May 7, 2012

Marilyn Tavenner, M.A.
Acting Administrator
Centers for Medicare & Medicaid Services
Department of Health & Human Services

RE: Medicare and Medicaid Programs; Electronic Health Record Incentive Program – Stage 2 (CMS-0044-P)

Dear Ms. Tavenner,

Through the Affordable Care Act (ACA), CMS is implementing new and better ways to improve health and control costs through ACOs, medical homes, and other new models of care. Whether they deliver coordinated, accountable, and patient-centered care will depend heavily on the Meaningful Use program establishing a strong national health IT infrastructure, and getting clinicians, hospitals, patients, and others to use it. The 26 undersigned -- representing leading consumer and purchaser organizations advancing health by advocating for the collection and use of robust performance information to support consumer choice, payment, transparency, and quality improvement -- believe that CMS’ proposal for Stage 2 brings Meaningful Use more closely in line with these expectations.

Stage 2 of Meaningful Use marks a significant step toward national commitment to effective management of health information to improve health outcomes. We urge CMS to finalize the progressive strides it makes in the proposed rule, especially those that enhance patient and family engagement. However, the proposed rule does not do enough to: (1) drive providers to share information with each other and (2) build the capability to report on quality measures that indicate whether providers are improving their ability to deliver high-value, coordinated care. We elaborate and offer recommendations on these points, below.

**Reward Providers Who Successfully Partner with Their Patients**

The notion of putting patients at the center of the care team and working to achieve better outcomes in collaboration with them, instead of doing things to them or for them, is gaining wide acceptance as a foundational principle. The proposed rule makes important progress in actualizing this concept. CMS must stand firm in its commitment to:

- Give patients online access to their health information (including the ability to view, download and transmit the information) and motivate providers to engage patients to use it.
- Facilitate secure messaging between patients and their care team.
These are concrete ways for CMS to show most Americans that the substantial federal investment in the Meaningful Use program is making a difference for them. CMS can further advance patient engagement by requiring that providers leverage patient-reported data to improve care. For example, under Meaningful Use, providers must capture demographic information, but they are not required to use it in a way that contributes to the program’s goals. This shortcoming can be addressed by modifying existing objectives to require providers to stratify clinical quality measure (CQM) results and patient lists using race, ethnicity, gender, and language. The program also must be aggressive in collecting patient-reported outcomes (see “Measure What Matters” for more details, below).

Get Clinicians to Share Information with Each Other

Clinicians, hospitals, and other providers need accurate, complete and timely information to provide appropriate, effective patient care. This means that providers need to show that their EHRs “speak” the same language (i.e., are interoperable) and exchange health information seamlessly and securely. As proposed, Stage 1 will not support this goal. CMS plans to eliminate the currently required test of electronic exchange of clinical data in Stage 1, without a substitute. We agree with removing this “test” because of its questionable value. However, CMS should replace it with a better approach -- require providers complete one successful exchange of information for an actual patient in Stage 1 with a provider of care or patient authorized entity (e.g., RHIO). This will prepare providers to broadly apply these capabilities in Stage 2 and consider how to use them to improve care coordination.

For Stage 2, beginning in 2014, CMS proposes that clinicians and hospitals must send along a summary of care document for at least 65 percent of care transitions and referrals, with 10 percent sent electronically to an outside organization that uses a different EHR vendor. This requirement falls short of what Stage 2 is supposed to achieve -- rigorous health information exchange. With the federal government’s big financial investment in Meaningful Use and Stage 2 not occurring until 2014, CMS should expect nearly all transmissions of health information from one meaningful user to another to occur electronically.

Measure What Matters

Stage 2 should prompt physicians and hospitals to capture and use information that reveals whether or not care is making a difference for the patient. Consumers and purchasers need information that covers the six domains identified in the National Quality Strategy and endorsed by HHS (i.e., patient safety, affordability, coordinated care, healthier communities, better prevention, and more engagement of patients and families in their care). Unfortunately, CMS is making slow progress on this front. The agency is woefully behind in developing and adopting meaningful CQMs.

