

Development and Reevaluation of Outpatient Imaging Efficiency Measures

Summary of the Third Meeting for the Imaging Efficiency Technical Expert Panel

Friday, February 26, 2016

Prepared by:

Yale New Haven Health Services Corporation
Center for Outcomes Research and Evaluation
(YNHHSC/CORE)

The Lewin Group



This material was prepared by CORE and The Lewin Group under contract to the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services (HHS).

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Background

The Centers for Medicare & Medicaid Services (CMS) has contracted with Yale New Haven Health Services Corporation Center for Outcomes Research and Evaluation (CORE), and its partner, The Lewin Group (Lewin), to develop and maintain six outpatient imaging efficiency measures (OIE) for the CMS outpatient quality reporting programs that support the objectives of CMS and National Quality Strategies (NQS). The contract number is: HHSM-500-2013-13018I; Task Order HHSM-500-T0002. CORE and Lewin are conducting a reevaluation of the outpatient imaging efficiency measures currently reported in the Hospital Outpatient Quality Reporting (HOQR) Program.

Current HOQR OIE measures include:

Measure Number	Measure Name
OP-8	Magnetic Resonance Imaging (MRI) Lumbar Spine for Low Back Pain
OP-9	Mammography Follow Up Rates
OP-10	Abdomen Computed Tomography (CT)—Use of Contrast Material
OP-11	Thorax CT—Use of Contrast Material
OP-13	Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac Low Risk Surgery
OP-14	Simultaneous Use of Brain Computed Tomography and Sinus CT

CORE and Lewin convened a technical expert panel (TEP) consisting of stakeholders and experts to contribute direction, technical input, and diverse perspectives to the measure reevaluation and expansion work. The objective of the OIE measures is to promote high quality, efficient care in the area of imaging. Specifically, each measure aims to reduce unnecessary exposure to testing or treatment that risk downstream patient harm, to ensure adherence to evidence-based medicine and practice guidelines, and to promote efficiency by reducing waste.

This report summarizes the feedback and recommendations provided by the TEP at the third meeting, considering potential changes to *MRI Lumbar Spine for Low Back Pain* (OP-8), *Abdomen CT—Use of Contrast Material* (OP-10), *Thorax CT—Use of Contrast Material* (OP-11), and *Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac Low-Risk Surgery* (OP-13), and results from the recent environmental scan and literature review (ES/LR) that impact all six OIE measure specifications.

Measure Development Team

Dr. Elizabeth Drye and Dr. Arjun Venkatesh are leading the CORE measure development and maintenance team; Dr. Charlie Bruetman is leading the Lewin measure development and maintenance team. Dr. Drye is Director of Quality Measurement Programs at CORE and a Research Scientist in Pediatrics at the Yale School of Medicine. Dr. Venkatesh is a Scientist at CORE and Assistant Professor in the Department of Emergency Medicine at the Yale University School of Medicine. Dr. Bruetman is the Senior Vice President

and Market Lead for the Federal Health and Human Services market at The Lewin Group. See [Appendix A](#) for the full list of members of the CORE and Lewin staff.

The TEP

A well-balanced representation of stakeholders on the TEP will help to ensure the consideration of key perspectives in the measure selection, development, respecification, and maintenance processes. Consequently, CORE and Lewin requested input from a broad group of stakeholders, including patients, caregivers, and consumer advocates; clinicians or other caregivers with subject matter expertise, including cardiology, emergency medicine, neurology, oncology, orthopedics, primary care, and radiology; informaticists, epidemiologists, methodologists, and other experts in measurement science; health system and hospital representatives; payers; healthcare purchasers; and, experts in healthcare disparities.

In alignment with the CMS Measures Management System (MMS) Blueprint, CORE and Lewin, under the guidance of CMS, held a public call for nominations in 2015, and convened a TEP. Lewin solicited potential TEP members through a posting on CMS's website, email blasts sent to CMS physician and hospital listservs, and also by reaching out to individuals and organizations recommended by the team and stakeholder groups.

The appointment term for the TEP is from February 2015 through September 2018. CORE and Lewin will ask the TEP for input and feedback on areas of measure importance, scientific acceptability, feasibility, usability and use, and harmonization.

