Research Report

Improving Care for Chronic Conditions

Current Practices and Future Trends in Health Plan Programs

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Preface

The need for better management of chronic conditions is urgent. About 141 million people in the United States were living with one or more chronic conditions in 2010, and this number is projected to increase to 171 million by 2030. To address this challenge, many health plans have piloted and rolled out innovative approaches to improving care for their members with chronic conditions. This research report documents the current range of chronic care management services, identifies best practices and industry trends, and examines factors in the plans' operating environment that limit their ability to optimize chronic care programs. The authors conducted telephone surveys with a representative sample of health plans and made in-depth case studies of six plans. All plans in the sample provide a wide range of products and services around chronic care, including wellness/lifestyle management programs for healthy members, disease management for members with common chronic conditions, and case management for high-risk members regardless of their underlying condition. Health plans view these programs as a "win-win" situation and believe that they improve care for their most vulnerable members and reduce cost of coverage. Plans are making their existing programs more patient-centric and are integrating disease and case management, and sometimes lifestyle management and behavioral health, into a consolidated chronic care management program, believing that this will increase patient engagement and prevent duplication of services and missed opportunities.

This research was sponsored by the AHIP Foundation (AHIPF) and conducted by RAND Health Advisory Services, a program within RAND Health, a division of the RAND Corporation. A profile of RAND Health, abstracts of its publications, and ordering information can be found at www.rand.org/health. Comments or inquiries concerning this report should be sent to the lead author, Soeren Mattke, at Soeren_Mattke@rand.org or to his address at RAND: RAND Corporation, 20 Park Plaza, Suite 920, Boston, MA 02116.

We thank AHIPF staff and in particular Aparna Higgins for their guidance and reviews of the document; however, we note that the material contained in this report is the responsibility of the research team and does not necessarily reflect the beliefs or opinions of AHIPF, the AHIP, or the health plans that contributed to our study.

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Introduction

The need for better management of chronic conditions is urgent. About 141 million people in the United States were living with one or more chronic conditions in 2010, and this number is projected to increase to 171 million by 2030, when almost every other American will be living with one or more chronic conditions (Robert Wood Johnson Foundation, 2004). Unless these chronic conditions are managed effectively and efficiently, the implications of these numbers for morbidity and mortality, workplace productivity, and health care costs in the coming decades will be staggering. For example, one estimate projects that by 2034, the number of people with diabetes will double to 42 million and the related health care spending will triple to $336 billion (Zhuo et al., 2012). Similarly, the American Heart Association projects that by 2030, 40 percent of the U.S. population will have some form of cardiovascular disease and the related health care costs will triple from the current $273 billion to $818 billion (Heidenreich et al., 2011). Productivity losses associated with chronic diseases are projected to triple to $3.4 trillion from the current $1.1 trillion (DeVol and Bedroussian, 2007).

To address this challenge, for many years health plans have piloted and rolled out innovative approaches to improving care for their members with chronic conditions (AHIP, 2007; AHIP, 2012). Concerns about the financial sustainability of the Medicare program as well as the passage of the Affordable Care Act, which will expand employer-sponsored health coverage and Medicaid enrollment, have increased interest in these innovations in policy circles. Indeed, as reflected in several provisions of the Affordable Care Act and the priorities identified for the National Quality Strategy, promoting innovation is central to the Administration's efforts to keep public and private health coverage affordable (National Quality Forum, 2011), and learning from the private sector is a key component of this, as evidenced by the activities of the Center for Medicare and Medicaid Innovation.

Against this background, the America's Health Insurance Plans (AHIP) Foundation commissioned RAND Health to conduct a systematic assessment of chronic care management programs offered by health plans, based on a nationally representative sample. The goal of this project is to document the current range of chronic care management services, identify best practices, and elicit industry trends. We also attempt to identify factors in the plans' operating environment that limit their ability to optimize chronic care programs.

Methods

The study consisted of two phases: The first phase was a semi-structured telephone survey with a representative sample of health plans; the second, in-depth case studies of six health plans that had participated in the first phase.

For the survey, a random sample of 70 health plans in the United States was drawn from a sampling frame consisting of health plans listed in the 2011 Atlantic Information Services' (AIS's) Directory of Health Plans with commercial enrollment of 50,000 or more members. The participation rate of eligible plans was 37 percent (25 plans), representing 51 percent of all members in the sample because larger plans were more likely to participate. The survey focused on the commercial segment of the plan's enrollment with questions about the health plan, its chronic care management programs, approaches to engage patients and providers in those programs, and factors affecting the plan's operating environment.

For the case studies, six health plans were purposively selected to represent different plan sizes and regions. The case studies entailed one- to two-day visits to conduct semi-structured interviews with health plan staff members, including management, medical directors, and chronic care program staff, as well as reviews of plan documents, such as program materials, evaluation reports, and publications.

Summary of Findings

Chronic care management has become a standard component of health coverage offered by health plans regardless of size, location, and ownership status: All plans in our sample provide a wide range of products and services around chronic care, including wellness/lifestyle management programs for healthy members, disease management for members with common chronic conditions, and case management for high-risk members regardless of their underlying condition. We found that health plans view these programs as a "win-win" situation and believe that they both improve care for their most vulnerable members and reduce cost of coverage: The main drivers for program uptake are stated as containing cost growth (96 percent of surveyed plans), employer and purchaser demands (92 percent), as well as the desire to improve patient health (76 percent) and clinical care (64 percent). Further, all six case study plans include chronic care management in their fully insured products, indicating their conviction that they can offer more competitive products when providing chronic care management.

As health plans have experienced difficulties with engaging members and coordinating their activities with those of providers, they have started to customize programs to individual patients' needs and preferences and to integrate their efforts into the providers' workflows to realize the full potential of chronic care management.

Moving Toward Patient-Centric Designs

Disease and case management as the core components of chronic care management have very different legacies. Disease management was conceived as a scalable and efficient intervention for large numbers of patients with the expectation that providing standardized recommendations for medical care and self-management based on evidence would improve outcomes and reduce cost. To reach the necessary scale, it was commonly outsourced to specialized vendors. By contrast, health plans have traditionally operated case management programs themselves because the complexity and heterogeneity of member needs required customized support by an experienced nurse or social worker services and coordination with other services and benefits. This historic separation is reflected in the fact the majority of health plans responding to our survey (72 percent) continue to operate disease management and case management as two separate programs.

But our case studies show a trend to integrating disease and case management, and sometimes lifestyle management and behavioral health, into a consolidated chronic care management program with the expectation that a unified program will facilitate patient engagement and prevent both duplication of services and missed opportunities. To facilitate integration, about one-third (38 percent) of plans in our survey are bringing disease management in-house.

In addition, plans are making their existing programs more patient-centric. Disease management, which has historically been organized by disease, and sometimes even offered by disease-specific vendors, is morphing toward a holistic approach that addresses patient needs and gaps in care across multiple conditions and health risks. Indeed, the vast majority of plans are now offering an integrated disease management program that covers a member's needs across chronic conditions.

The patient-centered approach extends to member engagement and program delivery, with the emerging message being that "one size does not fit all." Plans are using an increasing variety of communication channels—such as social media applications, video chat, and interactive voice recognition calls—to interact with program candidates and participants. Interventions are driven by members' preferences regarding which issue to handle first and tailored to their psychological states based on theories of behavior change.

Some plans are even thinking of more holistic approaches that involve the wider patient environment, including family, community, and workplace. For example, one plan that covers a Native American population is piloting a program that places a nurse on a reservation in order to provide face-to-face services not only to patients but also to tribal leaders. Another plan is actively promoting "more specialized employer-based wellness and chronic disease programs that involve working with the employer groups."

Almost half of the plans are offering incentives to members in the form of merchandise or gift cards or lower premiums and lower cost sharing to enroll in or complete a program.

Increasing the Focus of Interventions

Chronic care management aims at stabilizing patients with chronic disease and preventing exacerbations. Like any preventive intervention, those programs can only be effective if they target the right opportunity and cost-effective if they match the resources invested to the magnitude of the opportunity. We learned that across plans, legacy programs followed a similar path: Identification of members, outreach, and program intensity (e.g., telephonic versus mailings) were mostly driven by past utilization of medical care (in particular, hospital care) and fairly standardized. But we were told that programs have evolved toward greater differentiation and sophistication in matching interventions to opportunities, not just in terms of greater patient-centricity as described above. As one plan put it, "the difference is what we do with the data—we use information such as markers for pre-diabetics to predict the future." Typically, this new approach builds on the following components:

- Analysis of past utilization combined with predictive modeling to identify members at risk of exacerbation and prioritize them for proactive interventions
- Identification models using a greater range of data, such as electronic lab results and data from remote monitoring devices for biometric data, like blood pressure and heart rate
- Purpose-built models that predict the risk of different events, such as different models to predict the risk of hospital admissions and the risk of high overall resource use
- Targeting of specific care gaps, such as lack of medication adherence
- Greater differentiation of intervention intensity, for example, using case management tools and in-person interactions for higher-risk members with distinct conditions.

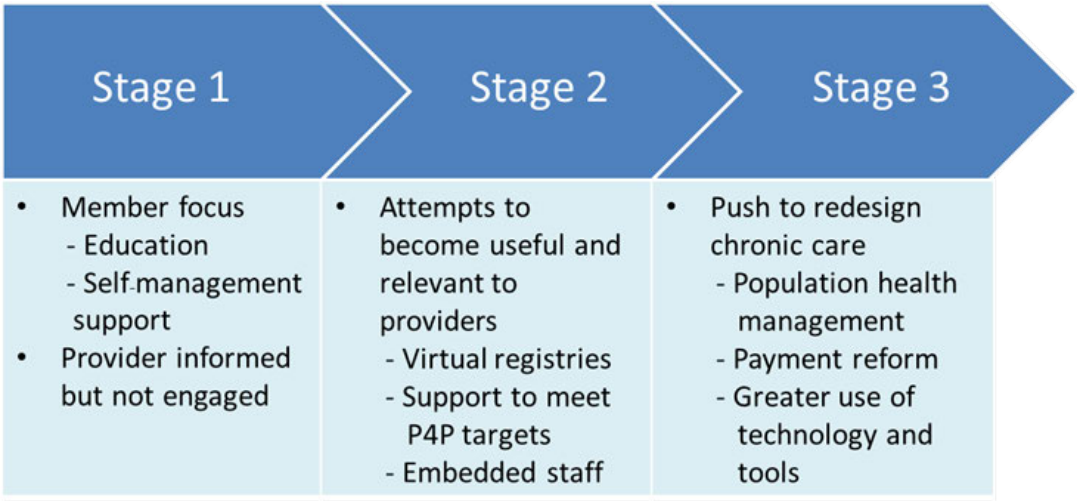
Technology appears to be part of the solution. Indeed, plans express enthusiasm for the potential of remote monitoring, telemedicine, and smartphone applications in their chronic care management programs, even though these technologies have yet to be widely implemented. The challenge, as many survey respondents stressed, is the existence of many new technologies, and often only limited evidence on their impact: Thirty-six percent of plans stated that patient care technology applications were generally effective in achieving the program objectives; 20 percent of plans emphasized that the

effectiveness of patient care technology applications depended on the match between the technology, the program's objective, and the targeted population; and the remainder of plans (44 percent) stated that patient care technology applications were either not effective in achieving the program objectives or that there is not enough evidence to assess their effectiveness.

Conclusions

To summarize, chronic care management has become a standard benefit in commercial health insurance. Health plans' approaches to improving care for members with chronic conditions are undergoing a fundamental transformation, as Figure S.1 illustrates.

Figure S.1. The Changing Face of Health Plans' Approaches to Chronic Care Management



Early attempts to support the chronically ill focused on interaction with members in the form of telephonic and sometimes in-person counseling and education. If gaps in care were discovered, members were encouraged to bring those up with their providers. Plans would notify physicians if a member enrolled in a program and alert them of care gaps, but interactions were limited. Realizing the limited impact of attempting to improve chronic care without engaging providers, plans tried to make their programs more useful and relevant for providers by providing services that directly add value to practice operations. For example, some plans maintain virtual registries of patients with chronic diseases, like diabetes, so that practices can easily review how well care is aligned with clinical guidelines. At the same time, such tools help physicians meet pay-for-

performance (P4P) targets. Other plans embed staff in practices that serve as a liaison to the chronic care program for both members and practice staff.

But we also learned that health plans are increasingly realizing that programs they run themselves will have limited impact, because care decisions ultimately remain in the hands of providers. While they are continuing to offer such programs, many health plans are now going one step further by attempting not just to support current practice models but also to fundamentally transform how practices deliver care, focusing on primary care providers who treat a substantial number of a plan's members. All six of our case study plans, for example, worked with practices to adopt patient-centered medical home (PCMH) models that offer continuous management of patient needs, team-based care and expanded access including same day appointments, after-hours care, and electronic visits. Several case study plans were experimenting with gain-sharing arrangements, such as accountable care organization (ACO)–type contracts. Plans want to "provide a sliding slope to facilitate change." Redesign efforts are flanked by changes to the payment system and substantial investment to support practices' transition. These can include free consulting support, financial assistance in the form of subsidies, and coverage of license fees for medical intelligence tools and electronic medical records (EMRs).

Lastly, an overarching theme that emerges throughout the study is that "health plans cannot do it alone" and need to bring "all stakeholders into the conversation." Programs can only be successful if they reflect provider needs and are coordinated with their efforts. Similarly, the wider community of which the member is a part must get involved to raise health awareness and to facilitate individual behavioral change. This entails engaging and collaborating with employers—as one plan put it, "forward-thinking plan sponsors serve as good partners," as well as providers, families and neighborhoods.

Acknowledgments

We would like to thank our AHIP and AHIPF contacts, Aparna Higgins, German Veselovskiy, Carmella Bocchino, and Karen Ignani for their guidance and review of this report. We want to express our gratitude to all the representatives of the participating health plans for being so generous with their time and for sharing their insights, and we are particularly grateful to the six health plans that hosted our case studies.

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Abbreviations

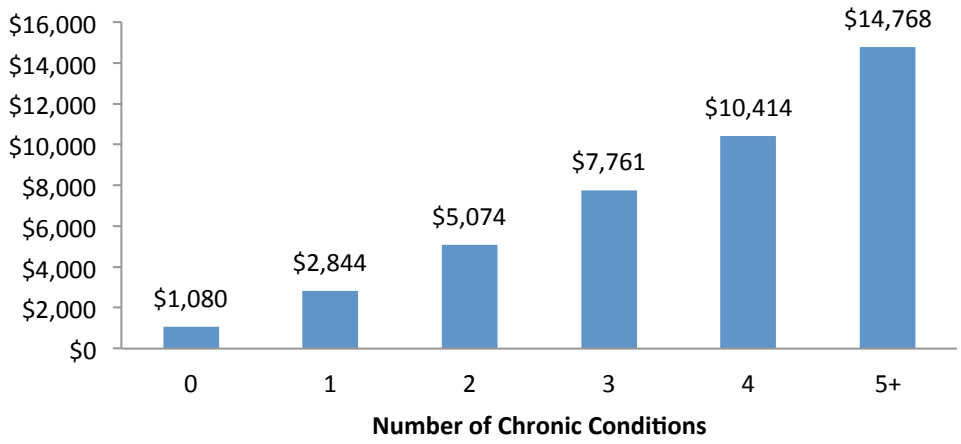
ACO	accountable care organization
AHIP	America's Health Insurance Plans
AIS	Atlantic Information Services
BH	behavioral health
CAD	coronary artery disease
CAHPS	Consumer Assessment of Health Care Providers and Systems
CCM	chronic care management
CDHP	consumer directed health plan
CHF	chronic heart failure
CM	case management
CMMI	Center for Medicare & Medicaid Innovation
CMS	Centers for Medicare & Medicaid Services
COPD	chronic obstructive pulmonary disease
DM	disease management
DMP	disease management program
EHR	electronic health record
EMR	electronic medical record
ER	emergency room
HEDIS	health care Effectiveness Data and Information Set
HIPAA	Health Insurance Portability and Accountability Act of 1996
HP	health plan
HRA	health risk assessment
IVR	interactive voice response
NCQA	National Committee for Quality Assurance
P4P	pay for performance

PBM	pharmacy benefit management
PCMH	Patient Centered Medical Home
PCP	primary care provider
RBM	radiology benefits management
ROI	return on investment
TPA	Third party administration
UM	utilization management

1. Introduction

The need for better management of chronic conditions in the United States is urgent. According to estimates, about 141 million people in the United States had one or more chronic conditions in 2010. That number is projected to increase to 171 million by 2030, meaning that almost every other American will live with one or more chronic conditions (Robert Wood Johnson Foundation, 2004). Although the prevalence of many chronic conditions increases with age, a large number of the chronically ill are under 65 years of age and are covered through private health insurance. In 2009, this subset accounted for about 30 percent of community-dwelling people under treatment for heart conditions, 38 percent for diabetes, 40 percent for hypertension, 56 percent for mental disorders, and 57 percent for chronic obstructive pulmonary disease (COPD) and asthma (Agency for Healthcare Research and Quality, 2009). As illustrated in Figure 1.1, chronic conditions are costly to treat, with per-capita health care spending increasing as an individuals' number of chronic conditions increases.

Figure 1.1. Average 2006 Per Capita Health Care Spending



SOURCE: Anderson 2010.

Unless these chronic conditions are managed effectively and efficiently, the implications of these numbers for morbidity and mortality, workplace productivity, and health care costs in the coming decades will be staggering. For example, one estimate projects that by 2034, the number of people with diabetes will double to 42 million, and the related health care spending will triple to US $336 billion (Zhuo et al., 2012). Similarly, the American Heart Association projects that by 2030, 40 percent of the U.S. population will have some form of cardiovascular disease, and the related health care costs will triple from the current $273 billion to $818 billion (Heidenreich

et al., 2011). Productivity losses associated with chronic diseases are projected to triple to US $3.4 trillion from the current US $1.1 trillion (DeVol and Bedroussian, 2007).

For many years, health plans have been piloting and rolling out innovative approaches to improve care for their members with chronic conditions (AHIP, 2007; AHIP, 2012). Examples include providing such services as health coaching and health information technology (e.g., electronic medical records, remote monitoring), proactively identifying patients who are more likely to experience a complication, and customizing the chronic care they offer to meet the needs of individual patients.

The passage of the Affordable Care Act and the anticipated expansion of employer-sponsored health coverage and Medicaid enrollment, as well as rising concerns over the financial sustainability of Medicare, have increased general interest in these initiatives. Promoting innovation is central to the Administration's efforts to keep public and private health coverage affordable, as reflected in several provisions of the Affordable Care Act and the priorities identified for the National Quality Strategy (National Quality Forum, 2011). And learning from the private sector plays an important role in promoting such innovation. Most notably, the Center for Medicare and Medicaid Innovation (CMMI) is testing innovative payment and care models developed by the private sector as part of its mission of finding new ways to reduce health care costs and improve care (CMS, 2012).

Against this background, the America's Health Insurance Plans (AHIP) Foundation commissioned RAND Health to conduct an assessment of chronic care management programs offered by health plans based on a nationally representative sample. The goal of this project is to document systematically the current range of chronic care management services, identify best practices, and elicit industry trends. We also attempt to identify factors in the plans' operating environment that limit their ability to optimize chronic care programs.

Research Approach

The study consisted of two phases: The first phase was a structured telephone survey of a representative sample of health plans; the second, consisted of in-depth case studies of six health plans that had participated in the first phase. The study was approved by RAND's Institutional Review Board. For the survey, a random sample of 70 health plans in the United States was drawn from a sampling frame consisting of health plans listed in the 2011 Atlantic Information Services (AIS's) Directory of Health Plans with commercial enrollment of 50,000 or higher. A stratified random sample of health plans was selected from five strata based on the plan's commercial enrollment. All plans with more that 5 million commercial enrollees were included in the sample because they represent a large proportion of the total commercial population.

The health plans in the sample were invited to participate by email. Plans that did not respond received a reminder email several weeks later. For each health plan that did not respond to the reminder email, up to three telephone calls were placed to encourage study participation. If the plan declined to participate during any of these contact attempts, it was not contacted again. An interview was scheduled with those plans that agreed to participate and met two criteria:

1. The company had to offer full medical coverage products rather than catastrophic coverage only.
2. The company had to offer programs to manage patients with chronic conditions.

The health plan contact, most often a medical director or chief medical officer, designated the plan representative(s) to participate in the survey, which was administered by phone by two or more trained health services researchers and lasted about 90 minutes. It focused on the commercial segment of the plan's enrollment, with questions about the health plan, its chronic care management programs, patient and provider incentives, and factors affecting the operating environment.

Of the 70 plans in the sample, two plans were not eligible to participate, one because the plan did not offer full medical coverage products and the other because the plan did not have any patients in the commercial segment. Among the remaining 68 plans, the participation rate was 37 percent (25 plans), representing 51 percent of all commercial members in the sample because larger plans were more likely to participate. Almost half of the plans in our sample have more than a million lives in the commercial segment (Table 1.1); the majority do not operate an integrated delivery system (68 percent), are not-for-profit (68 percent), and originated from a health insurance plan (68 percent).

Table 1.1. Characteristics of Surveyed Health Plans

Characteristic	Number of Plans (Percent of sample)
Number of covered lives in commercial segment	
Less than 200,000	7 (28%)
200,000–1 million	6 (24%)
More than 1 million	12 (48%)
Offer all types of commercial plans (i.e. fully insured individual market, fully insured small group market (<50 employees), fully insured large-group market (50+ employees), self-insured plan)	23 (92%)
Type of delivery system	
Integrated	5 (20%)
Not integrated	17 (68%)
Integrated and non-integrated components	3 (12%)
Profit status	
For-profit	6 (24%)
Not-for-profit	17 (68%)
Offer both for-profit and not-for-profit products	2 (8%)
Origin of plan	
Multi-specialty group practice	1 (4%)
Hospital organization	2 (8%)
Health insurance company	17 (68%)
Other (e.g. mixed origin)	5 (20%)

SOURCE: RAND Health Plan Survey, 2011.

Six health plans were purposively selected for the case studies to represent different plan sizes and regions: two large national plans, two mid-sized plans operating in one state (one in the Midwest and one in the South), and two small plans operating regionally within one state (one in the Northeast and one in the Midwest) (Table 1.2). The case studies entailed one- to two-day visits to conduct semi-structured interviews with health plan staff members, including management, medical directors, and chronic care program staff, as well as reviews of plan documents, such as program materials, evaluation reports, and publications.

Table 1.2. Characteristics of Plans Selected for Case Studies

Characteristic	Number (percent)
Number of covered lives in commercial segment	
Less than 200,000	2 (33%)
Between 1 million and 5 million	2 (33%)
Above 10 million	2 (33%)
Offer all types of commercial plans (i.e. fully insured individual market, fully insured small group market (<50 employees), fully insured large group market (50+ employees), self-insured plan)	6 (100%)
Type of delivery system	
Integrated	0 (0%)
Not integrated	6 (100%)
Integrated and non-integrated components	0 (0%)
Profit status	
For-profit	2 (33%)
Not-for-profit	4 (67%)
Origin of plan	
Multi-specialty group practice	1 (17%)
Hospital organization	1 (17%)
Health insurance company	4 (67%)

SOURCE: RAND Health Plan Survey, 2011.

Organization of the Report

The following sections of the report address the structural characteristics of chronic care management programs (Section 2), how the programs are designed and operated (Section 3), interaction between the programs and patients (Section 4), interaction between the programs and providers (Section 5), the design and results of program evaluations (Section 6), and the challenges to chronic care management (Section 7). Section 8 concludes by highlighting the main findings of the study. The appendices contain detailed tables (Appendix A) and the six case study reports (Appendix B).

2. Program Prevalence

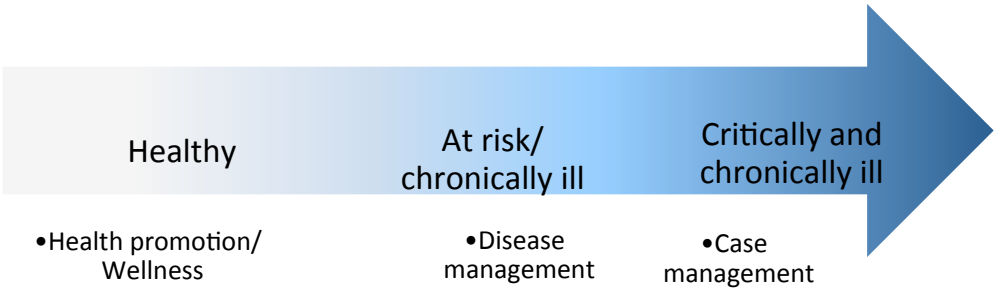
This section describes which programs health plans offer to improve chronic care management, what the range of services under those programs is, which types of patients and conditions they target, and what the reasons for their adoption were. We find that the availability of chronic care management programs has become the industry standard for health plans. Their adoption is driven by the need to reduce costs and purchaser demands, as well as the desire to improve members' heath and clinical care. A broad range of services is offered in chronic care management programs. Plans concentrate their efforts on the most prevalent conditions and risk factors but are increasingly moving from a condition-focused approach to chronic care management to a patient-centric approach.

Chronic Care Management Programs Are Widely Accessible for Commercially Insured Health Plan Members

Chronic care management programs have become the norm for health plans, independent of size, profit status, and geographic location. Integrated delivery systems that combine health insurance and provision of care are as likely to offer such programs as health plans that are not integrated. Indeed, all 25 plans in the sample offer a wide range of programs and services for patients with chronic conditions, including health promotion/wellness programs, disease management, and customized case management for high-cost patients.

We learned during the case studies that health plans view their chronic care management programs as addressing member needs along a continuum of care, with wellness programs/lifestyle management programs offered to members with chronic disease as well as healthy members, disease management to members with chronic conditions, and case management to the critically ill or those with advanced conditions (Figure 2.1). The boundaries between the different programs can differ by health plan. For example, some plans will offer case management to all members with certain chronic conditions, whereas others target case management to those members with advanced disease states.

