



Public Commentary Report

Quality Measures on the *Management of Carpal Tunnel Syndrome*

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Management of Carpal Tunnel Syndrome Quality Measures

Overview of Public Commentary

The reviews and comments related to these quality measures are reprinted in this document and posted on the AAOS website. All peer reviewers and public commenters are required to disclose their conflict of interests. Names are removed from the forms of reviewers who requested that they remain anonymous; however their COI disclosures still accompany their response.

Public Comment

ASSH and AAOS circulated a draft of three carpal tunnel syndrome quality measures for a 30-day public comment period ending on August 21st, 2017.

- ASSH and AAOS received 100 comments.
- 10 comments were on behalf of a society and 90 comments on behalf of individuals.
- All comments were considered by measure development leadership.

Public Comment Responses

Public Commenter Key

Each public commenter was assigned a number (see below). All responses in this document are listed by the assigned peer reviewer's number.

Table 1. Public Commenter Key

Reviewer ID	Name of Reviewer	Conflicts/Customer Number
1	Anonymous	No conflicts listed
2	George Edwards, Jr, MD	No conflicts listed
3	Craig Williams	24294
4	David Hildreth, MD	No conflicts listed
5	Kenneth Taylor	No conflicts listed
6	Stephen Kennedy, MD, FRCSC	599967
7	Anonymous	No conflicts listed
8	John Crick, CAQ	No conflicts listed
9	Anonymous	No conflicts listed
10	Mark Lemel, MD	No conflicts listed
11	John Rayhack, MD	No conflicts listed
12	William Shaffer	No conflicts listed
13	Marcia Hixson, MD	No conflicts listed
14	Igor Immerman, MD	No conflicts listed
15	Peter Bentivegna, MD, FACS	No conflicts listed
16	Scott Gordon, MD	No conflicts listed
17	Kevin Hildebrand, MD	No conflicts listed
18	Anonymous	No conflicts listed
19	Tjerk Bury, MD	No conflicts listed
20	Edward Lipp	No conflicts listed
21	Thomas Greene, MD	No conflicts listed
22	H. Kirk Watson, MD	No conflicts listed
23	Jeffrey Wint	No conflicts listed
24	Timothy Bill, MD	No conflicts listed
25	Christian Dumontier, A.	No conflicts listed
26	Teri Formanek, MD	No conflicts listed
27	Anonymous	No conflicts listed
28	Paul Puziss	No conflicts listed
29	David Netscher, MD	No conflicts listed
30	Anonymous	No conflicts listed
31	Malcolm Roth, MD	Conflict Questionnaire Responses Below
32	Harris Gellman, MD	No conflicts listed

Reviewer ID	Name of Reviewer	Conflicts/Customer Number
33	Anonymous	No conflicts listed
34	James Lin	No conflicts listed
35	David Wong, MD	No conflicts listed
36	John Evans, MD	No conflicts listed
37	Stephen Leibovic, MD	Conflict Questionnaire Responses Below
38	Michael Behrman, MD	No conflicts listed
39	Monica Wood, MD	No conflicts listed
40	Jeff Rodgers	No conflicts listed
41	Gregory May, MD	No conflicts listed
42	George Edwards, Jr, MD	No conflicts listed
43	Anonymous	No conflicts listed
44	Andrew Palmer, MD	11819
45	Paige Fox, MD, PhD	No conflicts listed
46	Gary Frykman	002023
47	Walter Short	No conflicts listed
48	Saul Kaplan, MD. CAQ Hand	No conflicts listed
49	Waldo Floyd III, MD, FAOA, ABOS, CAQ Hand	14570
50	Gregory Austin, MD	No conflicts listed
51	Alan Wolf	No conflicts listed
52	Clayton Peimer, MD, FACS, FAAOS	11821
53	Kenneth Sabbag, MD	No conflicts listed
54	Anonymous	No conflicts listed
55	Harold Stokes, MD	No conflicts listed
56	Donald Bynum, MD	No conflicts listed
57	James Pertsch, MD	No conflicts listed
58	Anonymous	No conflicts listed
59	E. Anthony Rankin, MD	No conflicts listed
60	Michael Clendenin, MD	No conflicts listed
61	Anonymous	No conflicts listed
62	Anonymous	No conflicts listed
63	Anonymous	No conflicts listed
64	Barton Wax, MD	No conflicts listed
65	Kyle Bickel, MD	No conflicts listed
66	John Houghtaling	671552
67	Dmitry Tuder, MD	No conflicts listed
68	Milton Armstrong, MD	No conflicts listed
69	Gordon Brody, MD CAQSH	No conflicts listed
70	Ann Van Heest, MD	34080
71	Anonymous	No conflicts listed
72	Anonymous	No conflicts listed

Reviewer ID	Name of Reviewer	Conflicts/Customer Number
73	Daniel Mass, MD	13400
74	Anonymous	No conflicts listed
75	Anonymous	059496
76	William Rogers, MD, FASSH, FAAOS	No conflicts listed
77	Duffield Ashmead, MD	Conflict Questionnaire Responses Below
78	Kent Jason Lowry, MD	136913
79	David Brogan, MD, MSc	858220
80	Lawrence Halperin, MD	24379
81	David Bernstein, MD	No conflicts listed
82	Michael Grafe, MD	Conflict Questionnaire Responses Below
83	Anonymous	No conflicts listed
84	John Lunt, MD	No conflicts listed
85	D. J. Mastella, MD, FAAOS/CAQH	No conflicts listed
86	Christopher English, MD	No conflicts listed
87	Tom Harter, MD	No conflicts listed
88	Anonymous	135956
89	Edward Diao, MD	17240
90	Wood Megan, Wood	No conflicts listed
91	Anonymous	No conflicts listed
92	Anonymous	No conflicts listed
93	Gregg Cregan, MD	No conflicts listed
94	Robert Coats II, MD	No conflicts listed
95	Vince Battista, MD	No conflicts listed
96	Megan Conti Mica, MD	000000859783
97	Anonymous	No conflicts listed
98	Anonymous	No conflicts listed
99	Peter Townsend, MD	No conflicts listed
100	Anonymous	No conflicts listed

To review disclosures of submissions with an AAOS customer ID, please visit:

<http://www7.aaos.org/education/disclosure/search.aspx>

All public commenters are required to disclose any possible conflicts that would bias their review via a series of 10 questions (see Table 1a). For any positive responses to the questions (i.e. “Yes”), the reviewer was asked to provide details on their possible conflict.

Table 1a. Additional Conflict Questionnaire Items

Disclosure Item Key	Disclosure Question
A	Do you or a member of your immediate family receive royalties for any pharmaceutical, biomaterial or orthopaedic product or device?
B	Within the past twelve months, have you or a member of your immediate family served on the speakers bureau or have you been paid an honorarium to present by any pharmaceutical, biomaterial or orthopaedic product or device company?
C	Are you or a member of your immediate family a PAID EMPLOYEE for any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier?
D	Are you or a member of your immediate family a PAID CONSULTANT for any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier?
E	Are you or a member of your immediate family an UNPAID CONSULTANT for any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier?
F	Do you or a member of your immediate family own stock or stock options in any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier (excluding mutual funds)
F.1	You indicated that you or a member of your immediate family own stock or stock options in any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier (excluding mutual funds)
G	Do you or a member of your immediate family receive research or institutional support as a principal investigator from any pharmaceutical, biomaterial or orthopaedic device or equipment company, or supplier?
H	Do you or a member of your immediate family receive any other financial or material support from any pharmaceutical, biomaterial or orthopaedic device and equipment company or supplier?
I	Do you or a member of your immediate family receive any royalties, financial or material support from any medical and/or orthopaedic publishers?
J	Do you or a member of your immediate family serve on the editorial or governing board of any medical and/or orthopaedic publication?

Table 1b. Additional Conflict Questionnaire Responses

Reviewer ID	A	B	C	D	E	F	F.1	G	H	I	J
31	No	No	No	No	No	Yes	Cegene	No	No	No	No
37	No	No	No	No	No	Yes	Owner, DJ Medical Inc.	No	No	No	No
77	No	No	No	No	No	No		No	No	No	No
82	No	No	No	No	No	No		No	No	No	No

Public Commenter Demographics

Reviewer ID	Name of Reviewer	Primary Specialty	Are you commenting on this measure as a representative of a professional society?
1	Anonymous	Hand	No
2	George Edwards, Jr, MD	Hand	Yes; American Society for Surgery of the Hand
3	Craig Williams	Hand	No
4	David Hildreth, MD	Hand	No
5	Kenneth Taylor	Hand	No
6	Stephen Kennedy, MD, FRCSC	Hand	No
7	Anonymous	Hand	No
8	John Crick, CAQ	Hand	No
9	Anonymous	Hand	No
10	Mark Lemel, MD	Hand	No
11	John Rayhack, MD	Hand	No
12	William Shaffer	Adult Spine	No
13	Marcia Hixson, MD	Hand	No
14	Igor Immerman, MD	Hand	No
15	Peter Bentivegna, MD, FACS	Plastic Surgery/Hand	No
16	Scott Gordon, MD	Hand	No
17	Kevin Hildebrand, MD	Hand	No
18	Anonymous	Hand	No
19	Tjerk Bury, MD	Hand	No
20	Edward Lipp	Hand	No
21	Thomas Greene, MD	Hand	No
22	H. Kirk Watson, MD	Hand	No
23	Jeffrey Wint	Hand	No
24	Timothy Bill, MD	Hand	No
25	Christian Dumontier, A.	Hand	No
26	Teri Formanek, MD	Hand	No
27	Anonymous	Hand	No
28	Paul Puziss	orthopedic surgery	No
29	David Netscher, MD	Hand	Yes; American Society for Surgery of the Hand
30	Anonymous	Hand	No
31	Malcolm Roth, MD	Plastic Surgery	No
32	Harris Gellman, MD	Hand	No
33	Anonymous	Hand	No

Reviewer ID	Name of Reviewer	Primary Specialty	Are you commenting on this measure as a representative of a professional society?
34	James Lin	Hand	Yes; American Society for Surgery of the Hand
35	David Wong, MD	Hand	No
36	John Evans, MD	Hand	No
37	Stephen Leibovic, MD	Hand	No
38	Michael Behrman, MD	Hand	No
39	Monica Wood, MD	Hand	No
40	Jeff Rodgers	Hand	No
41	Gregory May, MD	Hand	No
42	George Edwards, Jr, MD	Hand	Yes; American Society for Surgery of the Hand
43	Anonymous	Hand	No
44	Andrew Palmer, MD	Hand	No
45	Paige Fox, MD, PhD	Hand	No
46	Gary Frykman	Hand	No
47	Walter Short	Hand	No
48	Saul Kaplan, MD. CAQ Hand	Hand	No
49	Waldo Floyd III, MD, FAOA, ABOS, CAQ Hand	Hand	No
50	Gregory Austin, MD	Hand	No
51	Alan Wolf	Hand	No
52	Clayton Peimer, MD, FACS, FAAOS	Hand	No
53	Kenneth Sabbag, MD	Hand	No
54	Anonymous	Hand	No
55	Harold Stokes, MD	Hand	Yes; American Academy of Orthopaedic Surgeons
56	Donald Bynum, MD	Hand	No
57	James Pertsch, MD	Hand	No
58	Anonymous	Hand	No
59	E. Anthony Rankin, MD	General, Hand	No
60	Michael Clendenin, MD	Hand	Yes; ASSH/AAOS/ABOS
61	Anonymous	Hand	No
62	Anonymous	Hand	No
63	Anonymous	Hand	No
64	Barton Wax, MD	Hand	No
65	Kyle Bickel, MD	Hand	No
66	John Houghtaling	Hand	No
67	Dmitry Tuder, MD	Hand	No

Reviewer ID	Name of Reviewer	Primary Specialty	Are you commenting on this measure as a representative of a professional society?
68	Milton Armstrong, MD	Hand	No
69	Gordon Brody, MD CAQSH	Hand	No
70	Ann Van Heest, MD	Hand	No
71	Anonymous	Hand	No
72	Anonymous	Hand	No
73	Daniel Mass, MD	Hand	No
74	Anonymous	Hand	No
75	Anonymous	Hand	No
76	William Rogers, MD, FASSH, FAAOS	Hand	No
77	Duffield Ashmead, MD	Hand	No
78	Kent Jason Lowry, MD	Sports Medicine	Yes; American Academy of Orthopaedic Surgeons
79	David Brogan, MD, MSc	Hand	No
80	Lawrence Halperin, MD	Hand	No
81	David Bernstein, MD	Hand	No
82	Michael Grafe, MD	Hand	No
83	Anonymous	Hand	No
84	John Lunt, MD	Hand	No
85	D. J. Mastella, MD, FAAOS/CAQH	Hand	No
86	Christopher English, MD	Hand	Yes; American Society for Surgery of the Hand
87	Tom Harter, MD	Hand	No
88	Anonymous	Hand	No
89	Edward Diao, MD	Hand	No
90	Wood Megan, Wood	Hand	No
91	Anonymous	Hand	No
92	Anonymous	Hand	No
93	Gregg Cregan, MD	Hand	No
94	Robert Coats II, MD	Hand	No
95	Vince Battista, MD	Hand	No
96	Megan Conti Mica, MD	Hand	No
97	Anonymous	Hand	No
98	Anonymous	Hand	No
99	Peter Townsend, MD	Hand	Yes; American Academy of Orthopaedic Surgeons
100	Anonymous	Plastic Surgery	Yes; American Society of Plastic Surgeons

Public Comment Responses to Structured Peer Review Form Questions

All public commenters are asked their level of support for each of the candidate measures, with the options: Support, Support with Modifications, or Do Not Support, and invited to leave open-ended comments. Their responses to these questions are listed on the next few pages.

