavior

- The 2008 adult smoking rate of 22 percent was significantly below the rate prior to the initiation of tobacco settlement programming. The smoking rate in 2008 was approximately four percentage points lower than the five-year average preceding TPCP programming, which is equivalent to 16 percent fewer smokers. However, the smoking rate was only slightly below the baseline trend and did not match the expected decrease from comprehensive smoking control program comparable to California's. Nonetheless, this trend represents a major milestone for the health of Arkansans.
- For 2008, adult women were smoking significantly less than would be predicted by their baseline trend, while men were not.
- While the smoking rate for young adults did not decrease in 2008, it remained below the baseline trend for this population.
- Analysis of the 2008 data reveals that the smoking rate for pregnant women continued to decrease and was significantly below the baseline trend.

Youth Smoking Behavior

- The smoking rate for high school students and pregnant teenagers was lower than would be expected based on trends prior to the TPCP tobacco settlement programs.

Cigarette Sales

- The most recent data indicate that per-capita cigarette sales increased from prior years and reverted to the baseline trend.

Smoking-Related Health Indicators

- There have been reductions in the hospitalization rates for several smoking-related health conditions, including strokes and acute myocardial infarctions (heart attacks).

As in our previous report, we find statistically significant decreases in smoking among adult women and among young people, especially young pregnant women. We also find that smoking rates for the adult population in Arkansas are significantly below what they were prior to the initiation of tobacco settlement programming. Our analysis of short-term health outcomes shows promising evidence of improvements for smoking-related health conditions. We find strong evidence for reductions in hospitalizations for strokes and heart attacks. There are mixed results, however, with regard to many of the measures, including smoking incidence among middle-aged and older adults. Arkansas also lags behind Texas, one of its neighbor states, in

cigarette tax rates. However, we expect to find more positive effects of the statewide tobacco control policies and activities on health and health care for Arkansas people in the coming years when more data become available. Since many of these changes happen slowly, it is necessary to observe the trends over a long period of time.

Chapter 11 Synthesis and Recommendations

The ATSC is charged with overseeing the funded programs, assessing their performance, and recommending program funding changes to the General Assembly. The ATSC also facilitates the work of the programs by being responsive to the political and policy environment regarding public health and tobacco use in Arkansas. In this report, we present the findings from our multifaceted evaluation of the tobacco settlement programs. The process evaluation provided an update on each program’s status and an assessment of progress in meeting program-specific goals. The cost evaluation examined overall spending by activity area and unit costs when possible. The policy evaluation assessed the political and policy context during the past two years and examined the perspectives of stakeholders on the programs and their activities. The outcome evaluation looked at overall smoking and smoking-related outcome, as well as program-specific outcomes. In this concluding chapter, we synthesize the results to provide an overall assessment of progress related to programmatic goals, discuss program responses to common themes and issues from our last evaluation report, and offer recommendations for consideration by the ATSC, the governing boards that oversee the individual programs, and the general assembly.

SUMMARY OF PERFORMANCE THROUGH 2009

During 2008–2009, each program undertook a systematic review of its programmatic goals and the process, cost, and outcome indicators used to assess its progress to ensure that these goals and indicators were aligned with changes and additions to the program’s activity areas that had occurred over the past several years. While some goals have remained the same, there are also new goals that reflect the maturation of the programs over time. For these new goals, this evaluation report provides baseline data that will be used to assess progress moving forward.

**Table 11.1
Program Status on the Programmatic Goals**

| Program | Status of Goal | | | |
|--|----------------|------------|-----------------------|---------|
| | Accomplished | In Process | New; Unable to Assess | Not Met |
| College of Public Health | 4 | | 2 | |
| Arkansas Biosciences Institute | 2 | | | |
| Delta Area Health Education Center | 2 | 1 | 1 | |
| Arkansas Aging Initiative | 4 | 1 | 1 | |
| Minority Health Initiative | | | 5 | 1 |
| Medicaid Expansion Programs | 3 | | 1 | 1 |
| Tobacco Prevention and Cessation Program | 1 | 4 | 1 | |

PROGRAM RESPONSES TO COMMON THEMES AND ISSUES

In our report covering progress during 2006–2007, we described some common themes and issues for the programs and offered recommendations for actions to strengthen the programs going forward. As part of our ongoing evaluation, we regularly monitor the progress of the programs in carrying out these recommendations. The programs report on their progress on the recommendations on a quarterly basis to both RAND and the ATSC. In this section, we review these recommendations and highlight actions undertaken by the programs during 2008–2009 for each recommendation.

Managing Transitions and Change

Recommendation: With continued growth and change, all the programs need to develop methods to manage leadership transitions and programmatic changes.

Program Responses: While most programs have had stable leadership since their inception, others have had to weather leadership or senior level staffing changes. To help manage these transitions, MHI, for example has formalized processes for managing and evaluating its activities. With more written documentation and established procedures for running its programs, MHI will be better positioned for any future leadership changes. Similarly, TPCP's staffing realignment and institutionalization of processes for quality management will help it better manage programmatic and leadership transitions. Most of the other programs have formal strategic plans, program documentation, and quality management processes to help manage transitions and changes.

Ongoing Strategic Planning

Recommendation: As the programs mature, each program and the ATSC itself should have in place a documented strategic plan and process that includes concrete objectives, strategies, and tasks.

Program Responses: Several programs undertook strategic planning processes during 2008 and 2009, including MHI and TPCP. Delta AHEC develops one-year strategic plans each year; AAI has an existing strategic plan covering through FY2011. With a new chancellor at UAMS, COPH expects to complete a new strategic plan during 2010. ABI and MEP do not have formal strategic plans, but both did complete a thorough review of their activities, goals, and indicators during this reporting period.

Evaluation Development

Recommendation: Evaluation plans should evolve along with the programs and move toward measuring broader impact. As programming and activities develop over time, the programs should be urged to update the programmatic goals and the indicators used to measure progress toward these goals.

Program Responses: As part of our external evaluation during 2009, all the programs undertook a systematic review of their programmatic goals and the process, cost, and outcome indicators used to track progress toward meeting those goals. COPH, ABI, and MEP conduct limited, if any, internal evaluation activities. The three service-oriented programs (Delta AHEC, AAI, and MHI) have all built evaluation into each program

activity. For example, Delta AHEC collects health information on participants in its exercise and fitness programs and satisfaction surveys from participants in its education programs. Likewise, TPCP incorporates internal evaluation into each of its programs and activities and participates in evaluations conducted by an independent evaluation contractor to monitor its efforts.

Collaboration

Recommendation: The seven tobacco settlement programs should be encouraged to intensify their collaborative efforts, especially as they develop and adapt their programming to meet changing needs. The ATSC can help in this regard by continuing to convene meetings of the programs specifically on collaboration and requesting that the programs report their progress on these efforts during the meetings.

Program Responses: The ATSC continued to convene quarterly meetings focused on collaboration during 2008–2009. However, there are few concrete examples of substantial collaborative efforts among the programs. COPH has worked with some of the other programs, such as AAI, on proposal or evaluation activities. Delta AHEC recently received a grant from MHI to conduct a pilot project and has hosted a staff person from AAI at its Helena location. The barriers to more-substantive collaborative efforts appear to be related to the programs finding funding for these projects and agreeing about which one should take the lead.

Sustainability

Recommendation: The ATSC and each of the seven programs should focus on sustainability, with particular attention to funding stability and growth. As the tobacco settlement funds continue to fall below the amounts expected based on the MSA, some of the shortfall can and should be made up by aggressively seeking other funding sources to supplement the tobacco settlement funds.

Program Responses: The programs have made some progress in generating other funding streams. Delta AHEC now receives 40 percent of its total funding from other sources and AAI has set a goal of obtaining over \$1.5 million annually from other sources. Without its tobacco settlement funding, ABI would be able to continue funding some of its research, as would COPH. While the abilities of MEP and TPCP to obtain funding from other sources are more limited, MHI has the potential to be a strong strategic partner for local organizations applying for grants targeted to community-based agencies, particularly if it leverages its connections with AAI and Delta AHEC to extend the reach of its programs.

POLICY ISSUES AND NEW RECOMMENDATIONS

The programs supported by the tobacco settlement funds provide a variety of services and other resources in an attempt to respond directly to Arkansas' priority health issues. The two academic programs—COPH and ABI—are building educational and research infrastructure that can be expected to make long-term contributions to the state's health needs. The three service-oriented programs—Delta AHEC, AAI, and MHI—are providing needed health-related programs to underserved communities within Arkansas. MEP is extending Medicaid benefits to

populations without access to health care. TPCP is providing a statewide comprehensive tobacco control program. The programs' impacts on health needs can also be expected to grow as they continue to evolve and increasingly leverage the tobacco settlement funds to attract other resources. Below, we highlight some new areas of focus and provide recommendations for the programs and the ATSC based on our multifaceted evaluation.

Program Reporting and Planning

Recommendation: With strategic plans in place, the tobacco settlement programs should utilize progress-reporting systems for their ongoing program planning.

Over the past two years, the tobacco settlement programs have made substantial progress in developing strategic plans to guide their efforts in the coming years. These strategic plans lay out goals and objectives with measures to assess progress and inform program modifications. Many of the programs have also made progress in developing reporting systems to monitor and assess their activities on a routine basis. The programs should ensure that the progress reporting reflects the specific strategies and tasks outlined in the strategic plans. Once the progress-reporting systems are aligned with the strategic plans, the programs should use the information from these monitoring systems to provide their advisory boards with routine feedback on program activities and to better engage the advisory boards in ongoing planning.

Program Capacity and Need

Recommendation: As the programs focus on specific activity areas, each program should build on areas of strength relative to the needs of the state and develop capacity within those areas.

Each tobacco settlement program reviewed its activity areas and programs or strategies within its activity areas during this reporting period. This process helped identify areas of strength and gaps where activities are still needed. The programs should use the results of this review to focus on further developing areas of strength and building program capacity to address the gaps. These strengths are different for each program, demonstrating the variety and versatility of the activities supported by tobacco funds. For example, Delta AHEC should continue to build on its capacity to provide clients with a host of health education and services in a centralized facility. AAI should expand its efforts to leverage its network of locations to bring evidence-based educational content to a multidisciplinary assortment of health professionals caring for elderly Arkansans.

Education and Outreach

Recommendation: Both individually and collectively, the programs should focus on education and outreach efforts to market themselves and their activities and provide information to maximize participation.

As the results of the stakeholder survey indicate, about 20–30 percent of stakeholders were completely unaware of one or more of the tobacco settlement programs. Although several of the programs focus on public awareness and education about specific activities or health more generally, these efforts should be expanded to inform communities about the programs and services available through each tobacco settlement program. By targeting the education and

outreach efforts, programs can increase program participation and service utilization to ensure that the programs and services reach capacity.

Collaboration

Recommendation: The seven tobacco settlement programs should be encouraged to intensify their collaborative efforts. The ATSC can further these efforts by providing incentives and focused opportunities for programs to work together.

Our prior evaluation report recommended that the seven tobacco settlement programs increase collaboration. While our evaluation found a few limited examples of collaboration, stakeholders of the programs noted a need for improved collaboration among the tobacco settlement programs. As a result, we continue to recommend that the program capitalize on the natural synergies between programs to promote and educate communities about the breadth of programs available to different populations. The community-based programs should work together to form strategic partnerships with local organizations to extend each program's reach in the community. The academic programs should work with the service-oriented programs to provide technical assistance related to data collection, management, and analysis. The ATSC should also consider contracting with an organizational behavior consultant to advise on ways to increase collaboration.