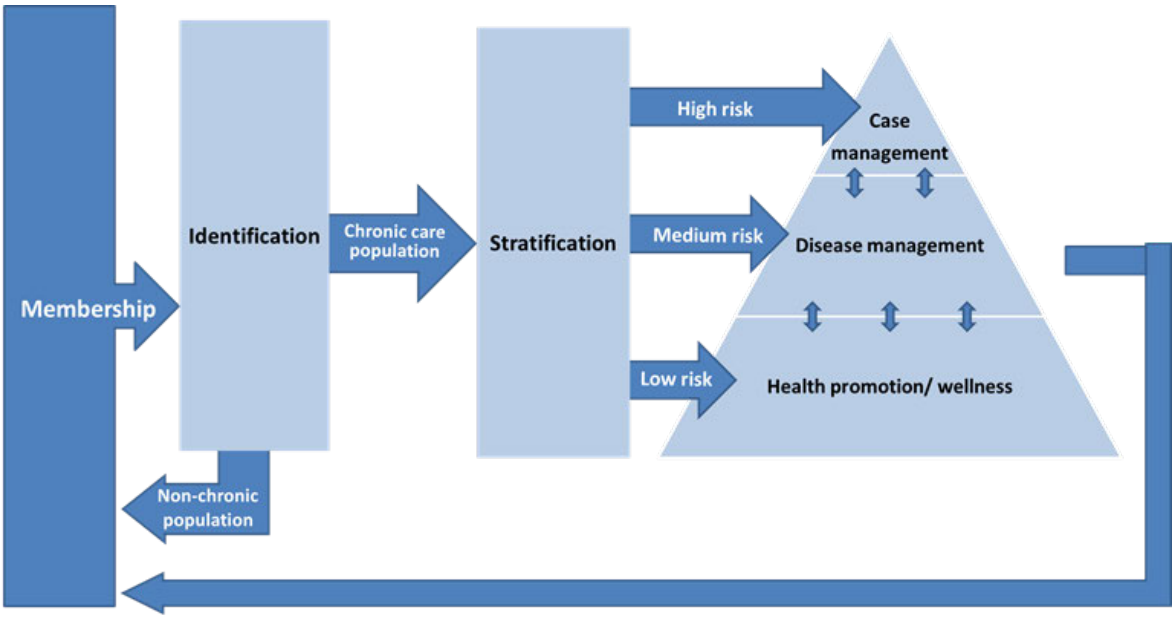
Figure 2.1. Chronic Care Management Offerings Along the Continuum of Care Needs



Overall, health promotion and wellness programs address unhealthy lifestyles (such as smoking and lack of exercise) and risk factors (such as high cholesterol) through behavioral interventions that involve educational materials, individual and group coaching, and often workplace health promotion events. Disease management programs aim at improving clinical care of chronic conditions and patient self-management. Typically, call center–based nurses educate patients about their conditions and encourage them to take an active role. In addition, providers are informed about gaps in care, such as overdue tests or lack of medication adherence. Case management, sometimes described as "a more intense extension of disease management," targets the highest-risk members irrespective of their underlying conditions. While also mostly phone-based, case management interventions are more customized to individual members' needs than disease management programs and offer such additional services as care coordination and coordination with social care.

In practice, health plans use several steps to assign members to specific chronic care management programs. As described in Figure 2.2, the first step is to identify the entire membership with chronic conditions. In the second step, this population is stratified by underlying risk. The criteria for stratification and the number of risk strata vary by plan. Most typically, stratification is based on a combination of proprietary criteria for utilization (e.g., number of office visits, hospital admissions, prescription drugs) and care gaps (e.g., health risks like smoking, lack of medication adherence, and missed preventive services). Plans with access to electronic lab data also use measures of disease control, like cholesterol and HbA1c level. Most plans have at least three but no more than five risk strata, and the strata follow the skewed distribution of health care spending, with the highest-risk stratum including a small subset of members. Both the boundaries between programs and percentage of members assigned to different risk levels vary by plan and, for self-insured plans, by employer. After assignment, members are recruited for program participation and enrolled, if they agree. As members "graduate," i.e., achieve the goals of their programs (e.g., members in case management stabilizing their conditions to a level at which self-management suffices), the plan

Figure 2.2. Schematic of Chronic Care Management Program Assignment



may assign them to a different chronic care management program or even move them back to the general membership pool.

Our case study findings suggest that management of chronic conditions has become a standard component of health coverage: All six plans include case management and disease management in their fully insured and self-insured product lines, but most give self-insured employers the option to opt out of disease management; one plan provides the option to opt out of the entire chronic care management program. In addition, some health plans offer additional interventions to their chronic care patients—for example, one plan provides physician home visits for homebound patients, while another places nurses onsite in communities with a high burden of chronic disease.

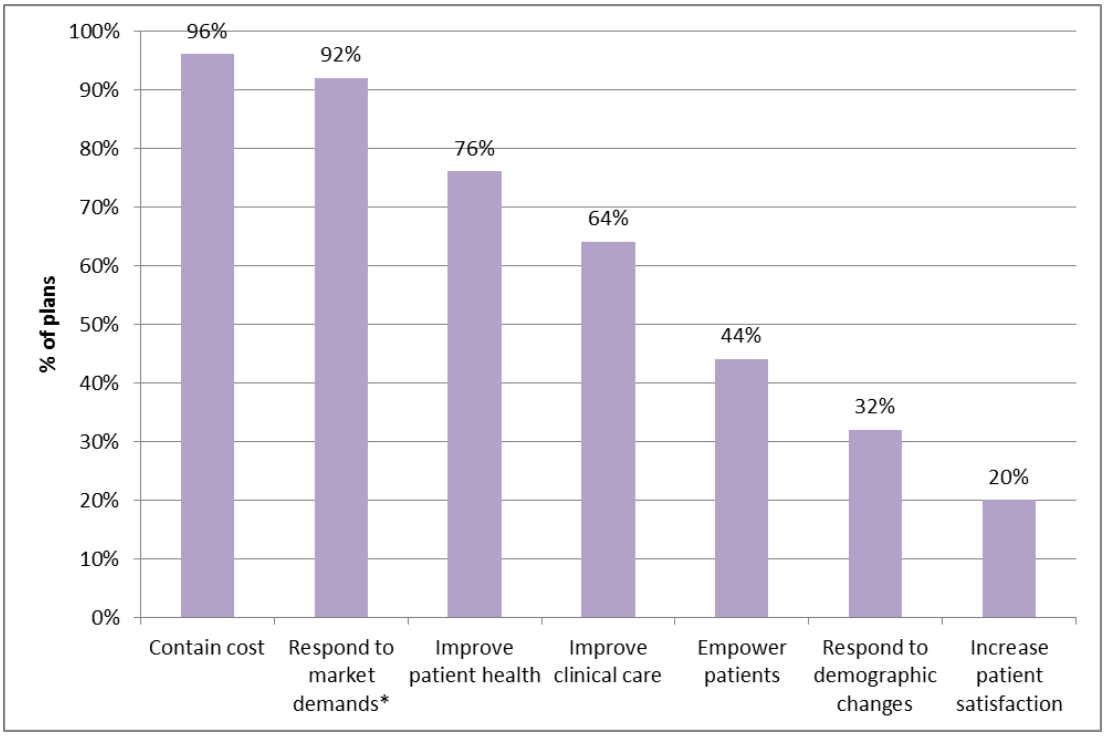
Chronic Care Management Programs Are Adopted for Multiple Reasons

Each of the plans in our sample stated multiple goals for its chronic care management programs and factors influencing its decisions to implement them. For example, one plan expressed the goals of its chronic care management program as "to live our mission statement; improve the lives of our members and improve our community, make a difference in improving evidence based care, care coordination, drive more clinical effective and affordable care," and another to "provide access to quality and affordable health solutions, which enables and empowers members to optimize their health leading to superior cost-effective outcomes." Cost growth and employer-purchaser demands, with 96 and 92 percent of plans respectively, were the

most common drivers for adopting and expanding chronic care management. Improving patient health and clinical care were also mentioned as key factors by, respectively, 76 and 64 percent of the surveyed plans (Figure 2.3).

The reasons for implementing chronic care management programs were very similar across plans, and did not vary significantly by plan size, or by profit status or level of integration (see Tables A.5 through A.7 in Appendix A).

Figure 2.3. Reasons for Implementing Chronic Care Management Programs as Reported by Health Plans



SOURCE: RAND Health Plan Survey, 2011.

* Market demands include purchaser demands and accreditation requirements (for a more comprehensive list, see Table A.5).

Programs Mirror Prevalence of Conditions and Risk Factors

Plans cover a broad and similar set of lifestyles and risk factors within their chronic care management programs—ranging from poor nutrition, lack of exercise, and obesity to stress, anxiety, and depression. Target conditions for disease management include those with the highest prevalence in a population of working-age adults and their dependents (Table 2.1). Asthma and diabetes top the list of targeted conditions with 88 percent of all plans offering a

Table 2.1. Estimated Prevalence of Chronic Conditions in Commercial Segment of Health Plans and Health Plans' Disease Management Programs, by Chronic Condition

Condition	Prevalence of Condition (percent)*	Number of Plans with DMPs for Condition (% of plans)
Multiple chronic conditions	10.2	58
Diabetes	4.2	88
Asthma	3.6	88
Depression**	2.4	50
CAD	1.9	79
COPD	1.3	71
CHF	0.5	83

SOURCE: RAND Health Plan Survey, 2011.
* Represents a weighted average of the prevalence of the condition among reporting plans.
** Of the 50% of plans that do not have a specific DMP for depression, many treat it as a co-morbidity within their other DMPs.

disease management program (DMP) for each of the diseases. These are followed by congestive heart failure (CHF), coronary artery disease (CAD), and chronic obstructive pulmonary disease (COPD), for which 83, 79, and 71 percent of plans respectively, have a DMP.

In addition, 58 percent of plans offer a DMP to patients with multiple chronic conditions. A dedicated DMP for depression is less common (50 percent of plans), but it should be noted that the three largest plans in our sample, which together cover almost 50 million lives in the commercial sector, do offer such a program. Furthermore, we learned during the case studies that plans typically manage depression as co-morbidity in other DMPs and include patients with severe mental illness in specialized case management programs.

An important trend is the move toward patient-centered chronic care management. Traditionally, assignment to programs was based on algorithms that identified the "leading condition(s)," which determined priorities to be addressed in the interactions and services offered. More recently, plans are abandoning this condition-centric approach and allowing for customization based on member preferences and needs—as described by one of our survey respondents: [we want to] "deliver comprehensive care and wellness programs to focus on whole person health. We try to move away from being condition-centric to a more holistic patient model which provides care throughout life till the end of life stage." In practice, as we learned through the case studies, this has meant that health plans are increasingly customizing their interventions to individual members' needs and "meet[ing] the members where they are" (See box below).

Health Plans Are Taking a More Patient-Centered Approach to Chronic Care Management

All six of the case study plans were either already using or currently transitioning to a patient-centric chronic care management model from a condition-centric model. The way health plans implement the patient-centric model can, however, differ from plan to plan. For example, in one case, disease management is structured as one program that covers 35 core chronic conditions but can be adapted to accommodate other conditions. Another plan merged three disease management programs which had previously operated separately (COPD, CHF, and asthma) with its existing case management program. Thus, disease management for these three conditions now operates under one combined case management/disease management program. Yet another plan offers two types of disease management programs; the first follows a more traditional disease-focused model for the lower-risk membership, the second offers high-risk members and those with multiple co-morbidities support similar to that provided under case management.

In all cases, the move from condition-centric to patient-centered care implies a more intense approach to chronic care management, emphasizing one-on-one interactions with members and more coordination with other services provided by the plan, such as behavioral health and social care.

3. Program Design

This section depicts the approaches that plans are taking when designing chronic care management programs. We find that a set of common principles guides program development and maintenance, and we observe similar use of patient stratification and trends in program operation. In general, there is a sense among health plans that they have to be flexible in their program design and that they have to continue to evolve: As one survey respondent put it, "We know we need to continually refine pieces of chronic care management to work better; drop pieces that don't work and add new pieces; [we] have to be agile to address demand […] factors in the environment; to really address the demands and objectives, to mitigate rising health care cost."

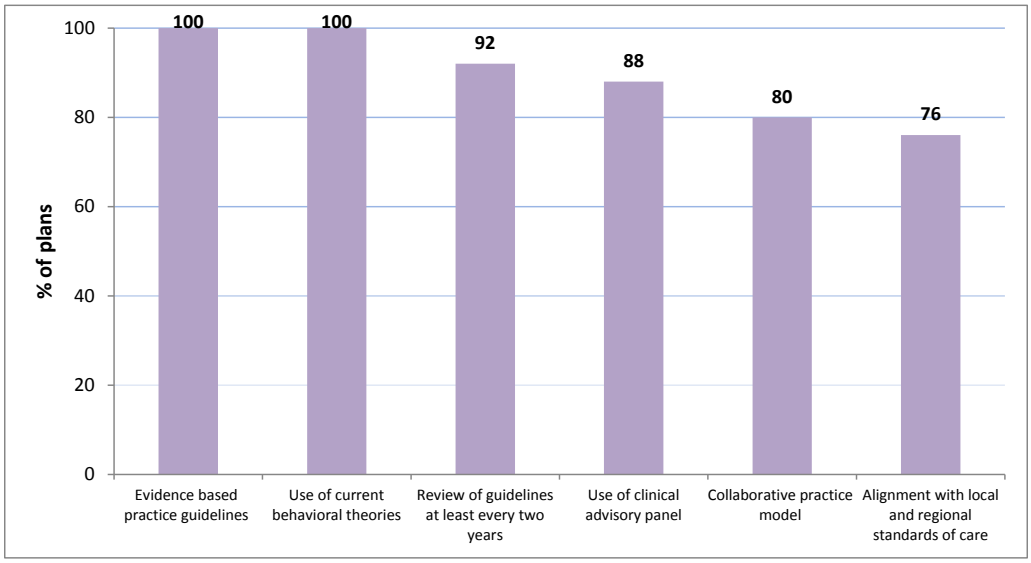
Wide Use of Similar Principles Guides Chronic Care Management Program Design

A similar set of guiding principles is reported by most plans. In particular, evidence-based practice guidelines and current theories of behavior change (such as the Stages of Change model or the Transtheoretical Model[1]) are used by all plans when designing or implementing chronic care management programs. Ninety-two percent of plans stated that they review clinical guidelines at least every two years—often even more frequently—to keep program content current, and 88 percent have clinical advisory panels for their chronic care management programs. Eighty percent use collaborative practice models (i.e., co-development with physicians and support service providers) to develop and maintain their programs, with 70 percent of them doing so in the design stage of their chronic care programs, 90 percent in the implementation stage, and 60 percent in the evaluation stage.

About three-quarters of plans seek to align with local and regional standards of care; these tend to be the local and regional plans. One regional case study plan in the Midwest, for example, aligns with evidence-based guidelines developed by a state-level consortium for quality

[1] The Transtheoretical Model of Change is a theoretical model of behavioral change used for many health interventions. It integrates several elements from other theories and is structured around the Stages of Change Model, a time component. The latter assumes a sequence beginning with the "pre-contemplation" phase, where the individual is not really thinking of changing his/her behavior. In a second phase, known as the "contemplation" stage, the individual undertakes a kind of cost-benefit analysis with respect to behavior change. The individual then experiments with small changes in the "preparation" stage, followed by the "action" stage where the real behavioral change occurs, and finally the "maintenance" stage. Eventually, if the individual relapses, this progress can turn into a cycle (e.g., Prochaska and DiClemente, 1983; Prochaska, DiClemente, and Norcross 1992; Prochaska and Velicer 1997; Velicer et al. 1998).

Figure 3.1. Principles Used in Development and Maintenance of Chronic Care Management Programs in Health Plans*



SOURCE: RAND Health Plan Survey, 2011.
*70% (14 plans) of those who use collaborative practice models do so in the design stage, 90% (18 plans) in the implementation stage, and 60% (12 plans) in the evaluation stage.

improvement. These guidelines, reviewed at least every other year, have achieved statewide adoption of common practice standards for all health plans (Figure 3.1).

A Trend Toward More In-House Delivery of Chronic Care Management Programs

Health plans' chronic care management programs are administered either in-house, using the health plans' own staff, resources, and facilities, or outsourced to a third-party vendor specialized in those services (e.g., a disease management vendor). In our sample, while the majority of plans—72 percent—have both in-house and outsourced components to their chronic care management program, we observe a trend toward in-sourcing. Nearly a quarter of the plans already provide all services in-house (Table 3.1), and the only plan that reported having all program components outsourced at the time of the survey was in the process of in-sourcing all of its chronic care management programs.

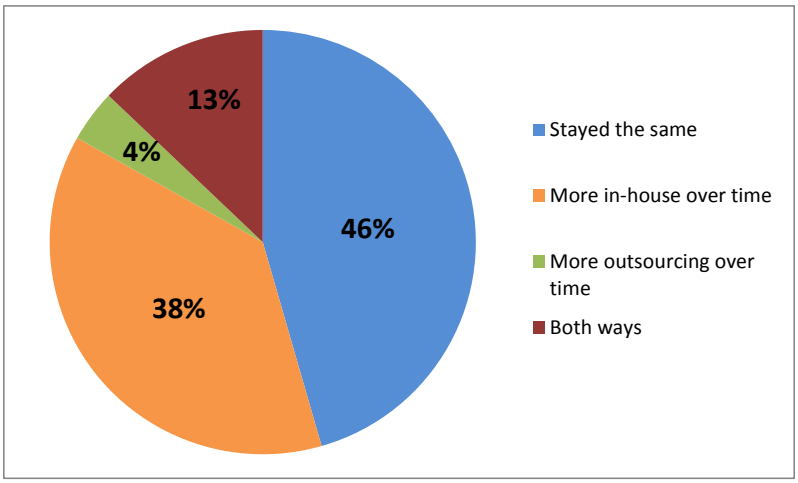
Table 3.1. Type of Administration Used for Chronic Care Management Programs

Type of Administration	Number (percent) (N=25)
All programs administered by a third party	1 (4%)
All programs administered in-house	6 (24%)
Both components	18 (72%)

SOURCE: RAND Health Plan Survey, 2011.

Furthermore, 38 percent of plans are bringing more of their chronic care management programs in-house compared to only 4 percent that have increased outsourcing (Figure 3.2).

Figure 3.2. Changes in Chronic Care Management Program Administration over Time*



SOURCE: RAND Health Plan Survey, 2011.

*One plan did not answer this question, so N=24.

We learned that cost considerations and the complexity of coordinating services with outside vendors are driving the trend to bringing programs in-house. For example, one case study plan that had insourced disease management due to the unsustainably high costs of the vendor-provided program reported that its in-house program operates at considerably lower cost. Another plan, which insourced components of its disease management because of difficult coordination between outsourced and in-house programs, found that the changes resulted in better coordination and integration with its other chronic care management activities, including wellness management, behavioral health (BH), maternity, and environmental health.

Plans typically outsource chronic care management components only if they lack the scale or the requisite capabilities to run them efficiently. A case study plan, for instance, outsources radiology benefits management (RBM), pharmacy benefits management (PBM), and a polypharmacy program for people with more than nine medications because it lacks sufficient scale to maintain an in-house program efficiently. Another plan outsources PBM and disease management for CAD and diabetes because it lacks key capabilities such as 24/7 nurse access.

Strong Commonalities in Methods Used for Identifying Patients

The typical path through which a member is identified for chronic care management programs is an analysis of insurance claims with sophisticated algorithms that take into account diagnoses, care utilization, and gaps in care (for a list of identification tools, see Table A.9).

For disease management, retrospective analysis of medical and pharmacy claims (conducted by 92 percent of plans) is the most common way that patients are identified. Similarly, participation in case management is most commonly based on retrospective analysis of claims data. In particular, all plans look for "frequent flyers" (e.g., high emergency room [ER] utilization), 92 percent of plans look for specific diagnoses (such as malignancy, psychosis, and heart disease), and 80 percent for high cost procedures (e.g., transplants). We also heard during the case studies that a referral from utilization management specialists is a common path to case management. In one example, the plan has a transition program whose main aim is to support high-risk patients after discharge and identify patients who would benefit from longer-term support through case management. Another plan has "discharge coordinators" embedded in hospitals who cover a large number of the plan's membership; these coordinators refer recently discharged patients to case management if appropriate.

The nature of the identification algorithms has evolved substantially. Early generations flagged members who had reached higher levels of disease severity and/or experienced high-cost events, such as hospital admissions and tried to stabilize them. More recent algorithms focus on gaps in care and aim at predicting future exacerbations and high-cost events by intervening early. To illustrate, older algorithms would have identified persons with diabetes who have severe end-organ damage but adequate current disease control, whereas newer approaches would focus on diabetics with worsening glucose control who also missed preventive care services. In the words of one survey respondent, the objective is to "catch patients early on, get them engaged and have them manage their conditions right away to prevent progression." Approximately four-fifths of plans use predictive modeling to identify patients for disease management (84 percent) and case management (76 percent). Algorithms are also becoming more differentiated: Different methods are used, for example, to identify gaps in care and predict risk of hospital admission. One plan is currently piloting a new algorithm designed to identify complex patients and predict hospital admissions and readmissions. According to the plan, early tests suggest that the algorithm works well: When applied retrospectively, it achieved 88 percent accuracy in predicting admissions and readmissions. Lastly, plans are experimenting with identification and stratification algorithms that combine multiple data sources, such as claims data, health risk assessment information, and clinical information collected directly from members. Those approaches are sometimes referred to as "Big Data" analytics in the industry.

While most plans accept self-referrals and provider referrals (92 percent), those paths are not frequently used. Respondents indicated that provider referrals rarely occur because providers are not sufficiently familiar with the details of chronic care management program rules and services.

Having identified members for chronic care management program participation, all but one plan stratifies them into risk groups based on disease severity and care utilization, using proprietary criteria to assess their risks of disease exacerbation. Such risk stratification allows

plans to tailor service intensity to clinical need and thus improving efficiency. Most plans (46 percent) use three risk strata—high/medium/low, or two risk strata—high/low (21 percent). Some plans adopt a more granular stratification with four (8 percent), five (17 percent) or even six (4 percent) risk levels.

4. Member Interaction

This section summarizes the range of tools and modalities that plans use to reach out to their members, recruit them for program participation, and deliver services. About half of the surveyed plans use member incentives (e.g., gift cards, lower premiums) to improve patient engagement in their chronic care management programs. In all cases, plans are attempting to personalize their interactions and interventions by tailoring program delivery based on patient characteristics and readiness to change. By the same token, the use of such technologies as remote monitoring and tele-visits is expanding. As expressed by one respondent, plans feel that they need "multiple leverage points to facilitate the members' engagement in the program with as many windows of opportunities as possible."

Plans Go to Great Length to Recruit Members into Their Chronic Care Management Programs

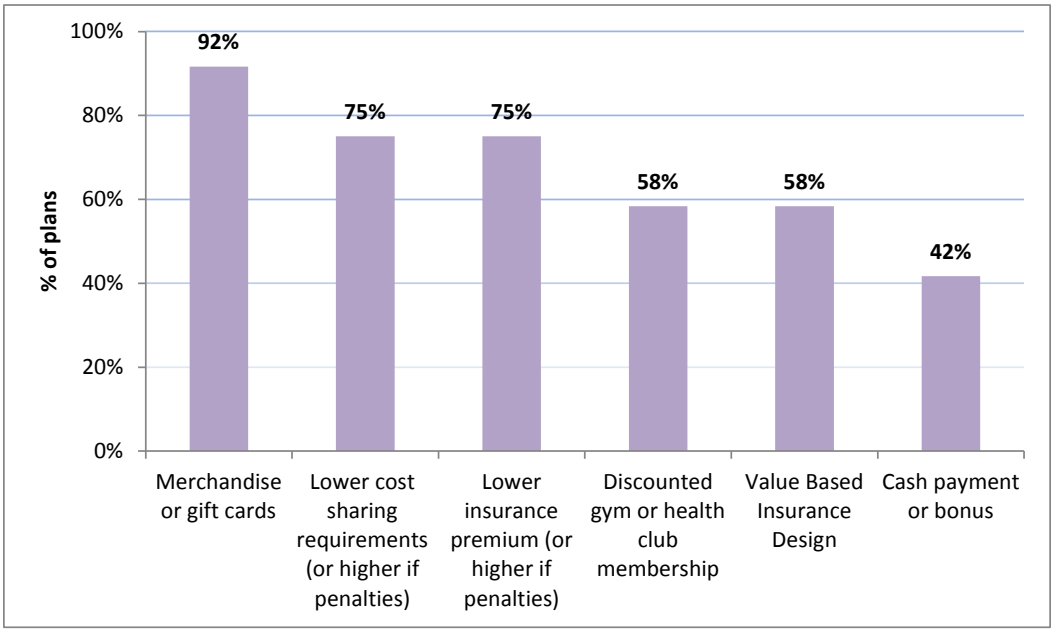
As 42 percent of plans report, contacting patients is a challenge because of missing or invalid telephone numbers or patients not responding to repeated outreach attempts. In response, health plans put significant efforts and creativity into making their initial outreach to members. The range of tools utilized includes mailings, online support tools, calls from trained recruitment specialists or chronic care management nurses, and tailored interactive voice response (IVR) calls. As noted previously, several plans place utilization management nurses in hospitals for recruitment into case management, where—in addition to participating in the patient's discharge planning—they refer members to the plan's case management program (if appropriate) and obtain valid phone numbers for future communication.

Plans are searching for ways to improve their outreach. For example, one case study plan conducted an analysis to understand the drivers of member engagement. Based on the findings, it adjusted its outreach activities to successfully increase engagement (see box below).
According to one of our survey respondents, the use of incentives is considered as "maybe [one of the] most effective tools to engage members." Almost half of the health plans (48 percent) use patient incentives within their chronic care management programs, with small plans offering incentives slightly more frequently than larger plans (57 percent compared to 42 percent). Plans use a range of different types of incentives, depending on program component and business segment. Most commonly, incentives are in the form of gift cards and merchandise, followed by lower premiums and cost-sharing (Figure 4.1). These incentives are primarily tied to enrolment into or completion of a program and less often to actual health outcomes (Table 4.1).