TEP Members

<i>TEP Member Name Credentials and Professional Role</i>	<i>Organizational Affiliation City, State</i>
Meenu Arora, MBA <i>Quality Improvement Leader</i>	Sequoia Hospital Campbell, CA
Brian Baker <i>Chief Executive Officer</i>	Carealytics Franklin, TN
Peter Benner <i>Chair</i>	MNSure Inver Grove Heights, MN
Martha Deed, PhD <i>Patient Advocate</i>	Safe Patient Project's Patient Advocacy Network North Tonawanda, NY
Lawrence Feinberg, MD <i>Attending Physician</i>	University of Colorado Hospital Aurora, CO
Elliott K. Fishman, MD <i>Professor of Radiology, Surgery and Oncology</i>	Johns Hopkins School of Medicine Baltimore, MD
Marian Hollingsworth <i>Patient Advocate</i>	La Mesa, CA

TEP Member Name Credentials and Professional Role	Organizational Affiliation City, State
Michael Hutchinson, MD PhD <i>Clinical Associate Professor of Neurology</i>	Icahn School of Medicine at Mount Sinai New York, NY
Gregory M. Kusiak, MBA FRBMA <i>Independent Consultant</i>	Radiologists and Radiology Organizations Oceanside, CA
Barbara Landreth, APRN, MBA <i>Clinical Information Analyst</i>	St. Louis Area Business Health Coalition Tulsa, OK
Barbara McNeil, MD PhD <i>Ridley Watts Professor and Head Professor of Radiology</i>	Harvard University Cambridge, MA
Michael J. Pentecost, MD <i>Chief Medical Officer</i>	Magellan Healthcare Washington, DC
David Seidenwurm, MD <i>Medical Staff Consultant</i>	Sutter Medical Group Sacramento, CA
Adam Sharp, MD MS <i>Research Scientist</i>	Kaiser Permanente Southern California Pasadena, CA
Paul R. Sierzenski, MD MS-HQS RDMS FACEP FAAEM <i>Medical Director</i>	Christiana Health Care System Bear, DE
C. Todd Staub, MD, FACP <i>Chairman and Primary Care Physician</i>	ProHealth Physicians Farmington, CT

TEP Meetings

CORE and Lewin have conducted the third TEP meeting (see [Appendix B](#) for schedule of TEP meetings). TEP meetings follow a structured format consisting of a presentation of key issues, followed by an open discussion of these issues by the TEP members.

The first TEP meeting focused on gaining TEP feedback on potential updates to measure specifications, and on evaluating the potential for expanding one OIE measure to the ACO setting. The second TEP meeting focused on gaining TEP feedback on the potential expansion of the *MRI Lumbar Spine for Low Back Pain* (OP-8) measure to the ACO setting, after a review of the results of quantitative and qualitative measure testing.

The third TEP meeting focused on potential changes to *MRI Lumbar Spine for Low Back Pain* (OP-8), *Abdomen CT—Use of Contrast Material* (OP-10), *Thorax CT—Use of Contrast Material* (OP-11), and *Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac Low-Risk Surgery* (OP-13), and a review of the results from the recent environmental scan and literature review (ES/LR), which cover all six OIE measure specifications.

TEP members provided considerable input on potential updates to the OIE measures. More specifically:

- The TEP had no concerns with recommendations from Lewin to not add the following imaging modalities to OP-8's denominator: X-ray spine, X-ray neck, cervical MRI, or thoracic MRI. The TEP did not reach consensus on adding CT lumbar spine to OP-8's denominator. Some TEP members felt that, if the goal of the measure is to reduce unnecessary imaging, then CT should be included, especially since overuse of CT also has exposes beneficiaries to unnecessary radiation. Another member opposed the exclusion because of the longitudinal evaluation issue that would cloud the comparison with previous measurement years' results.
- Lewin asked the TEP's thoughts on how to best capture evaluation and management (E&M) visits as a proxy for antecedent conservative therapy for the *MRI Lumbar Spine for Low Back Pain* (OP-8) measure, with a focus on certain provider specialties. One TEP member thought that the classification should be more conservative, since some of the provider types (e.g., dermatology, otolaryngology, ophthalmology) were unlikely to order imaging and/or engage in antecedent therapy for low back pain. Another TEP member thought that the E&M structure should be broader, since antecedent conservative therapies may be informally discussed or prescribed by clinicians other than a beneficiary's usual provider.
- The TEP reached consensus regarding the exclusion of non-traumatic aortic disease from OP-10's denominator. The TEP did not reach consensus around excluding diverticulitis. CORE and Lewin will do additional research on the exclusion of diverticulitis. One TEP member felt that external trauma codes did not need to be added to OP-10, as a majority of trauma cases would already be removed using the current trauma exclusion (consisting of internal trauma codes only).
- The TEP reached consensus regarding the exclusions of non-traumatic aortic disease from OP-11's denominator. Similar to OP-10, a TEP member felt that external trauma codes did not need to be added, as most trauma cases would already be removed using the current trauma exclusion (consisting of internal trauma codes only).
- The TEP reached consensus on the addition of cardiac computed tomography angiography (CCTA) to OP-13 in order to better align the measure with National Quality Forum (NQF) measure #0670.
- The TEP reached consensus on the exclusion of degenerative lumbar spondylolisthesis and adult isthmic spondylolisthesis for OP-8. The TEP did not support removal of complicated hematuria and recurrent urinary tract infection from OP-10's specifications because the clinical presentations for both conditions are not easily capturable using claims data. The TEP supported removal of ED encounters from OP-13's denominator.