DISCUSSION

Arkansas has been unique among the states in that it invested all its tobacco settlement funds in programs that focus on smoking prevention and cessation and other health-related endeavors. The seven programs supported by the tobacco settlement funds have continued to strengthen and expand their reach in support of improving the health of Arkansans. TPCP has developed a strategic plan to maximize its available resources for tobacco prevention and cessation programs. MEP has been able to expand access to health care to underserved populations. The Delta AHEC, AAI, and MHI are targeting programs and services to address short-term health-related needs of disadvantaged Arkansas residents. While MHI has struggled with leadership turnover and a lack of focus, it has developed a strategic plan to guide its works for the next several years. Both COPH and ABI are expanding public health education and public health and health research knowledge infrastructure in Arkansas. All the programs undertook a systematic review of programmatic goals and the process, cost, and outcome indicators used to assess progress toward those goals. With the goals and indicators now better aligned to reflect maturation and changes over time, the programs are better positioned to fulfill the mandate of the Initiated Act. The results of the outcome evaluation indicate that, collectively, the tobacco settlement programs are having an impact on smoking behavior and health in Arkansas. There have been significant decreases in smoking rates for adult women, high school students, and pregnant teenagers. Overall, smoking rates for the adult population in Arkansas are significantly below what they were prior to the initiation of tobacco settlement programming. There is also promising evidence of improvements in smoking-related health conditions, including strokes, heart attacks, and low-weight births.

Despite the progress of these programs, there is room for improvement. Although Arkansas has been a national leader in spending a considerable portion of its tobacco settlement money on tobacco prevention, the state still spends only about half of the amount recommended by the CDC for prevention efforts. Increasing the funding to CDC recommended levels would

help Arkansas extend its gains in smoking reduction. Most important, we encourage Arkansas policymakers to continue their commitment to dedicate the tobacco settlement funds to health-related programming. To do justice to the services, education, and research that these programs are now delivering, they should be given the continued support and time necessary to fulfill their mission of improving the health of Arkansas residents. We believe that additional progress can be made toward reaching this goal.

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Appendix A.

Initiated Act 1 of 2000: The Tobacco Settlement Proceeds Act

SECTION 1. TITLE. This Act may be referred to and cited as the “Tobacco Settlement Proceeds Act.”

SECTION 2. DEFINITIONS. (a) The following terms, as used in this Act, shall have the meanings set forth in this section:

- (1) “Act” shall mean this Arkansas Tobacco Settlement Funds Act of 2000.
- (2) “ADFA” shall mean the Arkansas Development Finance Authority.
- (3) “Arkansas Biosciences Institute” shall mean the Arkansas Biosciences Institute created by Section 15 of this Act.
- (4) “Arkansas Biosciences Institute Program Account” shall mean the account by that name created pursuant to Section 11 of this Act to be funded from the Tobacco Settlement Program Fund and used by the Arkansas Biosciences Institute for the purposes set forth in this Act.
- (5) “Arkansas Healthy Century Trust Fund” shall mean that public trust for the benefit of the citizens of the State of Arkansas created and established pursuant to Section 7 of this Act.
- (6) “Arkansas Tobacco Settlement Commission” shall mean the entity that administers the programs established pursuant to this Act, also known as “ATSC”, which is described and established in Section 17 of this Act.
- (7) “Arkansas Tobacco Settlement Commission fund” shall mean the fund by that name created pursuant to Section 8(f) of this Act to be used by the Arkansas Tobacco Settlement Commission for the purposes set forth in Section 17 of the Act.
- (8) “Bonds” shall mean any and all bonds, notes, or other evidences of indebtedness issued by ADFA as Tobacco Settlement Revenue Bonds pursuant to the terms of this Act.
- (9) “Capital Improvement Projects” shall mean the acquisition, construction and equipping of land, buildings, and appurtenant facilities, including but not limited to parking and landscaping, all intended for the provision of health care services, health education, or health-related research[,] provided that each such Capital Improvement Project must be either set forth in this Act or subsequently designated by the general assembly pursuant to legislation.
- (10) “Debt Service Requirements” shall mean all amounts required to be paid in connection with the repayment of Bonds issued pursuant to this Act, including, but not limited to, the principal of and interest on the Bonds, amounts reasonably required for a debt service reserve, amounts reasonably required to provide debt service coverage, trustee’s and paying agent fees, and, to the extent reasonably necessary, capitalized interest on the Bonds.
- (11) “Initial MSA Disbursement” shall mean the first disbursement from the MSA Escrow to the State, consisting of Arkansas’ share of payments from Participating Manufacturers due under the Master Settlement Agreement and designated as the 1998 First Payment, the 2000 Initial Payment, and the 2000 Annual Payment, which amounts, along with any accumulated interest, represent all money due to the State and attributable to payments prior to January 1, 2001.

- (12) “Master Settlement Agreement” or “MSA” shall mean that certain Master Settlement Agreement between certain states (the “Settling States”) and certain tobacco manufacturers (the “Participating Manufacturers”), pursuant to which the Participating Manufacturers have agreed to make certain payments to each of the Settling States.
- (13) “Medicaid Expansion Programs Account” shall mean the account by that name created pursuant to Section 12 of this Act to be funded from the Tobacco Settlement Program Fund and used by the Arkansas Department of Human Services for the purposes set forth in this Act.
- (14) “MSA Disbursements” shall mean all amounts disbursed from the MSA Escrow pursuant to the Master Settlement Agreement to the State of Arkansas.
- (15) “MSA Disbursement Date” shall mean any date on which MSA Disbursements are made to the State of Arkansas pursuant to the Master Settlement Agreement at the request of the State.
- (16) “MSA Escrow” shall mean those escrow accounts established to hold the State of Arkansas’ share of the Tobacco Settlement proceeds prior to disbursement to the State pursuant to the Master Settlement Agreement.
- (17) “MSA Escrow Agent” shall mean that agent appointed pursuant to the Escrow Agreement entered into between the Settling States and the Participating Manufacturers pursuant to the Settlement Agreement.
- (18) “Participating Manufacturers” shall mean those entities defined as Participating Manufacturers by the terms of the Master Settlement Agreement.
- (19) “Prevention and Cessation Program Account” shall mean the account by that name created pursuant to Section 9 of this Act to be funded from the Tobacco Settlement Program Fund and used for the purposes set forth in this Act.
- (20) “Program Accounts” shall mean, collectively, the Prevention and Cessation Program Account, the Targeted State Needs Program Account, the Arkansas Biosciences Institute Program Account, and the Medicaid Expansion Programs Account.
- (21) “State Board of Finance” shall mean the entity created pursuant to Arkansas Code Annotated § 19-3-101, as amended.
- (22) “Targeted State Needs Programs Account” shall mean the account by that name created pursuant to Section 10 of this Act to be funded from the Tobacco Settlement Program Fund and used for the purposes set forth in this Act.
- (23) “Tobacco Settlement” shall mean the State of Arkansas’ share of funds to be distributed pursuant to the Master Settlement Agreement between the Settling States and the Participating Manufacturers.
- (24) “Tobacco Settlement Cash Holding Fund” shall mean the Fund established as a cash fund outside of the State Treasury pursuant to Section 4 of this Act, into which all MSA Disbursements shall be deposited on each MSA Disbursement Date.
- (25) “Tobacco Settlement Debt Service Fund” shall mean the Fund established as a cash fund outside of the State Treasury pursuant to Section 5 of this Act.

(26) “Tobacco Settlement Program Fund” or “Program Fund” shall mean the Tobacco Settlement Program Fund established pursuant to Section 8 of this Act, which shall be used to hold and distribute funds to the various Program Accounts created by this Act.

(27) “Trust indenture” or “indenture” shall mean any trust indenture, ADFa resolution, or other similar document under which Tobacco Settlement Revenue Bonds are to be issued and secured.

SECTION 3. GRANT OF AUTHORITY TO STATE BOARD OF FINANCE.

The State Board of Finance is hereby authorized and directed to perform the following duties with respect to the Tobacco Settlement:

(a) The State Board of Finance is authorized and directed on behalf of the State of Arkansas to receive all authorized disbursements from the MBA Escrow. The Initial MBA Disbursement and each subsequent MSA Disbursement shall be immediately deposited into the Tobacco Settlement Cash Holding Fund, and distributed from there as prescribed in this Act. The Office of the Attorney General is directed to take all action necessary to inform the MBA Escrow Agent that the Board of Finance is authorized to receive such disbursements on behalf of the State.

(b) The State Board of Finance shall manage and invest all amounts held in the Tobacco Settlement Cash Holding Fund, the Tobacco Settlement Debt Service Fund, the Arkansas Healthy Century Trust Fund, the Tobacco Settlement Program Fund, the Arkansas Tobacco Settlement Commission Fund, and the Program Accounts, and shall have full power to invest and reinvest the moneys in such funds and accounts and to hold, purchase, sell, assign, transfer, or dispose of any of the investments so made as well as the proceeds of the investments and moneys, pursuant to the following standards:

(1) with respect to amounts in the Arkansas Healthy Century Trust Fund, all investments shall be pursuant to and in compliance with the prudent investor and other applicable standards set forth in Arkansas Code Annotated §§ 24-3-408, 414, 415, and 417 through 425, and Arkansas Code Annotated § 19-3-518;

(2) with respect to amounts in the Tobacco Settlement Debt Service Fund, all investments shall be pursuant to and in compliance with the prudent investor and other applicable standards set forth in Arkansas Code Annotated §§ 24-3-408, 414, 415, and 417 through 425, and Arkansas Code Annotated § 19-3-518[,] provided further that the types and manner of such investments may be further limited as set forth in Section 5 of this Act; and

(3) with respect to amounts held in the Tobacco Settlement Cash Holding Fund, the Tobacco Settlement Program Fund, each of the Program Accounts, and the Arkansas Tobacco Settlement Commission Fund, all investments shall be of the type described in Arkansas Code Annotated § 19-3-510 and shall be made with depositories designated pursuant to Arkansas Code Annotated § 19-3-507; or such investment shall be in certificates of deposit, in securities as outlined in Arkansas Code Annotated § 23-47-401 without limitation or as approved in the Board of Finance investment policy. The State Board of Finance shall insure that such investments shall mature or be redeemable at the times needed for disbursements from such funds and accounts pursuant to this Act.

(c) The State Board of Finance is authorized to employ such professionals as it deems necessary and desirable to assist it in properly managing and investing the Arkansas Healthy Century Trust Fund, pursuant to the standards set forth in Arkansas Code Annotated § 24-3-425.

(d) The State Board of Finance is authorized to use investment earnings from the Arkansas Healthy Century Trust Fund to compensate the professionals retained under subsection (c), and to pay the reasonable costs and expenses of the State Board of Finance in administering the funds and accounts created under this Act and performing all other duties ascribed to it hereunder.

(e) On the last day of each month, the State Board of Finance shall provide the Department of Finance and Administration, Office of Accounting with the current balances in the Tobacco Settlement Cash Holding Fund, the Arkansas Healthy Century Trust Fund, the Tobacco Settlement Program Fund, the Tobacco Settlement Debt Service Fund, the Arkansas Tobacco Settlement Commission Fund, and each Program Account.

(f) The State Board of Finance is authorized and directed to perform all other tasks that may be assigned to the State Board of Finance pursuant to this Act.

SECTION 4. CREATION AND ADMINISTRATION OF TOBACCO SETTLEMENT CASH HOLDING FUND.

(a) There is hereby created and established a fund, held separate and apart from the State Treasury, to be known as the "Tobacco Settlement Cash Holding Fund," which fund shall be administered by the State Board of Finance.

(b) All moneys received as part of the Tobacco Settlement are hereby designated cash funds pursuant to Arkansas Code Annotated § 19-6-103, restricted in their use and to be used solely as provided in this Act. All MSA Disbursements shall be initially deposited to the credit of the Tobacco Settlement Cash Holding Fund, when and as received. Any and all NSA Disbursements received prior to the effective date of this Act shall be immediately transferred to the Tobacco Settlement Cash Holding Fund upon this Act becoming effective. The Tobacco Settlement Cash Holding Fund is intended as a cash fund, not subject to appropriation, and, to the extent practical, amounts in the Tobacco Settlement Cash Holding Fund shall be immediately distributed to the other Funds and Accounts described in this Act.