Candidate Measure #1: Discouraging Use of MRI for diagnosis of carpal tunnel syndrome

2017 Options for Individual Measures:

Claims Only

Measure Type:

Process

Description:

Percentage of patients who are suspected of CTS and should not have received an MRI in the 90 days leading up to the diagnosis or 90 days after the diagnosis to limit overuse

Instructions:

This measure is to be reported at **each denominator eligible visit** occurring during the reporting period for patients with a diagnosis of carpal tunnel syndrome are seen during the reporting period. This measure may be reported by eligible clinicians who perform the quality actions described in the measure based on the services provided and the measure-specific denominator coding.

Measure Reporting:

The listed denominator criteria is used to identify the intended patient population. The numerator quality-data codes included in this specification are used to submit the quality actions allowed by the measure. All measure-specific coding should be reported on the claim(s) representing the eligible encounter.

Denominator:

Number of patients with a diagnosis of carpal tunnel syndrome

Denominator Criteria (Eligible Cases):

Diagnosis for carpal tunnel syndrome (ICD-10-CM): G56.00, G56.01, G56.02

OR

Diagnosis for carpal tunnel syndrome (ICD-9-CM): 354.0

Numerator:

Number of patients with a diagnosis of carpal tunnel syndrome, who did not receive an upper extremity MRI to evaluate for carpal tunnel syndrome within 90 days before the diagnosis or 90 days after the diagnosis

Numerator Criteria (Eligible Cases):

(Diagnosis for carpal tunnel syndrome (ICD-10-CM): G56.00, G56.01, G56.02

OR

Diagnosis for carpal tunnel syndrome (ICD-9-CM): 354.0)

AND

No patient encounter for Upper extremity joint w/ and w/o contrast & Upper extremity w/ and w/o contrast MRI within 90 days before or after diagnosis (CPT): 73218, 73219, 73220, 73221, 73222, 73223

Evidence-Based Recommendation:

Moderate evidence supports not routinely using MRI for the diagnosis of carpal tunnel syndrome.

Rationale

There was one high quality study (Jarvik, 2002) evaluating MRI for the diagnosis of CTS. Findings on MRI had a weak or poor association as a rule out test for CTS as compared to a classic or probable hand pain diagram and nerve conduction study. Only severe fascicular swelling, severe flexor tenosynovitis, or severe increased muscle signal had a strong association with CTS, suggesting that MRI would be insensitive in identifying the diagnosis of CTS in the majority of patients in whom these findings would be unlikely to be present.

Chart 1. Summary Pie Chart of Public Comment Responses

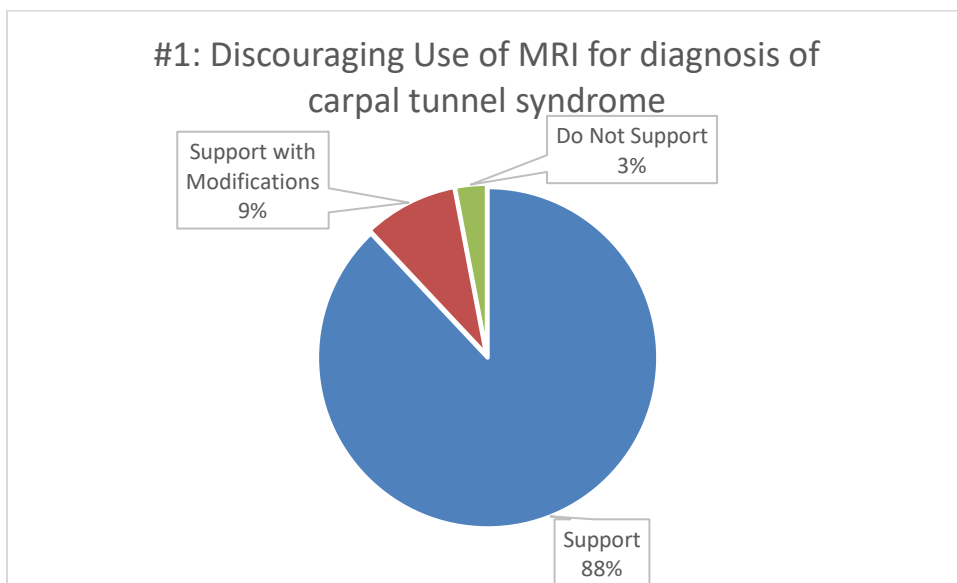


Table 2. All Reviewer Responses for Candidate Measure #1

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #1: Discouraging use of MRI for diagnosis of carpal tunnel syndrome measure.	Comments
1	Anonymous	Support	
2	George Edwards, Jr, MD	Support	
3	Craig Williams	Support with Modifications	Comments Below
4	David Hildreth, MD	Support	
5	Kenneth Taylor	Support	
6	Stephen Kennedy, MD, FRCSC	Support	
7	Anonymous	Support	
8	John Crick, CAQ	Support	Comments Below
9	Anonymous	Support	
10	Mark Lemel, MD	Support	
11	John Rayhack, MD	Support	
12	William Shaffer	Support	Comments Below
13	Marcia Hixson, MD	Support	
14	Igor Immerman, MD	Support	
15	Peter Bentivegna, MD, FACS	Support	
16	Scott Gordon, MD	Do Not Support	Comments Below
17	Kevin Hildebrand, MD	Support	
18	Anonymous	Support	Comments Below
19	Tjerk Bury, MD	Support	Comments Below
20	Edward Lipp	Do Not Support	
21	Thomas Greene, MD	Support	
22	H. Kirk Watson, MD	Support	
23	Jeffrey Wint	Support with Modifications	Comments Below
24	Timothy Bill, MD	Support	
25	Christian Dumontier, A.	Support	
26	Teri Formanek, MD	Support	Comments Below
27	Anonymous	Support	
28	Paul Puziss	Support	
29	David Netscher, MD	Support	
30	Anonymous	Support	
31	Malcolm Roth, MD	Support	

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #1: Discouraging use of MRI for diagnosis of carpal tunnel syndrome measure.	Comments
32	Harris Gellman, MD	Support	
33	Anonymous	Support	
34	James Lin	Support	
35	David Wong, MD	Support	
36	John Evans, MD	Support	
37	Stephen Leibovic, MD	Support	
38	Michael Behrman, MD	Do Not Support	Comments Below
39	Monica Wood, MD	Support	
40	Jeff Rodgers	Support	
41	Gregory May, MD	Support	Comments Below
42	George Edwards, Jr, MD	Support	
43	Anonymous	Support	
44	Andrew Palmer, MD	Support	
45	Paige Fox, MD, PhD	Support	
46	Gary Frykman	Support	
47	Walter Short	Support	
48	Saul Kaplan, MD. CAQ Hand	Support	Comments Below
49	Waldo Floyd III, MD, FAOA, ABOS, CAQ Hand	Support	
50	Gregory Austin, MD	Support	
51	Alan Wolf	Support	
52	Clayton Peimer, MD, FACS, FAAOS	Support	Comments Below
53	Kenneth Sabbag, MD	Support with Modifications	Comments Below
54	Anonymous	Support	
55	Harold Stokes, MD	Support	
56	Donald Bynum, MD	Support	
57	James Pertsch, MD	Support	
58	Anonymous	Support with Modifications	Comments Below
59	E. Anthony Rankin, MD	Support	
60	Michael Clendenin, MD	Support	
61	Anonymous	Support	
62	Anonymous	Support	
63	Anonymous	Support	
64	Barton Wax, MD	Support	

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #1: Discouraging use of MRI for diagnosis of carpal tunnel syndrome measure.	Comments
65	Kyle Bickel, MD	Support	
66	John Houghtaling	Support	Comments Below
67	Dmitry Tuder, MD	Support	
68	Milton Armstrong, MD	Support	
69	Gordon Brody, MD CAQSH	Support	Comments Below
70	Ann Van Heest, MD	Support	Comments Below
71	Anonymous	Support	
72	Anonymous	Support	
73	Daniel Mass, MD	Support	Comments Below
74	Anonymous	Support	
75	Anonymous	Support	
76	William Rogers, MD, FASSH, FAAOS	Support	
77	Duffield Ashmead, MD	Support	
78	Kent Jason Lowry, MD	Support with Modifications	Comments Below
79	David Brogan, MD, MSc	Support	
80	Lawrence Halperin, MD	Support	Comments Below
81	David Bernstein, MD	Support	
82	Michael Grafe, MD	Support	
83	Anonymous	Support	
84	John Lunt, MD	Support	
85	D. J. Mastella, MD, FAAOS/CAQH	Support	
86	Christopher English, MD	Support	
87	Tom Harter, MD	Support	
88	Anonymous	Support with Modifications	Comments Below
89	Edward Diao, MD	Support	
90	Wood Megan, Wood	Support	
91	Anonymous	Support	
92	Anonymous	Support	
93	Gregg Cregan, MD	Support	
94	Robert Coats II, MD	Support	
95	Vince Battista, MD	Support	
96	Megan Conti Mica, MD	Support	

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #1: Discouraging use of MRI for diagnosis of carpal tunnel syndrome measure.	Comments
97	Anonymous	Support with Modifications	Comments Below
98	Anonymous	Support with Modifications	Comments Below
99	Peter Townsend, MD	Support	
100	Anonymous	Support with Modifications	Comments Below

All reviewers were invited to submit comments in addition to rating level of support for the candidate measures. All submissions are listed unedited in table 3 in addition to the support rating submitted by those reviewers.

Table 3. Detailed Comments for Candidate Measure #1

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #1: Discouraging use of MRI for diagnosis of carpal tunnel syndrome measure.	Comments
3	Craig Williams	Support with Modifications	<p>Clearly for the diagnosis of the vast majority of patients with routine CTS there is no role for the use of MRI as a preoperative diagnostic tool. Likewise there is no indication in the typical postoperative patient for the use of MRI. However, it concerns me that this measure as stated leaves no leeway for extenuating circumstances. This statement does not distinguish primary CTS from persistent CTS, recurrent CTS, and secondary CTS.</p> <p>Specifically in the preoperative setting supplemental imaging may be of great value in patients who have had prior surgery for CTR or other reasons in the area of the carpal tunnel. Additionally, if there is concern for a space occupying lesion in the carpal tunnel, such as pathologic tenosynovium or a cystic lesion, supplemental imaging would be indicated as a useful adjunct in the diagnostic workup. Ultrasound is probably the preferred modality in this setting, however for surgeons who do not have access to high quality ultrasound imaging MRI may be of significant value.</p> <p>In the postoperative period an unanticipated outcome, such as increased numbness, may in certain circumstances be an indication for supplemental imaging in the early postoperative period. Again in certain practice settings MRI may be the best imaging modality available.</p>
8	John Crick, CAQ	Support	Unless flexor tenosynovitis is a probable etiology.

