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REPORT

# RAND/UCLA Quality-of-Care Measures for Carpal Tunnel Syndrome

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## Appendix V, Part A: Materials for Scoring Electrodiagnosis Quality Measures (Scoring Instructions)

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## Appendix V: Materials for Scoring Electrodiagnosis Quality Measures

## Scoring Instructions

These measures should be scored by a physician with specific training in electrodiagnosis (EDX). The purpose of the Scoring Instructions is to provide basic information that can be used to determine how to score the quality measures and related variables. Because the Scoring Instructions are long, recording data for individual patients on it would use a lot of paper. Instead, data for individual patients can be recorded on the separate and much shorter Data Form. Thus, if the Scoring Instructions are analogous to a test you might take in school, the Data Form is analogous to the sheet on which you record your answers to test questions. The Guidance Document contains detailed definitions and instructions; abstractors should refer to that document before scoring the measures and variables the first time, if they encounter unusual situations, or if they have any detailed questions.

In these documents, questions are numbered as follows:

- Questions pertaining to section or subsection eligibility are indicated by an “E” after the question.
- Questions pertaining to individual measures are indicated by “M” after the question number number.
  - “ME” means that the question pertains to eligibility for the measure.
  - “MC” means that the question addresses components of an individual measure.
  - “MA” means that the question addresses whether or not care adhered to the requirements of the measure.
- Additional variables that are not directly related to an individual measure are indicated by “V” after the question number.

Answer the following questions as directed for each diagnostic test completed on the study hand. Complete one Data Form per electrodiagnostic test.

**EDX.01.V Hand Studied:** Which hand is the study hand and/or the subject of this electrodiagnostic test?

**EDX.02.V Test Date:** Date of electrodiagnostic test

\_\_\_\_/\_\_\_\_/\_\_\_\_\_

### EDX.03.E Eligibility for EDX Measures

Is the complete electrodiagnostic test report for this test included in the medical record (interpretation and raw data)?

- YES → **Eligible for remaining questions, continue**
- NO or UNCLEAR → **Not eligible for remaining questions, skip to next electrodiagnostic test until answers are recorded for all available electrodiagnostic tests**

### EDX.04.M Essential components of EDX evaluation for CTS

Does the report from this electrodiagnostic test indicate that **the following test components** were performed? **Select all boxes on left that apply.** Document Measure Components and Measure Adherence on the Data Form.

- EDX.04.MC.1 Median motor (motor nerve conduction study on median nerve):** Either of the following:
  1. Amplitude, distal latency **AND** nerve conduction velocity were documented **OR**
  2. Motor nerve conduction responses were documented as unobtainable for the median nerve in the study hand
- EDX.04.MC.2 Median sensory (sensory nerve conduction study on median nerve):** Either of the following:
  1. Peak latency **AND** amplitude **OR**
  2. Sensory nerve conduction responses were documented as unobtainable for the median nerve in the study hand
- EDX.04.MC.3 Ipsilateral sensory (sensory nerve conduction study on ipsilateral radial or ulnar nerve):** Peak latency **AND** amplitude were documented for a sensory nerve conduction study of the ipsilateral ulnar **OR** radial sensory nerve at the wrist

-----*Summarize Adherence*-----

- ALL THREE BOXES CHECKED → **Pass, continue to next measure**
- NONE to TWO BOXES CHECKED, or UNCLEAR → **No Pass, continue to next measure**

### EDX.05.M Skin temperature should be measured during EDX testing

Was the skin temperature of that hand/arm recorded during the electrodiagnostic test?

- YES → **Pass, continue to next measure**
- NO or UNCLEAR → **No Pass, skip to EDX.07.E**

## EDX.06.M Low skin temperature should be normalized before EDX testing

Eligibility: Did this electrodiagnostic test pass measure **EDX.05.M AND** was the first skin temperature recorded for that hand/arm less than or equal to 32 degrees Celsius (89.6 degrees Fahrenheit)?

- YES → **Eligible for this measure, continue**
- NO or UNCLEAR → **Not eligible for this measure, skip to next measure**

Adherence: Did the report for this test document that a repeat skin temperature was at least 32 degrees Celsius before the nerve conduction studies were performed, such as due to a provider warming the skin?

- YES → **Pass, continue to next measure**
- NO or UNCLEAR → **No Pass, continue to next measure**

## EDX.07.E Eligibility for EDX.08.M through EDX.20.M

Did the physician who interpreted the electrodiagnostic test call it positive for or consistent with CTS?

- YES → **Eligible for remaining measures, continue to EDX.08.M**
- NO or UNCLEAR → **Not eligible for remaining measures, skip to next electrodiagnostic test**

**EDX.08.ME through EDX.19.MA:** All of these questions pertain to one quality measure, which determines whether or not calling an electrodiagnostic test positive for CTS is justified. The measure considers the results of four different component studies that may be performed during an electrodiagnostic test. A positive result on any of these studies justifies calling the electrodiagnostic test positive overall.

## EDX.08.ME Eligibility for EDX.09.MC through EDX.10.MC

Did the electrodiagnostic test include a digit-wrist study of the radial nerve, meaning was the ipsilateral radial nerve compared with the median nerve **AND** were conduction distances 10 cm?