(c) The Initial MSA Disbursement shall be distributed from the Tobacco Settlement Cash Holding Fund to the Arkansas Healthy Century Trust Fund as an initial endowment pursuant to Section 7 of this Act.

(d) After the Initial MSA Disbursement has been transferred as set forth in Section 4(c), the State Board of Finance, beginning with MSA Disbursements for years 2001 and thereafter, shall receive all amounts due to the State from the MSA Escrow. In calendar year 2001, there shall first be deposited to the Arkansas Healthy Century Trust Fund from the MSA Disbursements attributable to calendar year 2001, the amount necessary to bring the principal amount of the Arkansas Healthy Century Trust Fund to one-hundred million dollars (\$100,000,000). The remainder of any MSA Disbursements attributable to calendar year 2001 shall be deposited into the Tobacco Settlement Program Fund and distributed pursuant to Section 8 of this Act. Beginning in 2002, and for each annual MSA Disbursement thereafter, all MSA Disbursements shall be immediately deposited in the Tobacco Settlement Cash Holding Fund and then distributed, as soon as practical after receipt, as follows:

(1) The first five million dollars (\$5,000,000) received as an MSA Disbursement in each calendar year beginning in 2002 shall be transferred from the Tobacco Settlement Cash Holding Fund to the Tobacco Settlement Debt Service Fund; and

(2) After the transfer described in Section 4 (d) (1), the amounts remaining in the Tobacco Settlement Cash Holding Fund shall be transferred to the Tobacco Settlement Program Fund.

(e) While it is intended that the Board of Finance will transfer funds from the Tobacco Settlement Cash Holding Fund immediately upon receipt, to the extent that any amounts must be held pending the transfers described in Sections 4(c) and 4(d), the State Board of Finance is authorized to invest such amounts in suitable investments maturing not later than when the moneys are expected to be transferred, provided that such investments are made in compliance with Section 3(c) of this Act.

SECTION 5. CREATION AND ADMINISTRATION OF TOBACCO SETTLEMENT DEBT SERVICE FUND.

(a) There is hereby created and established a fund, designated as a cash fund and held separate and apart from the State Treasury, to be known as the Tobacco Settlement Debt Service Fund,” which Fund shall be administered by the State Board of Finance. All moneys deposited into the Tobacco Settlement Debt Service Fund are hereby designated cash funds pursuant to Arkansas Code Annotated § 19-6-103, restricted in their use and to be used solely as provided in this Act.

(b) There shall be transferred from the Tobacco Settlement Cash Holding Fund to the Tobacco Settlement Debt Service Fund, the amount set forth for such transfer in Section 4(d) of this Act. All amounts received into the Tobacco Settlement Debt Service Fund shall be held until needed to make payments on Debt Service Requirements. The State Board of Finance is authorized to invest any amounts held in the Tobacco Settlement Debt Service Fund in suitable investments maturing not later than when the moneys are needed to pay Debt Service Requirements, provided that such investments comply with Section 3(c) of this Act, and further provided that the investment of such moneys may be further limited by the provisions of any trust indenture pursuant to which Bonds are issued or any related non-arbitrage certificate or tax regulatory agreement.

(c) Amounts held in the Tobacco Settlement Debt Service Fund shall be transferred to funds and accounts established and held by the trustee for the Bonds at such times and in such manner as may be specified in the trust indenture securing the Bonds. If so required by any trust indenture pursuant to which Bonds have been issued, amounts deposited to the Tobacco Settlement Debt Service Fund may be immediately deposited into funds or accounts established by such trust indenture and held by the trustee for the Bonds. The State Board of Finance is authorized to execute any consent, pledge, or other document, reasonably required pursuant to a trust indenture to affirm the pledge of amounts held in the Tobacco Settlement Debt Service Fund to secure Tobacco Settlement Revenue Bonds.

(d) On December 15 of each calendar year, any amounts held in the Tobacco Settlement Debt Service Fund, to the extent such amounts are not needed to pay Debt Service Requirements prior to the following April 15, shall be transferred to the Arkansas Healthy Century Trust Fund. At such time as there are no longer any Bonds outstanding, and all Debt Service Requirements and other contractual obligations have been paid in full, amounts remaining in the Tobacco Settlement Debt Service Fund shall be transferred to the Arkansas Healthy Century Trust Fund.

SECTION 6. ISSUANCE OF TOBACCO SETTLEMENT REVENUE BONDS BY ARKANSAS DEVELOPMENT FINANCE AUTHORITY.

(a) The Arkansas Development Finance Authority (“ADFA”) is hereby directed and authorized to issue Tobacco Settlement Revenue Bonds, the proceeds of which are to be used for financing the Capital Improvement Projects described in Section 6(b) of this Act. The Bonds may be issued in series from time to time, and shall be special obligations only of ADFA, secured solely by the revenue sources set forth in this section.

(b) The Capital Improvement Projects to be financed shall be:

(1) University of Arkansas for Medical Sciences, Biosciences Research Building[,] provided, however, that no more than two million, two hundred thousand dollars (\$2,200,000) of the annual transfer to the Tobacco Settlement Debt Service Fund shall be allocated in any one year to pay Debt Service Requirements for this project, and provided further that no more than twenty-five million dollars (\$25,000,000) in principal amount of Tobacco Settlement Revenue Bonds may be issued for this project;

(2) Arkansas State University Biosciences Research Building[,] provided, however, that no more than one million, eight hundred thousand dollars (\$1,800,000) of the annual transfer to the Tobacco Settlement Debt Service Fund shall be allocated in any one year to pay Debt Service Requirements for this project, and provided further that no more than twenty million dollars (\$20,000,000) in principal amount of Tobacco Settlement Revenue Bonds may be issued for this project;

(3) School of Public Health[,] provided, however, that no more than one million dollars (\$1,000,000) of the annual transfer to the Tobacco Settlement Debt Service Fund shall be allocated in any one year to pay Debt Service Requirements for this project, and provided further that no more than fifteen million dollars (\$15,000,000) in principal amount of Tobacco Settlement Revenue Bonds may be issued for this project; and

(4) Only such other capital improvement projects related to the provision of health care services, health education, or health-related research as designated by legislation enacted by the Arkansas general assembly[,] provided that the deposits to the Tobacco Settlement Debt Service Fund are adequate to pay Debt Service Requirements for such additional projects.

(c) Prior to issuance of any series of Bonds authorized herein, ADFA shall adopt a resolution authorizing the issuance of such series of Bonds. Each such resolution shall contain such terms, covenants, conditions, as deemed desirable and consistent with this Act together with provisions of subchapters one, two, and three of Chapter Five of Title 15 of the Arkansas Code Annotated, including without limitation, those pertaining to the establishment and maintenance of funds and accounts, deposit and investment of Bond proceeds and the rights and obligations of ADFA and the registered owners of the Bonds. In authorizing, issuing, selling the Bonds and in the investment of all funds held under the resolution or indenture securing such Bonds, ADFA shall have the powers and be governed by the provisions of Arkansas Code Annotated §§ 15-5-309-15-5-310.

(d) The Bonds shall be special obligations of ADFA, secured and payable from deposits made into the Tobacco Settlement Debt Service Fund created pursuant to this Act. In pledging revenues to secure the Bonds, the provisions of Arkansas Code Annotated § 15-5-313 shall apply.

(e) If so determined by ADFA, the Bonds may additionally be secured by a lien on or security interest in facilities financed by the Bonds, by a lien or pledge of loans made by ADFA to the user of such facilities, and any collateral security received by ADFA, including, without limitation, ADFA's interest in and any revenue derived from any loan agreements. It shall not be necessary to the perfection of the lien and pledge for such purposes that the trustee in connection with such bond issue or the holders of the Bonds take possession of the loans, mortgages and collateral security.

(f) It shall be plainly stated on the face of each Bond that it has been issued under this Act, and subchapters one, two and three of Chapter 5 of Title 15 of the Arkansas Code Annotated, that the Bonds shall be obligations only of ADFA secured as specified herein and that, in no event, shall the bonds constitute an indebtedness of the State of Arkansas or an indebtedness for which the faith and credit of the State of Arkansas or any of its revenues are pledged or an indebtedness secured by lien, or security interest in any property of the State.

(g) The Bonds may be issued in one or more series, as determined by ADFA. Additional Bonds may be issued in one or more series to fund additional Capital Improvement Projects subsequently designated pursuant to Section 6(b) (4) of this Act, so long as ADFA determines that revenues transferred to the Tobacco Settlement Debt Service Fund, in combination with other revenues available to secure the Bonds pursuant to Section 6(e) of this Act; will be sufficient to meet all Debt Service Requirements on such additional Bonds and any other Bonds then outstanding.

(h) Any funds remaining and available to ADFA or the trustees under any indenture or resolution authorized herein after the retirement of all Bonds outstanding under such indenture or resolution, and the satisfaction of all contractual obligations related thereto and all current expenses of ADFA related thereto, shall be transferred to the Arkansas Healthy Century Trust Fund.

(i) ADFA may issue Bonds for the purpose of refunding Bonds previously issued pursuant to this Act, and in doing so shall be governed by the provisions of Arkansas Code Annotated § 15-5-314.

(j) All Bonds issued under this Act, and interest thereon, shall be exempt from all taxes of the State of Arkansas, including income, inheritance, and property taxes. The Bonds shall be eligible to secure deposits of all public funds, and shall be legal for investment of municipal, county, bank, fiduciary, insurance company and trust funds.

(k) The State of Arkansas does hereby pledge to and agree with the holders of any Tobacco Settlement Revenue Bonds issued pursuant to this Act that the State shall not (1) limit or alter the distribution of the Tobacco Settlement moneys to the Tobacco Settlement Debt Service Fund if such action would materially impair the rights of the holders of the Bonds, (2) amend or modify the Master Settlement Agreement in any way if such action would materially impair the rights of the holders of the Bonds, (3) limit or alter the rights vested in ADFA to fulfill the terms of any agreements made with the holders of the Bonds, or (4) in any way impair the rights and remedies of the holders of the Bonds, unless and until all Bonds issued pursuant to this Act, together with interest on the Bonds, and all costs and expenses in connection with any action or proceeding by or on behalf of the holders of the Bonds, have been paid, fully met, and discharged. ADFA is authorized to include this pledge and agreement in any agreement with the holders of the Bonds.

SECTION 7. CREATION AND ADMINISTRATION OF ARKANSAS HEALTHY CENTURY TRUST FUND.

(a) There is hereby created and established on the books of the Treasurer of State, Auditor of State, and Chief Fiscal Officer of the State, a trust fund, to be created as a public trust for the benefit of the State of Arkansas, to be known as the “Arkansas Healthy Century Trust Fund,” which Trust Fund shall be administered by the State Board of Finance. Such fund shall be restricted in its use and is to be used solely as provided in this Act.

(b) The Arkansas Healthy Century Trust Fund shall be a perpetual trust, the beneficiary of which shall be the State of Arkansas and the programs of the State of Arkansas enumerated in this section. The State Board of Finance, as it may from time to time be comprised, is hereby appointed as trustee of the Arkansas Healthy Century Trust Fund. Such trust shall be revocable, and subject to amendment.

(c) The Arkansas Healthy Century Trust Fund shall be administered in accordance with the provisions of this Section 7, which shall, for all purposes, be deemed to be the governing document of the public trust.

(d) The Arkansas Healthy Century Trust Fund shall be funded in an initial principal amount of one hundred million dollars (\$100,000,000) as provided in Section 4 of this Act. All earnings on investments of amounts in the Arkansas Healthy Century Trust Fund, to the extent not used for the purposes enumerated in Section 7(e) of this Act, shall be redeposited in the Arkansas Healthy Century Trust Fund, it being the intent of this Act that the Arkansas Healthy Century Trust Fund shall grow in principal amount until needed for programs and purposes to benefit the State of Arkansas.