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #1: Discouraging use of MRI for diagnosis of carpal tunnel syndrome measure.	Comments
12	William Shaffer	Support	<p>For full transparency I am the medical director for AAOS one of the two organizations undertaking this work.</p> <p>The three measures are significant in that each identifies a study or procedure that should be avoided. This attests to the variation of care in carpal tunnel syndrome and the significant health care cost savings in this commonly performed surgery.</p> <p>The principles of evidence based design have been scrupulously followed. This is an excellent addition to measurement sciences.</p>
16	Scott Gordon, MD	Do Not Support	<p>In days past, medicine was practiced as an art as well as a science. Physicians were paid by patients and did not know whether the patient had insurance or not. Doctors automatically would only do what is absolutely necessary to make the proper diagnosis and most effective treatment for the price charged.</p> <p>Doctors slowly became corrupted when they charged the insurance company directly and when the out of pocket expenses to the patient became negligible. Many doctors have convinced themselves that medicine is a patient's right. this is for three main reasons:</p> <ol style="list-style-type: none"> 1) They will be paid by government schemes for all their services provided 2) They can provide the most expensive services for everyone 3) They don't have to talk to patients about bills regarding their care and choices of treatment thereof. <p>Criteria of payments to physicians is not by care provided but by documentation, even if what is being documented plays no role in the physicians direct care.</p> <p>Now that healthcare has become so expensive, those paying the bills want to stop paying for ridiculous</p>

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #1: Discouraging use of MRI for diagnosis of carpal tunnel syndrome measure.	Comments
			<p>unnecessary tests and treatments which brings us to this the purpose of this correspondence.</p> <p>This correspondence would be totally unnecessary if the field of medicine was considered what it should be considered... NOT a right, NOT a privilege... BUT a commodity. Let the free market back into the delivery of healthcare. Let doctors post what their prices are for a carpal tunnel release. If they want to add a preop MRI or added procedures like a tenosynovectomy or neurolysis, they can add to that bill and justify it to the patient. I think those practices will stop pretty quickly. The patient has to have a financial stake in their healthcare.</p> <p>I do not support what is being proposed here because it is dictating how a doctor should practice his art of medicine. As government controls more and more of medicine, our practice of medicine becomes more and more dictated so even if it is very appropriate for the renal patient to have a tenosynovectomy with their CTR, you would have to go through hoops with a bureaucracy to get paid to do it.</p> <p>I hope that my comments wake some of my colleagues up to take back our profession from the control of others (even our own leaders and professional organizations who will become nothing more than labor unions in the future as we all become employees of the government.</p>
18	Anonymous	Support	<p>1. Discouraging the use of MRI for diagnosis of carpal tunnel syndrome This measure assesses the percentage of patients who are suspected of CTS and should not have received an MRI in the 90 days leading up to the diagnosis or 90 days after the diagnosis to limit overuse.</p> <p>Agree.</p>
19	Tjerk Bury, MD	Support	Extremely rare that an MRI would be warranted. Only if there is a tumor in the area
23	Jeffrey Wint	Support with Modifications	The problem with this, although I support the premise that MRI should not be used for the diagnosis of CTS and rarely have used it for such (only in cases where there was a reason that an nerve conduction study could

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #1: Discouraging use of MRI for diagnosis of carpal tunnel syndrome measure.	Comments
			<p>not be obtained due to patient problems and there was a need for confirmation of the diagnosis) is that CTS may be diagnosed IN CONJUNCTION with other problems, and the presence of G56.00, G56.01 or G56.02 as ONE of the diagnosis may now be used by CMS or another carrier to deny the request for an MRI.</p> <p>I am further concerned by this 90 day before and 90 day after premise that is in the text. Why is there an assignment of a 90 day interval associated with the proposed limiting of MRI studies. Will CMS (and thus every carrier under the sun) use this to subsequently deny claims, or hold up request for an MRI for those who have this diagnosis. What about the opposite hand or wrist, what about an MRI on an unrelated part of the body. You need to think about how these terms may affect things.</p> <p>There must be a way to limit MRI for the PRIMARY diagnostic determination of CTS in the same wrist, the verbiage needs to be CLARIFIED or I fear this same report will be used by insurance carriers to deny services.</p>
26	Teri Formanek, MD	Support	The only role for MRI in conjunction with the diagnosis of CTS is to investigate another condition that is occurring simultaneously in the wrist or hand.
38	Michael Behrman, MD	Do Not Support	I agree that there is no role in the use of MRI in diagnosing CTS but you can be sure that these m assures will be used by insurance companies to deny MRIs when there is a legitimate secondary concern In a patient who carries CTS as a diagnosis. (i.e. When there is a concern of a mass lesion in a patient already diagnosed with CTS.)
41	Gregory May, MD	Support	Not cost effective and of no benefit. I also worry about primary providers that order MRI's prior to referral for CTS.
48	Saul Kaplan, MD. CAQ Hand	Support	I Totally agree with these thoughtful suggestions.

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #1: Discouraging use of MRI for diagnosis of carpal tunnel syndrome measure.	Comments
52	Clayton Peimer, MD, FACS, FAAOS	Support	<p>Strongly support these measures to</p> <ul style="list-style-type: none"> - improve, streamline care; - reduce costs of unnecessary procedures, tests and treatments
53	Kenneth Sabbag, MD	Support with Modifications	<p>Thank you for your efforts, and I greatly appreciate your taking the lead on this.</p> <p>In general, I agree with these measures for the majority of patients. But as hand surgeons, we often deal with the "exceptional" case. I am concerned that these Quality Measures will be strictly adapted by payers and review companies so that no patient will get post surgical hand therapy, no patient will get a tenosynovectomy, and no patient will get the benefit of an operating microscope and internal neurolysis. Yet, in a minority of cases, these are indicated and necessary.</p> <p>Hand therapy. For example, pillar pain after carpal tunnel release reportedly occurs up to 20% of the time. Pillar pain and palmar induration may resolve much faster with a brief course of hand therapy. While pillar pain typically resolves with time, resolving sooner with a course of hand therapy may return a person to work months earlier thereby restoring their income. In addition, while most patients can learn and complete a home exercise program, not all can.</p> <p>For revision carpal tunnel release, use of the operating microscope and internal neurolysis is often required. Even though this is not a primary carpal tunnel release, we all know that carriers and payers will apply these measures to deny care and payment.</p> <p>An MRI is very rarely needed except in cases of an atypical mass in in the distal forearm or palm such as an AVM.</p> <p>So, for each item, one must make it clear that there are exceptions. You may wish to list some exceptions in</p>

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #1: Discouraging use of MRI for diagnosis of carpal tunnel syndrome measure.	Comments
			<p>the Measures. It should also be clear that if the surgeon documents the rationale for the procedure, then that should be enough. Otherwise, we will have an increase in poor outcomes that could have been good outcomes were it not for the lack of access to care.</p> <p>Public policy and reasonable economic constraints require that we practice efficiently and provide only the indicated and necessary medical and surgical care to achieve the optimal outcome. However, we know that as hand surgeons, we are often referred the "exceptional" case or the "failed" case that requires clinical judgment, rational application of technology, and the experience of a hand surgeon. "Quality Measures" should not be used to trump quality clinical care. In addition, surgeons who accept these exceptional and challenging patients will face a selection bias when measuring their outcomes.</p> <p>The way that our profession sets these standards for carpal tunnel syndrome will likely set the framework for future quality measures for procedures like knee and hip replacements, cortisone injections, hyaluronic acid injections, fracture care, etc. Peer reviewed literature and outcome studies should dictate how we practice medicine. Let's not give the nonmedical a tool that can be denied indicated and necessary medical and surgical care.</p> <p>Thank you</p>
58	Anonymous	Support with Modifications	<p>On very rare occasion, I perform flexor tenosynovecromies when severe tenosynovitis is present and submit for histological evaluation.</p> <p>With that said, a hand surgeon I occasionally worked with in my residency would take a very small piece of tenosunovium and charge for a formal tenosynovectomy. Very unethical in my opinion.</p> <p>Just wondering if tenosynovecromies will be bundled if this goes forward.</p>
66	John Houghtaling	Support	<p>In my opinion MRI adds no significant benefit over a thorough history and physical exam in diagnosing carpal tunnel or ruling out other pathology and should not be routinely used in doing so</p>

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #1: Discouraging use of MRI for diagnosis of carpal tunnel syndrome measure.	Comments
69	Gordon Brody, MD CAQSH	Support	These measures are in complete agreement with my 30 years of clinical experience and my current clinical practice.
70	Ann Van Heest, MD	Support	Proposal 1: Support
73	Daniel Mass, MD	Support	Unnecessary to use except on recurring CTS
78	Kent Jason Lowry, MD	Support with Modifications	As this measure is written (specifically without the use of exclusions or exceptions), it will limit the absolute use of MRI's 90 days before and 90 days after carpal tunnel release. If that is the intention of the work group than the measure should stand. However, if there are clinical scenarios that would necessitate an MRI for an unrelated reason (such as a mass, evaluation for AVN, etc) during the evaluation for carpal tunnel syndrome treatment decision making, the measure should detail this out with the use of exceptions and exclusions. Failure to do this runs the real risk of limiting care (the physician is unwilling or restricted from performing a carpal tunnel release until 90 days have passed since the MRI).
80	Lawrence Halperin, MD	Support	This measure accurately reflects the current evidence.
88	Anonymous	Support with Modifications	Most often MRI is not indicated. Sometimes MRI may be indicated, especially in cases where a distinct mass is palpable or in a subset of cases preoperatively for revision surgery after failed carpal tunnel release.
97	Anonymous	Support with Modifications	I agree that routine use of MRI is not justified in the vast majority of straightforward primary carpal tunnel syndrome. However, there are certainly instances where an MRI can add value and even alter treatment plan. For example, if there is suspicion that the carpal tunnel syndrome is secondary to mass effect from a cyst, hematoma, tumor or tenosynovitis, obtaining a preoperative MRI may help the surgeon approach the pathology differently. The measure should be more specific rather than to make a blanket statement that MRI use should be discouraged.

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #1: Discouraging use of MRI for diagnosis of carpal tunnel syndrome measure.	Comments
98	Anonymous	Support with Modifications	I am concerned that an MRI ordered for other purposes (i.e. separate diagnosis) will count against this measure when carpal tunnel syndrome is also diagnosed.
100	Anonymous	Support with Modifications	ASPS would like to request that the group consider an exception or exclusion for post-traumatic related CTS is cases where MRI is performed to diagnose other problems such as occult fractures and ligament injuries. The unintended consequence of no MRI 90 days before after the diagnosis may delay the diagnosis other conditions which may be appropriately treated simultaneous with the CTS. Also, we would like to request that consideration be given for utilization of MRI to determine carpal tunnel volume in recurrent CTS.

Candidate Measure 1 – Chair’s Response to Comments

There was robust interest, support, and response to the proposed Measure #1 addressing the use of MRI for the diagnosis of carpal tunnel syndrome. I reviewed all of the written responses, and in collaboration with representatives of the ASSH and the AAOS, we discussed the findings. The workgroup developed this measure based on an AAOS Clinical Practice Guideline with Moderate Evidence against the use of MRI as a diagnostic tool for carpal tunnel syndrome. The Workgroup determined that minimizing the use of MRI for the diagnosis of carpal tunnel syndrome would be an acceptable measurement of quality. There was overwhelming support for this measure by the respondents. There was some concern that the measure does not allow for patient-centered care when an MRI is indicated. For example, multiple respondents highlighted how in the setting of a mass or suspected tumor, an MRI may be indicated in the setting of symptoms of carpal tunnel syndrome. The Workgroup acknowledged this justified, yet rare, indication for an MRI and felt the incidence of this phenomenon did not warrant an exclusion criteria. The Workgroup expects this measure will drive MRI utilization down to approach 0% except in these rare cases. There were some respondents who suggested clarifying that the primary diagnosis for obtaining the MRI is carpal tunnel syndrome, and not a mass/tumor, for example. This measure prevents the use of MRI for the diagnosis of CTS but does not discourage its use to work up a tumor that may be obtained and ordered under another diagnosis (e.g. tumor or mass in the forearm or wrist).