Stage 2 requirements must focus provider attention on capturing information that supports a value-oriented health care system, quickly. A number of CMS value-based purchasing programs – and their private sector counterparts – are underway or scheduled for implementation in 2012 and the next few years. These programs will not succeed if we are unable to assess their ability to affect the National Quality Strategy domains and its foundational three aims of better care, healthier communities, and more affordable care. Meaningful Use has the potential to raise all boats, if CMS is willing to push further faster. We encourage CMS to accelerate the measurement agenda to reward value and urge that the final rule include the following changes:

Action: Immediately remove low-value CQMs from the program

The proposed rule puts forth many CQMs that are inconsequential (i.e., those that reflect basic competencies, mask outcomes, allow providers to simply check-the-box, are duplicative, or are topped out).
### Action: Incorporate available high-value CQMs that aren't listed in the proposed rule by 2013

The proposed rule omits a number of high-value measures. Examples include the following clinician measures:

- **Healthy term newborn** from the California Maternal Quality Care Collaborative (the proposed rule only applies the measure to hospitals though it can also be used for individual clinicians). This measure captures the percent of term singleton live births without significant complications.
- **Cesarean Delivery for Nulliparous (NTSV) Women** from the AMA-PCPI, which captures c-section use.
- **Optimal Diabetes Care, Vascular Care, and Asthma Care** from Minnesota Community Measurement. These are all-or-none composite measures that capture whether care actually made a difference for patients with these chronic conditions. Additionally, the Optimal Asthma Care measure assesses important factors in patients' perception of whether their asthma was under control.

### Action: Develop by 2015 high-priority measures that do not exist (Stage 3)

In 2010, the Office of the National Coordinator (ONC), with the help of external experts, identified a list of critical areas for measure development (i.e., patient-reported outcomes, quality of shared decision-making, appropriate invasive testing, patient activation and self-management, adverse drug events, health care acquired conditions, adverse events and sub-optimal outcomes from chronic conditions, etc.). CMS and ONC should develop a plan to fill these gaps by 2015.

The agency must ensure that its financial investments in measure development produce high-value measures (e.g., hold contractors to higher standards) and leverage work already done rather than starting from scratch. We are troubled by our perception that ONC's recent investments are not producing valuable measures. For example, efforts to build measures of patient-reported outcomes for orthopedic care resulted in check-the-box measures of whether the clinician “assessed” the patient's functional status before and after hip and knee replacement and failed to take advantage of more valuable measures and tools (e.g., Minnesota Community Measurement's patient-reported outcome measure for total knee replacement, NIH PROMIS).

### Action: Avoid counterproductive alignment

To align with other federal programs, CMS adds a deluge of new CQMs (many of questionable value) and CQM reporting options from other programs. Although we support the concept of streamlining federal programs to reduce burden on providers, we are deeply concerned that CMS' strategy for alignment, in some cases, will dilute the impact of Meaningful Use. Meaningful Use must support new models of care. Requiring Meaningful Use to adopt measures and reporting options from legacy programs such as PQRS is therefore counterproductive. CMS should integrate the more policy-relevant and valuable Meaningful Use CQM requirements into other federal programs, and only add robust elements from other federal programs into Meaningful Use. For these reasons, CMS should not build PQRS into Meaningful Use, but allow success in Meaningful Use to count towards PQRS.

### Action: Use Meaningful Use as a testing ground for new measures

Measure development and implementation is often slowed by the shortage of pilot testing sites. CMS should use Meaningful Use to test new measures. Meaningful Use is a safe place for testing because it does not require performance on CQMs to be factored into payment or public reporting. CMS could quickly fill large gaps in robust measures by allowing the program be a testing ground for:

- Newly developed measures.
- Applying established measures to other parts of the health care system (e.g., facility, provider, provider group, ACO, etc.). This would promote alignment across the health care system and maximize the potential for improvement. Currently, many developers fail to test measures for all applicable providers.
Conclusion

As Meaningful Use evolves, CMS must ensure that the program advances technological capabilities essential to supporting the National Quality Strategy.

The Appendix provides specific comments on elements of the Meaningful Use program in the order they appear in the proposed rule.

If you have any questions, please contact either of the Consumer-Purchaser Disclosure Project’s co-chairs, Bill Kramer, Executive Director for National Health Policy for the Pacific Business Group on Health or Debra Ness, President of the National Partnership for Women & Families.

Sincerely,

AARP
The Alliance
American Benefits Council
American Hospice Foundation
Business Health Care Group of Southeast Wisconsin
Buyers Health Care Action Group
Childbirth Connection
Consumers’ CHECKBOOK
Consumers Union of United States
Employers’ Coalition on Health
The Empowered Patient Coalition
Health Policy Corporation of Iowa
Iowa Health Buyer’s Alliance
The Leapfrog Group
Lehigh Valley Business Coalition on Health Care
Mid-Atlantic Business Group on Health
National Business Coalition on Health
National Partnership for Women & Families
New Jersey Health Care Quality Institute
Niagara Health Quality Coalition
Northeast Business Group on Health
Pacific Business Group on Health
Puget Sound Health Alliance
South Carolina Business Coalition on Health
Virginia Business Coalition on Health
Wyoming Business Coalition on Health
APPENDIX 1

Changes to Stage 1 Objectives

1. Health information exchange

Stage 1 must include an objective that promotes health information exchange. We are concerned that CMS eliminates the “capability to exchange key clinical information” objective from Stage 1, but does not offer a replacement.\(^1\) CMS removes the objective because providers found it difficult to fulfill and there are doubts about the value of a simple “test.” Instead, the agency should require one case of actual electronic transmission of a summary of care document for a real patient either to another provider of care at a transition or referral or to a patient authorized entity (e.g., RHIO).