(e) The Arkansas Healthy Century Trust Fund shall be held in trust and used for the following purposes, and no other purposes:

(1) investment earnings on the Arkansas Healthy Century Trust Fund may be used for:

(A) the payment of expenses related to the responsibilities of the State Board of Finance as set forth in Section 3 of this Act; and

(B) such programs, and other projects related to health care services, health education, and health-related research as shall, from time to time, be designated in legislation adopted by the general assembly.

(2) the principal amounts in the Arkansas Healthy Century Trust Fund may only be used for such programs, and other projects related to health care services, health education, and health-related research as shall, from time to time, be designated in legislation adopted by the general assembly, it being the intent of this Act that the principal amount of the Trust Fund should not be appropriated without amendment of this public trust.

(f) It is intended that the beneficiaries of the Arkansas Healthy Century Trust Fund be the State of Arkansas and its programs, and other projects related to health care services, health education, and health-related research, as such are now in existence or as such may be created in the future.

(g) The State Board of Finance, as trustee of the Arkansas Healthy Century Trust Fund, is authorized to invest all amounts held in the Arkansas Healthy Century Trust Fund in investments pursuant to and in compliance with Section 3(c) of this Act.

SECTION 8. CREATION AND ADMINISTRATION OF THE TOBACCO SETTLEMENT PROGRAM FUND.

(a) There is hereby created and established on the books of the Treasurer of State, Auditor of State and Chief Fiscal of the State a trust fund to be known as the "Tobacco Settlement Program Fund," which fund shall be administered by the State Board of Finance. All moneys deposited into the Tobacco Settlement Program Fund are hereby restricted in their use and to be used solely as provided in this Act. All expenditures and obligations that are payable from the Tobacco Settlement Program Fund and from each of the program accounts, shall be subject to the same fiscal control, accounting, budgetary and purchasing laws as are expenditures and obligations payable from other State Treasury funds, except as specified otherwise in this act. The Chief Fiscal Officer of the State may require additional controls, procedures and reporting requirements that he determines are necessary to carry out the intent of this act.

(b) There shall be transferred from the Tobacco Settlement Cash Holding Fund to the Tobacco Settlement Program Fund the amounts set forth for such transfer as provided in Section 4 of this Act.

(c) Amounts deposited to the Tobacco Settlement Program Fund shall, prior to the distribution to the Program Accounts set forth in Section 8(d), be held and invested in investments pursuant to and in compliance with Section 3(c) of this Act[,] provided that all such investments must mature, or be redeemable without penalty, on or prior to the next succeeding June 30.

(d) On each July 1, the amounts deposited into the Tobacco Settlement Program Fund excluding investment earnings shall be transferred to the various Program Accounts, as follows:

(1) thirty-one and six-tenths per cent (31.6%) of amounts in the Tobacco Settlement Program Fund shall be transferred to the Prevention and Cessation Program Account;

(2) fifteen and eight-tenths per cent (15.8%) of amounts in the Tobacco Settlement Program Fund shall be transferred to the Targeted State Needs Program Account;

(3) twenty-two and eight-tenths per cent (22.8%) of amounts in the Tobacco Settlement Program Fund shall be transferred to the Arkansas Biosciences Institute Program Account; and

(4) twenty-nine and eight-tenths per cent (29.8%) of amounts in the Tobacco Settlement Program Fund shall be transferred to the Medicaid Expansion Programs Account.

(e) (1) All moneys distributed to the Program Accounts set forth above and remaining at the end of each fiscal biennium shall be transferred to the Tobacco Settlement Program Fund by the State Board of Finance. Such amounts will be held in the Tobacco Settlement Program Fund and combined with amounts deposited to such Fund from the annual MSA Disbursements, and then redeposited on July 1 pursuant to the formula set forth in Section 8(d).

(2) However, if the Director of any agency receiving funds from the Tobacco Settlement Program Fund determines that there is a need to retain a portion of the amounts transferred under this section, the Director may submit a request and written justification to the Chief Fiscal Officer of the State. Upon determination by the Chief Fiscal Officer of the State that sufficient justification exists, and after certification by the Arkansas Tobacco Settlement Commission that the program has met the criteria established in Section 18 of this Act, such amounts requested shall remain in the account at the end of a biennium, there to be used for the purposes established

by this Act[,] provided that the Chief Fiscal Officer of the State shall seek the review of the Arkansas Legislative Council prior to approval of any such request.

(f) The State Board of Finance shall invest all moneys held in the Tobacco Settlement Program Fund and in each of the Program Accounts. All investment earnings on such funds and accounts shall be transferred on each July 1 to a fund hereby established and as a trust fund on the books of the Treasurer of State, Auditor of State and Chief Fiscal Officer of the State and designated as the "Arkansas Tobacco Settlement Commission Fund." Such fund is to be a trust fund and administered by the State Board of Finance. All moneys deposited into the Arkansas Tobacco Settlement Commission Fund are hereby restricted in their use and to be used solely as provided in this Act. Amounts held in the Arkansas Tobacco Settlement Commission Fund shall be used to pay the costs and expenses of the ATSC, including the monitoring and evaluation program established pursuant to Section 18 of this Act, and to provide grants as authorized in Section 17 of this Act.

SECTION 9. CREATION OF PREVENTION AND CESSATION PROGRAM ACCOUNT.

(a) There is hereby created a trust fund on the books of the Treasurer of State, Auditor of State and Chief Fiscal Officer of the State within the Tobacco Settlement Program Fund maintained by the State Board of Finance an account to be known as the "Prevention and Cessation Program Account ." Such account shall be used by the Arkansas Department of Health for such purposes and in such amounts as may be appropriated in law.

(b) On each July 1, there shall be transferred from the Tobacco Settlement Program Fund to the Prevention and Cessation Program Account the amount specified in Section 8(d) (1).

(c) All moneys deposited to the Prevention and Cessation Program Account except for investment earnings shall be used for the purposes set forth in Section 13 of this Act or such other purposes as may be appropriated in law.

(d) Moneys remaining in the Prevention and Cessation Program Account at the end of the first fiscal year of a biennium shall be carried forward and used for the purposes provided by law. Such amounts that remain at the end of a biennium shall be transferred to the Tobacco Settlement Program Fund pursuant to Section 8(e) of this Act.

SECTION 10. CREATION OF THE TARGETED STATE NEEDS PROGRAM ACCOUNT.

(a) There is hereby created a trust fund on the books of the Treasurer of State, Auditor of State and Chief Fiscal Officer of the State within the Tobacco Settlement Program Fund maintained by the State Board of Finance an account to be known as the "Targeted State Needs Program Account." Such accounts shall be used for such purposes and in such amounts as may be appropriated by law.

(b) On each July 1, there shall be transferred from the Tobacco Settlement Program Fund to the Targeted State Needs Program Account the amount specified in Section 8(d) (2)[.]

(c) All moneys deposited to the Targeted State Needs Program Account except for investment earnings shall be used for the purposes set forth in Section 14 hereof, or such other purposes as may be appropriated in law. Of the amounts deposited to the Targeted State Needs Program

Account, the following proportions shall be used to fund the programs established in Section 14 of this Act:

- (1) Arkansas School of Public Health - thirty-three per cent (33%);
- (2) Area Health Education Center located in Helena - twenty-two per cent (22%);
- (3) Donald W. Reynolds Center on Aging - twenty-two per cent (22%); and
- (4) Minority Health Initiative administered by the Minority Health Commission - twenty-three per cent (23%).

(d) Moneys remaining in the Targeted State Needs Program Account at the end of the first fiscal year of a biennium shall be carried forward and used for the purposes provided by law. Such amounts that remain at the end of a biennium shall be transferred to the Tobacco Settlement Program Fund pursuant to Section 8(e) of this Act.

SECTION 11. CREATION OF ARKANSAS BIOSCIENCES INSTITUTE PROGRAM ACCOUNT.

(a) There is hereby created a trust fund on the books of the Treasurer of State, Auditor of State and Chief Fiscal Officer of the State within the Tobacco Settlement Program Fund maintained by the State Board of Finance an account to be known as the “Arkansas Biosciences Institute Program Account.” Such account shall be used by the Arkansas Biosciences Institute and its members for such purposes and in such amounts as may be appropriated in law.

(b) On each July 1, there shall be transferred from the Tobacco Settlement Program Fund to the Arkansas Biosciences Institute Program Account the amount specified in Section 8 (d) (3).

(c) All moneys deposited to the Arkansas Biosciences Institute Program Account except for investment earnings shall be used for the purposes set forth in Section 15 hereof, or such other purposes as may be appropriated in law.

(d) Moneys remaining in the Arkansas Biosciences Institute Program Account at the end of the first fiscal year of a biennium shall be carried forward and used for the purposes provided by law. Such amounts that remain at the end of a biennium shall be transferred to the Tobacco Settlement Program Fund pursuant to Section 8(e) of this Act.

SECTION 12. CREATION OF MEDICAID EXPANSION PROGRAMS ACCOUNT.

(a) There is hereby created a trust fund on the books of the Treasurer of State, Auditor of State and Chief Fiscal Officer of the State within the Tobacco Settlement Program Fund maintained by the State Board of Finance an account to be known as the “Medicaid Expansion Programs Account.” Such account shall be used by the Arkansas Department of Human Services for such purposes and in such amounts as may be appropriated in law. These funds shall not be used to replace or supplant other funds available in the Department of Human Services Grants Fund Account. The funds appropriated for this program shall not be expended, except in conformity with federal and state laws, and then, only after the Arkansas Department of Human Services obtains the necessary approvals from the federal Health Care Financing Administration.

(b) On each July 1, there shall be transferred from the Tobacco Settlement Program Fund to the Medicaid Expansion Programs Account the amount specified in Section 8 (d) (4).

(c) All moneys deposited to the Medicaid Expansion Programs Account except for investment earnings shall be used for the purposes set forth in Section 16 hereof, or such other purposes as may be appropriated in law.

(d) Moneys remaining in the Medicaid Expansion Programs Account at the end of the first fiscal year of a biennium shall be carried forward and used for the purposes provided by law. Such amounts that remain at the end of a biennium shall be transferred to the Tobacco Settlement Program Fund pursuant to Section 8(e) of this Act.

SECTION 13. ESTABLISHMENT AND ADMINISTRATION OF PREVENTION AND CESSATION PROGRAMS.

(a) It is the intent of this Act that the Arkansas Department of Health should establish the Tobacco Prevention and Cessation Program described in this section, and to administer such programs in accordance with law. The program described in this section shall be administered pursuant to a strategic plan encompassing the elements of a mission statement, defined program(s), and program goals with measurable objectives and strategies to be implemented over a specific timeframe. Evaluation of each program shall include performance based measures for accountability which will measure specific health related results.

(b) The Arkansas Department of Health shall be responsible for developing, integrating, and monitoring tobacco prevention and cessation programs funded under this Act and shall provide administrative oversight and management, including, but not limited to implementing performance based measures. The Arkansas Department of Health shall have authority to award grants and allocate money appropriated to implement the tobacco prevention and cessation program mandated under this Act. The Arkansas Department of Health may contract with those entities necessary to fully implement the tobacco prevention and cessation initiatives mandated under this Act.

Within thirty (30) days of receipt of moneys into the Prevention and Cessation Program Account, fifteen percent (15%) of those moneys shall be deposited into a special account within the prevention and cessation account at the Department of Health to be expended for tobacco prevention and cessation in minority communities as directed by the director of the Department of Health in consultation with the chancellor of the University of Arkansas at Pine Bluff, the president of the Arkansas Medical, Dental and Pharmaceutical Association, and the League of United Latin American Citizens.