Conclusion

TEP feedback was instrumental in refining CORE and Lewin’s approach to measure reevaluation. Table 1, *Key Issues Discussed during Third TEP Meeting and Feedback*, below, describes the key issues discussed during the third TEP meeting and the TEP responses.

Table 1. Key Issues Discussed during Third TEP Meeting and Feedback

Topic	Key Issues Discussed	TEP Feedback/Discussion
<i>Welcome and Introductions</i>	CORE, Lewin, and CMS welcomed TEP members, introduced two guests from the National Committee for Quality Assurance (NCQA) and the American College of Cardiology (ACC), and reviewed meeting objectives. The objectives of the meeting were to review descriptive data for proposed changes to <i>MRI Lumbar Spine for Low Back Pain</i> (OP-8), <i>Abdomen CT—Use of Contrast Material</i> (OP-10), <i>Thorax CT—Use of Contrast Material</i> (OP-11), and <i>Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac Low-Risk Surgery</i> (OP-13), and; to review results from the year two environmental scan and literature review (ES/LR) that impact the measures’ specifications.	One TEP member disclosed a new business title. Another TEP member disclosed a new educational degree earned. No members of the TEP reported conflicts of interest that precluded them from participating.
<i>Proposed Modifications to OP-08</i>	CORE and Lewin described the <i>MRI Lumbar Spine for Low Back Pain</i> (OP-8) measure, and reviewed a similar measure maintained by the NCQA (NQF #0052). CORE and Lewin stated that we are looking for opportunities to harmonize the measure, as harmonizing the measure reduces the reporting burden and presents a clearer picture to stakeholders and to the clinical community. CORE and Lewin sought TEP feedback on key questions related to measure harmonization, including the addition of CT lumbar spine, and including E&M visits as a proxy for antecedent	<u>NOT adding X-ray spine, X-ray neck, cervical MRI, or thoracic MRI to OP-8’s denominator</u> The TEP had no concerns with recommendations from Lewin to not include the following imaging modalities: X-ray spine, X-ray neck, cervical MRI, or thoracic MRI, as they are out of scope for OP-8. <u>Adding CT lumbar spine to OP-8’s denominator</u> One TEP member inquired about any clinical situation in which providers would use CT lumbar spine instead of an MRI (e.g., CT might be done in a setting where there was no access to an MRI in certain settings, such as the emergency department). Another TEP member noted that insurance

Topic	Key Issues Discussed	TEP Feedback/Discussion
	conservative therapy.	<p>companies/policies can influence whether someone gets an MRI or a CT, and it may not be a clinical decision, but rather the insurance coverage that is available to some patients. A TEP member agreed with adding CT because arguments regarding CT and MRI overuse are quite similar. The use of MRI is preferable in the properly selected population since the most serious findings (e.g., abscess or large disk extrusions) are much more easily seen on MRI. Also, the radiation exposure from lumbar-spine CT is high, especially when soft tissue lesions within the canal are the target of imaging. Another TEP member stated that new laws will require consulting guidelines before ordering these examinations; a TEP member added that gaming may be less of a concern due to the increased emphasis on consulting clinical guidelines first. A TEP member was comfortable adding CT lumbar spine to the measure's denominator, and added that if the goal is to reduce unnecessary imaging, then CT should be included in the measure specifications, especially since overuse of CT exposes some beneficiaries to unnecessary radiation. Another TEP member expressed opposition to adding CT because comparing facility and national performance over time would be challenging.</p> <p>CORE asked for the TEP's thoughts on including CT lumbar spine as inappropriate because a beneficiary did not attempt antecedent conservative therapy, in the same way that MRI of the lumbar spine would be deemed inappropriate without antecedent conservative therapy. A TEP member responded that we should include the CT because four to six weeks of antecedent conservative therapy makes sense whether a beneficiary is receiving a CT or an MRI. As long as trauma is an exclusion, we would be</p>