Robin Kamal, MD

Chair, Carpal Tunnel Quality Measures Workgroup

Vice-Chair, ASSH Quality Metrics Committee

Candidate Measure #2: Discouraging the use of Adjunctive Surgical Procedures during carpal tunnel release

2017 Options for Individual Measures:

Claims Only

Measure Type:

Process

Description:

Percentage of patients who are diagnosed with carpal tunnel syndrome, receive carpal tunnel release and should not receive the following procedures at the same time: Internal neurolysis, using operating microscope (64727), Radical nine-tendon flexor synovectomy (25115), Tenolysis, flexor or extensor tendon, forearm and/or wrist; each tendon (25295).

Instructions:

This measure is to be reported at each denominator eligible visit occurring during the reporting period for patients who underwent carpal tunnel release during the reporting period. This measure may be reported by eligible clinicians who perform the quality actions described in the measure based on the services provided and the measure-specific denominator coding.

Measure Reporting:

The listed denominator criteria is used to identify the intended patient population. The numerator quality-data codes included in this specification are used to submit the quality actions allowed by the measure. All measure-specific coding should be reported on the claim(s) representing the eligible encounter.

Denominator:

Number of patients who underwent carpal tunnel release

Denominator Criteria (Eligible Cases):

Patient encounter (CPT): 64721 or 29848

Numerator:

Number of patients who underwent carpal tunnel release (64721 or 29848) and did not have any one of the following procedures completed at the same time: Internal neurolysis, using operating microscope (64727), Radical nine-tendon flexor synovectomy (25115), Tenolysis, flexor or extensor tendon, forearm and/or wrist; each tendon (25295).

Numerator Criteria (Eligible Cases):

Patient encounter (CPT): 64721 or 29848

AND

No simultaneous patient encounter for internal neurolysis, using operating microscope, radical nine-tendon flexor synovectomy, or tenolysis, flexor or extensor tendon, forearm and/or wrist; each tendon (CPT): 64727 OR 25115 OR 25295

Evidence-Based Recommendation:

Moderate evidence supports that there is no benefit to routine inclusion of the following adjunctive techniques: epineurotomy, neurolysis, flexor tenosynovectomy, and lengthening/reconstruction of the flexor retinaculum (transverse carpal ligament).

Rationale

Epineurotomy: There are two high quality studies (Leinberry 1997 and Crnkovic 2012) and one moderate quality study (Blair 1996) that evaluated carpal tunnel release alone versus the addition of epineurotomy of the median nerve. The Leinberry (1997) evaluated patients at 11.8 months after surgery. There was no significant difference found in clinical evaluation (Boston Questionnaire, APB strength, Phalen's, Tinel's, or two-point discrimination) or in symptom recurrence. Crnkovic (2012) studied nerve volume measured by MRI as an index of nerve recovery. Patients were evaluated at 3 and 6 months after surgery and no significant differences were noted at either time point. There were also no differences found for the symptoms of pain between the groups. Blair (1996) found no differences in post-operative two-point discrimination, pain, or ability to complete activities of daily living at a minimum of two years following surgery. There were also no differences in electrodiagnostic parameters.

Neurolysis: There was one high quality study (Mackinnon 1991) and one moderate quality study (Lowry 1988) which evaluated the addition of neurolysis of the median nerve to a standard carpal tunnel release. The Mackinnon study focused on internal neurolysis and found no differences in thenar atrophy, muscle strength, pressure threshold, vibration threshold and static two-point discrimination at 12 months after surgery. No difference was noted in pinch or grip strength. The Lowry study evaluated the NCS findings at 3 months after surgery and did not find a difference in nerve conduction velocity or distal motor and sensory latency. Neither study found a difference in symptom relief or recurrence.

Flexor Tenosynovectomy: There was one high quality study (Shum 2002) evaluating flexor tenosynovectomy as an adjunct to carpal tunnel release. There was no difference in surgical site infection, scar sensitivity, wrist motion, finger motion, or Boston Carpal Tunnel Questionnaire at 12 months following surgery.

Flexor Retinaculum Reconstruction/Lengthening: There was one high quality study (Dias 2004) that evaluated flexor retinaculum lengthening/reconstruction. Six months following surgery there were no differences in grip strength, Jebsen Taylor score, Phalen test, pinch strength, Boston Carpal Tunnel Questionnaire score or symptom recurrence.

Chart 2. Summary Pie Chart of Public Comment Responses

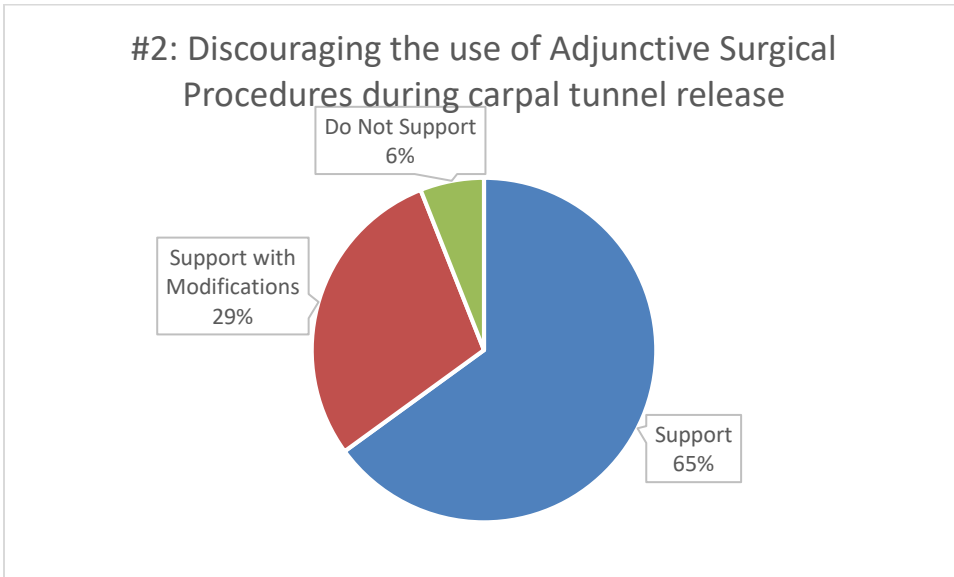


Table 4. All Reviewer Responses for Candidate Measure #2

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #2: Discouraging the use of adjunctive surgical procedures during carpal tunnel release	Comments
1	Anonymous	Support	
2	George Edwards, Jr, MD	Support	
3	Craig Williams	Support	
4	David Hildreth, MD	Support	
5	Kenneth Taylor	Support	
6	Stephen Kennedy, MD, FRCSC	Support with Modifications	Comments Below
7	Anonymous	Support with Modifications	Comments Below
8	John Crick, CAQ	Support	Comments Below
9	Anonymous	Support	
10	Mark Lemel, MD	Support with Modifications	Comments Below
11	John Rayhack, MD	Support with Modifications	Comments Below
12	William Shaffer	Support	
13	Marcia Hixson, MD	Support	
14	Igor Immerman, MD	Support with Modifications	Comments Below
15	Peter Bentivegna, MD, FACS	Support with Modifications	Comments Below
16	Scott Gordon, MD	Do Not Support	Comments Below
17	Kevin Hildebrand, MD	Support	
18	Anonymous	Support with Modifications	Comments Below
19	Tjerk Bury, MD	Support	Comments Below
20	Edward Lipp	Support	
21	Thomas Greene, MD	Support	
22	H. Kirk Watson, MD	Support	
23	Jeffrey Wint	Support with Modifications	Comments Below
24	Timothy Bill, MD	Support	
25	Christian Dumontier, A.	Support	
26	Teri Formanek, MD	Support	
27	Anonymous	Support with Modifications	Comments Below

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #2: Discouraging the use of adjunctive surgical procedures during carpal tunnel release	Comments
28	Paul Puziss	Support with Modifications	Comments Below
29	David Netscher, MD	Support	
30	Anonymous	Support	
31	Malcolm Roth, MD	Support	
32	Harris Gellman, MD	Support with Modifications	Comments Below
33	Anonymous	Support	
34	James Lin	Support	
35	David Wong, MD	Support	
36	John Evans, MD	Support	
37	Stephen Leibovic, MD	Support	
38	Michael Behrman, MD	Do Not Support	Comments Below
39	Monica Wood, MD	Support with Modifications	Comments Below
40	Jeff Rodgers	Support	
41	Gregory May, MD	Support	
42	George Edwards, Jr, MD	Support with Modifications	Comments Below
43	Anonymous	Support with Modifications	Comments Below
44	Andrew Palmer, MD	Support	
45	Paige Fox, MD, PhD	Support	
46	Gary Frykman	Support	
47	Walter Short	Support with Modifications	Comments Below
48	Saul Kaplan, MD. CAQ Hand	Support	Comments Below
49	Waldo Floyd III, MD, FAOA, ABOS, CAQ Hand	Support	
50	Gregory Austin, MD	Support	
51	Alan Wolf	Support	
52	Clayton Peimer, MD, FACS, FAAOS	Support	Comments Below
53	Kenneth Sabbag, MD	Support with Modifications	Comments Below
54	Anonymous	Do Not Support	Comments Below
55	Harold Stokes, MD	Support	

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #2: Discouraging the use of adjunctive surgical procedures during carpal tunnel release	Comments
56	Donald Bynum, MD	Support with Modifications	Comments Below
57	James Pertsch, MD	Support	Comments Below
58	Anonymous	Support with Modifications	Comments Below
59	E. Anthony Rankin, MD	Support	
60	Michael Clendenin, MD	Support	
61	Anonymous	Support	
62	Anonymous	Do Not Support	Comments Below
63	Anonymous	Support	
64	Barton Wax, MD	Support	
65	Kyle Bickel, MD	Support	
66	John Houghtaling	Support	Comments Below
67	Dmitry Tuder, MD	Support with Modifications	Comments Below
68	Milton Armstrong, MD	Support with Modifications	Comments Below
69	Gordon Brody, MD CAQSH	Support	
70	Ann Van Heest, MD	Support with Modifications	Comments Below
71	Anonymous	Do Not Support	
72	Anonymous	Support with Modifications	Comments Below
73	Daniel Mass, MD	Support	Comments Below
74	Anonymous	Support	
75	Anonymous	Support	
76	William Rogers, MD, FASSH, FAAOS	Support	
77	Duffield Ashmead, MD	Support	
78	Kent Jason Lowry, MD	Support	
79	David Brogan, MD, MSc	Support	
80	Lawrence Halperin, MD	Support	Comments Below
81	David Bernstein, MD	Support	
82	Michael Grafe, MD	Support	
83	Anonymous	Support	
84	John Lunt, MD	Support	

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #2: Discouraging the use of adjunctive surgical procedures during carpal tunnel release	Comments
85	D. J. Mastella, MD, FAAOS/CAQH	Support with Modifications	Comments Below
86	Christopher English, MD	Support with Modifications	Comments Below
87	Tom Harter, MD	Support	
88	Anonymous	Support with Modifications	Comments Below
89	Edward Diao, MD	Support	
90	Wood Megan, Wood	Support with Modifications	Comments Below
91	Anonymous	Support	
92	Anonymous	Support with Modifications	Comments Below
93	Gregg Cregan, MD	Support with Modifications	Comments Below
94	Robert Coats II, MD	Support	
95	Vince Battista, MD	Support	
96	Megan Conti Mica, MD	Support	
97	Anonymous	Do Not Support	Comments Below
98	Anonymous	Support	
99	Peter Townsend, MD	Support with Modifications	Comments Below
100	Anonymous	Support	

All reviewers were invited to submit comments in addition to rating level of support for the candidate measures. All submissions are listed unedited in table 5 in addition to the support rating submitted by those reviewers.