Finding the Right Approach—Empirical Analysis of What Works in Patient Outreach

Lack of patient engagement is the most salient challenge health plans' chronic care management programs face. To identify the drivers of member engagement, one plan conducted a multivariate analysis taking into account the time, channel, design of the education material, etc. It developed "recipes" for nurses (e.g., what to say, how to interact) and monitored the results of these different approaches to optimize its messaging. The findings helped the plan to design a member-centric outreach model that reflects time preferences (e.g., "seniors prefer calls at lunch time; for the working population, the nurse has to be more flexible and call after hours"). These changes have resulted in significantly higher engagement rates over the past 2–3 years. Under a current project, the plan is starting to adjust outreach activities and staffing based on seasonal patterns because response rates were found to vary by season.

Figure 4.1. Types of Patient Incentives Offered in Chronic Care Management Programs*



SOURCE: RAND Health Plan Survey, 2011.
*Percentages are based on the 12 plans that offer patient incentives. Incentive types are not mutually exclusive.

Table 4.1. Triggers for Patient Incentives in Chronic Care Management Programs

Trigger	Number (percent)*
Participation in program	9 (75%)
Completion of program	10 (83%)
Clinical outcome	6 (50%)

SOURCE: RAND Health Plan Survey, 2011
*Numbers and percentages are based on the 12 health plans that offer patient incentives.

Plans Strive to Tailor Their Interventions to Patient Needs

Traditionally, the cornerstone of chronic care management programs offered by all plans is telephonic interaction with members to educate them about their disease and counsel them on self-management (see box below). All plans state that they use current behavioral theories in program design to be able "to meet a member where he or she is," i.e., to personalize interventions based on patient readiness to change. Interventions are customized to fit member characteristics and preferences as well. For instance, plans often translate educational materials and letters into multiple languages and have multilingual staff on hand—one case study plan has access to a medical translation line with more than 100 languages/dialects. Another plan developed an online tool for nurses that helps them understand how different ethnic groups view specific diseases and behaviors, and enables them to make culturally sensitive recommendations around, for example, diet, nutrition, and end-of-life issues. For members who do not want to receive phone calls, some plans allow for interaction via email or even in-person in selected practices with embedded chronic care management nurses. Furthermore, members can initiate the conversation and obtain clinical advice by phone or email on a routine and urgent basis as well as educational materials on self-management of conditions and risk factors, and patient self-management tools such as calorie counters.

How Telephonic Interaction with Chronic Care Management Nurses Works

Telephonic interaction with higher-risk members in chronic care management programs is the cornerstone of most chronic care management programs. Typically, after the member has agreed to participate in the program, the first call focuses on getting the member's baseline health status, assessing whether any urgent needs have to be addressed, and identifying issues that the member would like to work on. All nurses are trained in motivational interviewing techniques to work with patients on understanding health issues as well as helping them to articulate health goals and achieve these goals. During the subsequent calls, nurses check on progress towards goals and adherence to treatment. They also educate members about available resources and encourage them to interact with their providers if needed. The length of the program varies by plan, type of program, and member needs.

In terms of the specific services provided in chronic care management programs, the plans offer responses to patient- and caregiver-initiated questions by email or phone (96 percent), patient tools to make decisions about treatment options (83 percent), and a 24-hour hotline available for urgent health care questions (75 percent). Providing these services is not significantly related to plan size (see Table A.10).

In-person coaching by nonclinicians is only offered by 13 percent of plans, —none of which are large plans, while in-person counseling by clinically trained staff is offered by only 33 percent of plans, of which two are small, one is mid-sized, and five are large.

Other services are occasionally offered. For example, 17 percent of plans send clinical data such as lab results directly to the member. Appointment reminders and electronic personal records are offered by 50 and 42 percent of plans, respectively. Some plans limit access to specific services to members in higher risk strata because of efficiency considerations (see Table A.1).

Members in Case Management Have Access to a Broad Range of Support Services

Members in case management typically receive additional services, such as coordination with social care services—home health agencies and meals-on-wheels—and coordination of care between different providers—e.g., between primary care, specialty care, and rehabilitation services. These services are offered by 96 percent and 92 percent of plans, respectively (Table 4.2). More than half of the plans provide in-home services to these high-risk patients.

Table 4.2. Supplemental Health Services Offered Only to Case Management Patients

Services	Number (Percent)
Coordination with social care	24 (96%)
Medical care coordination	23 (92%)
Home assessments	15 (60%)
Home visits	14 (56%)

SOURCE: RAND Health Plan Survey, 2011.

Plans typically distinguish between episodic and complex case management; in both cases a dedicated case nurse is the primary point of contact for a member and is in charge of coordinating all services offered by the plan. Episodic case management supports members during the post-discharge transition, usually after a prolonged hospital stay, to promote recovery and avoid readmission. Upon discharge, the nurse interacts with the member either by phone or in person to check for potential complications, medication adherence, and compliance with post-discharge instructions (dressing changes, mobilization, etc.), as well as to help schedule appointments with providers. Some plans place nurses in selected hospitals to start this interaction even prior to discharge.

Complex case management takes a holistic approach and provides such services as health coaching, remote outbound counseling, and care coordination to the highest-risk members with chronic health problems. The primary nurse first conducts an overall assessment of the health, social, and financial needs of the member and matches the member to resources available through the health plan and the community. The primary nurse is usually supported by multidisciplinary teams, including behavioral health specialists, pharmacists, and social workers who attempt to address nonmedical barriers to care (e.g., funding for transportation or child care during doctor visits).

Patient Care Technologies Increasingly Used to Connect with Patients

Numerous technologies to support chronic care and motivate patients to adopt healthy behaviors are being offered or developed today. They range from tele-medicine solutions to allow remote interaction with providers to remote monitoring products that transmit vital signs and other biometric data from devices like scales, glucose meters, and heart rate monitors to providers. More-recent developments are social media applications that allow patients to communicate with peer groups and other online communities. While patient care technologies are not yet widely adopted, some plans are using or piloting them in their chronic care management programs.

About half of the plans said they used remote monitoring technology (56 percent) and online self-administered behavior change applications (48 percent), while only 16 percent of plans reported using mobile health technology, such as smartphone applications. During the case studies, we learned that plans regard remote monitoring as a promising option, especially after hospital admission, if the patient has a provider who is able to respond to the data feeds.

Multiple plans mentioned upcoming pilots to test new tools, and some were even in the process of launching specific technology applications, including mobile phone applications and tele-medicine on a broader scale. Two plans have started offering secure video chats for higher-risk members.

In general, respondents felt that patient-care technologies showed great promise and that the role of technology would increase in the future. Many plans stated that they expected to expand the use of patient-care technologies within their chronic care management programs and were interested in other plans' experiences, particularly with smartphone and social network applications.

5. Coordinating Plan and Provider Activities

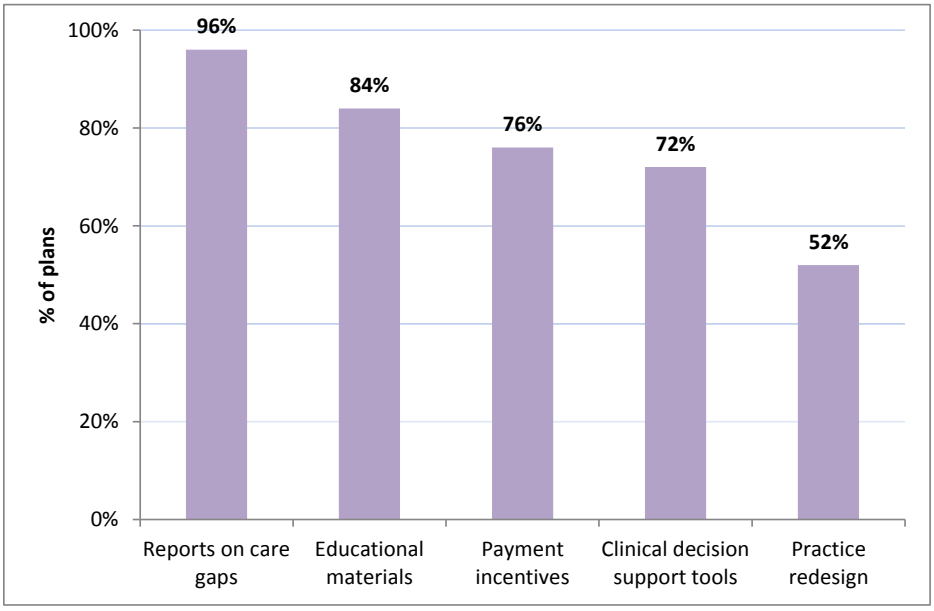
This section portrays how health plans are attempting to coordinate their chronic care management programs with providers. We find that health plans are aware that their programs for managing patients with complex chronic conditions can only succeed when they are coordinated closely with providers, and we observe fundamental changes in how plans attempt to coordinate care. Historically, plans interacted directly with members through telephonic and sometimes in-person communication and kept providers informed about their activities. While this model remains common, it is gradually being replaced by closer integration of provider and plan activities, either through embedding plan staff and tools into the existing practice workflow or through plan-driven practice redesign.

Traditional Plan-Provider Interaction

Health plans' main provider-facing activity is the provision of information on care gaps. Plans have sophisticated algorithms that scan claims and other data, such as lab results, for opportunities to align care with evidence-based recommendations. For example, the algorithms may show that a member is not adhering to his or her medication regimen or has missed a recommended test. Nearly all plans offer such reports to the providers in their networks (Figure 5.1). Among these plans, 84 percent provide reports at regular intervals, 16 percent on demand only, and 12 percent both at regular intervals and on demand.

Four-fifths of plans (84 percent) send educational materials (e.g., provider newsletters) to inform providers about the resources available under the plan's chronic care management programs. One case study plan even organizes educational seminars for provider staff; another sends experts to providers' offices to train staff on improving care for members with chronic conditions. Furthermore, 72 percent of plans make clinical decision support tools available to providers. In some instances, plan staff interact with providers directly about specific cases. For example, in one case study plan, chronic care nurses or medical directors may call a provider directly to discuss complex cases.

Figure 5.1. Methods Used to Engage Providers in Chronic Care Management Programs



SOURCE: RAND Health Plan Survey, 2011.

During the case studies, we learned that plans send additional information to providers, including clinical profiles of patients and practice-level quality and cost reports. In most cases, the information is sent to practices by mail or fax on a monthly basis, but some plans are working on integrated portals that allow providers to generate customized patient- or practice-level reports. In one market, an independent third party has set up a shared provider portal that allows plans to send care gap alerts to providers in a standardized format. At the same time, providers can access patient information and undertake a number of administrative transactions through this portal.

Closer Integration of Provider and Plan Activities

An emerging trend is the closer integration of health plans' programs into the practice workflow. In the words of one survey respondent, integration is essential to clarify "responsibilities without duplicating efforts, losing members in the cracks, stepping on each other's toes, and confusing members and staff." Four-fifths of the plans state that they integrate their chronic care management programs with provider workflow.

In practice, plans use two approaches to attempt to integrate into the provider workflow. The first—done by 24 percent of plans is virtual integration, which happens either telephonically or by using information technology such as electronic medical records (EMRs). Two of the case study plans are in the process of introducing a fully integrated data platform with the ultimate goal of having "a real bidirectional non-paper-based tool to communicate with [providers]."

The second way plans attempt to integrate into provider workflow is to have health plan staff embedded in practices and other care settings. A third of the surveyed plans do this, albeit in different ways. For example, some plans mentioned placing utilization management and behavioral specialists in hospitals to assist members with discharge planning, while another plan places staff in large practices "where they provide information on education on navigating the system, information about the chronic care management program, and on how to self-refer programs." A quarter of the plans integrate both virtually and by in-person practice visits.

Transforming Chronic Care Through Practice Redesign

Health plans across the country are embarking on ambitious efforts not just to support current practice models but to fundamentally transform how practices deliver care. Those efforts focus currently on primary care providers who treat a substantial number of a plan's members, both because there are fixed costs per practice and because providers tend to orient their practice toward the requirements of their largest payer; two case study plans, for example, mentioned thresholds of 300 to 500 members. In most cases, plans encourage practices to adopt patient-centered medical home (PCMH) models that offer continuous management of patient needs, team-based care, and expanded access, including same day appointments, after-hours care, and electronic visits.

Plans offer substantial support in terms of staff resources, tools, and investment for providers in this transition process (see box below). More than half the plans in our sample (52 percent) and all six case study plans provide such support. Staffing support can take the form of assigning

Supporting Practice Redesign

To improve chronic care management, one case study plan provides substantial support to assist primary care physicians in practice transformation: It covers the cost of an external consultant for one year prior to transition, offers free access to internal resources to support practices and up to $20k in subsidies based on milestones. Furthermore, the plan covers electronic medical records vendor fees for the first two years under the new practice model, as EMR adoption is critical for the new model to work, and the license fees for to a medical intelligence tool, as well as user training, that allows PCP to analyze care gaps, ER use, or prescriptions.

In addition, the plan offers back-office support (e.g., nurse does action plan to help practice in the transformation), and embedded case managers who support care coordination of chronically ill and at-risk patients in PCPs treating a large number of the plan's membership.

a coordinator, who is in charge of continuous quality control, to each PCMH, embedding case managers in practices, and having a team of nurses and medical directors visit practices regularly to share data and best practices. For example, one case study plan holds quarterly meetings with its PCMHs to go over performance data and discuss opportunities for improvement. Plan and practice staff then jointly establish an action plan and concrete steps for improvement; for instance, the plan's pharmacist reviews prescriptions for the past 90 days and provides concrete management recommendations.

To make such innovative delivery models sustainable, plans are experimenting with new payment systems. Three-quarters of all plans in our sample stated that they are working on reforming the current fee-for-service approach, and all six case study plans were at various stages of transitioning away from pure fee-for-service payments. The most common payment model under PCMH contracts maintains the fee-for-service system but adds a monthly fee for each chronic care patient and a performance-based bonus that is based on quality scores and efficiency. To date, these contracts have limited downside risk for practices. Some plans have gone much further with payment reform: One case study plan is transitioning most primary care practices to a risk-adjusted capitation scheme (see box below).

An Innovative Payment Approach for PCMHs

One case study plan has developed an innovative payment approach for its medical home practices that supports enhanced primary care by combining risk-adjusted capitation and a performance based bonus payments. The capitation payments cover 90-95 percent of all primary care services, and primary care providers (PCPs) can also receive fee-for-service payments for small procedures that they could alternatively refer to specialists (e.g., small dermatological procedures). The plan estimates that the new payment system raised PCP compensation by 20 percent, and PCPs are eligible for an additional 20 percent performance bonus based on

(1) patient experience (measured by the Consumer Assessment of Healthcare Providers and Systems [CAHPS] surveys)

(2) effectiveness/quality (based on 18 HEDIS measures that assess physicians' performance relative to their peer group)

(3) efficiency/utilization (based on total cost of care relative to peer group; case mix adjusted; including ER utilization, hospital lab, pharmacy, radiology, specialty).

The evaluation of the pilot showed reductions in inpatient admissions (15 percent), ER visits (9 percent), and high-tech imaging (7 percent); savings of $8 per person per month resulted in overall cost savings in spite of the increased PCP compensation.

For primary and specialty care, a few plans have started working with accountable care organizations (ACOs). Typically, the terms of engagement are negotiated with each ACO individually, and contracts depend on the market, the number of members being cared for by specialists, and whether groups are engaged and have the infrastructure in place for pay-for-performance contracts.

6. Chronic Care Management Program Evaluation

We learned that plans conduct regular evaluations of their chronic care management programs. The primary objectives are to determine whether programs meet their goals and targets, and to improve operations. Findings are mainly used to inform business decisions and to report back to employer-purchasers; they are rarely reported to external audiences through, for example, peer-reviewed or trade publications. Plans report largely positive results in terms of cost savings, clinical improvement, and patient satisfaction.[2]

Plans Have Built Evaluation Function

All surveyed plans have developed the capability to conduct regular evaluations of their chronic care management programs. Evaluation is usually divided into internal business intelligence to improve program operations and external reporting to meet client and accreditation requirements. Evaluation for business intelligence purposes, which all plans conduct, includes ongoing assessments of effectiveness and quality of service delivery as well as special projects to inform program changes. It can also include evaluations of pilots, special projects, and new programs. One case study plan, for example, recently evaluated the use of IVR calls compared to live calls and the use of nurses versus coaches to undertake the first outreach call. The studies found that demonstrating clinical knowledge during the first call was critical for member engagement, supporting the use of nurses to enroll members in the program. Internal evaluation at some plans allows the plan to drill down to individual staff members for performance assessment (see box below).

Evaluation of Chronic Care Management Program Staff in One Case Study Plan

Performance reports are generated through a sophisticated system that documents data at the level of the individual chronic care management staff member. Internal reporting provides scorecards for individual staff members that track time allocation and results. For nurses, a report can include, for example, how long it took to get members engaged. Some staff members have an incentive system that is linked to the reported outcomes, so the regular reports keep them informed of their performance relative to the targets. Line managers get aggregated information for their team but can drill down to the individual.

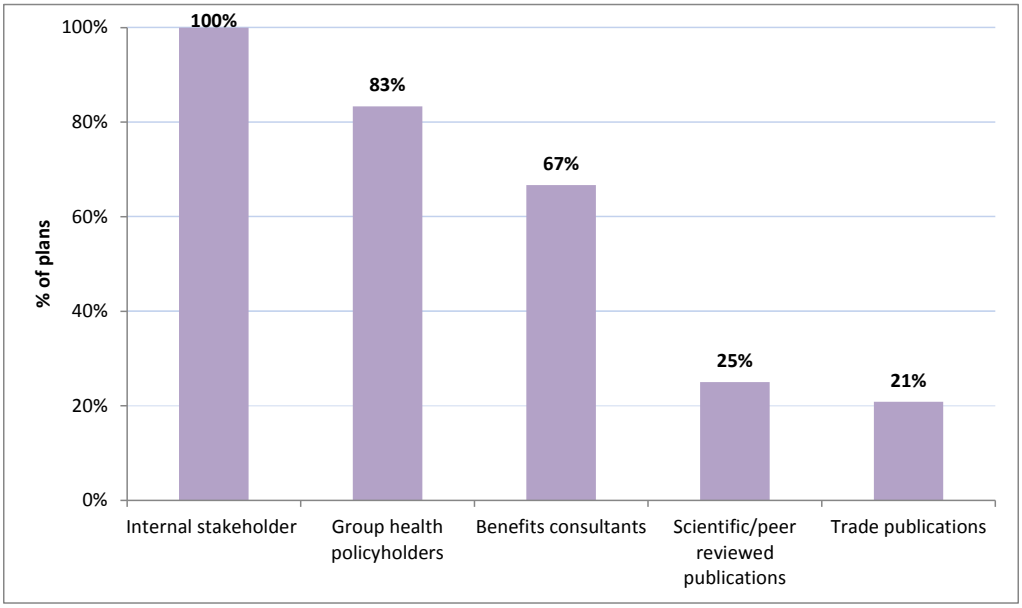
[2] This section reflects evaluation results as reported by health plan staff. They could not be independently verified by the research team.

External reporting on the effect of chronic care management programs focuses on fulfilling contractual reporting requirements to purchasers of coverage and on generation of data for accreditation purposes. Most plans communicate their evaluation results to group policyholders (83 percent) and benefit consultants (67 percent). Typically, standard client reporting includes aggregated statistics on identification, stratification, frequency of outreach calls, member engagement rates, and progress toward quality targets and closing care gaps. In some cases, purchasers can request customized reports with financial information such as return on investment (ROI), and sponsors with performance guarantees can get progress reports throughout the year.

Evaluation Results Are Not Commonly Shared with External Audiences

Only about a quarter of the plans report having published their evaluation results externally in scientific or trade publications (Figure 6.1). As we learned in the case studies, plans are reluctant to pursue publication because of resource constraints and the fact that their evaluation methods are designed to inform continuous quality improvement rather than to meet academic standards. But we were also told that plans are getting more active in this area. One case study plan had instituted an Innovation Office to conduct formal evaluations according to scientific standards, and another had successfully published the evaluation of a pilot in collaboration with a renowned university.

Figure 6.1. Stakeholders to Whom Plans Report Chronic Care Management Program Evaluation Results

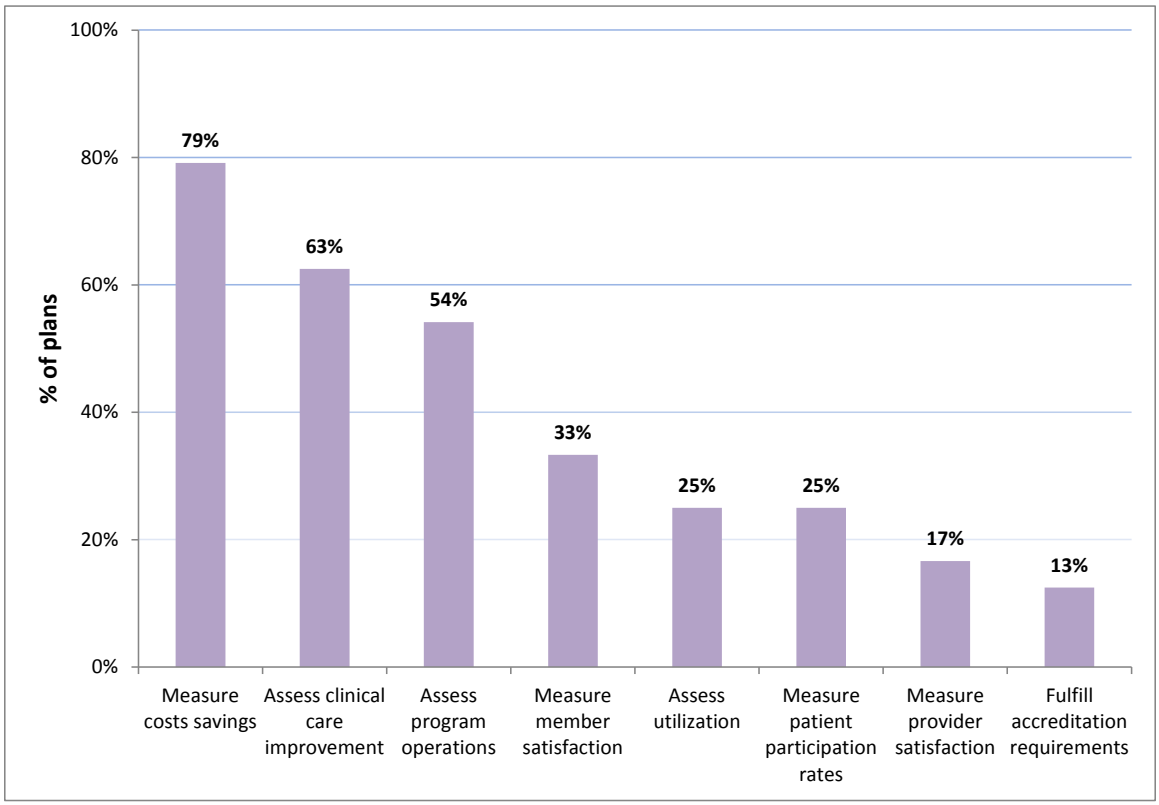


SOURCE: RAND Health Plan Survey, 2011.

Goals of Chronic Care Management Program Evaluation Are in Line with Goals of Chronic Care Management

Similar to the stated goals of the chronic care management programs, the most frequent evaluation goals are to measure cost savings (79 percent of plans) and clinical care improvement (63 percent) (Figure 6.2).

Figure 6.2. Goals of Chronic Care Management Program Evaluations Reported by Plans



SOURCE: RAND Health Plan Survey, 2011.

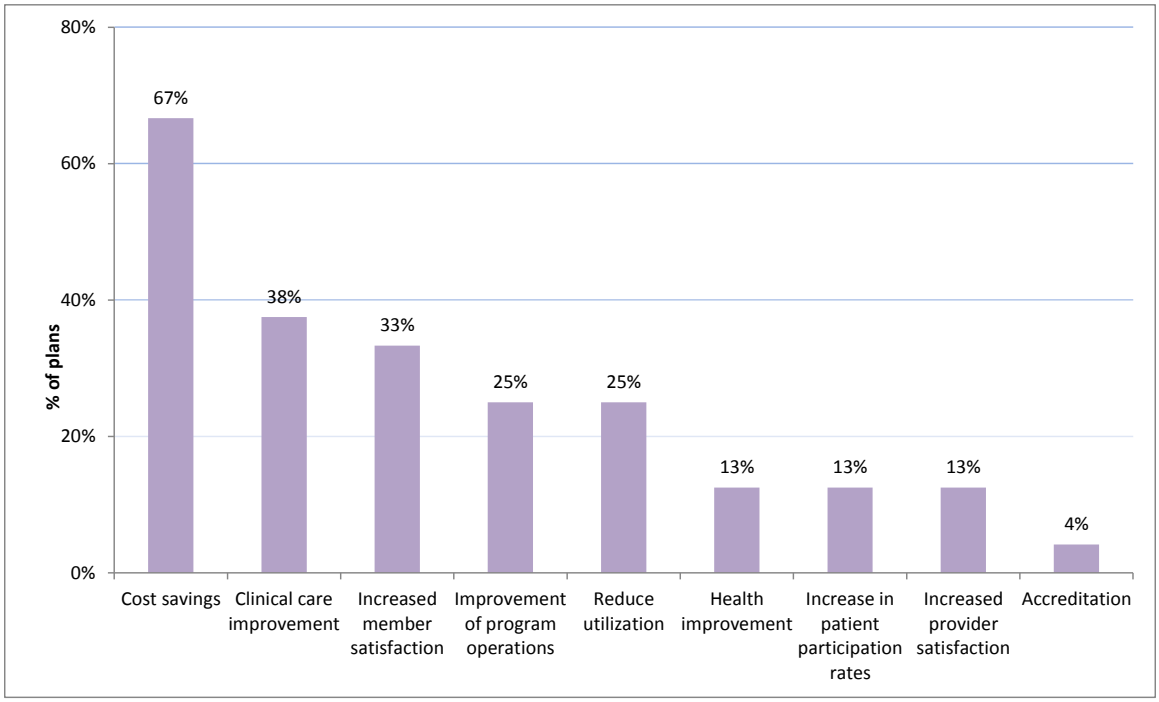
Almost all plans report using operational measures in their evaluations such as engagement, fulfillment of contract requirements, as well as measuring patient satisfaction, utilization, and cost (see Table A.13). Interestingly, while nearly all responding plans (96 percent) measure patient satisfaction and experience, most plans do not state it as a goal; only 33 percent of plans mention assessing patient satisfaction as an explicit goal of their evaluations. The least-common measures are metrics for health-related productivity loss, presenteeism, and absenteeism, with only 13 and 20 percent of plans, respectively, using such measures.