(c) The Tobacco Prevention and Cessation Program shall be comprised of components approved by the Arkansas Board of Health. The program components selected by the Board of Health shall include:

- (1) community prevention programs that reduce youth tobacco use;
- (2) local school programs for education and prevention in grades kindergarten through twelve (K-12) that should include school nurses, where appropriate;
- (3) enforcement of youth tobacco control laws;
- (4) state-wide programs with youth involvement to increase local coalition activities;
- (5) tobacco cessation programs;
- (6) tobacco-related disease prevention programs;

- (7) a comprehensive public awareness and health promotion campaign;
- (8) grants and contracts funded pursuant to this Act for monitoring and evaluation, as well as data gathering; and
- (9) other programs as deemed necessary by the Board.

(d) There is hereby created an Advisory Committee to the Arkansas Board of Health, to be known as the Tobacco Prevention and Cessation Advisory Committee. It shall be the duty and responsibility of the Committee to advise and assist the Arkansas Board of Health in carrying out the provisions of this Act. The Advisory Committee's authority shall be limited to an advisory function to the Board. The Advisory Committee may, in consultation with the Department of Health, make recommendations to the Board of Health on the strategic plans for the prevention, cessation, and awareness elements of the comprehensive Tobacco Prevention and Cessation Program. The Advisory Committee may also make recommendations to the Board on the strategic vision and guiding principles of the Tobacco Prevention and Cessation Program.

(e) The Advisory Committee shall be governed as follows:

(1) The Advisory Committee shall consist of eighteen (18) members; one (1) member to be appointed by the president pro tempore of the senate and one (1) member to be appointed by the speaker of the house of representatives, and sixteen (16) members to be appointed by the governor. The Committee members appointed by the governor shall be selected from a list of at least three (3) names submitted by each of the following designated groups to the governor, and shall consist of the following: one (1) member appointed to represent the Arkansas Medical Society; one (1) member shall represent the Arkansas Hospital Association; one (1) member shall represent the American Cancer Society; one (1) member shall represent the American Heart Association; one (1) member shall represent the American Lung Association; one (1) member shall represent the Coalition for a Tobacco-Free Arkansas; one (1) member shall represent Arkansans for Drug Free Youth; one (1) member shall represent the Arkansas Department of Education; one (1) member shall represent the Arkansas Minority Health Commission; one (1) member shall represent the Arkansas Center for Health Improvement; one (1) member shall represent the Arkansas Association of Area Agencies on Aging; one (1) member shall represent the Arkansas Nurses Association; one (1) member shall represent the Arkansas Cooperative Extension Service; one (1) member shall represent the University of Arkansas at Pine Bluff; one member shall represent the League of United Latin American Citizens; and one (1) member shall represent the Arkansas Medical, Dental and Pharmaceutical Association. The Executive Committee of Arkansas Students Working Against Tobacco shall serve as youth advisors to this Advisory Committee. All members of this committee shall be residents of the State of Arkansas.

(2) The Advisory Committee will initially have four (4) members who will serve one (1) year terms; four (4) members who will serve two (2) year terms; five (5) members who will serve three (3) year terms; and five (5) members who will serve four (4) years. Members of the Advisory Committee shall draw lots to determine the length of the initial term. Subsequently appointed members shall be appointed for four (4) year terms and no member can serve more than two (2) consecutive full four (4) year terms. The terms shall commence on October 1st of each year.

- (3) Members of the Advisory Committee shall not be entitled to compensation for their services, but may receive expense reimbursement in accordance with Ark. Code Ann. § 25-16-902, to be paid from funds appropriated for this program to the Arkansas Department of Health.
- (4) Members appointed to the Advisory Committee and the organizations they represent shall make full disclosure of the member's participation on the Committee when applying for any grant or contract funded by this Act.
- (5) All members appointed to the Advisory Committee shall make full and public disclosure of any past or present association to the tobacco industry.
- (6) The Advisory Committee shall, within ninety (90) days of appointment, hold a meeting and elect from its membership a chairman for a term set by the Advisory Committee. The Advisory Committee shall adopt bylaws.
- (7) The Advisory Committee shall meet at least quarterly[;] however, special meetings may be called at any time at the pleasure of the Board of Health or pursuant to the bylaws adopted by the Advisory Committee.
- (f) The Arkansas Board of Health is authorized to review the recommendations of the Advisory Committee. The Arkansas Board of Health shall adopt and promulgate rules, standards and guidelines as necessary to implement the program in consultation with the Arkansas Department of Health.
- (g) The Arkansas Department of Health in implementing this Program shall establish such performance based accountability procedures and requirements as are consistent with law.
- (h) Each of the programs adopted pursuant to this act shall be subject to the monitoring and evaluation procedures described in Section 18 of this Act.

SECTION 14. ESTABLISHMENT AND ADMINISTRATION OF THE TARGETED STATE NEEDS PROGRAMS.

- (a) The University of Arkansas for Medical Sciences is hereby instructed to establish the Targeted State Needs Programs described in this section, and to administer such programs in accordance with law.
- (b) The targeted state needs programs to be established are as follows:
- (1) Arkansas School of Public Health;
 - (2) Area Health Education Center (located in Helena);
 - (3) Donald W. Reynolds Center on Aging; and
 - (4) Minority Health Initiative administered by the Minority Health Commission.
- (c)(1) Arkansas School of Public Health. The Arkansas School of Public Health is hereby established as a part of the University of Arkansas for Medical Sciences for the purpose of conducting activities to improve the health and health care of the citizens of Arkansas. These activities should include, but not be limited to the following functions: faculty and course offerings in the core areas of public health including health policy and management, epidemiology, biostatistics, health economics, maternal and child health, environmental health, and health and services research; with courses offered both locally and statewide via a variety of distance learning mechanisms.

(2) It is intended that the Arkansas School of Public Health should serve as a resource for the general assembly, the governor, state agencies, and communities. Services provided by the Arkansas School of Public Health should include, but not be limited to the following: consultation and analysis, developing and disseminating programs, obtaining federal and philanthropic grants, conducting research, and other scholarly activities in support of improving the health and health care of the citizens of Arkansas.

(d) Area Health Education Center. The first Area Health Education Centers were founded in 1973 as the primary educational outreach effort of the University of Arkansas for Medical Sciences. It is the intent of this Act that UAMS establish a new Area Health Education Center to serve the following counties: Crittenden, Phillips, Lee, St. Francis, Chicot, Monroe, and Desha. The new AHEC shall be operated in the same fashion as other facilities in the UAMS AHEC program including training students in the fields of medicine, nursing, pharmacy and various allied health professions, and offering medical residents specializing in family practice. The training shall emphasize primary care, covering general health education and basic medical care for the whole family. The program shall be headquartered in Helena with offices in Lake Village and West Memphis.

(e) Donald W. Reynolds Center on Aging. It is the intent of this Act that UAMS establish, in connection with the Donald W. Reynolds Center on Aging and its existing AHEC program, health care programs around the state offering interdisciplinary educational programs to better equip local health care professionals in preventive care, early diagnosis and effective treatment for the elderly population throughout the state. The satellite centers will provide access to dependable health care, education, resource and support programs for the most rapidly growing segment of the State's population. Each center's program is to be defined by an assessment of local needs and priorities in consultation with local health care professionals.

(f) Minority Health Initiative. It is the intent of this Act that the Arkansas Minority Health Commission establish and administer the Arkansas Minority Health Initiative for screening, monitoring, and treating hypertension, strokes, and other disorders disproportionately critical to minority groups in Arkansas. The program should be designed:

(1) to increase awareness of hypertension, strokes, and other disorders disproportionately critical to minorities by utilizing different approaches that include but are not limited to the following: advertisements, distribution of educational materials and providing medications for high risk minority populations;

(2) to provide screening or access to screening for hypertension, strokes, and other disorders disproportionately critical to minorities but will also provide this service to any citizen within the state regardless of racial/ethnic group;

(3) to develop intervention strategies to decrease hypertension, strokes and other disorders noted above, as well as associated complications, including: educational programs, modification of risk factors by smoking cessation programs, weight loss, promoting healthy lifestyles, and treatment of hypertension with cost-effective, well-tolerated medications, as well as case management for patients in these programs; and

(4) to develop and maintain a database that will include: biographical data, screening data, costs, and outcomes.

(g) The Minority Health Commission will receive quarterly updates on the progress of these programs and make recommendations or changes as necessary.

(h) The programs described in this section shall be administered pursuant to a strategic plan encompassing the elements of a mission statement, defined program(s), and program goals with measurable objectives and strategies to be implemented over a specific timeframe. Evaluation of each program shall include performance based measures for accountability which will measure specific health related results.

(i) Each of the programs adopted pursuant to this section shall be subject to the monitoring and evaluation procedures described in Section 18 of this Act.

SECTION 15. ESTABLISHMENT AND ADMINISTRATION OF THE ARKANSAS BIOSCIENCES INSTITUTE

(a) It is the intent of this Act to hereby establish the Arkansas Biosciences Institute for the educational and research purposes set forth hereinafter to encourage and foster the conduct of research through the University of Arkansas, Division of Agriculture, the University of Arkansas for Medical Sciences, University of Arkansas, Fayetteville, Arkansas Children's Hospital and Arkansas State University. The Arkansas Biosciences Institute is part of a broad program to address health issues with specific emphasis on smoking and the use of tobacco products. The Arkansas Biosciences Institute is intended to develop more fully the interdisciplinary opportunities for research primarily in the areas set forth hereinafter.

(b) Purposes. The Arkansas Biosciences Institute is established for the following purposes:

(1) to conduct agricultural research with medical implications;

(2) to conduct bioengineering research focused on the expansion of genetic knowledge and new potential applications in the agricultural-medical fields;

(3) to conduct tobacco-related research that focuses on the identification and applications of behavioral, diagnostic and therapeutic research addressing the high level of tobacco-related illnesses in the State of Arkansas;

(4) to conduct nutritional and other research focusing on prevention or treatment of cancer, congenital or hereditary conditions or other related conditions; and

(5) to conduct other research identified by the primary educational and research institutions involved in the Arkansas Biosciences Institute or as otherwise identified by the Institute Board of the Arkansas Biosciences Institute and which is reasonably related, or complementary to, research identified in subparagraphs (1) through (4) of this subsection.

(c) Arkansas Biosciences Institute Board. (1) There is hereby established the Arkansas Biosciences Institute Board which shall consist of the following: the President of the University of Arkansas; the President of Arkansas State University; the Chancellor of the University of Arkansas for Medical Sciences; the Chancellor of the University of Arkansas, Fayetteville; the Vice President for Agriculture of the University of Arkansas; the Director of the Arkansas Science and Technology Authority; the Director of the National Center for Toxicological Research; the President of Arkansas Children's Hospital; and two (2) individuals possessing recognized scientific, academic or business qualifications appointed by the governor. The two (2) members of the Institute Board who are appointed by the governor will serve four (4) year terms and are limited to serving two consecutive four (4) year terms. The terms shall commence on

October 1 of each year. These members appointed by the governor are not entitled to compensation for their services, but may receive expense reimbursement in accordance with Ark. Code Ann. § 25-16-902, to [be] paid from funds appropriated for this program. The Institute Board shall establish and appoint the members of an Industry Advisory Committee and a Science Advisory Committee composed of knowledgeable persons in the fields of industry and science. These Committees shall serve as resources for the Institute Board in their respective areas and will provide an avenue of communication to the Institute Board on areas of potential research.