Topic	Key Issues Discussed	TEP Feedback/Discussion
		<p>covered in the emergency setting. A TEP member added that, generally speaking, there is not a clinical indication for imaging for low-back pain prior to attempting antecedent conservative therapy; this TEP member would agree with adding CT as currently recommended. One TEP member stated that they would personally prefer to receive an MRI, but that some hospitals want to act in a uniform fashion without taking into account the type of insurance a person has.</p> <p><u>E&M visits as a proxy for antecedent conservative therapy</u></p> <p>Lewin asked the TEP's thoughts on updating the definition of E&M visits as a proxy for antecedent conservative therapy for low back pain, with a focus on certain provider specialties (i.e., providers who were <i>likely</i> to treat low back pain, providers who <i>may</i> treat low back pain, and providers who were <i>unlikely</i> to treat low back pain).</p> <p>A TEP member thinks the E&M claims included in the definition should be more conservative. For example, a beneficiary who visits the gastroenterologist for low-back pain will likely be referred back to their primary care provider; one TEP member recommended removing the "may" and "unlikely" provider categories. Another TEP member agreed that some of the provider types were unlikely to order imaging and/or prescribe pharmacotherapy for low-back pain, but might recommend conservative therapies; therefore, this TEP member recommended keeping it broader, since the "unlikely" provider types may prescribe antecedent conservative therapy. Lewin asked the TEP if a beneficiary took the advice of antecedent care that did not resolve the low back pain, how likely is it that the initial provider would make an MRI order versus refer the beneficiary to their primary care</p>

Topic	Key Issues Discussed	TEP Feedback/Discussion
		<p>provider. A TEP member responded that they would likely refer them to their primary care provider.</p> <p>CORE stated that narrowing the E&M structure by provider specialty is to try to identify E&M visits to those at which conservative therapy (e.g., recommendation to take ibuprofen, recommendations for stretching) was attempted. A TEP member raised the concern about losing our focus when thinking about whether or not an interaction with a physician qualifies; the member suggested that we build this logic into the standards that we create.</p> <p>Summary: The TEP had no concerns with recommendations from Lewin to not add the following imaging modalities in OP-8's denominator: X-ray spine, X-ray neck, cervical MRI, or thoracic MRI. The TEP did not reach consensus on adding CT lumbar spine to OP-8's denominator. Some TEP members felt that, if the goal is to reduce unnecessary imaging, then CT should be included, considering CT overuse also exposes beneficiaries to unnecessary radiation. Other members opposed the exclusion because it would make assessment of longitudinal trends at the facility and national level challenging. Lewin asked the TEP's thoughts on updating the definition of E&M visits as a proxy for antecedent conservative therapy for low back pain, with a focus on certain provider specialties (i.e., providers who are likely to treat low back pain; providers who may treat low back pain; and providers who are unlikely to treat low back pain).. The TEP did not reach consensus on modifying how E&M visits are currently captured.</p>