Plans Report That Evaluations of Chronic Care Management Programs Show Positive Results

The majority of plans—67 percent—indicated that their evaluations have shown cost savings (Figure 6.3). For example, two of the case study plans find that across all conditions, their disease management programs have an ROI of about 2:1.

About one-third of plans also report clinical care improvements and increased member satisfaction (38 percent and 33 percent, respectively) (see Table A.14). For example, one case study plan finds that 90 percent of its members are satisfied with the chronic care management programs, and 92 and 98 percent, respectively, agree that the case managers are knowledgeable about the member's health needs and are professional.

Figure 6.3. Results of Chronic Care Management Program Evaluations

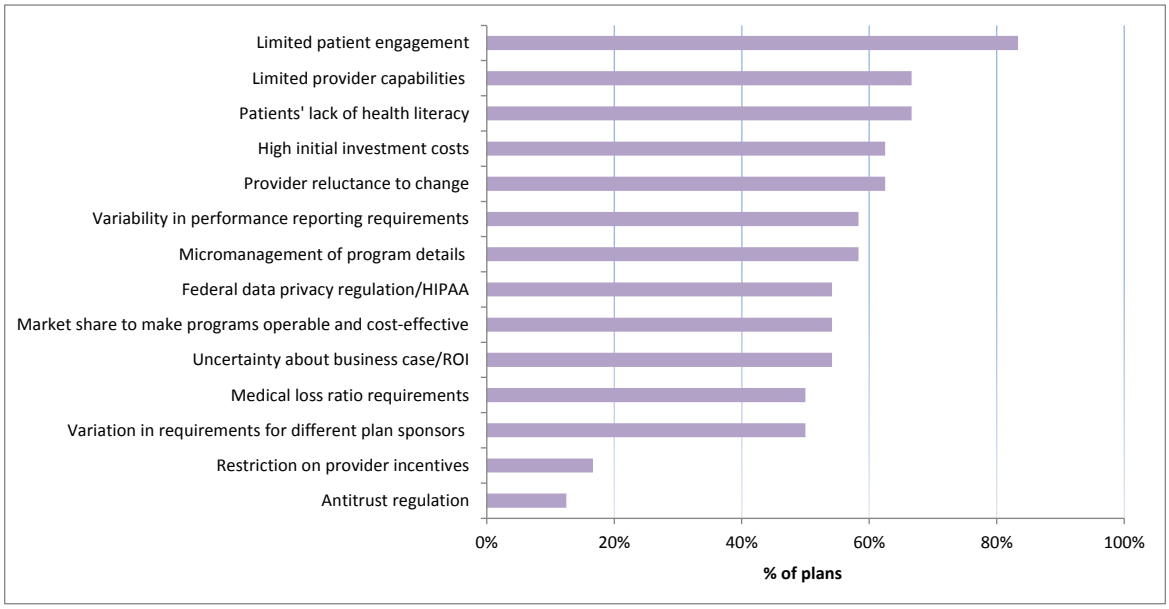


SOURCE: RAND Health Plan Survey, 2011.

7. Challenges to Chronic Care Management Program Success

Plans report multiple obstacles to getting the most out of their chronic care management programs. Patient factors are perceived to be the most challenging, followed by provider factors (Figure 7.1). Other barriers include the complexities of programs stemming from need for coordination with multiple relevant stakeholders, and program costs. The impact of regulations varies; while antitrust regulation is at the bottom of plans' concerns, state and federal privacy rules are considered to be an important obstacle.

Figure 7.1. Factors Reported as Having Moderate or High Impact on Chronic Care Management Program Operations



SOURCE: RAND Health Plan Survey, 2011.

*Factors shown were rated by either a high or low percentage of the surveyed plans as having moderate or high impact on chronic care management program operations.

Lack of Patient Engagement Seen as Crucial Obstacle to Program Success

Plans report that they face challenges to engage members in their chronic care management programs on several levels. As stated earlier, contacting members identified for chronic care management programs is difficult; valid phone numbers are often missing and outreach calls remain unanswered. As a result, only a small share of eligible members ever join a chronic care management program. In one case study plan, for instance, 20 to 25 percent of those identified cannot be reached due to invalid phone numbers, and 25 percent due to nonresponse to calls. Another plan is unable to reach "as many as two-thirds of program-eligible members by phone."

Even if plans can reach members, not all members are willing to join a program, and those who are moderately ill are typically the hardest to engage because they are commonly asymptomatic and do not perceive the need to improve their health, even though they could potentially benefit the most from an intervention.

For members who do join a program, plans report limited patient engagement (83 percent), health literacy (67 percent), and readiness to change (58 percent) as having moderate or high influence on their ability to improve chronic care (see Table A.17).

In response, plans have learned that the "flexibility to tailor interventions to patient needs and readiness" is key to successful chronic care management (71 percent).[3] The timing of outreach matters, as calls immediately after discharge are more successful than those unrelated to hospitalization. One case study plan has also found that it is much easier to engage members who have previously been in touch with the plan compared to those receiving "cold calls." Indeed, the participation rate for the former is between 80–90 percent compared to 20 percent for the latter.

Following these lessons, plans are experimenting with new initiatives. One case study plan has successfully piloted prescripted text messages that are sent every week (similar to a "tip of the week") to members with diabetes to help with adherence and lifestyle change. Another plan is transitioning toward high-touch personalized interactions in its chronic care management programs, making its programs as accessible as possible by extending outreach hours, putting case managers into provider practices and ERs, and experimenting with technology (e.g., chat rooms for younger members).

Providers Remain Skeptical About Plan Efforts

Plans find it difficult to get provider buy-in and support for their chronic care management programs. About two-thirds of plans (63 percent) state that provider reluctance to change moderately or strongly affects chronic care management program operations (see Table A.17). Particularly small practices and providers that are close to retirement resist changing their established practice models. Fifty-seven percent of small plans regard lack of provider acceptance as important (see Table A.16).

Partly, limited provider capabilities are to blame (67 percent of plans), such as lack of patient registries and EHRs, and overextension of staff. Other drivers of provider reluctance to change were negative experiences with capitation models in the 1990s and inherent resistance to population management among a subset of providers who prefer to focus on their traditional role of providing encounter-based medical care to the individual patient.

When asked to describe lessons learned with chronic care management programs, coordination with providers was ranked second overall (38 percent) but was especially important

[3] For the full set of lessons learned by plan size see Table A.18.

for small plans, 71 percent of which stated that it is key to a successful chronic care management program (compared to 17 percent of the large plans). As explored earlier, plans are working on improving coordination through embedding plan staff and implementing collaborative tools and using plan-driven practice redesign. Nevertheless, plans have not yet found a model for working with providers who serve small numbers of the plan's membership, the primary problem being that these individual plans have limited leverage to incentivize practice transformation. It is also difficult for providers to comply with the often varying requests of several payers. One case study plan noted that payers could potentially collaborate through third-party conveners and state-sponsored initiatives to adopt a standardized approach, making it easier for these providers to coordinate with multiple plans' chronic care management activities.

Implementing and Operating Chronic Care Management Programs Is Complex and Costly

Developing a comprehensive chronic care management program is a complex task for health plans. It involves creating the algorithms that screen claims and other data for members that might be program candidates, designing the intervention, and building the infrastructure to deliver it. Vendors that provide some of those components need to be integrated with in-house resources. In fact, "complexity of the program" is stated as a challenge by 46 percent of plans (see Table A.15). Besides maintaining the programs themselves, complexity arises from coordinating programs with employers and providers that may offer overlapping care management services.

Given the substantial upfront investment cost of chronic care management programs, it is not surprising that 54 percent and 63 percent of plans, respectively, mention uncertainty about the business case for programs and high initial investment costs as challenges (see Table A.15). By contrast, the operating costs for chronic care management programs are seen as an obstacle by none of the mid-sized plans, 17 percent of large plans, and 43 percent of the small plans.

Regulatory Environment Impacts Chronic Care Programs in Different Ways

Overall, regulation is not perceived as a major impediment to delivering chronic care programs. At the federal level, "antitrust regulation" and "restrictions on provider incentives" are mentioned by only 13 percent and 17 percent of plans, respectively, as having moderate or high impact. However, "federal data privacy regulation/HIPAA" was mentioned by 54 percent of plans as having moderate or high impact (see Figure 7.1).

"State-level privacy laws" were viewed by 46 percent of plans to have a moderate or high impact overall but can create substantial obstacles in states with very strict regulations. For example, state regulations force one case study plan to document members' consent to participate in its chronic care management programs annually before it can enroll or re-enroll

members. In addition, state restrictions on sharing medical data between providers and the plan, in particular on mental health conditions and HIV/AIDS, can impede care coordination. Another case study plan operates in a state with strict rules regarding incentive schemes, which limit the plan's ability to use incentives to enroll members in chronic care management programs. For example, under these rules the plan "couldn't even give away basketballs from the local college team to kids."

8. Conclusions

Chronic care management has become a standard component of health coverage, as health plans regardless of size, location, and ownership status are including it in their products. Plans usually combine disease management for patients with common chronic conditions with case management for high-risk members, regardless of the underlying condition. The main driver for the strong uptake of chronic care management is that plans see a win-win situation, because they believe that it allows them to both improve care for their most vulnerable members and reduce the cost of coverage. The clearest evidence for plans' trust in chronic care management is that they are including it in their fully insured products, indicating their conviction that they can offer more competitive products when including chronic care management. Another important observation is that plans are bringing chronic care management programs in-house and are integrating different components into the plans' operations.

However, plans are finding it difficult to realize the full potential of chronic care management. Only a subset of members who could potentially benefit from it join a chronic care management program, because plans lack valid contact information and because members are reluctant to engage. At the same time, providers are sometimes ill-equipped to deliver the continuous care management services that are essential for high-quality chronic care, because of an episode-focused payment system and limited technological capabilities. In response, approaches to chronic care management are evolving toward increasing patient-centeredness, targeting of care needs, and coordination with providers.

Moving Toward Patient-Centric Designs

Disease management and case management as the core components of chronic care management have very different legacies. Whereas health plans have long operated case management programs themselves, disease management emerged as a service that specialized vendors offered to self-insured employers. Similarly, the complexity and heterogeneity of members' needs implied that case management was always a customized service led by an experienced nurse or social worker. By contrast, the very idea behind disease management was that adhering to standardized recommendations for medical care and self-management would improve outcomes and reduce cost. It was conceived as a scalable and efficient intervention for large numbers of patients. While our results show that health plans are bringing disease management in-house to the degree that they can maintain this service efficiently, they commonly continue to operate disease and case management as two separate programs. Based on our case study results, however, plans are investing heavily in merging the two components into a consolidated chronic care management program, which requires creating a common data

platform, aligning processes, and coordinating staff. The hope is that this new structure will be clearer and more accessible for members and prevent both duplication of services and members falling through the cracks.

Because early disease management companies typically focused on selected conditions, disease management was historically disease-focused. Today, plans are moving from this focus on distinct conditions to a patient-centric approach that addresses multiple chronic conditions and health risks. The vast majority of plans either offer an integrated chronic care management program that covers a member's needs across chronic conditions or operate a complex chronic condition program for members with multiple diseases. For example, according to one plan, "the majority of chronically ill have depression," and "the health plan's job is also to find out what comes first and deal with that."

In member engagement and program delivery, the emerging message is "one size does not fit all." For example, one plan mentioned that the younger generation is "often so flexible that even a computer is too static and the best way to reach them is a mobile device." Thus, plans are using an increasing variety of communication channels, such as social media applications, video chat, and interactive voice recognition calls on the one hand, and in-person outreach through their member services offices on the other, to interact with program candidates and participants. Some plans are even thinking of more holistic approaches that involve the wider patient environment, including family, community, and workplace. For example, one plan that covers a Native American population is piloting a program in which it places a nurse on a reservation to provide "face-to-face services" not only to patients but also to tribal leaders. Another plan is actively promoting "more specialized employer-based wellness and chronic disease programs that involve working with the employer groups." Interventions are driven by members' preferences regarding which issue to handle first and are tailored to their psychological states, based on theories of behavior change. The use of incentives to promote program engagement is being explored but is not yet commonplace.

Increasing the Focus of Interventions

Chronic care management aims at stabilizing patients with chronic disease and preventing exacerbations. Like any preventive interventions, those programs can only be effective if they target the right opportunity, and can only be cost-effective if they match the resources invested to the magnitude of the opportunity. We learned that legacy programs followed a similar path: identification of members, outreach, and program intensity (e.g., telephonic versus mailings) were mostly driven by past utilization of medical care, in particular hospital care, and were fairly standardized. But we were told that programs have evolved toward greater differentiation and sophistication in matching interventions to opportunities, not just in terms of greater patient-centricity as described above. As one plan put it, "the difference is what we do with the data—

we use information such as markers for pre-diabetics to predict the future." Typically, this new approach builds on the following components:

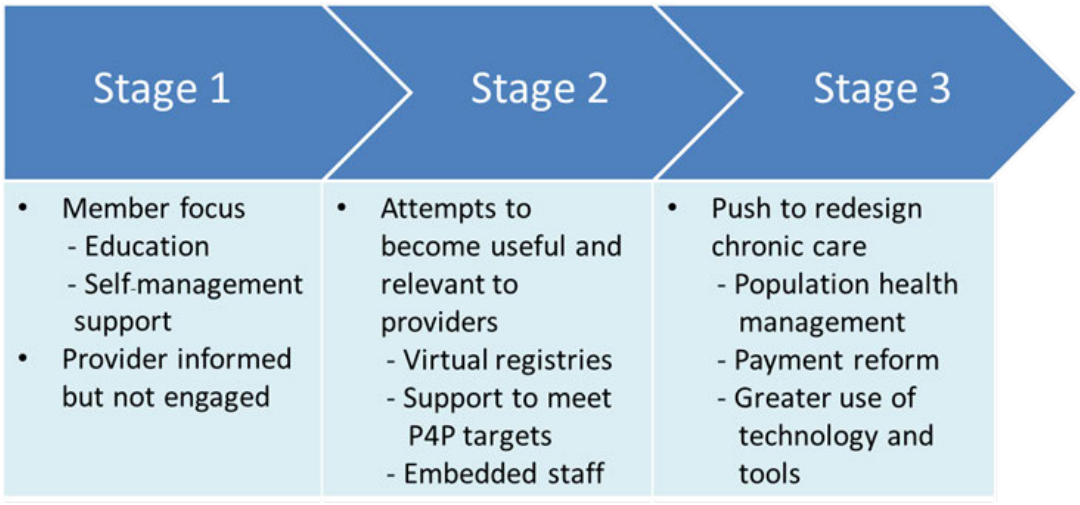
- Analysis of past utilization, combined with predictive modeling to identify members at risk of exacerbation and prioritize them for proactive interventions
- Identification models that use a greater range of data, such as electronic lab results and data from remote monitoring devices
- Purpose-built models that predict the risk of different events, such as the risk of hospital admissions and the risk of high overall resource use
- Targeting specific care gaps, such as lack of medication adherence, that have a proven link to better outcomes
- Greater differentiation of intervention intensity—for example, using case management tools and in-person interactions for higher-risk members with distinct conditions.

Technology appears to be part of the solution. Indeed, plans express enthusiasm for the potential of remote monitoring, telemedicine, and smartphone applications in their chronic care management programs, even though these technologies have yet to be widely implemented. The challenge, as many survey respondents emphasized, is the existence of many new technologies with often only limited evidence on their impact. To that effect, 36 percent of plans stated that patient care technology applications were generally effective in achieving the program objectives. But 20 percent of plans emphasized that the effectiveness of patient care technology applications depended on the match between the technology, the program's objective, and the targeted population. For example, one respondent said that they had dropped text messaging due to the lack of uptake by the chronic care population but they saw positive outcomes from the use of remote monitoring for heart failure patients. The remainder of plans (44 percent) stated that either patient care technology applications were not effective in achieving the program objectives or that there is not enough evidence to assess their effectiveness.

More Provider Involvement Through Integration with and Redesign of Practices

An important finding of our study is that health plans' approaches to improving care for members with chronic conditions are undergoing a fundamental transformation, as Figure 8.1 illustrates.

Figure 8.1. The Changing Face of Health Plans' Approaches to Chronic Care Management



Early attempts to support the chronically ill focused on interaction with members in the form of telephonic and sometimes in-person counseling and education (Stage 1). If gaps in care were discovered, members were encouraged to bring them up with their providers. Plans would notify physicians if a member enrolled in a program and alert them of care gaps, but interactions were limited. Realizing the limited impact of attempting to improve chronic care without engaging providers—as one survey respondent stated, "getting provider engagement would really strengthen outcomes"—plans tried to make their programs more useful and relevant for providers by providing services that directly add value to practice operations (Stage 2). For example, some plans maintain virtual registries of patients with chronic diseases like diabetes, so that practices can easily review how well care is aligned with clinical guidelines. At the same time, such tools help physicians meeting pay-for-performance targets. Other plans embed staff in practices to serve as a liaison with the chronic care program for both members and practice staff.

But we also learned that health plans are increasingly realizing that programs they run themselves will have limited impact, because care decisions ultimately remain in the hands of providers. While they are continuing to offer such programs, many health plans are now going one step further by attempting to not just support current practice models but to fundamentally transform how practices deliver care, focusing on primary care providers who treat a substantial number of a plan's members (Stage 3). All six of our case study plans, for example, worked with practices to adopt PCMH models that offer continuous management of patient needs, team-based care, and expanded access—including same-day appointments, after-hours care, and electronic visits. Several case study plans were experimenting with gain-sharing arrangements, such as accountable care organization–type contracts. Plans want to "provide a sliding slope to facilitate change." Redesign efforts are flanked by changes to the payment system and substantial investment to support practices' transition. These can include free consulting support, financial

assistance in the form of subsidies, as well as coverage of license fees for medical intelligence tools and EMRs.

Lastly, an overarching theme that emerges throughout the study is that "health plans cannot do it alone" and need to bring "all stakeholders into the conversation." Programs can only be successful if they reflect provider needs and are coordinated with their efforts. Similarly, the wider community of which the member is a part has to get involved to raise health awareness and to facilitate individual behavioral change. This entails engaging and collaborating with employers—as one plan put it, "forward-thinking plan sponsors serve as good partners" as well as providers, families, and neighborhoods.

Appendix A. Detailed Results from Survey

Table A.1. Profit Status by Plan Size

	<200,000 (N=7)	200,000 –1M (N=6)	>1 M (N=12)
For-profit	3 (43%)	0 (0%)	3 (25%)
Not-for-profit	4 (57%)	5 (83%)	8 (67%)
Both	0 (0%)	1 (17%)	1 (8%)

Table A.2. Type of Delivery System by Plan Size

	<200,000 (N=7)	200,000 – 1 M (N=6)	> 1M (N=12)
Integrated delivery system	3 (43%)	1 (17%)	2 (17%)
Non-integrated delivery system	3 (43%)	5 (83%)	8 (67%)
Mixed	1 (14%)	0 (0%)	2 (17%)

Table A.3. Origin of Plan by Plan Size

	<200,000 (N=7)	200,000 – 1 M (N=6)	> 1M (N=12)	All Plans (N=25)
Multi-specialty group practice	1 (14%)	0 (0%)	0 (0%)	1
Hospital organization	1 (14%)	0 (0%)	1 (8%)	2
Health insurance company	2 (29%)	6 (100%)	9 (75%)	17
Other (e.g. mixed origin)	3 (43%)	0 (0%)	2 (17%)	5

Table A.4. Health Plans with Disease Management Programs for Selected Chronic Conditions by Plan Size

	<200,000 (N=7)	200,000 –1M (N=5)	>1M (N=12)	All Plans (N=24)
Asthma	6 (86%)	5 (100%)	10 (83%)	21 (88%)
Diabetes	7 (100%)	5 (100%)	9 (75%)	21 (88%)
CHF	6 (86%)	5 (100%)	9 (75%)	20 (83%)
CAD	5 (71%)	5 (100%)	9 (75%)	19 (79%)
COPD	4 (57%)	5 (100%)	8 (67%)	17 (71%)
Multiple chronic conditions	3 (43%)	0 (0%)	11 (92%)	14 (58%)
Depression	4 (57%)	2 (40%)	6 (50%)	12 (50%)

Table A.5. Wording Used by Health Plans to Report Reasons for Implementing Chronic Care Management Programs

Theme	Examples of Words Relating to These Themes	Number (percent)*
Cost containment	Reduce cost, cost-effectiveness; increase productivity, affordability of care; manage cost trends . . .	24 (96%)
Market demands	Purchaser requests; increase enrollment by large employers; patient demands; employer groups realize importance and foster development of programs; change in benefit design; accreditation demands; competition; provider demands; employer group broker demands . . .	23 (92%)
Patient health	Reduce number of patients with hypertension, prevent exacerbation of chronic diseases, promote well-being, slow progression of disease, help keep members healthy or return them to health and allow for healthy aging . . .	19 (76%)
Clinical care	Improve quality of care; decrease care gaps; provide high quality of care; get physicians to follow evidence-based guidelines; coordinate care; promote cooperation and collaboration of providers; risk management; patient-centered approach; improve clinical measures . . .	16 (64%)
Patient empowerment	Improve patients' self-management; empower to self-manage,; promote member engagement; motivate members to take accountability . . .	11 (44%)
Demographic changes	Aging population . . .	8 (32%)
Patient satisfaction	Improve member satisfaction, improve quality of life . . .	5 (20%)

NOTE: When comparing small and mid-sized plans' reasons for implementing chronic care management programs, we obtain a t-statistic of –1.82 (p=0.11). Similarly, comparing small and large plans, and mid-sized and large plans, the t-statistic is respectively –1.22 (p=0.26) and 0.81 (p=0.47). When comparing non-profit and for-profit plans' reasons for implementing chronic care management programs, we obtain a t-statistic of –1.33 (p=0.22). Finally, when comparing integrated versus non-integrated plans, the t-statistic is –1.37 (p=0.20).

* This represents the number and percentage of plans that mention each theme as a central goal of their chronic care management.

Table A.6. Reasons for Implementing Chronic Care Management Programs as Reported by Health Plans, by Plan Size

	<200,000 (N=7)	200,000 – 1 M (N=6)	>1 M (N=12)
Cost growth	7 (100%)	6 (100%)	11 (92%)
Market demands	6 (86%)	6 (100%)	11 (92%)
Patient health	5 (71%)	6 (100%)	9 (75%)
Clinical care	4 (57%)	3 (50%)	9 (75%)
Patient empowerment	1 (14%)	3 (50%)	7 (58%)
Lower utilization	2 (29%)	4 (67%)	4 (33%)
Demographic changes	2 (29%)	2 (33%)	4 (33%)
Patient satisfaction	2 (29%)	1 (17%)	2 (17%)

Table A.7. Reasons for Implementing Chronic Care Management Programs as Reported by Health Plans, by Profit Status

	For-profit (N=6)	Non-profit (N=17)	Both (N=2)
Cost growth	6 (100%)	16 (94%)	2 (100%)
Market demands	5 (83%)	16 (94%)	2 (100%)
Patient health	5 (84%)	13 (77%)	1 (50%)
Clinical care	4 (67%)	11 (65%)	1 (50%)
Patient empowerment	2 (33%)	8 (47%)	1 (50%)
Lower utilization	1 (17%)	8 (47%)	1 (50%)
Demographic changes	2 (33%)	4 (24%)	2 (100%)
Patient satisfaction	0 (0%)	5 (29%)	0 (0%)

Table A.8. Reasons for Implementing Chronic Care Management Programs as Reported by Health Plans, by Type of Delivery System

	Integrated (N=5)	Non-Integrated (N=17)	Other (N=3)
Cost growth	4 (80%)	17 (100%)	3 (100%)
Market demands	3 (60%)	17 (100%)	3 (100%)
Patient health	3 (60%)	13 (76%)	3 (100%)
Clinical care	4 (80%)	10 (59%)	2 (67%)
Patient empowerment	1 (20%)	9 (53%)	1 (33%)
Lower utilization	2 (40%)	6 (35%)	0 (0%)
Demographic changes	2 (40%)	6 (35%)	0 (0%)
Patient satisfaction	1 (20%)	4 (24%)	1 (33%)

Table A.9. Methods Used to Identify Patients for Chronic Care Management Programs

	DMP	Case Management	Wellness
Retrospective/medical claims	24 (96%)	24 (96%)	15 (60%)
Retrospective/pharmacy claims	23 (92%)	22 (88%)	11 (44%)
Retrospective/laboratory claims	24 (96%)	21 (84%)	13 (52%)
Predictive/ medical claims	22 (88%)	19 (76%)	8 (32%)
Predictive/pharmacy claims	21 (84%)	19 (76%)	7 (28%)
Predictive/laboratory claims	19 (76%)	19 (76%)	8 (32%)
HRA	18 (72%)	17 (68%)	20 (80%)
Patient-self referral	23 (92%)	23 (92%)	20 (80%)
Provider referral	23 (92%)	25 (100%)	15 (60%)

Table A.10. Services Offered, by Plan Size

Type of Service	All Plans	<200,000 (N=6)[a]	200,000 – 1M (N=6)	>1M (N=12)
Direct Patient Communication				
Live responses to patient and/or caregiver initiated questions				
Routine (i.e., during regular business hours) communication with patients	24 (100%)	6 (100%)	6 (100%)	12 (100%)
Urgent (i.e., hotline available 24 hours) communication with patients	18 (75%)	3 (50%)	5 (83%)	10 (83%)
Responses to patient- and caregiver-initiated questions by email/phone follow-up	23 (96%)	6 (100%)	6 (100%)	11 (92%)
Remote outbound counseling by clinically trained staff	24 (100%)	6 (100%)	6 (100%)	12 (100%)
Remote outbound coaching by nonclinician staff	8 (33%)	2 (33%)	3 (50%)	3 (25%)
In-person counseling by clinically trained staff	8 (33%)	2 (33%)	1 (17%)	5 (42%)
In-person coaching by nonclinicians	3 (13%)	1 (17%)	2 (33%)	0 (0%)
Care coordination	24 (100%)	6 (100%)	6 (100%)	12 (100%)
Appointment reminders	12 (50%)	3 (50%)	4 (67%)	5 (42%)
Provision of Tools and Information to Patients				
Educational material for patient self-management of conditions and risk factors	24 (100%)	6 (100%)	6 (100%)	12 (100%)
Patient self-management tools (e.g., calorie counters)	24 (100%)	6 (100%)	6 (100%)	12 (100%)
Patient tools to make decisions about treatment options	20 (83%)	5 (83%)	5 (83%)	10 (83%)
Clinical data sent to patients	4 (17%)	2 (33%)	0 (0%)	2 (17%)
Electronic personal health records	10 (42%)	3 (50%)	2 (33%)	5 (42%)

NOTE: When comparing the services offered by small and mid-sized plans, we obtain a t-statistic of –0.27 (p=0.79). Similarly, comparing small and large plans, and mid-sized and large plans, the t-statistic is, respectively, –0.50 (p=0.62) and 0.67(p=0.51).