Table 5. Detailed Comments for Candidate Measure #2

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #2: Discouraging the use of adjunctive surgical procedures during carpal tunnel release	Comments
6	Stephen Kennedy, MD, FRCSC	Support with Modifications	I support discouraging the use of adjunctive surgical procedures during carpal tunnel release. However, in a small proportion of cases the indication for surgery is actually radical tenosynovectomy for inflammatory tenosynovitis, and carpal tunnel release is done at the same time. This is a separate and distinct issue from tenosynovectomy performed during routine carpal tunnel release. When other diagnoses are present, a hand surgeon should address those diagnoses in addition to the carpal tunnel syndrome.
7	Anonymous	Support with Modifications	There are always extenuating circumstances in which adjective procedures would be appropriate, so flexibility / allowance for these situations is crucial. Lack of flexibility may be detrimental to an individual patient's overall outcome and well-being, and thus would not be sound medical practice.
8	John Crick, CAQ	Support	Rare findings can support a limited neurolysis despite mckinnens paper
10	Mark Lemel, MD	Support with Modifications	Tenosynovectomy may be indicated in inflammatory disease such as RA with demonstrated physical finding of fullness of the flexor tendons
11	John Rayhack, MD	Support with Modifications	A Guyon's canal release of the ulnar nerve in conjunction with a carpal tunnel release is often appropriate if an ulnar nerve release at the elbow is performed in conjunction with a carpal tunnel release.
14	Igor Immerman, MD	Support with Modifications	Would be concerned about patients that have a concomitant diagnosis such as RA, for example, where a flexor tenosynovectomy is needed. Need safeguards to assure that those patients will not be counted as a negative in this measure.

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #2: Discouraging the use of adjunctive surgical procedures during carpal tunnel release	Comments
15	Peter Bentivegna, MD, FACS	Support with Modifications	Flexor tenosynovectomy is often needed in patients with flexor tenosynovitis as the cause of their Carpal Tunnel Syndrome. This should be supported with additional diagnosis codes for Rheumatoid disease, gout, inflammatory, and infective causes.
16	Scott Gordon, MD	Do Not Support	<p>In days past, medicine was practiced as an art as well as a science. Physicians were paid by patients and did not know whether the patient had insurance or not. Doctors automatically would only do what is absolutely necessary to make the proper diagnosis and most effective treatment for the price charged.</p> <p>Doctors slowly became corrupted when they charged the insurance company directly and when the out of pocket expenses to the patient became negligible. Many doctors have convinced themselves that medicine is a patient's right. this is for three main reasons:</p> <ol style="list-style-type: none"> 1) They will be paid by government schemes for all their services provided 2) They can provide the most expensive services for everyone 3) They don't have to talk to patients about bills regarding their care and choices of treatment thereof. <p>Criteria of payments to physicians is not by care provided but by documentation, even if what is being documented plays no role in the physicians direct care.</p> <p>Now that healthcare has become so expensive, those paying the bills want to stop paying for ridiculous unnecessary tests and treatments which brings us to this the purpose of this correspondence.</p> <p>This correspondence would be totally unnecessary if the field of medicine was considered what it should be</p>

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #2: Discouraging the use of adjunctive surgical procedures during carpal tunnel release	Comments
			<p>considered... NOT a right, NOT a privilege... BUT a commodity. Let the free market back into the delivery of healthcare. Let doctors post what their prices are for a carpal tunnel release. If they want to add a preop MRI or added procedures like a tenosynovectomy or neurolysis, they can add to that bill and justify it to the patient. I think those practices will stop pretty quickly. The patient has to have a financial stake in their healthcare.</p> <p>I do not support what is being proposed here because it is dictating how a doctor should practice his art of medicine. As government controls more and more of medicine, our practice of medicine becomes more and more dictated so even if it is very appropriate for the renal patient to have a tenosynovectomy with their CTR, you would have to go through hoops with a bureaucracy to get paid to do it.</p> <p>I hope that my comments wake some of my colleagues up to take back our profession from the control of others (even our own leaders and professional organizations who will become nothing more than labor unions in the future as we all become employees of the government.</p>
18	Anonymous	Support with Modifications	I think we have to be careful when we say to "discourage adjunctive surgical procedures during carpal tunnel". We may add a CTR to a procedure such as 1st CMC arthroplasty, with a CuTR, or distal radius ORIF. Insurers may use this statement in general terms and restrict a CTR in any combination of cases. Approval for adding a CTR may not be granted, leading to denials, and a second surgery later for a patient.
19	Tjerk Bury, MD	Support	Never needed unless there is other pathology such as tumor.
23	Jeffrey Wint	Support with Modifications	There must be a way to clarify this so that procedures on a separate site or revision procedures with scarring can be identified. If not you will just be dooming the 64727 cpt to oblivion an in those rare cases when indicated, such as a severely scarred redo it will not be available as a choice. If not the rare tensolysis in a rheumatoid patient where there is considerable additional work will still be denied in conjunction with CTS.

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #2: Discouraging the use of adjunctive surgical procedures during carpal tunnel release	Comments
			<p>If not a tenolysis done on a tendon at a separate site (rare but can happen) will also be denied.</p> <p>You must address the forearm fasciotomy ruse that providers use with CTR. Check the CMS data, there are a few providers who appear to use this code for forearm fasciotomy as frequently as they do CTR.</p>
27	Anonymous	Support with Modifications	Separate problems such as trigger finger dequervains thumd arthritis and cubital tunnel release can be done concurrantly
28	Paul Puziss	Support with Modifications	Sporadic use of external or internal neurolysis is reasonable, if the median nerve is severely compressed
32	Harris Gellman, MD	Support with Modifications	<p>I would suggest that the section on flexor tenolysis be modified.</p> <p>If patients have significant flexor synovitis with stiffness of their fingers, swelling which pushes the nerve up to the level of the wound due to their flexor synovitis, or multiple trigger fingers, then flexor synovectomy could be indicated.</p> <p>This is often seen in diabetics, renal dialysis patients, and patients with rheumatoid arthritis and thyroid disease.</p> <p>For the majority of patients, flexor synovectomy is probably not needed or indicated, but in the group with synovitis the patients report improved finger motion and improvement in their stiffness and pain.</p>
38	Michael Behrman, MD	Do Not Support	Likewise these measures will be used to deny payment for the (admittedly rare) times when a neurolysis, tenolysis or tenosynovectomy are indicated. While rare there are situations such as s/p severe open trauma for the first two or TB for tenosynovectomy do exist. Now carriers will use these measures as an excuse to

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #2: Discouraging the use of adjunctive surgical procedures during carpal tunnel release	Comments
			deny payment. The basic standard that routine CTS needs release of the transverse carpal ligament and nothing more was established over 30 years ago. These measures do not further care they just give UR more excuses when they are misapplied.
39	Monica Wood, MD	Support with Modifications	Exception should be made for intraoperative findings of aggressive synovitis that may risk rupture of the flexor tendons. If such a patient is not a known rheumatoid, then biopsy should be sent in addition to synovectomy.
42	George Edwards, Jr, MD	Support with Modifications	If the flexor tenosynovitis is severe (eg, in RA), then the primary procedure should be flexor tenosynovectomy and CTR should not be billed. Otherwise, I agree with the above. statement.
43	Anonymous	Support with Modifications	There are of course instances where carpal tunnel is associated with tenosynovitis. However, this is not the usual case.
47	Walter Short	Support with Modifications	in selective cases such as severe rheumatoids with synovitis tenosynovectomy could be included
48	Saul Kaplan, MD. CAQ Hand	Support	I Totally agree with these thoughtful suggestions.
52	Clayton Peimer, MD, FACS, FAAOS	Support	Strongly support these measures to - improve, streamline care; - reduce costs of unnecessary procedures, tests and treatments
53	Kenneth Sabbag, MD	Support with Modifications	Please see above. For revision carpal tunnel release, use of the operating microscope and internal neurolysis is often required. Even though this is not a primary carpal tunnel release, we all know that carriers and payers will apply these

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #2: Discouraging the use of adjunctive surgical procedures during carpal tunnel release	Comments
			<p>measures to deny care and payment.</p> <p>A tenosynovectomy is necessary in infrequent cases of tenosynovitis that causes or contributes to carpal tunnel syndrome. While uncommon, it does occur.</p> <p>Please note that exceptions these guidelines do occur. I suspect that hand surgeons see these exceptions much more often than non-hand surgeons.</p>
54	Anonymous	Do Not Support	Flexor tenosynovectomy might be necessary for patients who have flexor tenosynovitis, RA or other conditions or revision surgery.
56	Donald Bynum, MD	Support with Modifications	<p>Support for routine idiopathic carpal tunnel syndrome</p> <p>Oppose for post traumatic carpal tunnel syndrome. Tenolysis is frequently needed and beneficial following deep lacerations especially with tendon repairs, crush injuries and fracture.</p> <p>radical tenosynovectomy is an alternative effective surgery sometimes performed without concomitant release of transverse carpal ligament</p> <p>radical tenosynovectomy is warranted in cases of tenosynovitis such as rheumatoid arthritis</p>
57	James Pertsch, MD	Support	Sometimes decompression of a transligamentous thenar motor branch might be concomitantly performed.
58	Anonymous	Support with Modifications	As above
62	Anonymous	Do Not Support	Some patients do benefit from flexor tenosynovectomy, such as RA, Gout

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #2: Discouraging the use of adjunctive surgical procedures during carpal tunnel release	Comments
			<p>to say all patients should not receive adjunctive procedures is closed minded, interferes with our judgement to do what's in our patients best interest Medicine is an art that is being destroyed by dogmatic guidelines which have unintended consequences. Why not have a robot do what we do.</p> <p>Disagree with the wording ion the guideline that "All" patients with cts not have adjunctive procedures</p>
66	John Houghtaling	Support	There is no clear benefit to routinely performing adjunctive procedures. In my opinion the exception of this is in the case of revision surgery for failed carpal tunnel release or recurrent carpal tunnel after previous successful release
67	Dmitry Tuder, MD	Support with Modifications	Support this measure for PRIMARY carpal tunnel release only. Patients with REVISION carpal tunnel release should be excluded.
68	Milton Armstrong, MD	Support with Modifications	Related compression syndromes such as Cubital Tunnel and Guyon's Canal releases should be allowed with Carpal Tunnel release.
70	Ann Van Heest, MD	Support with Modifications	Proposal 2: There are some medical conditions that support tenosynovectomy. For example, I treat children with mucopolysaccharide storage disease and a tenosynovectomy is indicated at the time of carpal tunnel release. Please modify that tenosynovectomy is not indicated for idiopathic carpal tunnel and recognize that it is indicated with certain medical conditions.
72	Anonymous	Support with Modifications	While I agree that adjunctive procedures are not routinely indicated during carpal tunnel release, there are rare circumstances in which they may be justified. For instance, I have had a colleague in rheumatology ask me to perform tenosynovectomy during CTR in order to help manage a patient's painful flexor tenosynovitis and to have tissue to send to pathology so that a suspected glycogen storage disease could be confirmed.
73	Daniel Mass, MD	Support	Unnecessary except with rheumatoid synovitis