(2) The Arkansas Biosciences Institute Board shall establish rules for governance for Board affairs and shall:

(A) provide overall coordination of the program;

(B) develop procedures for recruitment and supervision of member institution research review panels, the membership of which shall vary depending on the subject matter of proposals and review requirements, and may, in order to avoid conflicts of interest and to ensure access to qualified reviews, recommend reviewers not only from Arkansas but also from outside the state;

(C) provide for systematic dissemination of research results to the public and the health care community, including work to produce public service advertising on screening and research results, and provide for mechanisms to disseminate the most current research findings in the areas of cause and prevention, cure, diagnosis and treatment of tobacco related illnesses, in order that these findings may be applied to the planning, implementation and evaluation of any other research programs of this state;

(D) develop policies and procedures to facilitate the translation of research results into commercial, alternate technological, and other applications wherever appropriate and consistent with state and federal law; and

(E) transmit on or before the end of each calendar year on an annual basis, a report to the general assembly and the governor on grants made, grants in progress, program accomplishments, and future program directions. Each report shall include, but not be limited to, all of the following information:

(i) the number and dollar amounts of internal and external research grants, including the amount allocated to negotiated indirect costs;

(ii) the subject of research grants;

(iii) the relationship between federal and state funding for research;

(iv) the relationship between each project and the overall strategy of the research program;

(v) a summary of research findings, including discussion of promising new areas; and

(vi) the corporations, institutions, and campuses receiving grant awards.

(d) Director. The director of the Arkansas Biosciences Institute shall be appointed by the President of the University of Arkansas, in consultation with the President of Arkansas State University, and the President of Arkansas Children's Hospital, and based upon the advice and recommendation of the Institute Board. The Director shall be an employee of the University of Arkansas and shall serve at the pleasure of the President of the University of Arkansas. The Director shall be responsible for recommending policies and procedures to the Institute Board for its internal operation and shall establish and ensure methods of communication among the units

and divisions of the University of Arkansas, Arkansas Children's Hospital and Arkansas State University and their faculty and employees engaged in research under the auspices of the Institute. The Director shall undertake such administrative duties as may be necessary to facilitate conduct of research under the auspices of the Arkansas Biosciences Institute. The Director shall perform such other duties as are established by the President of the University of Arkansas in consultation with the President of Arkansas State University, the President of Arkansas Children's Hospital and with the input of the Institute Board.

(e) Conduct of Research. Research performed under the auspices of the Institute shall be conducted in accordance with the policies of the University of Arkansas, Arkansas Children's Hospital, and Arkansas State University, as applicable. The Institute Board and the Director of the Institute shall facilitate the establishment of centers to focus on research in agri-medicine, environmental biotechnology, medical genetics, bio-engineering and industry development. Such centers shall be established in accordance with procedures adopted by the Institute Board, and shall provide for interdisciplinary collaborative efforts with a specific research and educational objectives.

(f) In determining research projects and areas to be supported from such appropriated funds, each of the respective institutions shall assure that adequate opportunities are given to faculty and other researchers to submit proposals for projects to be supported in whole or in part from such funds. At least annually the Institute Board shall review research being conducted under the auspices of the Institute and may make recommendations to the President of the University of Arkansas and the President of Arkansas State University and President of Arkansas Children's Hospital of ways in which such research funds may be more efficiently employed or of collaborative efforts which would maximize the utilization of available funds.

(g) The programs described in this section shall be administered pursuant to a strategic plan encompassing the elements of a mission statement, defined program(s), and program goals with measurable objectives and strategies to be implemented over a specific timeframe. Evaluation of each program shall include performance based measures for accountability which will measure specific health related results.

(h) Each of the programs adopted pursuant to this Section shall be subject to the monitoring and evaluation procedures described in Section 18 of this Act.

SECTION 16. ESTABLISHMENT AND ADMINISTRATION OF MEDICAID EXPANSION PROGRAMS.

(a) It is the intent of this Act that the Arkansas Department of Human Services should establish the Medicaid expansion programs described in this section, and to administer such program in accordance with law.

(b) The Medicaid expansion programs shall be a separate and distinct component of the Medicaid program currently administered by the Department of Human Services and shall be established as follows:

- (1) expanding Medicaid coverage and benefits to pregnant women;
- (2) expanding inpatient and outpatient hospital reimbursements and benefits to adults aged nineteen (19) to sixty-four (64);
- (3) expanding non-institutional coverage and benefits to adults aged 65 and over; and,

(4) creating and providing a limited benefit package to adults aged nineteen (19) to sixty-four (64). All such expenditures shall be made in conformity with the State Medicaid Plan as amended and approved by the Health Care Financing Administration.

(c) The programs defined in this section shall be administered pursuant to a strategic plan encompassing the elements of a mission statement, defined program(s), and program goals with measurable objectives and strategies to be implemented over a specific timeframe. Evaluation of each program shall include performance-based measures for accountability which will measure specific health related results.

(d) Each of the programs adopted pursuant to this Section shall be subject to the monitoring and evaluation procedures described in Section 18 of this Act.

SECTION 17. ESTABLISHMENT OF THE ARKANSAS TOBACCO SETTLEMENT COMMISSION.

(a) There is hereby created and recognized the Arkansas Tobacco Settlement Commission, which shall be comprised of the following: the Director of the Arkansas Science and Technology Authority, or his designee; the Director of the Department of Education or his designee; the Director of the Department of Higher Education or his designee; the Director of the Department of Human Services or his designee; the Director of the Arkansas Department of Health or his designee; a health care professional to be selected by the senate president pro tempore; a health care professional to be selected by the speaker of the house of representatives; a citizen selected by the governor; and a citizen selected by the attorney general.

(b) The four (4) members of the commission who are not on the commission by virtue of being a director of an agency, will serve four (4) year terms. The terms shall commence on October 1st of each year. Committee members are limited to serving two (2) consecutive four (4) year terms. Members of the commission shall not be entitled to compensation for their services, but may receive expense reimbursement in accordance with Ark. Code Ann. § 25-16-902, to be paid from funds appropriated for this program.

(c) Members appointed to the commission and the organizations they represent shall make full disclosure of the member's participation on the commission when applying for any grant or contract funded by this Act.

(d) All members appointed to the commission shall make full and public disclosure of any past or present association to the tobacco industry.

(e) The commission shall, within ninety (90) days of appointment, hold a meeting and elect from its membership a chairman for a term set by the commission. The commission is authorized to adopt bylaws.

(f) The commission shall meet at least quarterly[;] however, special meetings of the commission may be called at any time at the pleasure of the Chairman or pursuant to the bylaws of the commission.

(g) ATSC is authorized to hire an independent third party with appropriate experience in health, preventive resources, health statistics and evaluation expertise to perform monitoring and evaluation of program expenditures made from the Program Accounts pursuant to this Act. Such monitoring and evaluation shall be performed in accordance with Section 18 of this Act, and the third party retained to perform such services shall prepare a biennial report to be delivered to the

general assembly and the governor by each August 1 preceding a general session of the general assembly. The report shall be accompanied by a recommendation from the ATSC as to the continued funding for each program.

(h) The commission is authorized to hire such staff as it may reasonably need to carry out the duties described in this Act. The costs and expenses of the monitoring and evaluation program, as well as the salaries, costs and expenses of staff, shall be paid from the Arkansas Tobacco Settlement Commission Fund established pursuant to Section 8 of this Act.

(i) If the deposits into the Arkansas Tobacco Settlement Commission Fund exceed the amount necessary to pay the costs and expenses described in Subsection (h) of this Section, then the ATSC is authorized to make grants as follows:

(A) Those organizations eligible to receive grants are non-profit and community based.

(B) Grant criteria shall be established based upon the following principles:

(i) all funds should be used to improve and optimize the health of Arkansans;

(ii) funds should be spent on long-term projects that improve the health of Arkansans;

(iii) Future tobacco-related illness and health care costs in Arkansas should be minimized through this opportunity; and

(iv) funds should be invested in solutions that work effectively and efficiently in Arkansas.

(C) Grant awards shall be restricted in amounts up to fifty-thousand dollars (\$50,000) per year for each eligible organization.

SECTION 18. MONITORING AND EVALUATION OF PROGRAMS.

(a) The ATSC is directed to conduct monitoring and evaluation of the programs established in Sections 13, 14, 15, and 16 of this Act, to ensure optimal impact on improving the health of Arkansans and fiscal stewardship of the Tobacco Settlement. ATSC shall develop performance indicators to monitor programmatic functions that are state and situation specific and to support performance-based assessment for governmental accountability. The performance indicators shall reflect short and long-term goals and objectives of each program, be measurable, and provide guidance for internal programmatic improvement and legislative funding decisions. ATSC is expected to modify these performance indicators as goals and objectives are met and new inputs to programmatic outcomes are identified.

(b) All programs funded by the Tobacco Settlement and established in Sections 13, 14, 15 and 16 shall be monitored and evaluated to justify continued support based upon the state's performance-based budgeting initiative. These programs shall be administered pursuant to a strategic plan encompassing the elements of a mission statement, defined programs, program goals with measurable objectives and strategies to be implemented over a specific timeframe. Evaluation of each program shall include performance-based measures for accountability that will measure specific health related results. All expenditures that are payable from the Tobacco Settlement Program Fund and from each of the Program Accounts, therein, shall be subject to the same fiscal control, accounting, budgetary and purchasing laws as are expenditures and obligations payable from State Treasury funds, except as specified otherwise in this Act. The Chief Fiscal Officer of the State may require additional controls, procedures and reporting requirements that he determines are necessary in order to carry out the intent of this act.

(c) The ATSC is directed to establish program goals in accordance with the following initiation, short and long-term performance indicators for each program to be funded by the Tobacco Settlement, which performance indicators shall be subject to modification by the ATSC based on specific situations and subsequent developments. Progress with respect to these performance indicators shall be reported to the governor and the general assembly for future appropriation decisions.

(1) Tobacco Prevention and Cessation: The goal is to reduce the initiation of tobacco use and the resulting negative health and economic impact. The following are anticipated objectives in reaching this overall goal:

(A) Initiation: The Arkansas Department of Health is to start the program within six (6) months of available appropriation and funding.

(B) Short-term: Communities shall establish local Tobacco Prevention Initiatives.

(C) Long-term: Surveys demonstrate a reduction in numbers of Arkansans who smoke and/or use tobacco.

(2) Medicaid Expansion: The goal is to expand access to health care through targeted Medicaid expansions thereby improving the health of eligible Arkansans.

(A) Initiation: The Arkansas Department of Human Services is to start the program initiatives within six (6) months of available appropriation and funding.

(B) Short-term: The Arkansas Department of Human Services demonstrates an increase in the number of new Medicaid eligible persons participating in the expanded programs.

(C) Long-term: Demonstrate improved health and reduced long-term health costs of Medicaid eligible persons participating in the expanded programs.

(3) Research and Health Education: The goal is to develop new tobacco-related medical and agricultural research initiatives to improve the access to new technologies, improve the health of Arkansans, and stabilize the economic security of Arkansas.

(A) Initiation: The Arkansas Biosciences Institute Board shall begin operation of the Arkansas Biosciences Institute within twelve (12) months of available appropriation and funding.

(B) Short-term: Arkansas Biosciences Institute shall initiate new research programs for the purpose of conducting, as specified in Section 15: agricultural research with medical implications; bioengineering research; tobacco-related research; nutritional research focusing on cancer prevention or treatment; and other research approved by the Institute Board.

(C) Long-term: The Institute's research results should translate into commercial, alternate technological, and other applications wherever appropriate in order that the research results may be applied to the planning, implementation and evaluation of any health related programs in the State. The Institute is also to obtain federal and philanthropic grant funding.

(4) Targeted State Needs Programs: The goal is to improve the health care systems in Arkansas and the access to health care delivery systems, thereby resolving critical deficiencies that negatively impact the health of the citizens of the state.

(A) School of Public Health:

(i) Initiation: Increase the number of communities in which participants receive public health training.

(ii) Short-Term: Obtain federal and philanthropic grant funding.

(iii) Long-term: Elevate the overall ranking of the health status of Arkansas.