[a] One small plan did not answer this question in the survey.

Table A.11. Services Offered to Specific Chronic Care Management Subgroups

Type of Service	Percent of Plans Offering this Service	Of the Plans Offering this Service, Percent that Offer it to All Chronic Care Management Members	Of the Plans Offering this Service, Percent that Offer It Only to Intermediate-High Risk Members[a]
Direct Patient Communication			
Live responses to patient- and/ caregiver initiated questions			
Routine (i.e., during regular business hours)	24 (100%)	23 (96%)	1 (4%)
Urgent (i.e., hotline available 24 hours)	18 (75%)	17 (94%)	1 (6%)
Responses to patient- and caregiver-initiated questions by email/phone follow-up	23 (96%)	22 (96%)	1 (4%)
Remote outbound counseling by clinically trained staff	24 (100%)	10 (42%)	14 (58%)
Remote outbound coaching by non-clinician staff	8 (33%)	4(50%)	4(50%)
In-person counseling by clinically trained staff	8 (33%)	6 (75%)	2 (25%)
In-person coaching by nonclinicians[b]	3 (13%)	1 (33%)	1 (33%)
Care coordination	24 (100%)	13 (54%)	11 (46%)
Appointment reminders	12 (50%)	8 (67%)	4 (33%)
Provision of Tools and Information to Patients			
Educational material for patient self-management of conditions and risk factors	24 (100%)	23 (96%)	1 (4%)
Patient self-management tools (e.g., calorie counters)	24 (100%)	20 (83%)	4 (17%)
Patient tools to make decisions about treatment options[c]	20 (83%)	18 (90%)	1 (5%)
Clinical data sent to patients (e.g., lab results)	4(17%)	4 (100%)	
Electronic personal health records	10 (42%)	9 (90%)	1 (10%)

[a] Risk-levels are as defined by the plans themselves; therefore, they may not be uniform across plans.
[b] Of the plans reporting "In-person coaching by nonclinicians" (N=3), one plan makes it available to only low risk levels.
[c] Of the plans reporting "Patient tools to make decisions about treatment options" (N=20), one plan makes it available to only low, low-to-intermediate, and intermediate levels.

Table A.12. Goals of Chronic Care Management Program Evaluations, by Plan Size

	<200,000 (N=7)	200,000 – 1M (N=5)	> 1 M (N=12)	All Plans (N=24)
Measure costs savings	5 (71%)	3 (60%)	11 (92%)	19 (79%
Assess clinical care improvement	3 (43%)	2 (40%)	10 (83%)	15 (63%
Assess program operations	4 (57%)	2 (40%)	7 (58%)	13 (54%
Measure member satisfaction	3 (43%)	0 (0%)	5 (42%)	8 (33%
Assess utilization	1 (14%)	1 (20%)	4 (33%)	6 (25%
Measure patient participation rates	3 (43%)	1 (20%)	2 (17%)	6 (25%
Measure provider satisfaction	3 (43%)	0 (0%)	1 (8%)	4 (17%
Fulfill accreditation requirements	3 (43%)	0 (0%)	0 (0%)	3 (13%

Table A.13. Measures Used in Program Evaluation, by Plan Size

	<200,000 (N=7)	200,000 - 1M (N=5)	> 1 M (N=12)	All Plans (N=24)
Clinical quality measures	7 (100%)	4 (80%)	12 (100%)	23 (96%)
Operational	7 (100%)	5 (100%)	11 (93%)	23 (96%)
Patient satisfaction/experience	7 (100%)	4 (80%)	12 (100%)	23 (96%)
Utilization	7 (100%)	4 (80%)	11 (92%)	22 (92%)
Cost	6 (86%)	5 (100%)	10 (83%)	21 (88%)
Clinical outcomes measures	5 (71%)	3 (60%)	10 (83%)	18 (75%)
Clinical disease control measures	6 (86%)	4 (80%)	6 (50%)	16 (67%)
Provider satisfaction/experience	6 (86%)	3 (60%)	7 (58%)	16 (67%)
Absenteeism	2 (29%)	0 (0%)	3 (25%)	5 (21%)
Presenteeism	2 (29%)	0 (0%)	1 (8%)	3 (13%)
Other	1 (14%)	0 (0%)	0 (0%)	1 (4%)

Table A.14. Results of Program Evaluations, by Plan Size

	<200,000 (N=7)	200,000 - 1M (N=5)	> 1 M (N=12)	All Plans (N=24)
Cost savings	3 (50%)	3 (60%)	10 (83%)	16 (67%)
Clinical care improvement	3 (50%)	1(20%)	5 (42%)	9 (38%)
Increased member satisfaction	2 (33%)	1(20%)	5 (42%)	8 (33%)
Improvement of program operations	2 (33%)	2 (40%)	2 (17%)	6 (25%)
Reduce utilization	2 (33%)	0 (0%)	4 (33%)	6 (25%)
Health improvement	1 (17%)	1 (20%)	1 (8%)	3 (13%)
Increase in patient participation rates	0 (0%)	1 (20%)	2 (17%)	3 (13%)
Increased provider satisfaction	1 (17%)	0 (0%)	2 (17%)	3 (13%)
Accreditation	1 (17%)	0 (0%)	0 (0%)	1 (4%)

Table A.15. Challenges for Overall Success of Chronic Care Management Programs

Theme	Words Related to Theme	Number (percent)
Patient readiness to change	Reluctance to change behavior, life-style changes, sustainable patient engagement,…	14 (58%)
Program complexity	Coordination with other activities, health plan unable to make big change by itself: need interaction and collaboration with providers, communities, etc.; reduce unintended overlap with different stakeholder (e.g. provider, nurses within plan) activities, vendor management, some programs too difficult to manage, coordination between DMP and case management, need for more integration of multiple databases, outsourcing creates significant complexity (interfacing with vendors takes time), differing physician offices capabilities, consolidating is sometimes a challenge	11 (46%)
Contacting patient	Incorrect phone numbers, patient identification, having the right tools to meet the patients where they are when they want . . .	10 (42%)
Provider acceptance	Provider reluctance	8 (33%)
Program cost	Investment and operation, necessary investment in technology (e.g. databases), ROI, cost savings, challenge to use a meaningful measure of ROI and attribute outcomes to chronic care management, resources . . .	5 (21%)
Unrealistic purchaser expectations	Purchasers want short term outcomes and don't understand what is really important, improve communication of program to members and employers, some outrageous claims by disease management companies . . .	3 (13%)
Other	Inadequate understanding of the realms of chronic care management by purchasers; holistic patient-centric approach (not only condition centered); for specific diseases it is harder than for others (diabetes harder than heart failure); small purchaser groups- difficult to come up with numbers for them; describing our program to purchasers	6 (26%)

Table A.16. Challenges for Overall Success of Chronic Care Management Programs, by Plan Size

	<200,000 (N=7)	200,000 –1M (N=5)	> 1 M (N=12)
Patient readiness to change	5 (71%)	3 (60%)	6 (50%
Program complexity	3 (43%)	2 (40%)	6 (50%
Contacting patient	2 (29%)	2 (40%)	6 (50%
Provider acceptance	4 (57%)	2 (40%)	2 (17%
Program cost	3 (43%)	0 (0%)	2 (17%
Unrealistic purchaser expectations	0 (0%)	1 (20%)	2 (17%
Other	2 (29%)	1 (20%)	3 (25%

NOTE: When comparing small and large plans, the t-value is –2.55 (p=0.019). The comparison between small and mid-sized plans was not significant (t= –1.19; p= 0.249).

Table A.17. Factors Reported to Have Moderate to High Impact on Chronic Care Management Program Operations

Regulatory Factors	Number (percent)*
Federal data privacy regulation/HIPAA	13 (54%)
Variation in requirements for different plan sponsors (e.g. Medicare, Medicaid)	12 (50%)
Medical loss ratio requirements	12 (50%)
State-level privacy laws (e.g., restricted access to mental health diagnoses)	11 (46%)
Restrictions to federally administered plans (e.g. pre-approval of communication with patients for Medicare)	9 (38%)
Federal restriction on patient/member incentives	9 (38%)
State-level restrictions on patient/member incentives	9 (38%)
State regulatory restrictions other than those listed above	9 (38%)
Variation in state regulation	6 (25%)
Nondiscrimination regulation (e.g., ADA, GINA)	5 (21%)
Restrictions on provider incentives	4 (17%)
Antitrust regulation	3 (13%)
Other regulatory factors	3 (13%)
Provider Factors	
Limited provider capabilities (e.g., lack of EHR)	16 (67%)
Provider reluctance to change	15 (63%)
Duplication of services by providers	10 (42%)
Other provider factors	5 (21%)
Patient Factors	
Limited engagement	20 (83%)
Lack of health literacy	16 (67%)
Lack of access to personal health records	5 (21%)
Other patient factors	4 (17%)
Business Considerations	
High initial investment costs	15 (63%)
Uncertainty about business case/ROI	13 (54%)
Market share to make programs operable and cost-effective	13 (54%)
Other business factors	4 (17%)
Purchaser Requirements	
Micromanagement of program details (e.g., number of reminder letters to be sent)	14 (58%)
Variability in performance reporting requirements	14 (58%)
Purchaser coalition requirements	8 (33%)
Person in purchaser organization who must approve activities in chronic care management	7 (29%)
Other purchaser factors	5 (21%)

*Percentage of surveyed plans that rated environmental factors as having moderate or high impact on chronic care management program operations.

Table A.18. Lessons Learned about Chronic Care Management Programs, by Plan Size

	<200,000 (N=7)	200,000 – 1M (N=5)	> 1 M (N=12)	All Sizes (N=24)
Flexibility to tailor interventions to patient needs/readiness	7 (100%)	3 (60%)	7 (58%)	17 (71%)
Coordinate with providers	5 (71%)	2 (40%)	2 (17%)	9 (38%)
Communication with stakeholders	0 (0%)	1 (20%)	3 (25%)	4 (17%)
Pilot testing/prioritizing programs	0 (0%)	1 (20%)	1 (8%)	2 (8%)
Coordination with other efforts of purchasers and employers	0 (0%)	0 (0%)	2 (17%)	2 (8%)
Patient-centric approach	0 (0%)	0 (0%)	1 (8%)	1 (4%)
Other*	1 (14%)	2 (40%)	0 (0%)	3 (13%)

*Working with vendors; technology and data availability for staff are critical; not all has to be done by a physician (team of nurses, social workers, etc. can do a lot).

Table A.19. Type of Patient Care Technology Used in Chronic Care Management Programs, by Plan Size

	<200,000 (N=7)	200,000 – 1M (N=6)	> 1 M (N=12)	All Plans (N=25)
Remote monitoring	5 (71%)	5 (83%)	4 (33%)	14 (56%)
Online self-administered behavior change applications	5 (71%)	2 (33%)	5 (42%)	12 (48%)
Mobile health technology (e.g., smartphone applications)	2 (29%)	0 (0%)	2 (17%)	4 (16%)
Online social network or community applications	1 (14%)	0 (0%)	2 (17%)	3 (12%)
Automated medication dispensers	1 (14%)	0 (0%)	1 (8%)	2 (8%)
Personal Emergency Response Systems (e.g., Lifeline)	1 (14%)	0 (0%)	0 (0%)	1 (4%)
Telemedicine	1 (14%)	0 (0%)	0 (0%)	1 (4%)

Appendix B. Case Studies

Health Plan 1

Plan Description

Health Plan 1 (HP1) is a small regional health plan that operates not for profit. It contracts with providers for services and does not own or operate any health care facilities. While HP1 offers self-insured plans and third party administration (TPA) services, the majority of its commercial population of nearly 100,000 members in the individual to the large group market are fully insured. The high proportion of fully insured patients is perceived as providing greater flexibility to innovate in chronic care: As one survey respondent put it, "this makes us more flexible, we don't have to go back to the employers to check what they find acceptable, but we can manage the population as if it were our own." HP1 also offers Medicare and Medicaid plans, including a Medicare Advantage Plan serving nearly 20,000 members.

Chronic Care Management Approach

Services, Management, and Design of Programs

HP1's chronic care management programs aim at "assisting members in achieving optimal health." The key drivers motivating the creation of the programs were the desire to optimize patient health, improve risk management, and reduce cost growth, as well as increasing market demand and accreditation requirements, such as NCQA standards.

HP1 offers disease management, case management, pharmacy benefit management (PBM), and wellness programs within its chronic care management programs. HP1 has elected to develop a standard approach to chronic care management and extends the same services to all its members, even to the (small) TPA segment of its population. In addition, HP1 occasionally adds customized programs, such as for palliative care or high ER utilization, if requested by large employers.

Today, most chronic care management program components are provided in house. Only radiology benefits management (RBM), pharmacy benefits management and a polypharmacy program for people with more than nine medications are outsourced, mostly because of lack of sufficient scale to maintain an in-house program efficiently. HP1 views the in-house solution as advantageous because of lower operational complexity and better coordination between programs. As one survey respondent put it: "Providing all the programs in-house allows us to look at the overall cost reduction—not

only, for example, at savings for pharmaceuticals. We understand that it can be acceptable to have higher medication costs if this translates into long-term savings in hospital costs." In-house provision is also seen as offering better value, even though it was acknowledged that HP1 "might not always have the best in class program." Disease management, for example, had been outsourced for six years until program cost became unsustainably high. In 2010, HP1 invested in the development of an in-house disease management program that now operates at about one-sixth of the vendor's costs.

Dedicated disease management programs that offer disease-specific information to patients are in place for the five most common chronic conditions (CAD, CHF, diabetes, asthma, and COPD). Members with several conditions are enrolled in all applicable programs. Other communication channels, such as emails and text messaging, have been piloted or are under consideration.

The highest-risk patients are enrolled into the case management program, irrespective of their underlying condition(s). Case management is seen essentially as "a more intense extension of disease management" for high-risk members, in which the case management team interacts on a personal basis either through phone calls or, in some cases even face-to-face meetings. It takes a holistic approach; it is not disease-specific but member-centric, and it provides services such as health coaching, remote outbound counseling, and care coordination by clinically trained staff. The case management team has primary case management nurses (who handle between 50 and 60 cases), complex case management nurses (who handle about 20 more difficult cases), and special intervention nurses for short-term cases (e.g. transplants, IV antibiotics). Specialized case management staff screen for and manage psychosocial and behavioral health issues, which are common in chronically ill patients. As one survey respondent remarked, "The majority of chronically ill have depression. The health plan's job is also to find out what comes first and deal with that."

Social workers at the plan attempt to address nonmedical barriers to care (e.g., funding for transportation or child care during the doctor visit) and inform participants about community resources (e.g. churches, community services, charities), because only "after you bring down some of these barriers that they can sit back and follow your information on the medical issues." Furthermore, HP1 has contracted with a team of external nutritionists who do home visits and evaluate "what is in the house."

Members of the chronic care management team are accessible for members with chronic disease during regular business hours and follow up on phone or email inquiries. HP1 also offers tools for patient self-management decision support.

Patients with hospital admissions for heart failure can be enrolled in a remote monitoring program for six months post-discharge. A local home health agency monitors such vital signs as weight, heart rate, and blood pressure, and alerts the patient's

physician if the data point to exacerbation. A successful pilot showed an ROI greater than 1 in the first year.

Development and maintenance of program content are based on evidence-based guidelines and input from clinical advisory panels and collaborative practice models that include physicians and support service providers. The guidelines are developed and reviewed at least every other year by a consortium for quality improvement at the state level, which has achieved statewide alignment of practice standards for all health plans. This alignment has been received well by providers because it addresses their common complaint that different health plans apply different standards for the same condition.

Member Identification, Stratification, and Interaction

Identification

Identification for chronic care management programs is based mostly on claims data analysis that uses sophisticated predictive modeling and risk evaluation technology. This shift toward proactively identifying patients at risk represents a major innovation, since five to ten years ago HP1 identified patients reactively, i.e., after high-cost events or exacerbations. As one of our survey respondents put it, "The difference is what we do with the data—we use the information such as markers for pre-diabetics to predict the future." In addition, HP1 is in the unique position of having had access to its members' lab data in electronic format for the last 15 years or so. The data are provided through integration with the region's dominant provider of laboratory services that covers most of HP1's contracted providers. Lab data are used for identifying members for chronic care management program eligibility, special projects, and ongoing care management.

Provider or patient self-referrals are a potential entry point into all chronic care management programs but are in practice mostly used for case management where the majority of referrals come from acute care settings, hospitals, and physician offices. HP1 offers a health risk assessment tool, which is used to identify members for lifestyle management programs but not for chronic care management eligibility. Only about 1 percent of members complete the survey, unless completion incentives are offered.

Stratification

HP1 uses a stratification model that assigns members to five risk strata—so-called "resource utilization bands." Stratification is based on diagnoses, prescription drugs, care gaps, lab data, and demographic information. Members in higher-risk strata have access to higher-intensity services. Members in the lowest-risk band receive educational material on common health issues by mail; higher-risk members receive more specific and more frequent mailings. HP1 starts using one-on-one health coaching for the chronically ill (level 3) and intensifies this for the very severely ill (level 4), which is also

the level at which case management may be offered. All members at the highest risk level (level 5) have access to case management services.

Resource Utilization Band (i.e. risk layer)	Estimated Percent of Patients	Communication (not one on one)	Health Coaching[a]	Case Management
1: Young and healthy	50	Increased amounts of communication but not one-on-one		
2: Acute incident (likely self-limiting)	10			
3: Chronically ill	30		Health coaching blended in	
4: Very severely ill	8			Case management blended in
5: High potential for death	1–2			

[a] Personal contact once a while to check in on the patient.

Interaction

HP1 uses an opt-out model to define program participation, i.e., eligible members are considered program participants unless they specifically request not to be contacted. Levels of engagement, however, can be low and may involve only mailing of educational material.

As described above, higher-risk patients are targeted for one-on-one interventions by phone and in person. Especially for the in-person services offered under case management, a key success factor is to build a relationship with the patient. Thus, HP1 staff sometimes even go to physician appointments with patients. The plan also tries to create continuity by having an integrated information system that is accessible to every chronic care management staff member. One survey respondent mentioned that this computer interface "even has a spot for the name of the dog of our patients, to show them that we know them and care for them."

HP1 is currently exploring the adoption of the patient activation model to understand patient readiness for self-management. The expectation is that such a tool could help to personalize chronic care management interventions.

HP1 is experimenting with incentives for behavior change such as merchandise, gift cards, discounted gym memberships, and lower insurance premiums or cost-sharing requirements. So far incentives have been offered for health risk assessment (HRA) completion and preventive visits. For the latter, HP1 has successfully combined provider and member incentives to increase use of services that are factored into HEDIS measures.

Provider Engagement

Primary Care

HP1 coordinates closely with its contracted primary care providers on chronic care delivery. The plan offers various tools, such as educational material and clinical decision support tools, and support programs, such as experts who train office staff to deal with chronic care patients. Special projects are instituted to address identified gaps in chronic care (see box).

HP1 regularly sends data on care gaps and clinical profiles to practices. This information-sharing process has become increasingly sophisticated. Originally, simple patient-level reports addressing gaps that are relevant for HEDIS measures were mailed to practices. Over time, to optimize the usefulness of the reports, HP1 consulted with providers on format and content of the reports. Today, these reports summarizing both patient-level and practice-level data and are available for download on a provider portal. The ultimate goal is to implement "a real bi-directional non-paper based tool to communicate with [providers]." Progress toward such integration is deepest with two large groups that together serve about 50 percent of HP1's members. One of those groups is in the process, for example, of integrating its EHR into HP1's data infrastructure to allow for direct exchange of information. Engagement with other, especially smaller, practices is more limited, as outlined below under "Provider Factors."

At this point, HP1 uses mainly financial incentives to reward practice-based primary care providers for using population-based management approaches for patients with chronic disease, such as pay-for-performance tied to quality indicator targets and shared savings arrangements with larger practices that operate under capitation contracts. Practice redesign models are being considered, especially for Medicaid patients with complex needs, under which HP1 would place staff into practices to coordinate chronic care.

Treatment-Resistant Hypertension

Under this project, members with diagnosed hypertension and continuously elevated blood pressure (BP≥ 140/90) were identified from EMRs. HP1 analysts used pharmacy claims to assess medication adherence and reported findings back to the treating physician. Physicians were asked to provide an action plan (e.g., medication change or patient education about the important of adherence). Nearly 3,500 patients were identified, and for 28 percent of those the treating physician responded. Three months after the intervention, 27 percent of the members had achieved the targeted blood pressure of below 140/90.

Specialty Care

In contrast to primary care, coordination with specialty providers is much less evolved. Most specialty physicians in HP1's market are organized in independent, hospital-based practices, operate strictly under fee-for-service arrangements, and have shown little interest in direct interaction with the plan. HP1 has formed liaison committees for 11 specialties to have a dialog on chronic care improvement and shared decisionmaking for common and costly conditions, such as back pain. The plan is that the committee members would become ambassadors who relay concerns of the specialty community to HP1 and educate their peers about quality improvement.

Evaluation

HP1's business intelligence unit is tasked to conduct analyses for routine reporting purposes, such as HEDIS measure reports and employer reports, and evaluations for projects and initiatives. It also handles chronic care management reporting and evaluation. Chronic care management performance measures are derived from the claims and lab data systems and include operations, clinical quality, disease control, and outcomes, as well as cost and utilization. Member and provider satisfaction surveys are also undertaken on a regular basis. So far, absenteeism and presenteeism have not been tracked.

The unit is very production-oriented because multiple reporting requirements, not just for the chronic care management program, need to be maintained with limited resources. Outside reporting is regarded as an activity with limited potential to add value, because report recipients typically do not express much interest in detailed results. As one survey respondent put it: "Most employers rely completely on their brokers or benefits consultants," and "Many employers have accepted a certain annual health care cost increase" and are therefore not too concerned with a detailed analysis of cost drivers. Only large employers sometimes request analyses beyond standard reports.

At the same time, dedicated analyses are commonly done for internal stakeholders, such as evaluations of special projects or new program components. One survey respondent mentioned that providing most services in-house has the advantage of understanding the context to put findings into perspective and of being able to follow up on the results.

According to HP1, results of the chronic care management evaluations have for the most part shown improved clinical care, as well as cost savings and reduced utilization. Furthermore, HP1 has been able to identify several challenges to program success, such as appropriate targeting of patients and limited provider engagement, as discussed below.

HP1 has not yet attempted to publish its results in trade or academic journals, partly because of constrained resources and partly because its small samples and policy not to use experimental designs limit the ability to publish. Collaborations with universities on evaluation have so far not been successful. Often, academic partners wanted HP1 to run programs that they had designed rather than evaluate HP1's existing programs or did not follow through after exploratory discussions. However, HP1 does submit project evaluations to annual award competitions organized by state associations.

Challenges in the Operating Environment

In HP1's assessment, provider and patient factors are creating the most substantial obstacles to chronic care management. Other obstacles include the high cost of implementing and operating a chronic care management, especially for a small plan, micromanagement and unrealistic expectations of purchasers, and heterogeneity of performance reporting requirements. In addition, HIPAA and state privacy laws' restrictions on sharing mental health diagnoses impose restrictions on managing those patients that would benefit the most from a coordinated approach.

Provider Factors

Overall, HP1 finds it difficult to engage providers in its chronic care management program because they lack the infrastructure and the motivation to provide population-based health management. So far, only the largest practices are implementing EHRs, and most do not yet use them to manage their population by, for example, creating registries and conducting practice-level assessments. Smaller practices, especially, find the cost of building the infrastructure for population-based management prohibitive and are reluctant to change their operating model. Rather, they would join a group or hospital-based practice where managers would handle administration and management.

However, the current culture among providers is seen as an even bigger challenge. Many providers are far from understanding what population management means and want to concentrate on the traditional role of providing encounter-based medical care to the individual patient. They regard support from a health plan as undue interference: "Doctors just don't like it when someone is looking over their shoulder." For example, an attempt to place nurses into practices to work with chronic care patients was not well received, and attempts to get physician input into the development of support material has so far not proven successful. "Historically it has been a shot in the dark; we send information to the providers but they often ignore it if it is not related to a payment."

This statement also points to the importance of the payment system as an obstacle to chronic care management. HP1 finds it easier to affect change if HP1 members represent a substantial share of patients in a practice, because providers are more likely to

accommodate HP1 requirements; and if the practice has an overall higher patient volume, because providers are more likely to accept gain-sharing arrangements. Financial disincentives to reorganizing chronic care are compounded by the fact that Medicare still pays fee-for-service: "One of the biggest barriers is that the largest dominant player is Medicare, which drives the market to a particular behavior that managed care plans first have to counter before they even can demonstrate success/value."

Overcoming these obstacles is possible but only with a small subset of practices. As mentioned above, HP1 does have close relationships with some provider groups and is even integrating its data systems with the EHR in one practice. Gain-sharing and pay-for-performance arrangements align incentives under these joint efforts to improve chronic care (see box). Nonetheless, "bringing these arrangements forward into the 21st century by moving away from HEDIS specific measures to global quality thresholds" is still challenging. Also, HP1's experience is that practices typically do not reinvest quality-based rewards into improving their infrastructure for care delivery, for example by hiring care coordinators.

Pharmacist Engagement

HP1 currently pilots an incentive scheme for pharmacists to reward them for timely prescription refills and preventive tests for diabetics. This scheme replaces a patient-targeted approach that did not get much uptake. The underlying rationale is that pharmacists are the medical "authorities" who interact most with members; as such, they have a close tie to members and should be able to influence adherence rates.