Topic	Key Issues Discussed	TEP Feedback/Discussion
<i>Proposed Modifications to OP-10</i>	<p>CORE and Lewin described the <i>Abdomen CT—Use of Contrast Material</i> (OP-10) measure, the exclusion of two conditions (non-traumatic aortic disease, and diverticulitis), and the exclusion of imaging procedures associated with trauma with external injury.</p> <p>CORE and Lewin sought TEP feedback on key questions related to modifications to OP-10.</p>	<p><u>Exclusion of non-traumatic aortic disease and diverticulitis</u></p> <p>A TEP member expressed support for adding the exclusions to the measure to align with the American College of Radiology (ACR) Appropriateness criteria. Another TEP member would make the changes to align with ACR Appropriateness criteria for aortic disease, but not for diverticulitis, and felt that providers should only perform one abdominal imaging study (with or without contrast) for evaluation of acute abdominal pain, potentially indicative of diverticulitis. Another TEP member stated that, most times, no imaging is required for diverticulitis; one TEP member recommended excluding non-traumatic aortic disease, and not excluding diverticulitis. A TEP member added that, even in cases where experts disagree, there is value in aligning with ACR criteria.</p> <p><u>Exclusion of imaging procedures associated with trauma with external injury</u></p> <p>CORE and Lewin asked the TEP the following question: would a double scan (with and without contrast) for external trauma be appropriate? A TEP member noted that excluding either internal or external trauma should be sufficient to capture the vast majority of trauma cases. A TEP member suggested aligning the measure with clinical guidance. Another TEP member was concerned that the addition of external traumas would make longitudinal evaluation challenging.</p> <p>Summary: The TEP reached consensus regarding exclusion of non-traumatic aortic disease from OP-10's denominator. CORE and Lewin will do additional research on the exclusion of diverticulitis. Because the current trauma exclusion (internal traumas only) likely captures the vast majority of</p>

Topic	Key Issues Discussed	TEP Feedback/Discussion
		trauma cases, no changes are needed. CORE and Lewin will continue to monitor the literature to determine the value of excluding external traumas.
<i>Proposed Modifications to OP-11</i>	CORE and Lewin described the <i>Thorax CT—Use of Contrast Material</i> (OP-11) measure, and the exclusion of non-traumatic aortic disease and trauma with external injury codes. CORE and Lewin sought TEP feedback on key questions related to modifications to OP-11.	<p><u>Exclusion of non-traumatic aortic disease</u> The TEP had no concerns with this exclusion.</p> <p><u>Exclusion of trauma with external injury codes</u> Similar to OP-10, TEP members believed that use of external trauma codes would capture a majority of trauma cases. A TEP member was concerned that the addition of external traumas would make longitudinal evaluation challenging.</p> <p>Summary: The TEP reached consensus around excluding non-traumatic aortic disease. Because the current trauma exclusion likely captures the vast majority of trauma cases, no changes are needed. CORE and Lewin will continue to monitor the literature to determine the value of excluding external traumas.</p>
<i>Proposed Modifications to OP-13</i>	CORE and Lewin described the <i>Cardiac Imaging for Pre-Operative Risk Assessment for Non-Cardiac, Low-Risk Surgery</i> (OP-13) measure, and reviewed a similar measure maintained by ACC (NQF #0670). CORE and Lewin stated that we are looking for opportunities to harmonize the measure, as harmonizing the measure reduces the reporting burden and presents a clearer picture to stakeholders and to the clinical community. CORE and Lewin sought TEP feedback on key questions related to measure harmonization.	<p><u>Inclusion of cardiac computed tomography angiography (CCTA) in OP-13's denominator</u> A representative from the ACC stated that this addition would bring OP-13 into alignment with NQF #0670. The representative added that this sends a message to hospitals that the priority is to avoid pre-operative imaging before low-risk surgery, regardless of the type of imaging performed.</p> <p>The representative from ACC noted that NQF #0670 uses clinical data to determine if an imaging study is inappropriate; consequently, imaging emergency department setting is not included, as it is rarely performed as a pre-operative assessment. A TEP member stated that, historically, a beneficiary could be sent to the emergency department to have pre-operative testing performed if it were not</p>