(B) Minority Health Initiative:

(i) Initiation: Start the program within twelve (12) months of available appropriation and funding.

(ii) Short-Term: Prioritize the list of health problems and planned intervention for minority population and increase the number of Arkansans screened and treated for tobacco-related illnesses.

(iii) Long-term: Reduce death/disability due to tobacco-related illnesses of Arkansans.

(C) Donald W. Reynolds Center on Aging:

(i) Initiation: Start the program within twelve (12) months of available appropriation and funding.

(ii) Short-Term: Prioritize the list of health problems and planned intervention for elderly Arkansans and increase the number of Arkansans participating in health improvement programs.

(iii) Long-term: Improve health status and decrease death rates of elderly Arkansans, as well as obtaining federal and philanthropic grant funding.

(D) Area Health Education Center:

(i) Initiation: Start the new AHEC in Helena with DHEC offices in West Memphis and Lake Village within twelve (12) months of available appropriation and funding.

(ii) Short-Term: Increase the number of communities and clients served through the expanded AHEC/DHEC offices.

(iii) Long-Term: Increase the access to a primary care provider in underserved communities.

SECTION 19. Arkansas Code Annotated § 19-4-803 is amended to add a new subsection to read as follows:

“(e) The Tobacco Settlement Cash Holding Fund administered by the State Board of Finance shall be exempt from the provisions of this subchapter.”

SECTION 20. The Director of the Department of Human Services, after seeking approval of the Chief Fiscal Officer of the State and review by the Arkansas Legislative Council, shall implement the Medicaid Expansion Programs established in Section [16] of this Act with such existing funds and unobligated appropriation as may be available during the biennial period ending June 30, 2001.

SECTION 21. The Director of the Department of Human Services shall use six hundred thousand dollars (\$600,000) of existing funds and unobligated appropriation as may be available during the biennial period ending June 30, 2001, to offset federal cuts in the Meals on Wheels Program.

SECTION 22. If any provision of this Act or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions of this Act which can be given effect without the invalid provision or application, and to this end the provisions of this Act are declared to be severable.

SECTION 23. All laws and parts of laws in conflict with this Act are hereby repealed.

Appendix B. Evaluation Methods

RAND's evaluation approach responds to the Arkansas Tobacco Settlement Commission's intent for a longitudinal evaluation of the development and ongoing operation of its funding program. We employed an iterative evaluation process through which information was tracked on both the program implementation processes and a targeted set of outcomes derived based on each program's goals and objectives. This information can be used to inform both future funding decisions by the commission and programmatic and activity-related decisions by the funded programs. Below, we present a description of each of the four evaluation components: process evaluation, cost evaluation, policy evaluation, and outcome evaluation.

PROCESS EVALUATION

The evaluation team conducted annual site visits, made quarterly conference calls, and collected program indicator data semiannually to monitor the development and progress of the funded programs on a regular basis.

Annual Site Visits

Annual site visits provide an opportunity to observe the programs in operation at their facilities, engage in dialogue with program leaders and participants, and conduct interviews with other stakeholders outside of the program administrators (e.g., program staff). The site visit information provides annual "data points" in a longitudinal collection of data on a program's status over time. Annual site visit consisted of meetings with program administrators and staff to gather information on the program's progress as well as challenges. We also used this time to work with program administrators to adjust or modify long-term goals and indicators for each program, as needed. Similar to site visits in past reporting periods, the 2008 and 2009 site visits were planned in advance in consultation with the program administrators. Following the 2009 visit, the evaluation team summarized the visits in summary site visit reports and presented this information to the ATSC for its review. This information was also used to provide background and context within the report.

During this reporting period, we conducted site visits during May 2008, April 2009, and January 2010. In the 2008 visit, we focused on receiving program updates as well as providing technical assistance for strategic planning, as needed, and feedback on the data each program provided for its evaluation. During the 2009 site visit, we reviewed the grids developed for each program that showed links among program goals; activity areas; and process, cost, and outcome indicators for each evaluation strategy. We also visited each program in January 2010 to review our assessment of the program's progress during the preceding two years. We obtained status updates on each activity area and collected data on progress toward program goals, as needed.

Quarterly Conference Calls

The evaluation team conducted quarterly conference calls to maintain regular contact with the programs between site visits. During the first and third quarterly conference calls, we focused on updates related to the process and cost evaluations. We asked about any significant events that

have taken place over the past six months, including significant achievements and successes that should be given special notice, as well as ongoing barriers and challenges the programs faced during implementation. We reviewed each activity area, progress toward goals, and responses to recommendations from the most recent evaluation report (Schultz et al., 2008). We also discussed program costs and budgeting. During the second and fourth quarterly conference calls, we focused on the outcome evaluation (see below for more detail). Collectively, these conference calls yielded a description of the evolution of each program over time. Within two weeks of each conference call, we prepared a report that summarized our review of program activities and each program's progress. These summaries were shared with the ATSC and with the programs.

Semiannual Data Collection on Process Indicators

The evaluation team continued to collect data on each program's process indicators semiannually. We generated an evaluation request with detailed information on the data and time periods requested. We circulated these requests prior to the first and third quarterly conference calls and used some of the time during the conference call to discuss any questions or issues related to the data collection.

COST EVALUATION

For the cost evaluation, the evaluation team documented and assessed trends in the programs' spending of the Tobacco Settlement funds. The extent to which the programs spent the available funds on the mandated services or other programming is a measure of their success in applying these valuable resources to addressing the health-related needs of Arkansans. Since 2005, we have requested financial data from all the funded programs on their spending of the tobacco settlement funds they have received. Using the information provided, we prepared schedules of appropriations, funds received, and actual expenditures for each program. We analyzed annual patterns of spending by line item to identify any variances from trends, with particular attention to the line items with the largest expenditures.

We also worked with the programs to develop systems by which they can allocate expenditures to particular program activity areas. Each program has discrete activities that make up the diverse portfolio of its efforts to achieve its long-term goals. Wherever possible, we tracked spending by key program components, so that trends could be followed for the mix of services provided by each program. We attempted to collect annual activity-based expenditure data from all programs except COPH and ABI to determine whether resources are being distributed among activities in a manner that is appropriate given program priorities, and whether expenditures are proportional to the effect of each activity. In some cases this information was readily available; in others cases, we were not able to fully allocate costs to the various activity areas at that point. Using the information on spending by program category, we were also able to calculate unit costs for some program activities. These unit costs were calculated by dividing the total amount spent on an activity area by the number of participants.

POLICY EVALUATION

The policy evaluation examined policy changes during 2008 and 2009 that affect smoking in Arkansas and in the region, as well as ATSC's operation during the past two years. It

also reviewed the commission's response to previous recommendations. Additionally, we surveyed stakeholders to obtain their perspectives on the ATSC and the Arkansas tobacco settlement programs.

The policy evaluation included reviewing existing documents produced by various state agencies, federal agencies, or relevant policy research organizations, as well as discussions with program management and surveys of stakeholders involved in or affected by the use of the tobacco settlement funds. A detailed description of the methods used to collect the stakeholder survey data is provided below.

Stakeholder Survey

Sample. Each of the seven programs provided RAND with a list of stakeholders, as well as contact information (i.e., email or mail addresses) for each individual. The target sample of stakeholders for the survey included administrators and staff members from partner agencies, grantees, program participants, committee members, legislators, advisors, and other relevant individuals who had worked in some capacity with the program (n = 1,795). Two programs, MHI and AAI, shared stakeholders in common with another one of the other programs. For shared stakeholders, the primary organization with which a stakeholder was associated provided the contact information.

Content. RAND created a standard survey with four modules: (1) the Initiated Act, (2) the ATSC, (3) the programs, and (4) program-specific questions. Modules 1, 2, and 3 were identical for all survey participants. Although the template for module 4 was identical across programs, language was tailored for a subsection of module 4. These questions were tailored to address the activities unique to each program. The name of the program was inserted into questions to provide context for stakeholder ratings (for example, "How would you rate the effectiveness of [program name] in reaching its goals?"). Similarly, the appropriate roles and activity areas for each program were adjusted for each program. As previously mentioned, there were two programs that shared stakeholders with another program. For those stakeholders, the survey repeated module 4 for the second program if the stakeholder indicated awareness of the other program.

Administration. All stakeholders received an email with a brief message explaining the purpose of the survey, the role of the RAND Corporation, and the types of questions participants would be asked. Stakeholders were told that the surveys and their responses were confidential and would not be reported in a way to identify them. The surveys were sent to stakeholders either by email or hard copy depending on the type of contact information available. For those with email addresses, an email was sent that included a link to the online version of the survey through SurveyMonkey, an online survey tool. The hard copy mailings included an invitation to participate, a paper version of the survey, and a pre-addressed prepaid envelope to return the completed survey. The survey was fielded beginning December 1, 2009, and was closed on January 14, 2010. Email reminders were sent at least once a week to those who had not responded. At least two additional mailing were made for those receiving the survey through the regular mail. Survey responses by program were tracked daily.

Response Rates. Response rates reflect the number of stakeholders responding to survey question divided by the total number of stakeholders in the target sample. A total of 18 stakeholders did not receive invitations to participate in the survey, because physical addresses

were incorrect and there was no email address. These stakeholders were included in calculations for overall response rate even though they were not able to participate in the survey. In sum, all program stakeholders included on the initial stakeholder list were included in the response rate calculation.

The overall response rate was 27 percent with a range of between 10 and 66 percent across the different programs (Table A.1).

Table B.1
Stakeholder Survey Response Rates

| Program | Target Sample | Respondents | Response Rate (%) |
|----------------|----------------------|--------------------|--------------------------|
| COPH | 561 | 110 | 20 |
| ABI | 212 | 140 | 66 |
| Delta AHEC | 78 | 26 | 33 |
| AAI | 272 | 65 | 24 |
| MHI | 66 | 27 | 41 |
| MEP | 490 | 49 | 10 |
| TPCP | 116 | 60 | 50 |
| Total | 1,795 | 477 | 27 |

Missing and duplicate data. Survey participants were not required to answer questions. Therefore, some stakeholders skipped questions or reported “unable to rate” for some survey items. Participating stakeholders who did not respond or were unable to respond were included in calculations. The percentage of missing responses appears in tables and is explained, where possible. Overall, frequencies include responses and nonresponses for participants on survey items. In two cases, respondents completed the paper version of the survey twice; the surveys received by RAND first were included in analyses and the second set of responses was not included.

OUTCOME EVALUATION

The outcome evaluations presented within the program chapters and in Chapter 10 use data from a variety of sources to measure the effect of the funded programs on the smoking-related outcomes and non-smoking outcomes of Arkansans. Here, we describe the data and methods used in the analyses, making references to particular sections of the chapters that provide examples of where these methods are used.

Measuring Outcomes

The scope of the outcome evaluation was defined by the outcome measures we selected for analysis. The first step in this process was defined by the outcome measures we selected for

analysis. The measures selected had to be capable of providing information on how well the programs are meeting those goals. Then we worked with the program leaders in identifying outcomes that would be expected to change as a result of the program interventions they were implementing. We used this information to identify candidate measures, and we then assessed the availability of data needed to analyze each measure.

Two sets of outcome measures were defined for the evaluation: overall measures that addressed global outcomes for the state as a whole, and program-specific measures that addressed outcomes specific to the types of services provided by each program. All the overall measures were measures of smoking behaviors and related health outcomes that address one of the fundamental goals of the Initiated Act—reducing use of tobacco products across the state.

We compared two values of each outcome measure to accurately estimate program effects: the actual outcome that occurs in the presence of the program and a counterfactual value of the outcome that would have occurred if the program had not been implemented. When selecting this counterfactual, we had to bear in mind the fact that many outcome measures could have changed even without the program because of trends in demographics and economic conditions. Therefore, simple baseline outcome measures often do not provide adequate counterfactuals by which to measure program impact.