Patient Factors

Actually reaching the member turns out to be an important obstacle. The older population prefers to interact through landline phones, but members of the younger generation are often "so flexible that even a computer is too static and the best way to reach them is the mobile device." Thus far, it remains a challenge to find the optimal use of the available technologies and communication channels to "make the message meaningful to the members and nonrepetitive." Less than 1 percent of diabetics who were invited to a pilot program per email responded to the invitation.

Limited health literacy and reluctance to change health-related behaviors are also seen as important obstacles. The chronic care management team often finds that it takes a dramatic event, such as a hospital admission, to motivate patients to change, at which point their disease has already progressed. Nonmedical obstacles can be quite important, especially in the Medicaid population. Chronic care management nurses have to work with social workers to address "how a patient can get to the doctor's appointment if she

can't find a baby sitter," before they can discuss the medical issues. Lastly, depression or other behavioral health issues commonly interfere with management of chronic disease, requiring a holistic and patient-centric approach.

Summary

HP1 is a small plan with a stable membership and long-lasting relationships with some employers and provider groups. This stability and the fact that the majority of the commercial population is fully insured allow HP1 to shape the chronic care management approach independent of purchaser requirements and apply the same range of services to all members.

In line with the industry trend, HP1 has moved from working with members after high-cost exacerbations to proactively identifying members at risk and addressing their conditions and risk factors. To increase program efficiency, the intensity of chronic care management interventions is staggered based on predicted risk, from sending lower-risk members informational material to in-person case management for the highest risks. HP1 also shifted from vendor-based to in-house programming to reduce cost, improve coordination, and increase flexibility. A small but highly dedicated team works closely together and with other stakeholders to design and implement interventions. New ideas are frequently piloted, evaluated, and rolled out, if successful. HP1's access to electronic lab records plays an important role in this process.

The major challenges to HP1's chronic care management are obstacles on the provider and the patient side. On the provider side, the prevailing culture is reluctant to explore the new population-based approach and favors doing "business as usual," i.e., focusing on the traditional role of providing encounter-based care. In addition, providers often lack the necessary infrastructure. To mitigate these obstacles, HP1 is working on providing easy, on-demand access to relevant information (e.g., by moving toward a provider portal for patient information), increasing the involvement of the provider community in HP1's decisionmaking, and incentivizing providers through alignment of the payment system.

On the patient side, reaching patients and engaging them in actively taking responsibility for their health remain a challenge. Thus, HP1 is exploring different, more-customized communication channels, including a variety of technologies (e.g., phone, email, text), as well as health care professionals (e.g., pharmacists). HP1 is also gearing its chronic care management activities to a more member-centric approach both in the evaluation of the problem (e.g., taking behavioral health issues into account) and in tackling nonmedical obstacles (e.g., practical barriers to health visits).

Although the overall chronic care management program has not yet been formally evaluated, HP1 perceives that it can reduce cost and improve member health, and several

initiatives that were evaluated have shown promising results. While multiple obstacles still limit the plan's ability to optimize its approach to chronic care, HP1 feels that it plays an important role in ensuring member health. This role requires building trust and closer relationships with its members as well as establishing the right incentive and support systems for providers to move toward population-based management.

Health Plan 2

Plan Description

HP2 is a large health plan with a substantial market share in all states in which it operates. It offers a wide range of health benefits and health-related services, but its largest business segment (commercial segment) is fully insured plans. It also offers Medicare Advantage and Medicaid plans in several states, but the information in this report relates primarily to its commercial business. HP2 is a for-profit plan. Through several mergers and acquisitions, HP2 has not only expanded into several additional states but has also brought subsidiaries on board that enhance its capabilities in the areas of data analysis and technology solutions, among other things. HP2 relies heavily on sophisticated technology to support consistent chronic care management programs for all its members who participate in such programs.

Chronic Care Management Approach

Services, Management, and Design of Programs

With its chronic care management programs, HP2 aims to improve health and health care for its members and their communities by adopting evidence-based care guidelines and assisting with the coordination of health benefits. The key drivers for implementing chronic care management were the need to improve quality of care, to avoid unnecessary cost and the desire to help guide members through complex processes.

HP2 offers three types of performance guarantees for large client accounts, under which it returns a share of the administration fees if it fails to meet targets. These may include trend reversal guarantees (i.e., decrease cost trend), engagement guarantees (i.e., get a certain share of chronic care management program eligible members to engage), and operational guarantees (i.e., meet service-level targets, such as returning 80 percent of member calls within 24 hours). To be eligible for those guarantees, employers have to agree to minimum requirements, such as for health risk assessment completion rates and ER co-pays.

HP2 recently has adopted a unified chronic care management approach that is used for its entire enrollment base with limited customization for larger clients. The underlying

philosophy is that HP2's scale allows it to develop sophisticated technology platforms to support chronic care management, and that using a consistent approach will leverage the advantages of the technology the most.

Currently, the chronic care management programs are built along a wellness continuum (see table below) with wellness programs and health risk management offered for the lower-risk members, disease management for those with one or more chronic conditions, and case management for the critically ill (e.g. exacerbated chronic conditions). Typically, case management is included in self-insured and fully insured accounts, whereas wellness and disease management are optional services.

	Wellness Continuum			
Targeted Population	Healthy	At risk	Chronically ill	Critically ill
Initiatives	Wellness programs	Health risk management	Disease management	Case management
Aim	Life management	Behavior change	More informed health decisions	

The development and maintenance of chronic care management program content is based on evidence-based practice guidelines and current theories of behavior change as well as input from clinical advisory panels for certain specialties, such as oncology, behavioral health, and cardiovascular diseases. Guidelines are reviewed at least every other year.

Most chronic care management components and special projects (see box below) are administered in-house, with a few exceptions such as home health care, pharmacy benefits management, and certain wellness programs .

"Right-Siting" Urgent Care

HP2 has launched an initiative to point members in one state to sources other than the ER for urgent care. Members can obtain a phone application that points them to the closest urgent care center, including retail clinics and worksite clinics. This pilot successfully reduced ER utilization and will now be rolled out.

HP2's chronic care management programs include access to a 24/7 nurse line that provides answers to health-related questions for both acute and chronic problems. For the higher risk levels, HP2's chronic care management programs provide outbound calls through clinical and nonclinical staff and coordination of health benefits. Educational material and self-management tools are available for all risk levels. The two main

programs to manage members with chronic conditions are case management (CM) and disease management (DM).

The case management program includes members with high cost, high utilization, or multiple hospital admissions. While 80 percent of the members in case management have one or more chronic conditions, program eligibility is typically triggered by an acute event, such as a hospital admission. The intervention then focuses on reducing the risk of further exacerbations and readmissions.

The focal point of the case management program is a primary care nurse, who conducts a full assessment of the health, social, and financial situation of the member and matches the member to health plan and community resources. Each member is screened for behavioral health issues with the Patient Health Questionnaire-2 (PHQ2) and referred to behavioral health services, if appropriate. The nurse is supported by a multidisciplinary team (see box) including, among others, specialized nurses (e.g., oncology), physicians, pharmacists, and behavioral health clinicians. Members are also supported by social workers with respect to home safety, housing arrangements, financial issues, and community service referrals.

Case Management Rounds and Webinars: Learning and Bonding

The case management team regularly holds so called "case management rounds" in which complex cases are presented by the case manager to the whole multidisciplinary team to enable feedback from different angles. The member's situation and constraints are discussed, and solutions to achieve the member's optimal quality of life are weighted. Besides these "grand rounds" there also "floor rounds" with MDs, who are part of the case management staff, walking the floor to see if any of the case management nurses has a particular problem. These intense team interactions have proven highly valuable in improving the outcomes of the individual cases, as well as in fostering mutual learning, coordination, and collaboration within the team. In addition, MDs prepare regular webinars about specific diseases and symptoms for the case management staff.

The intensity of outreach activities is driven by both member risk and member readiness, as assessed by the Hibbard Patient Activation Measure. Members who are low-risk and less ready to engage receive IVR calls, and others are contacted by a nurse. The interactions focus on gaps in care (e.g., medication compliance), care transition (e.g., making sure that all necessary home services are lined up after hospital discharge), self-management (e.g., educating member about signs and symptoms), and assisting with the coordination of health benefits (including coordination with community resources and the scheduling of follow up doctor visits).

On average, members graduate from the case management program after three months and may transition into disease management if ongoing support is required. "Graduated" members also receive follow-up calls.

Disease Management

HP2's disease management program focuses on members with the following common chronic conditions: COPD, CHF, CAD, asthma, and diabetes. In addition, condition-independent case management is offered for the highest-risk members with multiple chronic conditions and complex care needs

Future Trends

HP2 is moving toward a more holistic and member-centric chronic care management approach. The expectation is that this will lead to more transparent, standardized processes for both members and staff and allow for taking lessons learned from both disease management and case management and applying them across all chronic care management initiatives.

Member Identification, Stratification, and Interaction

Identification

Identification for chronic care management programs is based on medical and pharmacy claims data, health risk assessments, and lab data, where electronically available. HP2 was a pioneer in using predictive modeling to proactively identify members for interventions and continues to use both predictive modeling and retrospective analysis to determine need for chronic care management.

Case Management

Today, nearly 80 percent of the members in case management are identified through predictive modeling based on diagnosis (e.g., psychoses or heart diseases), type of admission (e.g. urgent vs. planned; high number of approved member days, surgical vs. nonsurgical), demographics, clinical indicators (e.g., lab results if available), claims one year prior to admission, and the 90-day utilization management history prior to admission. Case management referrals can also come from utilization management and providers or can be triggered by prolonged hospital stays and high cost claims.

Disease Management

Each year, about 15.5 percent of the members are identified as potentially eligible for disease management. Recently, HP2 phased in a dedicated predictive model to identify members with a high risk for hospital admission or readmission.

Stratification

As mentioned above, disease management and case management members are stratified by readiness and risk. The lowest-risk members receive monitoring for three months and graduate if they have no care gaps. High-risk members establish goals and care plans with a nurse and are followed for as long as a year. The nurse calls approximately once a month to assess progress toward the established goals and to support the members in reaching them. Every six months, the short form health survey (SF8) is administered to follow up on the members' health status. Approaches for cases who are not ready for graduation after a year (i.e., those with open goals) are discussed within the team.

Interaction

The first step in the chronic care management program is the creation of a health profile for each member that uses an algorithm to identify actionable opportunities to improve quality, safety, and cost-effectiveness. This profile serves to personalize communication to individual members (e.g. through mail alerts), providers (see *"Provider Engagement*" section below), and also provides a health record system (HRS) for HP2's care managers.

For case management members, the case manager tries to start a conversation before hospital discharge. This practice increases the response rate and reduces the risk of being unable to reach the member after discharge. As one of our survey respondents stated, "the best moment to engage members is when they are just out of hospital."

For both case management and disease management, nurses apply motivational surveying to gauge the member's readiness to change as well as the member's priorities, so that among "the most acute care gaps the ones that also resonate most with the member can be tackled first."

Outbound calls (IVR and nurse calls) are made through an automated dial-up system; if the member cannot be reached, 5–8 attempts are made subsequently. After each failed attempt, a letter is sent to the member to inform him/her about the failed attempt. HP2 has also started offering video chats via secured lines for higher-risk members.

HP2 is increasing the number of channels through which members can interact with its chronic care management (CCM) program (including IVR, in-person nurse calls (including video chats), newsletters, letters, online portals), but only regards members as actively engaged if they participate in nurse or IVR calls. Overall HP2 is pushing toward a more member-centric, flexible outreach to members' preferences in terms of communication channel, timing, design of message, etc. (see box below).

Finding the Right "Recipe" – Empirical Analysis of What Works in Patient Interaction

To identify the drivers of member engagement, HP2 conducted a multivariate analysis, taking into account the time, channel, design of the education material, etc. It developed "recipes" for nurses (e.g., what to say, how to interact) and monitored the results of these different approaches to optimize messaging. The findings helped HP2 design a member-centric outreach model that reflects time preferences (e.g., "seniors prefer calls at lunch time while for the working population the nurse has to be more flexible and call after hours"). These changes have resulted in significantly higher engagement rates over the last 2–3 years. Under a current project, HP2 is starting to adjust outreach activities and staffing based on seasonal patterns, as response rates were found to vary by season.

HP2 is also about to launch a more refined system of IVR calls that allows the combination of modules of health messages tailored to the individual member (see box below). HP2 is currently working on a consistent strategy for mobile technologies to engage members.

Evolution Toward Tailored IVR Calls

HP2 currently uses five different types of authenticated IVR calls that are matched to the specific case: pre-admission, post-discharge, post-graduation from CM/DM, high-cost, and oncology. Based on the member's responses to the questions, these IVR calls can automatically transfer the member to a nurse. These calls are very successful and 80 to 90 percent of members stay on the call; as one interviewee put it, "the calls are so realistic that it happens that the member addresses the IVR voice as if it were a person, we had members thanking them and talking to them." HP2 is now working on modular IVR calls that can combine different elements based on member needs, for example by adding educational content on diabetes to information about a recent hospital discharge. The expectation is that this approach will increase engagement and reduce redundancy.

Incentives are considered as "maybe [one of the] most effective tools to engage members," according to one of our interviewees. HP2 commonly administers participation-based incentives on behalf of the employer. Incentives are awarded for participating in DM calls, HRA completions, biometric screenings, or wellness programs.

Provider Engagement

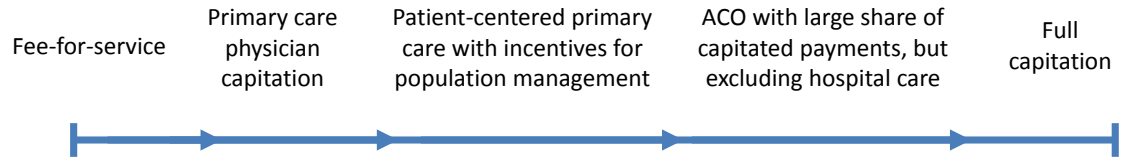
HP2 is in the process of fundamentally changing how it interacts with providers of medical care. At the moment, it follows a traditional CCM model under which it sends

practices educational material, clinical decision support tools, and reports on care gaps for HP2 members. The algorithms to identify care gaps are the same as the ones used by the internal CCM teams and identify gaps, like medication nonadherence or failure to use evidence-based screening tests, from medical and pharmacy claims, as well as lab data where electronically available. Practices receive a report on these gaps on a monthly basis by mail or fax.

The first change to the current model of provider interaction is the introduction of a fully integrated data platform. In the future, all member information will reside in a unified database with role-based access. Both internal teams and providers will be able to access the same information about members, as described below. The second and more fundamental change is a shift to practice redesign and population health management as the future business model. This shift is driven by a growing realization that sustainable improvement in care, especially for chronically ill members, can only be achieved by changing current practice models, which in turn requires novel payment models and transition support. HP2 believes that it is well positioned to drive this change, because of its large market share and its commitment to population health improvement. As one executive put it, "practices really only align with the largest players; they can't accommodate every plan."

Future Operating Model

The unifying principle of HP2's future model is a departure from the current fee-for-service payment approach toward greater accountability, but the new payment systems will vary depending on the size, capabilities, and risk appetite of practices, as described in the figure below. As one interviewee put it, "you will always have provider contracts along the spectrum, including FFS."



New Primary Care Model

HP2 is currently moving toward the implementation of a new primary care model. The rationale for focus on primary care is that primary care physicians (PCPs) are best placed for care coordination and that CCM activities are most successful if they are integrated with the PCP.

Under this model, HP2 will initially pay a care coordination fee in addition to the usual fee-for-service charges but will then transition to performance-based payment. Practices are encouraged to offer team-based care and expanded access—such as same-

day appointments, after-hours care, and electronic visits—and to adopt evidence-based decision support tools and EMRs that integrate with the HP2 information systems.

In addition, HP2 will put a support staff in place to help the PCP with the development of individual care plans for the members. The HP2 staff will not work with members directly but with the "clinical coordinator" within the PCP. Furthermore, HP2 will give providers access to its multidisciplinary CCM team that includes pharmacists, social workers, case managers, behavioral health specialists, and discharge planners.

Accountable Care Organizations (ACOs)

HP2 gained experience with ACO models through its participation in the Pioneer ACO programs and is currently designing a new ACO model focusing on chronic care. This model will be rolled out to a number of practices in select states that have the necessary scale, stability, and infrastructure. The rationale is to achieve sufficient coverage of each state but to avoid overlap of practice catchment areas in order to allow for sharing of information and best practices without competitive concerns.

ACOs will be paid based on three elements:

- Customary fee for service payments for every member.
- Monthly coordination fee for members with 2+ chronic diseases that sign up for the ACO.
- Shared savings for all members if the provider passes a quality threshold (based on physicians' quality, service, and performance criteria). The threshold will be raised over time and also include hospital quality measures to incentivize referrals to high quality hospitals.

Evaluation

HP2 pursues three major goals in CCM program evaluations—assessment of clinical outcomes (effectiveness of program, better quality of care, more evidence-based care, etc.), member satisfaction, and financial performance. Measures include operational, clinical, cost, and utilization measures, as well as provider and member satisfaction (through focus groups with providers and members every two years, as well as regular member satisfaction surveys) and even absenteeism and presenteeism.

Performance reports are generated through a sophisticated system that documents data at the level of the individual CCM staff member and then rolls them up based on the target audience for a report. Internal reporting provides scorecards for individual staff members that track time allocation and results. For nurses, a report can include, for example, how long it took to get members engaged. Some staff members have an incentive system that is linked to the reported outcomes, so the regular reports keep them

informed on their performance relative to the targets. Line managers receive aggregated information for their team but can drill down to the individual.

Client reporting rolls up member results and provides aggregated statistics on identification, stratification, risk, and disease burden, and open and resolved care gaps. Clients who have contracts with performance guarantees receive information on whether the contractual targets were met and on what their rebates are, if they were not met.

In addition to operational reports, HP2 publishes in trade publications and scientific journals. HP2's dedicated analytics unit sometimes even conducts randomized controlled trials to test the program outcomes for internal research reports and external publications.

Evaluation Findings

On average, HP2's DM programs have a 2:1 ROI, but ROI varies by condition. Predictive modeling has been shown to improve targeting of members and ROI.

Evaluations showed that providers appreciate educational information and support to increase members' adherence to recommended treatment. Around half of providers use the information made available to them. Member satisfaction tends to be high; 90 percent of members report being satisfied, and 92 percent and 98 percent, respectively, agree that the case managers are knowledgeable about the member's health needs and professional.

Challenges in the Operating Environment

In HP2's assessment, provider and member factors are the leading obstacles to CCM success, whereas regulatory factors tend to matter less. In addition, discontinuity of care can result from carve-outs (discussed below) and from job changes, even if both employers offer coverage through HP2, because of the lack of a unique person identifier.

Member Factors

Member engagement commonly already fails because of inability to reach a member if correct phone number and address are not available. Other factors are lack of health literacy and limited interest of asymptomatic members in improving their health.

Provider Factors

Provider reluctance to change remains an important obstacle for CCM programs. While practices in HP2's population management pilots are eager to adopt new approaches to chronic care, the majority of practices remain resistant. In addition, limited capabilities, lack of financial incentives for provider engagement, and the fact that providers sometimes duplicate services that are offered through the plan were perceived as obstacles to CCM impact.

Regulatory Factors

Overall, regulatory factors, such as variation in state level regulation, different requirements for different plan sponsors, medical loss ratio requirements, and restrictions on provider incentives, were perceived as having limited impact on the success of CCM. However, some specific regulations make the operation for HP2 cumbersome and complex. Examples of such provisions are the Federal Trade Commission/Federal Communication Commission (FTC/FCC) requirement that autodialed or automated message calls to cellphones can only be made with explicit member approval, and HIPAA regulations that require tailoring of IVR messages that are left on answering machines.

Lack of Continuity

Carve-outs have emerged as a substantial issue in operating CCM programs. In particular, large employers buy services such as pharmacy benefit management or behavioral health care from different providers. This complicates the coordination of health care benefits and limits the availability of critical data. For example, medication adherence cannot be assessed without access to pharmacy claims. Incorporating outside data into the HP2 system requires additional effort and is not always successful. Another obstacle to continuity is that currently the previous health history is lost whenever a member changes employment—even if HP2 provides health insurance for both the old and the new employer. In response to this problem, HP2 is working to roll out a Master Consumer ID (MCID) that will allow member tracking.

Summary

HP2 is a large health plan with a substantial presence in all of its markets. HP2's focus extends to the health of the community and not only the individual, which has implications for the design of its initiatives, (e.g., enabling providers to provide better care to all patients, not only to HP2 members).

HP2 has brought almost all CCM services in-house and is currently working on transforming its CCM approach. It anticipates that the current model with separate CM, DM, and at-risk population programs will morph into a unified member-centric model that will span the full spectrum of care needs from wellness to disability. Likewise, the aim is to make member outreach more flexible and targeted by using analysis and experimentation to optimize time, format, means, and content of communication. In this context, IVR calls have proven highly successful, as has designing the content and timing of calls around member demographics. The plan is to have the new CCM model supported by a sophisticated technology platform that can integrate all member data and allow role-based access to members, providers, and HP2 staff.

Provider payment is being transitioned from the currently dominant fee-for-service approach to performance-based remuneration to promote practice redesign. Integration of provider electronic health records with HP2's data platform will provide actionable data intended to promote improved care provision. The ultimate goal of this new approach is to encourage providers in all markets in which HP2 operates to offer true population care management for members with chronic disease, regardless of whether they are HP2 members or not.

Health Plan 3

Plan Description

HP3 is a large, national, for-profit health plan with over 10 million members in its commercial segment. It offers both fully insured and self-insured plans, with the majority of its commercial members—70 percent—being in self-insured plans. HP3 does not own or operate health care facilities; it contracts with provider groups to deliver services to its members. And, because HP3 membership is spread out geographically with varying degrees of market concentration, HP3 contracts with a large number of providers across the country.

For its chronic care management, HP3 takes a holistic and member-centric approach, with programs geared toward providing greater flexibility around patients' care needs. The high proportion of self-insured plans also requires plan sponsor support and buy-in for changes in product design, as well as flexibility to accommodate plan sponsors' requests for customization.

Chronic Care Management Approach

Services, Management, and Design of Programs

HP3 sees as the purpose of its chronic care management program to improve patient care, provide holistic and member-centric care, and promote patient empowerment, as well as to better respond to purchaser demands to contain cost growth. The main goals of the program are (1) "deliver high quality, timely service and information to members," (2) "strategically and proactively anticipate member needs," and (3) "strengthen and support member relations with health care professionals."

To achieve these goals, HP3's chronic care management program currently has three main components: disease management and case management as standing programs and ad-hoc initiatives to address quality gaps in a focused manner. Those initiatives are typically driven by internal analytics and can be regional or national. They consist of provider and/or patient outreach programs to raise awareness and affect change. In

addition, HP3 provides access to a wellness program for a portion of the population through a vendor, which was transferred in-house as of January 1, 2013.

For the development and maintenance of the overall chronic care management program, HP3 uses evidence-based guidelines, which are reviewed at least annually and as practice is updated, as well as clinical advisory panels and psychological theories of behavioral change. Additionally, HP3 frequently incorporates changes in its workflow based on its own analyses and best practices.

Disease management is a standard component for fully insured plans and an optional buy-up for self-insured plans. It is today operated as an in-house program, after HP3 purchased its disease management vendor in 2006 to reduce cost and improve coordination with other programs. Disease management is structured as a patient-centric program that covers 35 core chronic conditions and can be adapted to accommodate other conditions. It is primarily a telephonic program, with the severity of the condition determining the frequency of interactions between the patient and the disease management nurses, but lower-risk members receive only mailings and online support.

Case management for high-risk, high-cost, and complex members is a standard component for all plan types but can be customized to accommodate purchaser needs. Some of the main aims are to ensure that "patients and their families are aware of all their benefits and the resources that are available to them, including community resources that can help with personal care; e.g., pharma discount programs, social services." Case management provides all identified members with care coordination services, discharge planning in the event of a hospitalization, counseling and advice on reducing out-of-pocket payments and overall cost of care. Sponsors of self-insured plans can add benefits, such as the "first-fill partnership," under which HP3 works with members' pharmacists to ensure medication adherence. Utilization management (UM) is tied into the case management program.

Case management and disease management are supported by behavioral health (BH) services. BH is a standard component of all plans, although sponsors of self-insured plans can choose to carve it out. BH uses a different set of triggers for identification and different staff from disease management and case management, but there have been efforts to integrate BH services with chronic care management programs because of the frequent coexistence of chronic conditions and behavioral health issues, especially depression. So patients suffering from such co-morbidities are provided with additional care coordination, with chronic care management case managers or behavioral health specialists taking the lead depending on the individual patient's needs.

Member Identification, Stratification, and Interaction

Identification

HP3 uses separate identification processes for disease management and case management. For disease management, data from medical, pharmacy, and laboratory claims are used to assign all members an "opportunity score." This score captures not just disease severity but also the "impactability" of patients, i.e., whether they have gaps in care that providers could address. For case management, identification algorithms look for acute triggers, including specific diagnoses, medication use, high utilization (the current standard threshold is $75,000), ER utilization, and seeing a large number of providers, in addition to using predictive modeling to identify patients who are likely to have high costs over next 12 months. Provider and patient (self) referrals are other entry points into chronic care management programs. And, within the chronic care management, HP3 also looks for triggers for behavior health interventions through depression screenings, responses on health risk assessments, and conversations with chronic care management nurses.

Furthermore, HP3 is currently piloting a new algorithm to identify patients as an alternative to traditional case management and disease management. In addition to identifying complex patients, this algorithm is designed to predict hospital admissions and readmissions and was able to achieve 88 percent accuracy when applied retrospectively.

Stratification

There is no formal stratification of case management members because intensity of interactions is driven by member needs. Identification for the disease management program may be based on plan sponsor market segment. Intensity of outreach in disease management is based on members' opportunity scores, which is based on disease severity and actionable care gaps, as described above. As shown in the figure below, members with scores less than 14 are regarded as low risk, those with scores between 15 and 24 as moderate risk, and those with scores of 25 and above as high risk. The cut-offs may vary based on plan sponsor preferences and available resources.

Interaction

Both case management and disease management are opt-out, i.e., identified members are considered "participants" unless they explicitly ask to be removed from the program.