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		<p>easily available in another setting; a TEP member added that providers could game the system if emergency imaging was eliminated because clinicians may send beneficiaries to the ED for their pre-operative cardiac work-up.</p> <p>Another TEP member supported the addition of CCTA, but raised concerns about accurate measurement of CCTA in the ED setting.</p> <p>Summary: The TEP reached consensus on the addition of CCTA to OP-13.</p>
<p><i>Review Recent ES/LR Results</i></p>	<p>CORE and Lewin described the methodology for updating the ES/LR. Lewin performed a review of guidelines and peer-reviewed literature published in 2014 and 2015. CORE and Lewin reviewed high-quality evidence for measure implications, and the team considered whether the literature would harmonize with each measure's denominator population and overall clinical concept.</p> <p>CORE and Lewin identified potential guideline changes that may impact <i>MRI Lumbar Spine for Low Back Pain</i> (OP-8), <i>Abdomen CT—Use of Contrast Material</i> (OP-10), and <i>Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac Low-Risk Surgery</i> (OP-13).</p> <p>No potential specification updates were identified for <i>Mammography Follow-Up Rates</i> (OP-9), <i>Thorax Computed Tomography – Use of Contrast Material</i> (OP-11), or <i>Simultaneous Use of Brain Computed Tomography and Sinus Computed Tomography</i> (OP-14).</p> <p>CORE and Lewin sought TEP feedback on the following:</p> <ul style="list-style-type: none"> Potential concerns related to conflicting clinical evidence (<i>not all guidelines align</i>) Potential problems with the technical 	<p><u><i>MRI Lumbar Spine for Low Back Pain</i> (OP-8)</u></p> <p>CORE and Lewin identified two new red-flag conditions in guidelines: degenerative lumbar spondylolisthesis and adult isthmic spondylolisthesis. Lewin asked the TEP about adding these exclusions to the measure.</p> <p>A TEP member asked about implications for adding the exclusions, given that they are not excluded by NCQA and would not align with the specifications for NQF #0052. Lewin responded that there are several differences between the OP-8 and NQF #0052 specifications, as the measures serve different purposes—OP-8 seeks to capture the level of inappropriate MRI use, while NQF #0052 is a resource use measure. A TEP member supported the alignment with the guideline's recommendation. A TEP member provided the definition of spondylolisthesis and believed that an MRI would be indicated for such a diagnosis, and therefore recommended that the two conditions be excluded from OP-8's specification. Another TEP member agreed with adding both exclusions.</p> <p><u><i>Abdomen CT—Use of Contrast Material</i> (OP-10)</u></p> <p>CORE and Lewin identified updated ACR Appropriateness criteria for hematuria and urinary tract infections in women that</p>

Topic	Key Issues Discussed	TEP Feedback/Discussion
	<p>approach to these updates</p> <p>Potential stakeholder feedback that could arise from measure revisions</p>	<p>provide different recommendations for complicated versus uncomplicated hematuria and UTIs. Historically, all cases of hematuria and UTIs have been excluded because claims cannot differentiate between complicated and uncomplicated presentations. Lewin asked the TEP: should CORE/Lewin explore ways to more accurately capture complicated hematuria and UTI, or is the current, more generous approach acceptable, given limitations in coding?</p> <p>The TEP agreed to leave the measure as is (excluding all cases of hematuria and complicated cases of kidney disease as proxies for recurrent UTI).</p> <p><u><i>Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac Low-Risk Surgery (OP-13)</i></u></p> <p>CORE and Lewin identified a newly published ACR/ACC Appropriateness criteria where a number of emergent cardiac scenarios rate cardiac imaging (stress echocardiography, stress MRI, SPECT MPI, and CCTA) as appropriate (7, 8, or 9). Because of the difference in urgency and intention of imaging in the emergency setting, CORE and Lewin would like to consider whether measuring facilities on emergency cardiac imaging is reasonable. Lewin asked the TEP: should CMS consider excluding ED encounters from the measure's denominator?</p> <p>A TEP member stated that this measure focuses on pre-operative risk assessment, and that pre-operative imaging is not likely to occur in the ED. A TEP member added that to exclude the ED encounters makes this a cleaner measure, aligning the specifications with clinical guidance.</p> <p>Summary: The TEP reached consensus on the exclusions of degenerative lumbar</p>

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		<p>spondylolisthesis, and adult isthmic spondylolisthesis for OP-8. The TEP agreed to leave the OP-10 measure as currently specified. The TEP was in agreement to remove ED encounters from OP-13's denominator.</p>

Appendix A. CORE and Lewin Measure Development and Maintenance Teams

Name	Title/ Affiliation	Contact Information
Haikun Bao, PhD	Senior Statistician, CORE	haikun.bao@yale.edu
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Appendix B. TEP Call Schedule

TEP Meeting #1:

Friday, June 05, 2015: 4:00-6:00pm ET (Location: Webinar)

TEP Meeting #2:

Friday, September 11, 2015: 3:30-5:30pm ET (Location: Webinar)

TEP Meeting #3:

Friday, February 26, 2016: 12:00-2:00pm ET (Location: Webinar)

Subsequent TEP Meetings:

2016 (date TBD) (Location: Webinar)

2017 (date TBD) (Location: Webinar)

2017 (date TBD) (Location: Webinar)

2018 (date TBD) (Location: Webinar)

2018 (date TBD) (Location: Webinar)