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #2: Discouraging the use of adjunctive surgical procedures during carpal tunnel release	Comments
80	Lawrence Halperin, MD	Support	This measure accurately reflects the current evidence.
85	D. J. Mastella, MD, FAAOS/CAQH	Support with Modifications	The adjunctive surgical procedures should be discouraged for the diagnosis of CTS, however, in the presence of other diagnoses, the appropriate procedure should be supported at the same surgical setting, rather than at as a separate case. Such consolidation of surgical procedures is generally in the patient's best interest.
86	Christopher English, MD	Support with Modifications	<p>This measure assesses the proportion of patients who are diagnosed with carpal tunnel syndrome, receive carpal tunnel release and should not receive the following procedures at the same time: Internal neurolysis, using operating microscope (64727), Radical nine-tendon flexor synovectomy (25115), Tenolysis, flexor or extensor tendon, forearm and/or wrist; each tendon (25295).</p> <p>For primary carpal tunnel release the above procedures are almost never indicated. However, they are often indicated in revision surgery. It is already difficult to obtain adequate reimbursement for a revision carpal tunnel surgery that includes some of the above mentioned procedures. I would not want 64721 to exclude the above procedures.</p>
88	Anonymous	Support with Modifications	There may be occasional instances when tenolysis or flexor tenosynovectomy is indicated, but this is unusual.
90	Wood Megan, Wood	Support with Modifications	In the case of Rheumatoid arthritis there is the needs to perform carpal tunnel and radical flexor tenosynovectomy on occasion. This cohort of patients do benefit from these two procedures. It would be wise to exclude patients with a ICD-10 diagnosis of rheumatoid arthritis from this measure.
92	Anonymous	Support with Modifications	<p>I would revise the Evidence-based recommendation to include the words "during primary carpal tunnel release" so that the recommendation reads as follows:</p> <p>"Moderate evidence supports that there is no benefit to routine inclusion of the following adjunctive</p>

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #2: Discouraging the use of adjunctive surgical procedures during carpal tunnel release	Comments
			<p>techniques DURING PRIMARY CARPAL TUNNEL RELEASE: epineurotomy, neurolysis, flexor tenosynovectomy, and lengthening/reconstruction of the 310 flexor retinaculum (transverse carpal ligament)."</p> <p>Distinguishing between primary carpal tunnel release and revision carpal tunnel release is important, as the adjunctive procedures may differ significantly depending on the reason for revision surgery.</p>
93	Gregg Cregan, MD	Support with Modifications	<p>Patients with uncontrolled flexor tenosynovitis due to rheumatoid arthritis, gout, TB, or other inflammatory conditions should not be denied the opportunity to have both CTS and the flexor tenosynovitis corrected at the same operative setting.</p>
97	Anonymous	Do Not Support	<p>While most straightforward primary carpal tunnel syndromes do not require adjunctive surgical procedures, not all carpal tunnel syndromes are straightforward and/or primary. There are situations where adjunctive procedures may be of benefit. A statement like candidate measure #2 creates restrictions on surgeons from treating patients as individuals who often have unique pathologies.</p>
99	Peter Townsend, MD	Support with Modifications	<p>While the use of adjunctive procedures during routine carpal tunnel release is not indicated, occasionally some are indicated. Patients with co-morbidities such as Rheumatoid arthritis, may need an adjunctive flexor or extensor tenosynovectomy or tenolysis. Sometimes a ganglion is noted in the carpal canal that would need to be removed during the same surgical procedure.</p> <p>Therefore, the word "routine" should be added to the "executive summary" portion of the quality measure candidate # 2. The word "routine" is in the body of the quality measure, however it should be emphasized in the headline. Otherwise, insurance carriers, or the legal community, may use that language to imply that those adjunctive procedures were not indicated, or not within a standard of care.</p> <p>It is agreed that internal neurolysis, or step-cut lengthening of the transverse carpal ligament is not</p>

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #2: Discouraging the use of adjunctive surgical procedures during carpal tunnel release	Comments
			<p>indicated.</p> <p>Respectfully submitted,</p> <p>Peter F. Townsend, M.D.</p>

Candidate Measure 2 – Chair’s Response to Comments

There was a robust response and support to the proposed Measure #2 addressing the use of adjunctive procedures during carpal tunnel release. I reviewed all of the written responses, and in collaboration with representatives of the ASSH and the AAOS, we discussed the findings. The workgroup developed this measure based on an AAOS Clinical Practice Guideline with Moderate Evidence against the routine use of adjunctive procedures during carpal tunnel release. The Workgroup determined that nudging surgeons away from the routine use of these procedures during carpal tunnel release would improve quality of care by minimizing unnecessary interventions. There was overwhelming support for this measure as the indications for these additional procedures is narrow, however, some respondents had concerns with the uncommon situation that these procedures are necessary. For example, one respondents highlighted that in some patients with rheumatoid arthritis, a tenosynovectomy may be indicated. The Workgroup highlighted and acknowledged this very scenario during our discussions, however felt that the incidence of this occurrence would be uncommon and did not warrant an exclusion criteria. The validation data we obtained on the measure also supported this. The Workgroup expects this measures will drive utilization down towards 0%, but there will always be a baseline utilization of adjunctive procedures that is acceptable. The measure will still allow for these procedures to be completed when clinically indicated (patient centered care), but will identify outliers that routinely use these adjunctive procedures during all carpal tunnel releases.

Robin Kamal, MD

Chair, Carpal Tunnel Quality Measures Workgroup

Vice-Chair, ASSH Quality Metrics Committee

Candidate Measure #3: Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release

2017 Options for Individual Measures:

Claims Only

Measure Type:

Process

Description:

Percentage of patients who received surgical carpal tunnel release and should not routinely be prescribed postoperative hand, physical, or occupational therapy within 6 weeks after release

Instructions:

This measure is to be reported at **each denominator eligible visit** occurring during the reporting period for patients who received surgical carpal tunnel release during the reporting period. This measure may be reported by eligible clinicians who perform the quality actions described in the measure based on the services provided and the measure-specific denominator coding.

Measure Reporting:

The listed denominator criteria is used to identify the intended patient population. The numerator quality-data codes included in this specification are used to submit the quality actions allowed by the measure. All measure-specific coding should be reported on the claim(s) representing the eligible encounter.

Denominator:

Number of patients who underwent carpal tunnel release

Denominator Criteria (Eligible Cases):

Patient encounter (CPT): 64721 or 29848

Numerator:

Number of patients who underwent carpal tunnel release and did not receive postoperative hand, physical therapy (low, moderate, or high complexity) or occupational therapy (low, moderate, or high complexity) within 6 weeks (42 days) of carpal tunnel release

Numerator Criteria (Eligible Cases):

Patient encounter (CPT): 64721 or 29848

AND

No patient encounter for postoperative hand, physical therapy (low, moderate, or high complexity) within 6 weeks (42 days) of carpal tunnel release (CPT): 97161, 97162, 97163

AND

No patient encounter for postoperative hand occupational therapy (low, moderate, or high complexity) within 6 weeks (42 days) of carpal tunnel release (CPT): 97165, 97166, 97167

Note: Code change implemented 2015, for data prior to 2015 CPT codes for 97161, 97162, 97163 is equivalent to 97001 (PT) and codes 97165, 97166, 97167 is equivalent to 97003 (OT).

Evidence-Based Recommendation:

Moderate evidence supports no additional benefit to routine supervised therapy over home programs in the immediate postoperative period. No evidence meeting the inclusion criteria was found comparing the potential benefit of exercise versus no exercise after surgery.

Rationale

Routine post-operative therapy after carpal tunnel release was examined in 6 high quality studies. From these, two studies (Hochberg 2001 and Jerosch-Herold 2012) addressed interventions not relevant to current core practices of postoperative rehabilitation. The remaining four studies (Alves 2011, Fagan 2004, Pomerance 2007, and Provinciali 2000) addressed the need for supervised therapy in addition to a home program in the early postoperative period, the early use of laser, or the role of sensory reeducation in the later stages of recovery.

One high quality study (Alves 2011) evaluated the use of laser administered to the carpal tunnel in 10 daily consecutive sessions at a 3J dosage and found no difference in pain/symptom reoccurrence in comparison to placebo.

Two moderate quality studies (Pomerance 2007 and Provinciali 2000) compared in-clinic or therapist supervised exercise programs in addition to a home program to a home program alone. The studies were somewhat limited by an incomplete description of who delivered home programs, exercise/education content and dosage, and treatment progression. Pomerance (2007) compared a two week program directed by a therapist combined with a home program alone and found no additional benefit in terms of grip or pinch strength in comparison to the home program alone. Provinciali (2000) compared one hour sessions over 10 consecutive days of in-clinic physiotherapy comprising a multimodal program with a home program that was progressed in terms of strength/endurance. No benefit was found in outcome when measured by a CTS-specific patient reported instrument.

Chart 3. Summary Pie Chart of Public Comment Responses

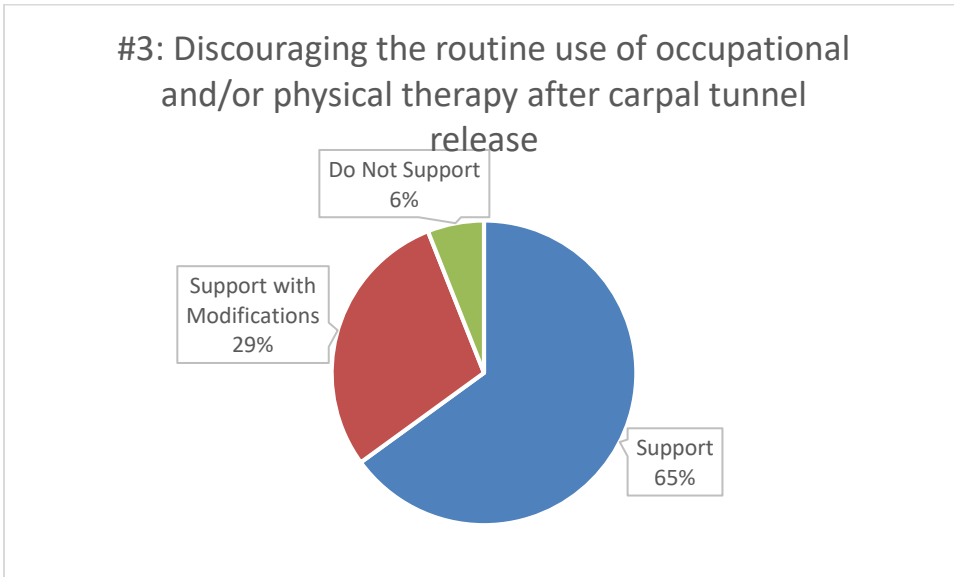


Table 6. All Reviewer Responses for Candidate Measure #3

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #3: Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release	Comments
1	Anonymous	Support	
2	George Edwards, Jr, MD	Support	
3	Craig Williams	Support	
4	David Hildreth, MD	Support	
5	Kenneth Taylor	Support	
6	Stephen Kennedy, MD, FRCSC	Support	
7	Anonymous	Support with Modifications	Comments Below
8	John Crick, CAQ	Support	
9	Anonymous	Support	
10	Mark Lemel, MD	Support	
11	John Rayhack, MD	Support	
12	William Shaffer	Support	
13	Marcia Hixson, MD	Support with Modifications	Comments Below
14	Igor Immerman, MD	Do Not Support	Comments Below
15	Peter Bentivegna, MD, FACS	Support with Modifications	Comments Below
16	Scott Gordon, MD	Do Not Support	Comments Below
17	Kevin Hildebrand, MD	Support	
18	Anonymous	Support with Modifications	Comments Below
19	Tjerk Bury, MD	Support	Comments Below
20	Edward Lipp	Support	
21	Thomas Greene, MD	Support	
22	H. Kirk Watson, MD	Support with Modifications	
23	Jeffrey Wint	Support with Modifications	Comments Below
24	Timothy Bill, MD	Support with Modifications	Comments Below
25	Christian Dumontier, A.	Support	Comments Below
26	Teri Formanek, MD	Support with Modifications	Comments Below