- YES → **Eligible for EDX.09.MC through EDX.10.MC, continue**
- NO or UNCLEAR → **Not eligible for EDX.09.MC through EDX.10.MC, skip to EDX.11.ME**

## EDX.09.M Sensory peak latencies at 10 cm

**EDX.09.MC.1** What was the median sensory peak latency at 10 cm? \_\_\_\_\_ ms

**EDX.09.MC.2** What was the radial sensory peak latency at 10 cm? \_\_\_\_\_ms



## EDX.10.MC Criteria for calling digit-wrist study of radial nerve positive

Based on values from EDX.09.MC above, select all that apply.

- ❖ The radial sensory peak latency was less than 2.9 ms
- ❖ The difference between the median sensory peak latency and radial sensory peak latency was 0.4 ms or greater

----- Summarize digit-wrist study, radial nerve -----

- BOTH → This study can be called POSITIVE for CTS, skip to EDX.19.MA
- ONE OR NONE → Cannot call this study positive for CTS, continue to EDX.11.ME

## EDX.11.ME Eligibility for EDX.12.MC through EDX.13.MC

Did the electrodiagnostic test include a palm-wrist study of the ulnar nerve, meaning was the ipsilateral ulnar nerve compared with the median nerve AND were conduction distances 8 cm?

- YES → Eligible for EDX.12.MC through EDX.13.MC, continue
- NO or UNCLEAR → Not eligible for EDX.12.MC through EDX.13.MC, skip to EDX.14.ME

## EDX.12.M Sensory peak latencies at 8 cm

EDX.12.MC.1 What was the median sensory peak latency at 8 cm? \_\_\_\_\_ ms

EDX.12.MC.2 What was the ulnar sensory peak latency at 8 cm? \_\_\_\_\_ ms

## EDX.13.MC Criteria for calling palm-wrist study of ulnar nerve positive

Based on the values for EDX.12.MC, select all that apply:

- ❖ The ulnar sensory peak latency was less than 2.3 ms
- ❖ The difference between the median sensory peak latency and ulnar sensory peak latency was greater than 0.4 ms

----- Summarize palm-wrist study, ulnar nerve -----

- BOTH → This study can be called POSITIVE for CTS, skip to EDX.19.MA
- ONE OR NONE → Cannot call this study positive for CTS, continue to EDX.14.ME

## EDX.14.ME Eligibility for EDX.15.MC through EDX.16.MC

Did the electrodiagnostic test include a digit-wrist study of the ulnar nerve, meaning was the ipsilateral ulnar nerve compared with the median nerve **AND** were conduction distances 13 to 14 cm?

- YES → **Eligible for EDX.15.MC through EDX.16.MC, continue**
- NO or UNCLEAR → **Not eligible for EDX.15.MC through EDX.16.MC, skip to EDX.17.ME**

## EDX.15.M Sensory peak latencies at 13-14 cm

EDX.15.MC.1 What was the median sensory peak latency at 13-14 cm? \_\_\_\_\_ ms

EDX.15.MC.2 What was the ulnar sensory peak latency at 13-14 cm? \_\_\_\_\_ ms

## EDX.16.MC Criteria for calling digit-wrist study of ulnar nerve positive

Based on the values for EDX.15.MC, select all that apply:

- ❖ The ulnar sensory peak latency was less than 3.6 ms
- ❖ The difference between the median sensory peak latency and ulnar sensory peak latency was 0.6 ms or greater

----- Summarize digit-wrist study, ulnar nerve -----

- BOTH → **This study can be called POSITIVE for CTS, skip to EDX.19.MA**
- ONE OR NONE → **Cannot call this study positive for CTS, continue to next measure, continue to EDX.17.ME**

## EDX.17.ME Eligibility for EDX.18.MC: Other criteria for calling electrodiagnostic test positive

Was the sensory peak latency unobtainable for the median nerve AND a median wrist abductor-pollicis-brevis study was performed, meaning that motor distal latency was assessed on the median nerve between the wrist and the abductor pollicis brevis muscle?

- YES → **Eligible for EDX.18.MC, continue**
- NO or UNCLEAR → **Not eligible for EDX.18.MC, skip to EDX.19.MA**

## EDX.18.MC Criteria for calling median wrist abductor-pollicis-brevis study positive

Was the motor distal latency on the median wrist abductor-pollicis-brevis study greater than 4.5 ms?

- YES → **This study is consistent with CTS, continue**
- NO → **Cannot conclude this study is consistent with CTS, continue**

## EDX.19.MA Criteria for calling test positive for CTS overall

Considering the results from EDX.10.MC, EDX.13.MC, EDX.16.MC or EDX.18.MC, were any results consistent with CTS?

- YES → **Pass, continue**
- NO or UNCLEAR → **No Pass, continue**

## EDX.20.M Criteria for calling positive EDX test for CTS severe

Eligibility: Was this test interpreted as severe CTS?

- YES → **Eligible for measure, continue**
- NO or UNCLEAR or MISSING RECORDS → **Not eligible for this measure, skip to next electrodiagnostic test until answers are recorded for all available tests.**

Adherence: Was needle electromyography performed on muscles innervated by the median nerve in the study hand **AND** were the following documented? **Select all that apply.**

- EDX.20.MC.1** Reduction in recruitment
- EDX.20.MC.1** Motor unit action potentials (MUAPs) of increased duration **and** amplitude or acute CTS (onset < one week)

-----*Summarize Adherence*-----

- BOTH → **Pass**
- NONE or ONE, or needle electromyography was not performed, or UNCLEAR → **No Pass**

**Go to next electrodiagnostic test until Data Forms have been completed for all available tests.**