It is well documented that program changes require time to be translated into health outcomes for a given population. Furthermore, localized program activities will affect only the population exposed to the program. Some of the programs supported by the tobacco settlement funds are state-level programs. However, in many cases, the program interventions are not applied equally across the entire state but are focused on specific geographic areas or on a designated population subgroup. Therefore, state and national-level data from such instruments as the Behavioral Risk Factor Surveillance System (BRFSS) and Youth Risk Behavior Surveillance System (YRBSS) are not specific enough to detect and assess program effects for some of the funded programs. Other data sources had to be sought to address these outcomes.

Assessment of program impacts requires the ability to connect the effort undertaken by a program to the expected outcome in a way that takes into account other factors that influence the outcome. If this is not done, changes in an outcome could be attributed incorrectly to a program's interventions when in fact the changes were due to other factors. Examples of other factors include the following:

- Broader (nationwide or regional) trends that are independent of local program efforts
- Continuation of trends that predate the program and reflect effects of earlier actions or interventions
- Changes in the demographic composition of the population
- Efforts by other related programs

Whenever survey data are collected and analyzed, it is important to report not only the size of the effect, but also the degree of certainty. Without this additional information, the reader does not know whether an apparent impact reflects changes in the underlying behavior or merely variability in the data or model. Therefore, our assessments also provided an indication of their statistical precision using either (1) a margin of error (+/- so many percent), (2) a confidence

interval (the narrower the interval, the more precise the estimate), or (3) a significance level on a hypothesis test (whether or not the finding is reliable or could be expected by chance).

The Use of Population Measures

In our analysis, we measured changes in smoking rates for all adults in Arkansas rather than for a group who participated in a particular education or cessation program. In many cases the target population was restricted to a particular demographic group (e.g., youth) or a specific geographic region (e.g., the Delta), but in all cases we measured outcomes for that entire target population, and not for a specific group of program participants.

There are several advantages to this approach. First, some program components, either alone or in combination with other program components that have similar goals, have sufficient size that an impact should be measurable at a population level. In such a case, it is important to demonstrate that the program affects a broad segment of the population. Second, some components, such as media campaigns and other educational outreach efforts, do not have participants per se but are targeted at everyone in a particular population. Third, many programs have an impact that extends beyond the immediate participants. For example, programs that attempt to change the behavior of program participants through education can affect the behavior and health outcomes of other people who are in contact with the immediate participants. Finally, and perhaps most important from an evaluation standpoint, it is very difficult to distinguish between pre-program tendencies and the impact of the program under study if only outcomes for program participants are considered. The people who participate in a specific program frequently are the most motivated individuals in the population, and many would improve their outcomes even without participating in the program.

Only through comparison with a control group or through careful statistical modeling is it possible to determine whether the outcomes for a group of program participants are due to the program or simply reflect a high level of motivation on the part of program enrollees. Creating a randomized control group is neither cost-effective nor politically feasible. Collecting voluminous background information on participants to use in statistical modeling is also expensive and intrusive. Therefore, we focus our outcomes evaluation on programs that we judge to be large to have a measurable impact on an identifiable target population and for which we have population outcome measures.

Data Sources and Outcome Definitions

Smoking-Related Outcomes

Table B.1 lists the main sources of data used for the analysis of outcomes in the target populations. The primary outcome of interest, smoking behavior, is measured by several of these data sources. The Behavioral Risk Factor Surveillance System is a survey that asks a random sample of each state's population a series of questions about behaviors related to health outcomes, including whether or not they smoke. The Youth Risk Factor Surveillance System records the answers to similar questions for a sample of youth. The Natality Data Public Use File records the answers to questions about smoking for all women who give birth.

Table B.2
Data Sources and Outcome Measures

| Outcome | Figure | Data |
|---------------------------------------|--|--|
| Adequate prenatal care | 8.6 | Nativity Data Public Use File (birth certificates) |
| Avoidable hospitalizations | 8.7 | Arkansas Hospital Inpatient Data System |
| Days of hospitalization | 8.8, 8.9 | Arkansas Hospital Inpatient Data System |
| Smoking attitudes | 9.5, 9.6, 9.7 | Behavioral Risk Factor Surveillance System |
| Enforcement | 9.8 | Synar Reports |
| Adult smoking rates* | 10.2, 10.3, 10.4, 10.5, 10.6, 10.9, 10.10 | Behavioral Risk Factor Surveillance System |
| Pregnant women smoking rates* | 10.7, 10.8 | Nativity Data Public Use File (birth certificates) |
| Smoking prevalence among young people | 10.11, 10.12 | Youth Risk Behavior Survey, Natality Data Public Use File (Birth Certificates); Behavioral Risk Factor Surveillance System |
| Cigarette sales | 10.13 | Cigarette excise tax revenue; Adult Tobacco Survey |
| Short-term health indicators | 10.14 | Arkansas Hospital Inpatient Data System, Healthcare Cost and Utilization Project (HCUP national hospitalization data) |

* Also analyzed for association between county programming activity and smoking.

The BRFSS is the primary source of information regarding smoking behavior for the adult population. The sample size, of approximately 3000 Arkansans per year is adequate to obtain a fairly precise estimate of smoking prevalence among the adult population in the entire state, but precision drops considerably when using these data for analysis of specific subpopulations within the state.

The YRBSS is of similar size, so the same comments apply. An additional limitation of the YRBSS is that it is only collected every two years and in the most recent collection the response rate in Arkansas was so low that it did not meet the CDC requirements for valid data.

The other source of smoking prevalence information has a different set of limitations. Information on the smoking behavior of pregnant women is collected for all women who give birth, which produces a sample of approximately 35,000 observations per year in Arkansas. This sample size is adequate for producing precise estimates of smoking prevalence of this population and many subpopulations defined by age, race and county of residence. However, the unique circumstances of this special population limit its usefulness as an indicator of changes in smoking behavior among the general population.

Two other direct data sources also provide information on smoking activity. Monthly revenue reports from the sales of cigarette tax stamps by the Arkansas Department of Finance to cigarette wholesalers allows for the calculation of the number of packs of cigarettes sold each month. Similar information is available annually for all other states. The Synar Amendment requires random inspection of tobacco retailers to determine compliance with laws prohibiting sales to minors. Data from these inspections provide information regarding the success of a state in preventing such violations.

A final source of information regarding smoking behavior and attitudes toward smoking and smoking regulation is the Arkansas Adult Tobacco Survey (AATS). Conducted in 2002 and 2004, it asked a battery of questions of randomly selected adults. Unfortunately, comparisons with BRFSS and cigarette excise tax collection data suggest that the AATS undersampled smokers in 2004. Presumably, tobacco cessation and prevention programming had heightened awareness about smoking, and more smokers than nonsmokers declined to participate in the 2004 study. Other states have had similar difficulties. Although we report some findings from the AATS, we think they should be interpreted cautiously.

Non-Smoking Outcomes

We also used data sources that provide health status and health care utilization information in order to examine the effect of funded programs on these outcomes. The birth certificate data provide information on expectant mothers' use of prenatal care and on infant birth weight. As noted above, the birth certificate data also provide information on the age, race, and residential location of the mother, thereby allowing analysis of health and health care differences along these dimensions. When used in conjunction with population counts from the census, the birth certificate information can provide estimates of teen pregnancy rates by residential location (i.e., counties or zip code within Arkansas or by state and metropolitan area for other states) and by demographic group.

The hospital discharge data provide information on the primary and secondary diagnosis as well as basic demographics, residential location, and type of payer for all hospital stays. These can be used to identify hospitalizations for smoking-related illnesses such as asthma, strokes, and acute myocardial infarctions as well as hospitalizations that are likely to be the result of inadequate primary care (McCall, Harlow, and Dayhoff, 2001). Counts of these events are used in conjunction with census data to estimate rates for subpopulations that are targeted by funded programs.

Program and Policy Information

These outcomes data are most useful when combined with information that measures the program and policy efforts that have an impact on smoking and related health outcomes. We have assembled data on ATS-funded programs within the state for the major community-based programs (ADH, MHI, DHEC, and AAI). For interstate comparisons, we have annual spending on prevention and control activities by state for years 2000 through 2008. We also have data on cigarette taxes by state for 2000 through 2009.

Analytic Framework

This section describes a common analytic framework that we applied to evaluate many of the smoking-related and non-smoking outcomes. For many of these outcomes, we analyzed

administrative or survey data that provide information on individuals in the populations targeted by the funding programs. Although the analyses for each of the programs have many idiosyncratic features, most share four basic steps. The first step is to calculate the prevalence of a behavior or a condition in each year for which data are available. The second step is to use multivariate analysis to adjust for changes in demographic composition in order to isolate changes in behavior or health status for people of similar characteristics. In the third step, we estimated the baseline trend in the outcome for the adjusted population and compared the observed outcomes following program implementation to what would be expected based on this trend. Finally, in some cases we were able to investigate whether deviations from this baseline trend differed from those observed in other states or in other portions of the state with less intense programming.

Prevalence

The analyses of prevalence require a stable sample frame for a sequence of years. For example, the BRFSS annually surveys a national random sample of all adults age 18 and over. From this sample, we can obtain a consistently measured outcome. For example, the BRFSS used the same question about smoking behavior starting in 1996. Using the sample weights, which adjust for variation in sampling rate by demographic category, the estimated prevalence in the population can be defined, along with a measure of precision that indicates how much variation in the estimate would be expected if the sampling process were repeated. The simplest of these analyses is reported in Figure 10.2 for adult smoking prevalence in Arkansas.

We used a modification of the approach in our analyses for the prevalence of smoking among pregnant women (Figure 10.7). In this case, the sample frame was all pregnant women, so no sampling weights were needed and sampling precision was not an issue.

Adjusting for Demographic Composition

Smoking prevalence, the proportion of a population who smoke, is not useful for measuring the effectiveness of antismoking programs when other factors are affecting this proportion. The first factor we addressed is the changing composition of the population. From year to year, the aging process, as well as migration in and out of the sample frame, changes the identity of the people in the sample frame. Since smoking rates differ among people of different ages, different racial and ethnic identities, and between men and women, it is important to account for demographic changes that could influence smoking trends.

We did this by performing multivariate analysis of the outcome measures for individuals as a function of their demographic characteristics. We created measures of age, race, sex, and pregnancy status and included these as explanatory variables in a regression. The regression also included measures of time, which allowed us to measure the change in the outcome after controlling for changes in population demographics.

This multivariate analysis took into account the sampling design using STATA 8's commands for clustered sampling. We used appropriate functional forms, such as logit for binary outcomes (smoking versus not smoking) or least squares regression for continuous outcomes that have approximately normal distributions. Additional detail on the regression methods used for creating baseline trends and extrapolating these trends into the period during which the programs were operating are provided in an earlier report (Farley et al., 2007).

Comparative Analysis

The above analyses are based on a pre/post design. Inference about the effect of a program is based on deviations from the pre-program trend, making a comparison only between the target population prior to program implementation and the same population following implementation. An alternative is to make comparisons between the target population and a similar population at the same time. This could be done by completely relying on cross-sectional information, comparing the level of the outcome between populations with and without program exposure. This approach requires that all confounding factors that differ among the populations be measured and included in the analysis. Because this strong requirement is seldom met, we preferred to use alternative methods whenever available.

One alternative is to combine both longitudinal and cross-sectional variation. This improves upon the simple longitudinal design presented above because changes over time in unmeasured confounding factors—e.g., economic conditions or health care access—are accounted for as long as they change in the same way in both the target and nontarget population. However, if these unmeasured confounding factors change in ways that differ between the target and comparison populations, then this method can lead to erroneous inferences.

We made use of this type of analysis in two circumstances. We used this type of analysis for within-state comparisons between areas with and without program activity and among areas of varying levels of program activity. We also used it to compare outcomes in Arkansas with outcomes in other states.