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #3: Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release	Comments
27	Anonymous	Support	
28	Paul Puziss	Support with Modifications	Comments Below
29	David Netscher, MD	Support	
30	Anonymous	Support with Modifications	Comments Below
31	Malcolm Roth, MD	Support	
32	Harris Gellman, MD	Support	
33	Anonymous	Support	
34	James Lin	Support	
35	David Wong, MD	Do Not Support	Comments Below
36	John Evans, MD	Support	
37	Stephen Leibovic, MD	Do Not Support	Comments Below
38	Michael Behrman, MD	Do Not Support	Comments Below
39	Monica Wood, MD	Support	
40	Jeff Rodgers	Support	
41	Gregory May, MD	Support	
42	George Edwards, Jr, MD	Support	Comments Below
43	Anonymous	Do Not Support	Comments Below
44	Andrew Palmer, MD	Support	
45	Paige Fox, MD, PhD	Support	
46	Gary Frykman	Support	
47	Walter Short	Support	
48	Saul Kaplan, MD. CAQ Hand	Support	Comments Below
49	Waldo Floyd III, MD, FAOA, ABOS, CAQ Hand	Support	Comments Below
50	Gregory Austin, MD	Support	
51	Alan Wolf	Support with Modifications	Comments Below
52	Clayton Peimer, MD, FACS, FAAOS	Support	Comments Below
53	Kenneth Sabbag, MD	Support with Modifications	Comments Below
54	Anonymous	Support	

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #3: Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release	Comments
55	Harold Stokes, MD	Support	
56	Donald Bynum, MD	Support with Modifications	Comments Below
57	James Pertsch, MD	Support	
58	Anonymous	Support	
59	E. Anthony Rankin, MD	Support	
60	Michael Clendenin, MD	Support	
61	Anonymous	Do Not Support	Comments Below
62	Anonymous	Support	
63	Anonymous	Support	Comments Below
64	Barton Wax, MD	Support	
65	Kyle Bickel, MD	Support	
66	John Houghtaling	Support	Comments Below
67	Dmitry Tuder, MD	Support with Modifications	Comments Below
68	Milton Armstrong, MD	Support	
69	Gordon Brody, MD CAQSH	Support	
70	Ann Van Heest, MD	Do Not Support	
71	Anonymous	Do Not Support	
72	Anonymous	Support	
73	Daniel Mass, MD	Support	Comments Below
74	Anonymous	Support with Modifications	Comments Below
75	Anonymous	Support with Modifications	Comments Below
76	William Rogers, MD, FASSH, FAAOS	Support	
77	Duffield Ashmead, MD	Do Not Support	Comments Below
78	Kent Jason Lowry, MD	Support with Modifications	Comments Below
79	David Brogan, MD, MSc	Support	
80	Lawrence Halperin, MD	Support	Comments Below
81	David Bernstein, MD	Support	
82	Michael Grafe, MD	Support	

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #3: Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release	Comments
83	Anonymous	Support with Modifications	Comments Below
84	John Lunt, MD	Support with Modifications	Comments Below
85	D. J. Mastella, MD, FAAOS/CAQH	Support with Modifications	Comments Below
86	Christopher English, MD	Support	
87	Tom Harter, MD	Support	
88	Anonymous	Support	
89	Edward Diao, MD	Support	
90	Wood Megan, Wood	Support	
91	Anonymous	Support	
92	Anonymous	Do Not Support	Comments Below
93	Gregg Cregan, MD	Support	
94	Robert Coats II, MD	Support	
95	Vince Battista, MD	Support	
96	Megan Conti Mica, MD	Support with Modifications	Comments Below
97	Anonymous	Support with Modifications	Comments Below
98	Anonymous	Support	
99	Peter Townsend, MD	Support	
100	Anonymous	Support	

All reviewers were invited to submit comments in addition to rating level of support for the candidate measures. All submissions are listed unedited in table 7 in addition to the support rating submitted by those reviewers.

Table 7. Detailed Comments for Candidate Measure #3

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #3: Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release	Comments
7	Anonymous	Support with Modifications	<p>There are always extenuating circumstances in which in-department post-op therapy would be appropriate, so flexibility / allowance for these situations is crucial.</p> <p>Examples would be elderly or disabled patients, those with concomitant arthritis, or patients who have had an additional surgery to the hand at the time of CTR, such as trigger release or ganglion removal, etc, which may decrease the patient's ability, willingness, to move the hand early. And we do know that delayed mobility in a post surgical hand such as this can lead to delayed recovery for the patient which can, in turn, negatively impact return to work and productivity.</p> <p>There must be allowance for judgment by the treating surgeon, on an individual basis.</p> <p>Lack of flexibility may be detrimental to an individual patient's overall outcome and well-being, and thus would not be sound medical practice.</p>
13	Marcia Hixson, MD	Support with Modifications	<p>Patients who have revision CTR often have difficulties with scar tissue and with regaining functional use of the hand.</p> <p>There is also a certain cadre of patients who are intolerant of pain and tend to swell. These patients benefit from OT; they often will become stiff and dysfunctional without it.</p>
14	Igor Immerman, MD	Do Not Support	<p>There is a subset of patients who can be predicted to need hand therapy even when seen at their first post-op visit (or sometimes before surgery even). They have stiff hands, low tolerance of pain, swelling, anxiety, and are not particularly able to follow a home program. This measure will discourage hand surgeons to refer</p>

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #3: Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release	Comments
			those patients to therapy early, and will lead to potentially poor outcomes or delayed recovery in those patients.
15	Peter Bentivegna, MD, FACS	Support with Modifications	Occupational therapy post op and sometimes pre op may be needed in patients with previously existing stiffness due to osteoarthritis or inflammatory disorders and should be supported by additional diagnosis codes
16	Scott Gordon, MD	Do Not Support	<p>In days past, medicine was practiced as an art as well as a science. Physicians were paid by patients and did not know whether the patient had insurance or not. Doctors automatically would only do what is absolutely necessary to make the proper diagnosis and most effective treatment for the price charged.</p> <p>Doctors slowly became corrupted when they charged the insurance company directly and when the out of pocket expenses to the patient became negligible. Many doctors have convinced themselves that medicine is a patient's right. this is for three main reasons:</p> <ol style="list-style-type: none"> 1) They will be paid by government schemes for all their services provided 2) They can provide the most expensive services for everyone 3) They don't have to talk to patients about bills regarding their care and choices of treatment thereof. <p>Criteria of payments to physicians is not by care provided but by documentation, even if what is being documented plays no role in the physicians direct care.</p> <p>Now that healthcare has become so expensive, those paying the bills want to stop paying for ridiculous</p>

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #3: Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release	Comments
			<p>unnecessary tests and treatments which brings us to this the purpose of this correspondence.</p> <p>This correspondence would be totally unnecessary if the field of medicine was considered what it should be considered... NOT a right, NOT a privilege... BUT a commodity. Let the free market back into the delivery of healthcare. Let doctors post what their prices are for a carpal tunnel release. If they want to add a preop MRI or added procedures like a tenosynovectomy or neurolysis, they can add to that bill and justify it to the patient. I think those practices will stop pretty quickly. The patient has to have a financial stake in their healthcare.</p> <p>I do not support what is being proposed here because it is dictating how a doctor should practice his art of medicine. As government controls more and more of medicine, our practice of medicine becomes more and more dictated so even if it is very appropriate for the renal patient to have a tenosynovectomy with their CTR, you would have to go through hoops with a bureaucracy to get paid to do it.</p> <p>I hope that my comments wake some of my colleagues up to take back our profession from the control of others (even our own leaders and professional organizations who will become nothing more than labor unions in the future as we all become employees of the government).</p>
18	Anonymous	Support with Modifications	Unfortunately, a number of my patients have postop digital stiffness after a CTR, even though they are provided with a home exercise program. A formal therapy regiment is often required in these cases. Again, Insurers may use this statement in general terms to restrict therapy after a CTR.
19	Tjerk Bury, MD	Support	Less than 1 % need this in my practice

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #3: Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release	Comments
23	Jeffrey Wint	Support with Modifications	<p>Please , while I rarely use therapy for my patients who have had CTR as they rarely need it, please clarify that the use of OT/PT is still a viable option for some patients. You would do a great service if you added the rationale for therapy for some patients in the post operative period. If you do not thenm the few who need this will be met with denials, especially in the global period.</p> <p>What you dont understand is that by using CPT and IC10 codes you are arming CMS and insurance carrier with more tools for denials.</p>
24	Timothy Bill, MD	Support with Modifications	<p>As a hand surgeon only, there are not enough reasonable claims based measures to qualify completely for MIPS. We need more hand focused measures, and this is a great start. Why as orthopedic surgeons, plastic surgeons, and hand surgeons responsible for issues like hypertension, living wills, etc.? This should be a primary care issue only. I do think more specifics should be given for this particular measure. I do send around 5% of my carpal tunnel releases to a hand therapist for persistent post-op palmar discomfort or other issues. PLEASE find a way to make these measures claims based. Not all of us have an EMR. Thanks.</p>
25	Christian Dumontier, A.	Support	<p>We decided as the French society that post-op rehabilitation should not be reimbursed to patients, except if the surgeon asks specifically for a special patient and discusses its utility</p>
26	Teri Formanek, MD	Support with Modifications	<p>Exception would be for treatment of patients with work related CTS.</p>
28	Paul Puziss	Support with Modifications	<p>Sometimes PT/OT indicated if pillar pain persists</p>
30	Anonymous	Support with Modifications	<p>I do agree that most patients with carpal tunnel syndrome do not require or benefit from supervised therapy after surgery. However, this language may be used as a tool to deny access or coverage for the rare patient that does need therapy either because of disease severity or other post op issues. I recommend adding some provision or language that protects access to therapy at the discretion of the physician.</p>

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #3: Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release	Comments
35	David Wong, MD	Do Not Support	<p>As written this statement provides payers with a ready made excuse to deny coverage. Certainly OT/PT are often unnecessary, particularly in the private setting. However, in Workmens Compensation patients they can be an integral part of the patients rehab.</p> <p>Perhaps "not indicated in all cases" or "only sometimes indicated" would be a better, more nuanced statement.</p>
37	Stephen Leibovic, MD	Do Not Support	<ol style="list-style-type: none"> 1. Home program must be taught by someone. Best professional to teach this home program is a hand therapist. This will require a visit. 2. Studies questioning benefit of therapy after CTR, espically Pomerance, is of low quality. In addition, there was little discussion of who would teach home program. 3. Some (but not all) CTR patients have incisional tenderness and disuse which may be benefitted by therapy treatments.
38	Michael Behrman, MD	Do Not Support	<p>This measure is absurd and will do nothing but harm patients. I do 150 CTRs and at least 10% have some level of flare that benefits from OT. It is true most patients do not need therapy after CTR but all this measure does is harms those that do. Anybody who says that they never see patients with pillar pain, weakness or stiffness after CTR is either lying or not listening to their patients.</p>
42	George Edwards, Jr, MD	Support	<p>Should only be used for unusual tenderness from scar hypertrophy or stiffness (about 5% of cases). Unfortunately, worker's compensation cases may need more "hand holding" and require a bit more therapy.</p>
43	Anonymous	Do Not Support	<p>In my experience patients have more predictable postoperative results when they are supervised by the therapist. This resulted in less scars and pillar tenderness.</p>

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #3: Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release	Comments
48	Saul Kaplan, MD. CAQ Hand	Support	I Totally agree with these thoughtful suggestions.
49	Waldo Floyd III, MD, FAOA, ABOS, CAQ Hand	Support	The operative word is "routine". Rarely therapy is indicated.
51	Alan Wolf	Support with Modifications	I work for a hospital system. I do not have a PA, but they do supply us with an OT who does routine follow up care and it is helpful. She does the initial post-op visit and does the dressing change, and then takes out sutures at 10-12 days, and I see the patient at that time. To deny me use of our OT post operatively would be horrible. I do not routine OVER USE OT in post op period...I use it appropriately.
52	Clayton Peimer, MD, FACS, FAAOS	Support	Strongly support these measures to - improve, streamline care; - reduce costs of unnecessary procedures, tests and treatments
53	Kenneth Sabbag, MD	Support with Modifications	Please see above. Hand therapy. For example, pillar pain after carpal tunnel release reportedly occurs up to 20% of the time. Pillar pain and palmar induration may resolve much faster with a brief course of hand therapy. While pillar pain typically resolves with time, resolving sooner with a course of hand therapy may return a person to work months earlier thereby restoring their income. In addition, while most patients can learn and complete a home exercise program, not all can.
56	Donald Bynum, MD	Support with Modifications	support discouraging routine use of hand therapy BUT these guidelines should NOT IMPEDE use of hand therapy in individual cases when needed.