Disease Management

In disease management, members with the lower opportunity scores receive educational materials by e-mail, except for Medicare members, who receive the materials by postal mail. Members with higher scores engage at varying frequencies with a disease management nurse mostly telephonically—either monthly or quarterly. Since the members participating in the disease management program have chronic conditions, they rarely graduate; once their condition stabilizes, they get, at a minimum, quarterly calls unless they opt out.

Disease management calls are always made by clinicians trained in motivational surveying techniques so that they are able to "meet the patients where they are, and work on what they want to work on." The first call focuses on getting a member's baseline health status and on identifying issues that the patient would like to work on first. In addition, the nurse will assess whether any urgent needs have to be addressed first. During the subsequent calls, the nurses check on progress toward goals and adherence to treatment and educate members about available resources and the need for provider interactions.

Members who do not want to receive phone calls can interact via email and mailings and can call a disease management nurse directly. HP3 is also in the early stages of trying other outreach methods for specific chronic diseases. For example, it is currently piloting a program for patients with hypertension in which patients are sent blood pressure cuffs by mail for them to key in their measurements on a routine basis, and they get a phone call every month from the nurse to discuss their progress or post the logging of a measure outside of a defined range.

Case Management

Similar to disease management, interactions in case management happen mostly over the telephone, but in select instances case managers visit hospitalized patients. An important focus is management of care transition after hospitalization. A case manager will typically call the patient post-discharge to check for potential complications, medication adherence, and compliance with post-discharge instructions (dressing changes, mobilization, etc.). The case manager will also help with scheduling appointments. Remote monitoring is sometimes used in this phase, and HP3 is currently also looking into using mobile apps for monitoring weight, blood pressure, and other vital signs.

On the utilization management side, case managers answer members' questions about the procedure, the recovery period, and rehabilitation. If HP3 learns about the procedure four to six weeks before the procedure, case managers explain differences in overall and out-of-pocket costs for different providers and differences in quality of care, and provide information on HP3's designated Centers of Excellence. In practice, however, providers alert HP3 much closer to the procedure date changing the content of the phone call. Nevertheless, HP3 offers online shared decision making (SDM) tools that members can use to learn about treatment alternatives and about cost and quality of different providers. Increasingly, plan sponsors are now requiring use of the SDM tool prior to elective procedures.

Use of Incentives

HP3 administers incentives for plan sponsors who choose to incentivize members to engage in healthier practices and participate in chronic care management programs, and it advises sponsors that are considering such incentives. Approximately 12 percent of HP3's commercial accounts use financial incentives; these tend to be the national accounts but there are also some middle-market accounts. The types of incentives used vary from employer to employer, ranging from cash payments and merchandise or gift cards, to lower insurance premiums and cost-sharing requirements. Members with consumer directed health plans (CDHPs) can also earn rewards in the form of contributions to their health reimbursement accounts.

According to our survey respondents, the use of such incentives has evolved over time as "plan sponsors have become savvier with their incentives management"; initially, members were incentivized with cash or gifts cards for completing an HRA, but requirements have become more sophisticated, such as talking to a coach and participating in a program. Increasingly, incentives are being tied to biometric screening results and health targets—that is, outcomes instead of actions.

HP3 believes that financial incentives can be an effective tool, if used in the right context. That is, employers also have to create a "culture of wellness" and promote program participation actively. The type and magnitude of the incentive do matter: For example, a recent study found that the optimal amount for completing HRAs to be $75, even though some employers were offering much larger amounts.

HP3 is experimenting with various approaches to steer members to high quality and low-cost providers. These include benefit design, tiering of providers, and tools to improve cost and quality transparency.

Provider Engagement

Under its current chronic care management model, HP3 identifies eligible providers for value-based contracting models and shares clinical, quality, and cost information with those providers, which include lists of attributed patients and details on gaps in care. These contracting models align provider incentives so that increased payments are correlated with improved care delivery.

Its current model goes beyond provision of attribution lists and data-sharing to include practice redesign approaches to improve ongoing management of chronic conditions. HP3 is pushing to "promote a pay-for value over a pay-for-volume model" and has implemented such models with patient centered medical homes for primary care. HP3 now has PCMH contracts in twelve markets, covering about 13 percent of its network of 180,000 PCPs. HP3 currently has approximately 300,000 commercial members attributed to contracted PCMH contracts and plans to have one million commercial members in contracted PCMHs by the end of 2012.

Contracted PCMH practices are paid based on the established fee-for-service system and receive an additional monthly payment of about two to three dollars per HP3 member to cover care coordination services and quality improvement activities. Practices with a meaningful number of HP3 members (usually more than 500) can earn performance-based bonuses based on improved performance on efficiency and quality measures. Practices receive data on patient health status and identification of care gaps and may be eligible for technical assistance to support practice redesign.

The PCMH payment model has limited downside risk for practices, but performance may impact physicians' eligibility for rate increases. HP3 is tracking the impact of the model closely to assess whether better aligned incentives and data-sharing actually improve quality and efficiency results, particularly in practices with a relatively small number of HP3 members because those practices are typically aligning their processes based on the payment policies of their dominant payer.

New models to improve specialty and hospital care are more mature. For specialty care, HP3 is in advanced stages of contracting with ACOs across the country.

HP3 has performance-based contracts with a number of specialty physician groups. In general, implementation of specialty physician performance contracts depends on the market, the number of members being cared for by specialists, and whether groups are engaged and have the infrastructure in place for pay-for-performance–type contracts. Typically, in such contracts, HP3 ties payments to negotiated cost and quality targets. For example, in the Philadelphia area, HP3 has a contract with a cardiology group that ties payments to appropriate medication use for patients with heart failure.

HP3 is piloting recognition programs for providers with better quality and lower cost than their peers, and some plan sponsors incentivize their employees through benefit design to seek care from these providers. For hospital care, HP3 has implemented pay-for-performance contracts based on quality and efficiency measures, but feels somewhat constrained by the absence of established quality measures for outpatient care which accounts for an ever increasing portion of hospital services.

Evaluation

HP3 evaluates its chronic care management programs on a regular basis with the objective of "assess[ing] the program against desired program goals to determine if there are further needs."

Chronic care management program evaluation is divided into internal business intelligence to improve program operations and external client reporting. The internal application is based on nurse-level data on call volume, engagement rates, and member satisfaction, which are rolled up for managers at different levels to identify best practices and opportunities for improvement. For example, HP3 currently concentrates on reducing the number of identified members that the program cannot reach and on increasing sustainable member engagement. Each month, challenges and best practices are reviewed in meetings at each level and action plans to improve functioning of programs are rolled out.

Another area of investigation is optimization of outreach to members. For instance, recent studies looked at situations in which IVR technology-based calls are superior to live calls and at the comparative value of using clinicians or nonclinicians in the first outreach call. The latter study found that demonstrating clinical knowledge during the first call was critical for member engagement, supporting the use of nurses to enroll members in the program.

External reporting is mostly done for plan sponsors and their consultants. HP3 provides annual performance reports outlining operational performance data, such as frequency of outreach calls and member engagement rates, and progress toward quality targets and closing care gaps. Sponsors with performance guarantees receive progress

reports throughout the year, and custom reporting formats can be developed based on sponsor requests.

HP3 rarely pursues external publication of evaluation results because the evaluation methods are designed to inform continuous quality improvement of these dynamic programs rather than meet academic standards.

Challenges in the Operating Environment

HP3 perceives state and federal legislation, patient engagement, and provider factors as the primary challenges to the success of its chronic care management program. In addition, given its high percentage of self-insured plans, HP3 stressed the need for purchaser buy-in and support for the success of its chronic care management, and that sometimes justifying and explaining the value of chronic care management to sponsors can be difficult.

Regulatory Factors

HP3 operates nationally and offers a broad range of products for commercial and public-sector payers. It therefore has to comply with a large number of regulatory requirements that can differ by state and the type of plan sponsor. Its coverage of the entire country compared with a small market share in most markets means that the burden of compliance is high, because HP3 has to invest in ensuring compliance even in small markets. As a result, HP3 has to innovate cautiously and align itself with market trends.

Patient Factors

Member engagement is seen as the biggest challenge to chronic care management program success. Like many other plans, HP3 is typically unable to reach as many as two-thirds of program-eligible members by phone, and sustaining engagement after initial enrollment remains difficult. HP3 is therefore experimenting with different channels to reach members and to communicate with them. For example, the plan successfully piloted prescripted text messages that were sent every week (similar to a “tip of the week”) to members with diabetes to help with adherence and lifestyle change.

Smart phone and mobile apps are regarded as attractive communication channels, but there were some concerns with respect to the security of protected health information and potentially violating federal data privacy regulations. Nonetheless, HP3 is making progress in this area, particularly in the wellness realm. It is, for example, currently piloting a new mobile app that generates a plan and tips on how to achieve member-selected health goals. The app also allows members to track progress and to share goals and progress with others.

Provider Factors

HP3 believes that the new PCMH-type contracts with primary care providers will be able to affect practice redesign and improve chronic care, but it remains uncertain about their financial viability in the long run. At the moment, the contracts provide additional payments to practices with no downside risk, which can only be sustained if the resulting practice redesign leads to better and more efficient care. Definite evidence to answer this question, however, will not be available for another two to five years.

In addition, HP3 still finds it challenging to develop performance-based payment models for primary care practices, which serve only small numbers of HP3 members, and for specialty and hospital care. Third-party conveners, such as Catalyst for Payment Reform, and state-sponsored initiatives could provide a pathway to plan cooperation.

Purchaser Factors

Given the high representation of large, self-insured employers in its membership base, HP3 has to be very sensitive to purchaser sentiments in the design and implementation of its chronic care management programs. At the same time, an employer's health and wellness culture can play an important role in driving member engagement and behavior change. Indeed, one survey respondent stated that "forward thinking plan sponsors serve as good partners." HP3 thus tries to cultivate these types of partnerships by using performance guarantees that define mutual expectations. Conversely, HP3 finds it challenging to sustain the long-term investment that is required to achieve practice redesign and fundamental improvement in chronic care if purchasers are focused on transactions and short-term return on investment.

Summary

HP3 is a national plan that focuses on large employers. It has 70 percent of its commercial population covered under self-insured plans and a geographically dispersed membership with limited market share in any given market. Consequently, it has to ensure employer buy-in of new models for chronic care management, and it lacks the clout in most of its markets to change provider behavior on its own.

In response, HP3 has made its chronic care management program highly customizable to respond to sponsor demands and holistic and patient-centered to drive change through patient empowerment. Improving member engagement in chronic care management remains at the top of HP3's research and development agenda. In addition, HP3 is introducing performance-based payment models for primary care practices that serve a meaningful number of HP3 members and is seeking out opportunities to collaborate with multi-stakeholder efforts to transform care at the system level.

Health Plan 4

Plan Description

HP4 is a regional plan with a dominant position in its state of operation: Its over 1.5 million commercial members represent about half of the total commercial population in the state. While HP4 provides both self-insured and fully insured plans in its commercial segment, 70 percent of its members are in self-insured accounts. The plan does not own or operate health care facilities but contracts with providers for services. As the provider market is fairly consolidated, even in rural areas of the state, HP4 is able to form strong links with its main providers and drive provider engagement in chronic care management.

Chronic Care Management Approach

Services, Management, and Design of Programs

The goal of HP4's chronic care management program is "to make a healthy difference and improve member care [by] closing gaps in care related to specific diseases, as well as case management for catastrophic cases and high dollar, high utilization cases." The chronic care management program thus focuses on care gaps, i.e., "the variance in a member's health care processes or outcomes compared to recommended guidelines," rather than on disease severity.

HP4 offers disease management and case management within its chronic care management and views chronic care management as addressing care needs along a continuum of care. It therefore strives to integrate its chronic care management activities with other programs including wellness management, behavioral health (BH), maternity, and environmental health. To support integration and coordination and to reduce cost, disease management was brought in-house in 2009.

HP4 supplements its chronic care management with population-based outreach, for example, promoting bicycle use in the city or running advertisements on television about the health risks associated with obesity. In the design and maintenance of the chronic care management program, HP4 uses evidence-based guidelines, theories of health behavior change, and input from a clinical advisory panel that meets monthly and reviews program content on an annual basis. Furthermore, HP4 is in the process of testing collaborative practice models that include physicians and support service providers.

Disease management for the five most common chronic conditions (asthma, COPD, CAD, diabetes, and heart failure) is a standard offering for fully insured plans. Disease management for an additional four diseases—chronic kidney disease, low back pain, major depression, and cancer—is available for purchase by the self-insured plans. Case management, a standard offering for all plans, is offered to the highest-risk patients and

provides them with higher-intensity engagement with a nurse irrespective of their condition(s).

The chronic care management program allows for limited customization because identification and stratification models and the intensity of interventions are standardized. But employers can carve out specific services, for example, Employee Assistance Programs (EAPs) and the 24/7 nurse line.

HP4's is continually innovating and experimenting in its chronic care management and is testing nonstandard interventions. Through its Innovation Office, it identifies specific populations that would benefit from an innovative intervention (e.g., communities with high burden of chronic disease) and designs pilot projects. The pilots are evaluated at three and six months, and depending on the results, sustained and/or expanded. Examples of such programs have included posting chronic care management nurses on-site in native tribal communities (see box below). Most of the large purchasers have been supportive of the Innovation Office because "employers like new ideas" and can also influence the projects considered.

Placing Nurses Within Communities

HP4 is working with native Indian communities having a high prevalence of diabetes and heart disease to improve chronic care. Given the limited availability of phone numbers, HP4 had trouble reaching members through its primarily telephonic chronic care management program. In 2010, in collaboration with community leaders, HP4 decided to pilot on-site chronic care management services with a nurse from within the community in one of the reservations. While the program is more costly than the telephonic program, HP4 has chosen to continue it because of improved patient engagement in this high-risk and difficult-to-reach community.

Member Identification, Stratification, and Interaction

Identification and Stratification

Eligible members are identified on a monthly basis for case management and disease management services through the analysis of medical and pharmacy claims data, health assessment and biometric data, and—as frequently as daily—through sources such as accepted but not adjudicated claims, inpatient length of stay reports, and hospital discharge data. Direct referrals into chronic care management programs are possible, including referrals from other programs such as the nurse advice line, UM specialists, and other internal clinicians, as well as members themselves, their caregivers, and their

providers. Members can also be identified for case management based on a variety of predefined triggers, such as if they have frequent use of emergency services.

As mentioned above, HP4 focuses on gaps in care, high cost, and high utilization of services for identification and stratification in chronic care management; based on disease severity, cost, service utilization, and the number of gaps identified, each member is assigned an opportunity score that determines the intensity of the intervention. As shown in the table below, the opportunity score ranges from healthy (low risk), to catastrophic (high risk). The higher the risk level, the greater the intensity of intervention, with case management the most intense level: "Healthy" and "at-risk" members get preventive care, while the "controlled" and the "moderately ill" are identified for disease management and the "significantly ill" and the "catastrophic" cases are identified for case management. Approximately 5 percent and 1 percent of HP4's commercial population are identified for disease management and case management, respectively.

Opportunity Level	Description	Intervention
Highest opportunity (catastrophic)	Catastrophic cases and chronic conditions with ER and inpatient claims and major gaps in care	Case management
High support level 3 (significantly ill)	Complex or chronic cases with significant gaps in care	Disease management/case management
High support level 2 (Moderately ill)	Complex or chronic cases with gaps in care	Disease management
High support level 1 (controlled (well))	Chronic condition with gaps in care	Disease management
Moderate opportunity (at-risk (well))	Minor gaps in care	Disease management
Preventive opportunity (healthy (well))	No gaps in care	Preventive

Interaction

Members at the preventive and moderate opportunity levels receive introduction letters and education materials; those in the higher strata are offered participation in a telephonic program. A recruitment specialist places the first call(s). Members who

decline participation or drop out may get re-identified for disease management within the next six months.

Once agreement to participate is obtained, members are put in a queue for a phone call with a disease management nurse, who will jointly develop a care plan with the member and conduct depression screening and assess the need for potential involvement of BH clinicians. All nurses are trained in motivational surveying techniques to work with patients on understanding health issues, articulating goals, and helping them achieve these goals. The duration of the intervention is typically less than a year, unless members continue to have open goals and are willing to work on them.

HP4 goes to great lengths to make its chronic care management programs accessible. For example, educational materials and letters in multiple languages, bilingual Spanish/English clinicians and a medical translation line for more than 100 languages/dialects are available. In addition, HP4 is looking into implementing a secure email system for members' interactions with chronic care management staff and into an online care management program for the highest-risk members with the use of a Skype-like system for interaction. The interface allows visual interaction with a nurse and sharing of information as well as the creation of an action list.

In spite of those efforts, engagement rates remain low: Outreach representatives are unable to reach 20 to 25 percent of those identified due to invalid phone numbers, 25 percent do not respond to outreach and only 55 percent of those reached agree to participate, and 50 percent decline participation. Under the narrow definition of engagement that requires "members [to be] actively working with a clinician on an assessment and plan of care" approximately 9 percent of the identified members are considered engaged.

Given limited engagement, HP4 is increasingly working with employers on incentive schemes—to date, mostly for participation in biometric screenings rather than participation in chronic care management or achievement of health outcomes. HP4 sees its role as helping employer groups define "who they are, how they move the wellness culture within the organization, and how incentives play into that" and to administer the incentive scheme.

Case management is an opt-out program and offers a range of services to the highest-risk members including a more intensive telephonic interaction with a clinician. Furthermore, HP4 places case managers—UM nurses and BH specialists—on site at eight hospitals in the metropolitan area; they participate in discharge planning, obtain valid phone number for future communication with the member, refer members to chronic care management programs, and are able to get a list of medications that members would need post-discharge and help members take medication appropriately, as well as to authorize home health if needed.

Provider Engagement

The main provider-facing activity under HP4's chronic care management program to date is the mailing of information on care gaps to practices. For complex cases or providers that are hard to engage, nurses and sometimes HP4 medical directors call providers directly to have a live conversation.

But HP4 is rapidly transitioning to a collaborative model for chronic care management under which it uses new payment models and technical support for practices to fundamentally change care delivery. In this effort, HP4 takes advantage of its strong market share and the highly consolidated provider market. As one of our survey respondents put it, "we are mutually dependent as the providers are our main access to patients, especially those in some of the more remote areas."

HP4 contracts with these large provider networks based on so-called aligned incentive contracts, which combine fee-for-service payments with incentives for efficiency and quality targets. While providers face no downside risk under the current contracts, targets are getting more demanding over time. HP4 also provides technical assistance to the practices: In quarterly meetings with practice staff, HP4 shares data and best practices. The first wave of such arrangements was negotiated in 2011 with 10 provider groups, which represent 65 percent of HP4's spend in the metropolitan area and 35 percent within the state.

HP4 recognizes that division of roles and responsibilities for chronic care management programs between them and the practices is still evolving but believes that some practices might bite off more than they can chew. According to our survey respondents, "providers know who needs to be reached but they don't necessarily know how to reach them." Even those providers with EMRs have limited capabilities to create and maintain patient registries and track patients over time.

Working with small independent providers is even more challenging because they have small panels and limited resources and capabilities to support population-based care management. While HP4 sees receptiveness for practice redesign among some of these providers, it is not clear that HP4 has the right model to engage with them.

Evaluation

Chronic care management program evaluation at HP4 falls into two categories, operational reporting and evaluations of Innovation Office pilots. The former fulfills routine contractual reporting requirements for plan sponsors and informs management about chronic care management program performance; the latter uses state-of-the-art statistical methods to assess the potential of pilot projects to be rolled out.

Routine reporting measures performance at the purchaser level semiannually and annually, including clinical outcomes, financial value, and operational and member

satisfaction metrics. Disease management ROI is provided at the book of business level. In addition, engagement rates in different programs are tracked on a monthly basis, and quality audits, based on NCQA/URAC standards and departmental metrics, are conducted in order to measure the effectiveness and quality of CM/DM service delivery. Managers evaluate two cases per clinician per month or more frequently when clinicians are new or if performance indicates the need for oversight. Results are discussed regularly with individual clinicians and used in their annual performance reviews. Other performance measures are used on a case-by-case basis. For example, HP4 implemented a project with some employers where it looked at program impact on work absences.

Evaluation results have largely been positive. In particular, higher rates of care gap closure for those engaged compared to those not engaged have been found. These rates have increased over time and, according to the most recent evaluation, the relative improvement rate of gap closure between engaged and not engaged is 28 percent. Satisfaction surveys indicate that members have positive experiences with health support staff. The overall ROI for the disease management program across all conditions was estimated at 1:1.9 across conditions based on the Care Continuum Alliance evaluation standards.

HP4 communicates the results of its evaluations to employers and benefits consultants. Employers receive activity data and estimates of the overall ROI based on the overall book of business. Although plan sponsors would be interested, HP4 does not provide specific ROI for each employer based on purchased plan due to resource constraints and sample size considerations. Benefits consultants also receive case volume statistics. So far, benefits consultants have not been too keen to scrutinize methodology, but the discussions may be trending that way.

HP4 does not publish its routine evaluations in peer-reviewed journals. One of our survey respondents suggested that the design of evaluations was too basic to warrant interest in academic circles. In the future, HP4 is considering publishing the evaluation work coming out of its Innovation Office. Because those pilot projects are purposefully designed to be evaluated, meeting academic standards will be easier.

Challenges in the Operating Environment

HP4 experiences challenges in the operating environment at four levels. Patient factors include making the initial contact with members identified for chronic care management and promoting sustained engagement. At the provider level, the main challenge lies in engaging providers who are operating outside of the consolidated health provider networks in the state. For plan sponsors, demonstrating the value of chronic care management can sometimes be difficult. And finally, in terms of the regulatory environment, stringent state laws around health information technology (HIT) issues and

privacy, as well as malpractice laws, constrain some of the initiatives that HP4 can implement in its chronic care management.

Patient Factors

HP4 has found that enrolling members who have been identified as candidates for chronic care management can be difficult. One reason is difficulty in reaching members, even though HP4 has evening and Saturday hours for disease management calls. In particular, members who are moderately ill and still impactable are the hardest to engage because they are commonly asymptomatic and do not perceive the need to improve their health.

Provider Factors

HP4 recognizes that close collaboration with providers is critical for the success of chronic care management programs because providers are in the best position to close identified gaps in care and to identify patients who would benefit from chronic care management. As one of our survey respondents put it, "modelers are known to be 60 percent wrong," implying that the algorithms a plan uses to identify members for intervention will always be imperfect. While making progress with the large delivery systems, HP4 still lacks a good model to engage providers operating outside these groups.

Purchaser Factors

Purchaser demands can, in HP4's view, interfere with optimal chronic care management program design. Employers commonly push for more customization and greater intensity of outreach, particularly in case management, and want to combine program elements from different vendors, but they tend to disregard that the resulting higher complexity increases cost and impedes coordination.

Regulatory Environment

The state in which HP4 operates has stringent requirement for privacy protection, which a survey respondent characterized as "HIPAA plus plus plus." These requirements make it more difficult to enroll members because their consent to participate has to be documented annually, and to coordinate care because sharing of medical data between providers and the plan is restricted.

Summary

HP4 is a regional plan with a large market share in its state of operation. Its chronic care management program is focused on closing gaps in care and providing a continuum

of care through integration with other programs such as prevention and wellness. HP4 is committed to experimenting with innovative solutions to chronic care, a distinct feature of its chronic care management being its Innovation Office, a department dedicated to experimentation on a small scale to assess whether to expand an initiative.

Given its large market share and the fact that it operates in an enabling provider environment—i.e., the majority of providers are practicing in consolidated care delivery systems and payment reform is quite advanced—HP4 has been able to negotiate performance-based contracts with the bulk of its providers in an attempt to improve chronic care through practice redesign.

The majority of HP4's accounts are self-insured. Strong plan sponsor support is therefore important for the success of its chronic care management. To that effect, HP4 fosters a partnership with employers by engaging them in various aspects of programs, including placing HP4 nurses at the workplace, advising employers on how to promote a culture of wellness, allowing them to shape innovation tested by the Innovation Office, and collaborating with them to undertake evaluations projects.

Health Plan 5

Plan Description

HP5 is a small not-for-profit health plan operating in parts of one state. Overall, it has around 25 percent market share but has higher concentrations in four core regions. The plan is currently marketing self-insured and fully insured plans for large and small groups in its commercial segment, as well as Medicare and Medicaid plans. HP5 has also developed individual insurance products, but it does not expect to have a viable market for those products before the state's health insurance exchange is operational because of the state's strict regulations on individual policies. The plan's primary mission is to provide the "highest quality of care in the most efficient way" to its very stable membership.

Founded by a group of local physicians, who "were really interested in defining the solution," the majority of the board members are physicians practicing in the region. They are elected to serve on the board by their peers, and are invested in providing a sustainable local primary care system. While it does not operate any facilities, HP5 has shaped the local delivery system with strategic investments over a decade.

Chronic Care Management Approach

Services, Management, and Design of Programs

The goal of HP5's chronic care management is to "assist [our] members in achieving optimal health with the conditions that they may have" and to follow the Institute for Healthcare Improvement's triple aims: improve care and access while reducing cost. Concrete drivers for the implementation of the chronic care management program include demographic changes, cost pressure, benefit design, demands by members—especially by insurance brokers—and regulatory requirements.

The diversity of its membership has taught HP5 the importance of a customized approach to "meet the members where they are" early on. For example, it has adopted intense community-based outreach for the Medicaid population to deal with lack of continuity of care and subsequent high ER utilization, and home care services for the Medicare population. Those innovations provided the impetus for its new "high-touch" approach in the commercial space. Resources can also be shared across business lines: For example, staff pharmacists who are required for medication therapy management under Medicare plans are now supporting chronic care management for commercially insured members.

Chronic care management programs include wellness, disease management, and case management. Disease management and case management are part of the core product in the commercial space. While self-insured plans can carve out disease management, they rarely do. Health promotion and wellness programs, which HP5 regards as related to its chronic care management program, are optional features (see box).

Shared Savings Health Promotion Program

HP5 has designed a wellness promotion program for fully insured employers that have 50+ members and are long-term clients. Launched three years ago, this program uses an employer's utilization data to identify top cost drivers and opportunities to address them. HP5 uses the results to recommend changes to benefit design, such as incentives to encourage prudent resource use (e.g., higher co-pay for ER visits) and health promotion activities (e.g., weight loss and activity campaigns). Participating employers can share in the resulting savings through premium reductions.