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #3: Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release	Comments
			My concern in all instances of "Guidelines" or "Recommendations " is that they will be used mindlessly by insurers and reviewers to automatically disallow needed or useful treatment in individual instances.
61	Anonymous	Do Not Support	The occasional patient benefits from supervised therapy after carpal tunnel release. These patients include, but are not limited to, those who have multiple procedures (CTR with ORIF distal radius, with trigger finger release, with CMC arthroplasty, with tendon transfer/opponensplasty), those with pre-operative stiffness/weakness, and those who develop post-operative pain/stiffness issues (CRPS, pillar pain). Without a clear definition of "routine" in Candidate Measure #3, the fear is that supervised therapy after CTR would be summarily denied by CMS/payers and that the process of appealing and getting approval for these services would put an undue burden on the provider and the patient.
63	Anonymous	Support	I would request that the word "routine" allows for clinical judgement of the surgeon to refer patients with co-morbidities (e.g. trigger fingers, osteoarthritis; post--op hand swelling etc.) to hand therapy if deemed necessary.
66	John Houghtaling	Support	I see no difference or clear benefit for use of therapy after carpal tunnel release in my patients except when they have severe or excessive hypersensitivity over the incisional area
67	Dmitry Tuder, MD	Support with Modifications	Support only for patients that undergo carpal tunnel release only. Do not support for patients that undergo carpal tunnel release in conjunctions with other procedures (such as cubital tunnel release, trigger finger releases, cmc arthroplasty, distal radius ORIF).
73	Daniel Mass, MD	Support	Most patients can do this on their own
74	Anonymous	Support with Modifications	The need for hand therapy is based on patient attitude. Compliant and trustworthy patients can be taught a home based program during their appointment with me. Patients who are reluctant to follow instructions ,

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #3: Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release	Comments
			patient poorly motivated, patients who are stiff at their one week postop visit should be referred to a supervised program with a hand therapist. If range of motion is delayed and the patient gets stiff , at their next visit in 6 weeks, the situation may be difficult to reverse. it would be lovely to be able to follow this second category of patients weekly , but that is just not feasible
75	Anonymous	Support with Modifications	Although I agree that "routine" use of OT/PT is not indicated after CTR, there are a subset of patients that present with disproportionate pain and disability after CTR in the immediate post-op period. These patients will benefit from one or two visits with OT for scar massage and desensitization exercises and encouragement of ROM and functional use of the hand. I fear that a blanket statement discouraging PT/OT will lead to denial of service for those rare patients that benefit from therapy post CTR.
77	Duffield Ashmead, MD	Do Not Support	<p>I believe there is a role for routine therapist engagement in the post-operative care of Carpal Tunnel patients (and others undergoing relatively minor hand surgical procedures) -- typically one visit at or shortly after dressing change for assessment and instruction, and a second visit at or shortly after suture removal (2 weeks post op) for re-assessment and progress report. Provided the patient is doing well there may be no further role whatsoever. If not, the patient is already "in the system." I am convinced that early supervised rehabilitation has diminished the incidence of RSD and other complications in our practice. I am also convinced that surgeons typically do not have the inclination or the time to provide this service themselves, and that medical assistants, nurses, and even PA's are typically under qualified.</p> <p>I fully agree that therapy services can be over utilized in the aftermath of simple hand surgical procedures, but I am not comfortable with a "blanket" statement discouraging routine use of therapy in this setting.</p>
78	Kent Jason Lowry, MD	Support with Modifications	As this measure is written (specifically without the use of exclusions or exceptions), it will limit the absolute use of therapy up to 6 weeks after carpal tunnel release. If that is the intention of the work group than the measure should stand. However, if there are clinical scenarios that would necessitate initiation of

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #3: Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release	Comments
			therapy prior to the 6 week cut off (such as the development of or history of complex regional pain syndrome), the measure should detail this out with the use of exceptions and exclusions. Failure to do this runs the real risk of limiting or delaying care (the physician is unwilling or restricted from ordering therapy until 6 weeks have passed since the MRI).
80	Lawrence Halperin, MD	Support	This measure accurately reflects the current evidence.
83	Anonymous	Support with Modifications	Would change to limiting within 4 weeks, or limit for 6 weeks but in patients without coexisting diabetes or inflammatory conditions such as rheumatoid or psoriatic arthritis. I find that in general PT is rarely needed, but in a select group of patients, an early referral is beneficial. I find that these are best identified at the first follow up visit by seeing how much swelling they have and if the patient is likely to be hesitant to use their hand.
84	John Lunt, MD	Support with Modifications	I have a comment only on the use of occupational therapy after carpal tunnel release. I find in my patient population, a brief (usually only 1 visit) encounter with a therapist effectively teaches the patient on how to use their hand without injuring it and delaying their recovery. I also have the therapist make a custom splint which protects the patient and is more comfortable and makes for a higher compliance than an off-the-shelf type.
85	D. J. Mastella, MD, FAAOS/CAQH	Support with Modifications	<p>Early post-operative hand therapy evaluation of patients after CTR (even just a single visit) may significantly reduce potential complications due to patient pain response and apprehension.</p> <p>In cases complicated by stiffness, hypersensitivity and RSD, early hand therapy intervention will forestall the worst of the complications and shorten the total duration of disability.</p>

Reviewer ID	Name of Reviewer	Please indicate your level of support for Candidate Measure #3: Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release	Comments
			Routine implementation of a full hand therapy regimen (e.g. 3 visits per week for four weeks) after uncomplicated CTR should be discouraged.
92	Anonymous	Do Not Support	The patient population requiring carpal tunnel release (CTR) is quite varied. For most patients, physical (PT) or occupational therapy (OT) are not necessary. However, there is a certain subset for whom therapy is appropriate, for example patients with comorbidities that may compound the usual expected postoperative course, patients with excessive postoperative swelling or patients with significant stiffness. In these patients, therapy is most effective when initiated early in the postoperative course. This measure may deter clinicians from referring patients that would benefit from early PT or OT early and delay referral until 6 weeks after surgery. This would negatively impact patient outcomes while satisfying the measure. The measure makes no exception for patients who actually would benefit from early therapy after routine CTR.
96	Megan Conti Mica, MD	Support with Modifications	Also include discouraging Immobilization after surgery.
97	Anonymous	Support with Modifications	This statement needs to indicate that the use of occupational and/or physical therapy is sometimes appropriate as there are many patients whose physical comorbidities and emotional temperaments can limit their clinical outcomes without therapy.

Candidate Measure 3 – Chair’s Response to Comments

There was a robust response and support to the proposed Measure #3 addressing the routine use of formal therapy after carpal tunnel release. I reviewed all of the written responses, and in collaboration with representatives of the ASSH and the AAOS, we discussed the findings. The workgroup developed this measure based on an AAOS Clinical Practice Guideline with Moderate Evidence for no additional benefit to routine supervised therapy over home programs in the immediate postoperative period. The Workgroup determined that nudging surgeons away from the routine use of formal therapy would improve quality of care by minimizing unnecessary interventions. There were multiple respondents that highlighted the need, at times, for therapy for certain patients with stiff proximal interphalangeal joints, generalized arthritis of the digits, or preoperative stiffness. The Workgroup was in complete agreement with these concerns and discussed these specific examples during the in person meeting. The Workgroup acknowledged that these comorbidities are uncommon and implementation of the measure would drive utilization towards 0% but it would never reach 0%. The literature does not support the routine use of formal therapy but implementation of the measure will establish a national benchmark of utilization and will identify outliers that routinely use therapy 100% of the time, as we found during our validation study. The workgroup did not believe building in exclusion criteria would be beneficial as the incidence of these comorbidities requiring formal therapy is uncommon when patients are appropriately educated and counseled on a home program.

Robin Kamal, MD
Chair, Carpal Tunnel Quality Measures Workgroup
Vice-Chair, ASSH Quality Metrics Committee

Appendix A – Structured Public Comment Form

4. Public Comment - Carpal Tunnel Syndrome Quality Measures

Instructions: Indicate your support for each measure and enter your comments or modification suggestions in the space provided. If you support the measure, but would like to suggest modifications, please select "Support with Modifications" and include your modifications in the comment box provided. The comment box can also be used to share feedback on the information contained in the Technical Report. When finished, click on the "Submit" button on the bottom of the page to send your comments.

Please indicate your level of support for Candidate Measure #1: Discouraging use of MRI for diagnosis of carpal tunnel syndrome measure. *

- Support
- Support with Modifications
- Do Not Support

Provide comments or suggested modifications here.

Please indicate your level of support for Candidate Measure #2: Discouraging the use of adjunctive surgical procedures during carpal tunnel release *

- Support
- Support with Modifications
- Do Not Support

Provide comments or suggested modifications here.

Please indicate your level of support for Candidate Measure #3: Discouraging the routine use of occupational and/or physical therapy after carpal tunnel release *

- Support
- Support with Modifications
- Do Not Support

Provide comments or suggested modifications here.

Appendix B – Chairs Response to Performance Measures Committee Approval Teleconference

The chairs of the Carpal Tunnel Syndrome (CTS) performance measures work group are pleased that the AAOS Performance Measures Committee (PMC) has voted unanimously to approve this evidence based CTS measures. The AAOS Performance Measures Committee discussed several issues surrounding this approval, and we wish to address these concerns.

1. There was robust discussion surrounding the workgroup’s decision to not list exclusions for comorbidities for these measures. This issue was considered at length with the workgroup at all in-person and teleconference committee meetings. After careful consideration, it was the workgroups opinion that the proposed exclusions would not constitute a sufficiently large subset of the affected population to warrant additional analyses at this point. The cost (time and financial commitment) of updating the dataset and analysis outweighs the benefit of addressing a relatively small subset.

We acknowledge that there may still be minority of the population which are affected by this decision, and propose addressing that potential harm during the measure maintenance period after baseline data have been collected and we are able to understand clinical behavior. We are not at the end of this measure development process, but what we believe is a strong beginning on a solid evidence-based foundation.

2. One comment addressed an inconsistency in the language used in the MRI measure. The numerator description lists “ipsilateral wrist MRI”, while the CPT codes address “upper extremity MRI”. Although the intention of this measure is to address those undergoing unnecessary wrist MRI, precision in language and harmony between how the measure is described and what is being captured is important. Since there is no specific CPT code for wrist MRI we will adjust the language to reflect “upper extremity MRI” in moving forward to additional approving bodies.
3. There was also discussion regarding the possibility that cervical MRI may not be approved based on the measure addressing upper extremity MRI over-use. We see this as an unlikely occurrence, as a cervical MRI should be ordered when exploring for a cervical radiculopathy or the existence of a double crush injury. This would necessitate using different CPT codes than the numerator for this measure. The imaging would then be appended to a different diagnosis (such as cervical radiculopathy).
4. There was concern related to the lack of laterality within this measure set. Unfortunately, the legacy ICD-9 does not distinguish laterality. ICD-10 does make this distinction. However, sufficient historical data coded with ICD-10 are not yet available for testing reliability, validity, and performance gap. With the shift from ICD-9 to ICD-10, this workgroup expects laterality can be addressed in the future.
5. Two measures (MRI and Adjunctive procedures) showed a high overall compliance rate. The validation studies demonstrated a high compliance rate in the aggregate, however there were variations amongst the metropolitan service areas (MSAs) with high noncompliance rates. 30% of

MSAs were not compliant. We felt that this regional variation represented a gap in care, and that implementation of these measures would improve quality of care on a national level.

If the proposed measure set is accepted by CMS, and we can collect real-world usage data, future improvement and revision is expected. As the first evidence-based orthopaedic hand performance measurement set, this carpal tunnel syndrome-related performance measurement set constitutes pivotal evidence based step toward improving hand care.

Stephen McCollam, MD
Oversight Chair, Carpal Tunnel Quality Measures Workgroup
Chair, ASSH Quality Metrics Committee

Robin Kamal, MD
Chair, Carpal Tunnel Quality Measures Workgroup
Vice-Chair, ASSH Quality Metrics Committee