Chronic care management program development and maintenance are based on practice guidelines that are reviewed at least once every two years, current behavioral theories, and input from clinical advisory panels.

Building on a "loyal membership that stays with us and ages with us" and the strong belief that "high-quality care and high-touch interaction saves costs in the long run," HP5

is moving gradually away from a traditional disease management model that provides standardized communication with substantial use of mailings and IVR calls toward a case management–type approach that emphasizes personal interaction with a nurse and combines disease management into its case management program. This high-touch approach is even used for lower-risk diseases such as asthma, because it allows handling behavioral health and social issues that can interfere with successful chronic care management.

HP5 has decided that this high-touch chronic care management approach can only be effectively and efficiently implemented as an in-house program, because vendor costs were too high and coordination between outsourced and in-house programs is difficult. It therefore brought most of its chronic care management services in-house: behavioral health was brought in-house three years ago, and three disease management programs (COPD, CHF, asthma) were blended into the case management this year and are now operated as a combined CM/DM program. Services that are still outsourced include pharmacy benefit management, 24/7 call line, online tools, and disease management programs for CAD and diabetes.

For case management, HP5 distinguishes two program types based on the length of interaction: episodic case management for about two months, usually post discharge, and complex case management for longer periods. Each member is assigned to a personal nurse who takes the lead in managing the interaction. The primary nurse is supported by behavioral health nurses, social workers, and pharmacists. This multidisciplinary approach allows for "warm transfers between the case management and the behavioral health nurse" in a single call, a process perceived as highly beneficial by HP5. In parallel, social workers can support members in solving issues such as financial barriers to medication compliance by identifying discount programs.

Given the high emphasis on personal engagement between members and case management nurses, staff development and satisfaction is very important to HP5. Case management nurses come from a broad range of backgrounds, many with experience in chronic care. Their preparation starts with an introduction to the program; they then work for several months with a seasoned case management nurse under a preceptor model. When starting to work on their own, they are subject to extensive monitoring and monthly review of cases by two supervisors. HP5 trains all case management nurses in motivational surveying and offers seminars on specific topics for continuous education.

Member Identification, Stratification, and Interaction

Identification and Stratification

Two separate algorithms identify members for the outsourced disease management and the in-house CM/DM programs. Both algorithms use 24 months of claims data to

identify and predict high-cost, high-risk members. The 10 percent of highest-risk members with CAD and diabetes are eligible for outsourced disease management, and the 2 percent of members with the highest overall risk are eligible for the in-house CM/DM program. In cases of overlap, HP5 decides on the program assignment. Furthermore, algorithms are used to identify members for specific campaigns (e.g., to redirect frequent ER users to other urgent care facilities).

Members who are likely to require transitional care after hospital discharge can be flagged for case management through the prior authorization process or through direct referrals from discharge coordinators, who are embedded in some "high-value facilities" that cover large numbers of HP5's membership.

While the disease management vendor uses an algorithm to stratify identified disease management members into high, medium, and low risk, the lead case management nurse stratifies case management members into high, medium, and low acuity based not only on their medical needs but also on their social and financial situation. Based on the acuity, the case management nurse establishes the communication intensity; several times a month for the high-level group, once a month for medium, and less frequently for low acuity levels. Members on a transplant list receive bimonthly check-in calls, and in cases aiming at readmission avoidance, a nurse calls 2, 7, 14, 21, and 28 days after discharge to ensure the member's needs are met.

Interaction

In the two outsourced disease management programs, the vendor provides mailings for members stratified into low and medium risk levels, and telephonic support for those at high risk levels. The in-house CM/DM program is based primarily on personal communication over the phone or in person in selected practices with embedded case management nurses. HP5 has stopped using IVR calls and uses mailings only to provide information and tools that members request, such as pillboxes for members with complex medication regimens.

As mentioned above, each case management member is assigned to a primary nurse whom they can call directly or through an 800 number. During regular business hours, case management members always get a direct, live response; after hours they have, like every HP5 member, access to the 24/7 nurse line provided by a third-party vendor.

Since HP5 focuses on "personal communication with a nurse," it uses support technology in its chronic care management programs selectively. Remote monitoring, for example, has been used successfully after hospital admission for congestive heart failure, if the patient has a provider who is able to respond to the data feeds.

Provider Relationships

As a not-for-profit organization founded by local providers, with a continuing strong representation of regional providers on the board, HP5 has a close relationship with local providers and the trust of the medical community. This trust has allowed HP5 to pursue innovative models for financing and delivery of care for many years. HP5's commitment to the community is evidence in its long history of supporting the development of an innovative and sustainable delivery system in its catchment area. For example, HP5 provided the funding to establish a Regional Health Information Organization about 10 years ago and has supported an ambitious program to transform primary care since 2007. The latter was driven by declining interest of local medical graduates in primary care, because of stressful working conditions and much less pay than for specialty care. A first initiative subsidized the adoption of EMRs in primary care practices.

Primary Care

HP5 has two separate models to interact with providers under its chronic care management program. For the majority of providers, who are paid on a fee-for-service basis, it uses a traditional CM/DM model—i.e., it sends care gaps reports, educational material, and clinical data.

Following a successful pilot with three practices, HP5 is in the process of rolling out a transformational chronic care management model that is based on the concept of a PCMH. Participating practices are paid based on a risk-adjusted capitation scheme with performance-based bonus payments (for details and initial evaluation results see box below). So far about 160 practices with approximately one-third of HP5's members have moved to this new enhanced primary care model; the goal is to make it the future standard PCP model, covering 80 percent of eligible physicians by 2014.

HP5 provides substantial support to assist PCPs in practice transformation: It covers the cost of an external consultancy for one year prior to transition, offers free access to internal resources to support practices and up to $20,000 in subsidies based on milestones. Furthermore, HP5 covers EMR vendor fees for the first two years under the new practice model, since EMR adoption is critical for the new model to work, and license fees for to a medical intelligence tool, as well as user training that allows PCPs to analyze care gaps, ER use, or prescriptions.

Support is continuing for practices that have adopted the new model: HP5 offers back-office support (e.g., a nurse does an action plan to help the practice with the transformation), and embedded case managers support care coordination of chronically ill and at-risk patients in PCP offices with a large HP5 membership. While the practice transformation benefits all patients of these enhanced PCPs, the embedded case managers support HP5 members only. PCPs receive daily discharge reports for hospitalized

members, as well as monthly lists of patients with care gaps, ER use, and other data. Each practice has an assigned strategic coordinator at HP5 who is responsible for supporting continuous quality improvement. In quarterly meetings—usually attended by the coordinator as well as a nurse and the medical director—performance data and opportunities for improvement are discussed with the PCPs. The focus is on establishing an action plan for up to three items and concrete steps for improvement; one element that providers appreciate a great deal is that HP5's pharmacist reviews prescriptions for the last 90 days and provides concrete management recommendations. In addition, these meetings serve to create trust and enable the parties to talk "eye-to-eye"; for example, the HP5 medical director can point out clinical vignettes that illustrate things that have come up in the review of the clinical data.

The New Primary Care Payment Model for Patient-Centered Medical Homes

Providers in the program still send claims (and diagnoses) to HP5 where they are used to calculate the member risk-scores. HP5 has developed an innovative payment scheme for its medical home practices that supports enhanced primary care by combining risk-adjusted capitation and a performance based bonus payments. The capitation payments cover 90 to 95 percent of all primary care services, and PCPs can also receive fee-for-service payments for small procedures that they could alternatively refer to specialists (e.g., small dermatological procedures). HP5 estimates that the new payment system raised PCP compensation by 20 percent and PCPs are additionally eligible for 20 percent in performance bonuses based on

(1) patient experience (measured by the Consumer Assessment of Healthcare Providers and Systems [CAHPS] surveys) provides a threshold (currently very low and easy to pass)

(2) effectiveness/quality (based on 18 HEDIS measures that assess the physician's performance relative to peer group) determines the eligibility for the bonus

(3) efficiency/utilization (based on total cost of care relative to peer group; case mix adjusted; including ER utilization, hospital lab, pharmacy, radiology, specialty) establishes the amount of the bonus.

The evaluation of the pilot, which was conducted in partnership with academic researchers and published in a peer-reviewed journal, showed reductions in inpatient admissions (15 percent), ER visits (9 percent), and high-tech imaging (7 percent); savings of $8 per person per month resulted in overall cost savings in spite of the increased PCP compensation.

HP5 is very satisfied with the risk-adjusted capitation but feels that the performance-based bonus part may still need some revisions (e.g., to account for providers with a lot of Medicaid patients who provide a different level of challenges than the commercial population).

By HP5's account, practices are very happy with the new model. Not only do they feel more rewarded financially, they also find their work more satisfying. In particular,

the new model facilitates population management and team-based care, because practices are free to reorganize care delivery without consideration of billability. For example, they can introduce group visits and are exploring the feasibility of consultation by phone or email. However, the model is not intended to completely replace the chronic care management services provided by HP5 because practices cannot provide all required services, such as management of severe behavioral health issues.

Specialty and Hospital Care

HP5 is looking into new payment schemes for specialty and hospital care as well, but finds this more challenging. While the overall market is competitive, some specialties are dominated by a single group that may be reluctant to depart from established and profitable models. It is also more difficult to attribute members to specialists for accountability purposes. HP5 is thus pursuing gradual change through pilots and is trying to leverage the referral decisions from PCPs working under the new model in order to put pressure on specialists. As one of our survey respondents stated, "We want to provide a sliding slope to facilitate a slow change."

HP5 is, for example, piloting a payment scheme based on shared gains and bundled payment in cardiac surgery and orthopedics groups and a capitation model with the only pediatric urology group in the area. A prospective payment model for cardiology is under development. Furthermore, HP5 is looking to partner with hospitals to reduce readmissions by embedding case managers and providing care transition support.

Evaluation

HP5's in-house team provides regular evaluations for multiple purposes. The first is to fulfill external reporting requirements to plan sponsors, regulators (e.g., Department of Health), accreditation agencies (e.g., NCQA) and recognition programs (e.g., Medicare Star ratings) and secondly, to provide data at the provider level to track provider performance, identify best practices, and inform feedback and guidance provided through the quality program coordinators. Lastly, the team develops internal reports for performance tracking and improvement. In addition, ad-hoc evaluations are conducted to design new interventions, for example, member incentive programs to improve use of preventive services.

HP5 has cooperated with outside experts in the evaluation of its PCP model and initial results have been published in peer-reviewed journals, as described above. Convinced that wider adoption of its enhanced primary care model would benefit the health care system overall, HP5 has always shared its experience publicly.

Challenges in the Operating Environment

HP5 perceives purchaser factors and business considerations as main challenges to its chronic care management program's success. In addition, provider reluctance and limited patient engagement have driven new approaches in HP5's chronic care management program. Finally, regulations at federal and state levels, specifically those related to privacy issues and incentives, provide challenges.

Business Considerations

Business considerations, such as high investment costs, uncertainty about the ROI and the need for a large market share to allow for cost-effective operation of the programs are considerable. As exemplified by HP5's enhanced PCP initiative, effective transformation of the health care system requires a sizable upfront investment, which is only feasible for a plan with significant market share and loyal members.

Purchaser Requirements

Purchaser requirements, such as the variability of performance requirements, purchaser coalition requirements, and micromanagement of program details, are perceived as challenging. Furthermore, employers and insurance brokers demand results quickly, which may be unrealistic because changes in chronic care management will only translate into lower cost in the long run, and may even lead to initial spikes in utilization and costs (e.g., through higher use of preventive services).

Patient Factors

Limited member engagement is a challenge, but HP5 feels that its high-touch personalized interaction is the most promising path to overcome this. The plan actively tries to "meet the members where they are" by extending outreach hours addressing the needs of the predominantly commercially insured working population, creating community initiatives especially for Medicaid members, putting case managers into provider practices and ERs, or experimenting with technology (e.g., chat rooms for younger members). Overall HP5 has found that it is much easier to engage members who have previously been in touch with the plan as opposed to those receiving "cold calls." Timing also matters: Calls immediately after discharge are more successful.

Provider Factors

Provider reluctance to change can interfere with chronic care management program success, especially for a transformational model like HP5's. While many local providers are enthusiastic about the new model, there is a subset that resist changes, in particular

providers close to retirement and those who may have had negative experiences with capitation models in the 1990s.

Regulatory Factors

Given that HP5 has a significant Medicare and Medicaid population, restriction to public plans and the variation in the requirement of different plan sponsors impact its chronic care management operation. Federal nondiscrimination laws as well as state and federal privacy laws are seen as important factors. Our survey respondents mentioned that the state in which HP5 operates has very strict rules regarding incentive schemes; in fact, HP5 "couldn't even give away basketballs from the local college team to kids." While less restricted than Medicaid, the commercial segment is still limited by state laws such as the prohibition of outcome-based incentives.

Summary

HP5 is a small, not-for-profit plan with substantial market share in parts of one state. Founded and led by local physicians, the plan is very invested in the local community. This and the loyal member base strongly define the design and implementation of HP5's chronic care management program. The plan is committed to providing the highest quality of care at the lowest cost, investing in members' health for the long run, and giving back to the community by supporting the transformation of the regional health care system.

The two defining features of its chronic care management program are a personalized, high-touch approach to member communication and engagement and a long-standing effort to transform the local delivery system with a strong focus on primary care. HP5 has piloted and is rolling out a patient-centered medical home model that combines a capitation model with quality monitoring, and is now exploring similar innovations for specialty and hospital care.

Health Plan 6

Plan Description

HP6 is a mid-size health plan operating in one state where it has a market share of 35 percent. Its market share is somewhat higher in rural areas than in metropolitan centers, where large multinational corporations tend to contract with national plans. The plan has a total membership of 1.7 million in the commercial segment, of which 700,000 are fully insured and 1 million are self-insured, and a small Medicare business.

Chronic Care Management Approach

Services, Management, and Design of Programs

The main goals of HP6's chronic care management (CCM) programs are to "deliver comprehensive care and wellness programs" and to empower members to optimize their health. Historically, its approach has been condition-focused, but it is gradually adopting a holistic and member-centric approach, particularly for its in-house programs. While the design of the programs and services is standardized, HP6 tailors outreach methods to accommodate the varying needs of the diverse population in its state. For the development and maintenance of the overall CCM program, HP6 uses evidence-based guidelines, which are reviewed at least every two years, as well as clinical advisory panels and theories of behavioral change.

HP6's CCM offerings are standardized across business lines. Large self-insured accounts have some flexibility on the depth of outreach and can opt out of CCM, which they rarely do. HP6's chronic care management combines a vendor-provided disease management program for five chronic conditions (asthma, COPD, CAD, diabetes, and heart failure) and for care of preference sensitive conditions (e.g., back pain) with several in-house programs, including core chronic and rare chronic conditions management, case management, and a care transition program.

The vendor program provides referrals to online support tools, outbound calls, and health coaching, as well as additional services to all of HP6's commercial members, such as access to online information around chronic conditions, outbound calls to encourage uptake of preventive services (e.g., mammograms), and a 24-hour nurse line.

The in-house programs focus on higher-risk patients and are more intense. Each member is assigned an HP6 nurse as a primary case manager who can arrange additional services such as home assessments, home visits, care coordination, and coordination with social care. The core chronic conditions program focuses on closing care gaps and improving self-management and health literacy. Case management uses a similar approach for high-risk patients irrespective of their underlying conditions (e.g., home-bound patients, oncology patients, high-risk pregnancies). The rare conditions program, which targets members with rare but severe diseases (such as AIDS, MS, and Parkinson's), provides primarily medication management support. Finally, the transition program supports high-risk patients during admission and after hospital discharge, such as those hospitalized for over ten days, those with prior readmission(s), and those who are at elevated risk for readmission based on predictive modeling. Its main aims are to avoid readmissions as well as to identify patients that would benefit from longer-term support through case management.

HP6 offers a distinctive service to patients who are home-bound, either temporarily due to a specific event or permanently due to a chronic condition, through the Physician Assessment, Treatment and Consultations at Home (PATCH) program (see box below).

The Physician Assessment, Treatment and Consultations at Home (PATCH) program

Case managers can refer home-bound members who are physically unable to get to their physicians for treatment to PATCH, a vendor-administered program that provides "comprehensive emergent and urgent care in the home setting." The program targets members at risk for unplanned emergency room visits or hospital admissions, as well as recently discharged patients requiring medical oversight and members for whom face-to-face consultation with a physician is beneficial for treatment adherence. Given the very positive results—cost savings in the order of $2,200 per participating member per month—the pilot was extended statewide, and HP6 is currently piloting an expansion to patients at risk for hospital readmission.

Member Identification, Stratification, and Interaction

Identification and Stratification

HP6 first identifies the 10 percent of members with the highest risk for its in-house programs based on medical and pharmacy claims, lab results, biometric data and HRAs. The current system involves referral-based processes as well as a number of algorithms based on specific triggers (e.g., high-cost procedures, specific diagnoses) and predicted future costs. Assignment to case management is mostly referral-based, while other programs use mainly predictive modeling and algorithms for identification. Members who are flagged for multiple programs are assigned to a program based on a hierarchy, which takes into account the ROI of the respective programs. The plan is currently in the process of streamlining the way it assigns members to the different in-house programs to be more patient-centric and incorporate aspects of impactability and engagement.

Interaction

The vendor program provides online support tools to low-risk members and telephonic outreach and coaching for high-risk members. For the latter, the vendor aims to reach members within 30 days of identification.

For the in-house programs, interaction with members is mostly telephonic, with the exception of the transition program, where field-based nurses see patients in hospitals or post-discharge in providers' offices to support the member's immediate needs and, if necessary, to refer them to longer-term case management. For the other programs, the initial call to the member can either be made by a coach (core chronic conditions

management) or a nurse (rare chronic conditions and case management). The main purpose of the call is to introduce the member to the respective programs, get the required consent to participate, and do the initial triage. Once enrolled, a nurse case manager conducts a telephonic assessment, helps the member articulate health goals, and develops a plan to help the member achieve these goals.

The intensity and duration of the interactions differ by program. In the core chronic conditions management program, the case manager checks in with the member weekly or biweekly, depending on the patient's needs, for a total of three to four months. In case management, members graduate within three months on average, either because they have met their goals, their conditions have stabilized, or they choose to disengage. Members are encouraged to keep their case manager's direct number and re-enroll at any point in the future.

In its interactions, HP6 strives to "reach members where they are" by training nurses in behavioral interviewing techniques. In addition, HP6 has bilingual (Spanish-English) nurses and other staff, and all the nurses have access to a tool—CultureLink—that helps them understand how certain groups view a specific disease and enables them to make culturally sensitive recommendations around, for example, diet, nutrition, and end-of-life issues.

One of the biggest challenges for HP6 is that only around 36 percent of its members who were identified for its CCM programs can be reached because the plan commonly lacks a valid phone number and other contact information. Engagement rates—defined as having at least two meaningful interactions with a nurse—are between 35 and 60 percent of those reached. To improve engagement rates, HP6 is considering promoting face-to-face interactions through its existing retail centers and clinics (see box below).

HP6 does not provide incentives for CCM program engagement to members in its fully insured line of business and only administers them through a vendor for some of its large self-insured plans. These incentives are, for example, in the form of gift cards and cash awards, but the plan is still trying to identify the right type and amount of incentive to promote participation and sustained engagement in CCM programs.

Expanding Personal Outreach to CCM Members

HP6 has about a dozen retail centers and clinics. Retail centers provide wellness-related activities (e.g., health risk appraisals, diabetes education) and administrative activities (e.g., customer service, bill paying), while retail clinics (usually adjacent to retail centers) provide clinical services and some urgent care through a partnership with physician groups. HP6 is planning to use these facilities for face-to-face interactions between CCM nurses and members identified for these programs.

Provider Engagement

The main provider-facing activity under HP6's CCM program is the communication of care gaps to practices through a provider portal that connects the plan with physicians. The portal—a joint venture with other payers—sends care gap alerts to providers, allows them to undertake a number of administrative transactions, and enables them to check member benefits. All of HP6's members are included in the system, and more than 90 percent of the physicians in HP6's network have signed up. In addition, HP6 is sending information (e.g., provider newsletters) and organizing educational seminars for provider staff.

In the past two years, HP6 has transitioned to practice redesign models with new payment methods and technical support for practices to fundamentally change care delivery. It has made the most progress with primary care but is now forming partnerships in specialty care as well.

With 2,400 physicians in 100 practices covering 650,000 patients, HP6 reported having one of the largest number of physicians in PCMHs in the country (see box below). Payment under PCMH contracts combines fee-for-service payment, a per-member per-year fee for chronic care patients, and an efficiency-based bonus of 0–16 percent, depending on cost relative to a practice's peer group. These contracts have no downside risk for the practices.

HP6's Experience with Practice Redesign

Two years ago, HP6 conducted its first PCMH pilot with four practices. Practices with at least 300 HP6 members were contacted, and those with the highest quality scores were invited to participate. Lessons learned from this pilot informed the further roll-out.

Today, all medical groups that pass a quality threshold are eligible to join the PCMH program but must get accredited as PCMH within two years. Practices also have to expand office hours by six hours a week, engage with the plan on a quarterly basis, and implement EHRs.

HP6 supports the transition by sharing the costs, including educating the group on the requirements, subsidizing EHR adoption, and providing free consulting support. The smaller practices receive the same level of support but do not have the same requirements; for example, smaller practices are not required to obtain external accreditation.

Evaluation results suggest that PCMHs have both improved quality of care and reduced cost in the order of 5–10 percent even after taking into account physicians' bonuses.

The plan interacts regularly with PCMHs. In addition to sending care gap information to the PCMHs, a team of nurses and medical directors from HP6 visits the practices on a quarterly basis and share their results. Further, since HP6 is not yet connected to physicians' EHRs, it routinely checks member medical charts at random, and gives the practices additional credit if they are providing high quality of care to their patients. HP6 encourages practices to refer patients to its CCM programs by providing them with a guide on the different programs.

In partnership with its DM vendor, HP6 is undertaking a pilot with ten high-volume practices under which an embedded nurse helps the practice to close care gaps and refers patients to the plan's CCM programs. The goal is either to make practices self-sufficient in providing such care management or to persuade them to contract with the DM vendor for this service. In the first year, the vendor is covering the full cost of the pilot; in the second year, the plan shares the cost; and in the third year, the physician groups assume the full cost if they decide to continue the service.

For specialty care, HP6 started working with ACOs last year and currently has six groups in its network. The terms of engagement are negotiated with each ACO individually and the level of interaction and data-sharing differs from group to group. For example, HP6 is linked to the EHRs of two oncology groups and has nurses on-site. These groups inform the plan of a patient's first visit, which then allows an HP6 nurse to follow up and enroll the member in the in-house case management program. Within another ACO, a hospital shares real-time data with the plan, which helps HP6 capture more immediately the patient's tests and procedures in-hospital rather than through claims data.

Evaluation

CCM program evaluations at HP6 fall into two categories: operational reporting for external stakeholders and internal evaluations to assess program/pilot performance. The former is done on an annual, semiannual, or quarterly basis, depending on the purpose.

For employers, standard reports include metrics on identification, clinical outcomes, and operations (e.g., nurse activity and engagement rates). HP6 reports on financial measures by request; for example, employers can get a "drill-down" option for per-member per-month costs to see cost drivers by risk category or disease (e.g., cancer, cardiovascular diseases). However, only a minority of employers request such data.

Program evaluations are conducted annually for the vendored DM program and on an ad-hoc basis for other programs and pilots to find opportunities for improvement or to decide on program discontinuation. For example, an initiative to remind members to schedule a mammogram was phased out for lack of effect. Where possible, ROI is

calculated, but our interviewees acknowledged that determining the correct methodology to accurately reflect the ROI is often difficult.

While generally positive, evaluation results for the CCM programs indicate that case management (mostly referral based) tends to be more effective in terms of engagement and clinical outcomes than disease management (identification mostly through predictive modeling), suggesting that identification through predictive modeling would need to be improved to get to the most impactable members. Evaluation results also show better clinical outcomes for the more proactive employer groups, for example, those that provide member incentives.

HP6 does not routinely publish its results in peer-reviewed journals, even though evaluation staff would be interested in doing so. The reasons are resource constraints and concern about the methodological rigor of studies that are conducted for business intelligence purposes.

Challenges in the Operating Environment

HP6 experiences challenges in the operating environment at several levels. For patient factors, making the initial contact and engaging patients identified for CCM in a sustained way have proven to be difficult. At the provider level, coordinating workflows has been especially challenging. Finally, regulatory environment and business considerations can sometimes impede CCM.

Patient Factors

Enrolling patients in the CCM programs was identified as one of the most important challenges, primarily due to the lack of access to correct telephone numbers. Once patients have been reached, limited engagement on their part is a significant challenge to the success of the CCM programs.

Provider Engagement

HP6 has made great headway in gaining the trust of many providers, who now see it as a partner in providing solutions for chronic care. However, others—particularly those outside HP6's PCMH network—are unaware of HP6's resources, in spite of efforts to promote the programs through periodic seminars and provider newsletters.

Lack of EHR implementation continues to stand in the way of maximizing the impact of HP6's CCM program because workflows cannot be integrated between the plan and the providers.

Regulatory Environment and Business Consideration

Our interviewees suggested that the use of technologies in CCM is limited partly by privacy laws on federal and state levels.

Business considerations, such as high investment costs and uncertainty about ROI, are important to HP6's chronic care strategy. Further, making the value proposition both internally and externally for investing in patients who are still healthy but are at risk (e.g., pre-diabetes) rather than just focusing on those who are already high cost, is sometimes a challenge for HP6 staff.

Summary

HP6 is a mid-sized plan with a substantial market share in its state. Its CCM is transitioning from being disease-focused to a more holistic and patient-centric approach. In parallel, the plan is trying to streamline its identification and stratification strategies to fit them to its new CCM approach. In addition, HP6 is progressing toward more-personalized interactions with members in CCM through innovative programs such as the Physician Assessment, Treatment and Consultations at Home (PATCH) program, and possible future extension of services offered in retail centers and clinics. In its provider relations, HP6 has focused its efforts on building a strong provider network with models such as PCMH and ACOs.

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