2. Patient access to online information

Consumers and purchasers applaud CMS' expectation that, starting in 2014, providers give 50% of their patients the ability to electronically “view, download, and transmit” their health information. CMS must maintain this criterion at the current threshold, and as a core requirement. This is a concrete and powerful way for Meaningful Use to demonstrate value to patients. Two out of three Americans want this capability because it helps them understand their health better, keep up with medications, and maintain a healthy lifestyle.\(^2\) For the investment in Meaningful Use to be successful, patients need to trust EHRs. Research shows that online access increases patients’ trust in the ability of EHRs and physicians to protect their health information.\(^3\)

Stage 2 Objectives

3. Exclusion loopholes

We agree with CMS' plans to prevent providers, starting in 2014, from selecting objectives for which they qualify for an exclusion, when there are other objectives they can legitimately meet. Taxpayer dollars should not be used to reward providers for not using health IT to improve patient care.

4. Demographic data

We agree with requiring providers to capture demographic data (i.e., RELGD, DOB) for a significantly larger percentage of their patients than in Stage 1. However, we recommend the following modifications:

- Use IOM or CDC standards for collecting race and ethnicity data (HHS and OMH adopted CDC’s standards as part of ACA implementation), which are more granular than OMB’s categories.
- Apply IOM preferred language variables.\(^4\)
- Collect disability status (a required category in Section 4302 of the Affordable Care Act), which will make providers more aware of a patient’s special needs.
- Require providers to use demographic data to stratify CQM performance and patient lists.

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\(^1\) CMS considered four options: (1) Remove the objective; (2) Require that the test be successful; (3) Eliminate objective, but require that providers select either Stage1 medication reconciliation objective or Stage 1 summary of care transitions of care and referrals from the menu set; (4) Move from a test to one case of actual electronic transmission of a summary of care document for a real patient either to another provider of care at a transition or referral or to a patient authorized entity.


\(^3\) Ibid.

\(^4\) 2009 IOM Report on Race, Ethnicity, and Language Data
5. Clinical decision-support

Consumers and purchasers applaud CMS for requiring that providers implement five clinical decision support interventions (Stage 1 asks that they use only one) and drug-drug and drug-allergy checks. The interventions must be tied to CQMs. This move is reasonable, supports evidence-based care and patient safety, and helps address specialty care. Although it is important to give providers the flexibility to choose clinical decision-support interventions that best fit their needs, CMS should add safeguards to prevent providers from selecting low-value interventions. For example, CMS could require the use of interventions that address:

- Areas the National Priorities Partnership (NPP) identified as demonstrating high levels of unwarranted variation of overuse (i.e., diagnostic/medical/surgical procedures, non-palliative services at end of life, cesarean section among low-risk women).5

- The 45 medical tests and procedures that the ABIM Foundation’s Choosing Wisely campaign identified as commonly used but not always necessary (i.e., stress tests for annual checkups, CT scan or antibiotics for chronic sinusitis, imaging for headaches, etc.).6

6. Clinical summaries for patients

Under the proposed rule, clinicians must give clinical summaries to 50 percent of their patients within 24 hours. The 24-hour turnaround period is a much needed improvement over Stage 1. Stage 1 gives clinicians 3 days to get clinical summaries to patients – this timeframe does not support the reality that patients and their families often need to take action within the first 24 hours of discharge or a clinical visit (i.e., implement self-care tasks and drug regimens) to avoid costly and preventable visits to the hospital. The agency should also encourage clinicians to provide clinical summaries in the patient’s preferred language, where possible.

7. Health information exchange (sending summaries of care at transitions of care and referrals)

Under the proposed rule, clinicians and hospitals must: (1) provide a summary of care document for more than 65% of transitions of care and referrals and (2) 10% of these documents must be sent electronically to an outside provider who uses a different EHR vendor. This is a missed opportunity to foster greater interoperability amongst providers. Additionally, the second requirement may be difficult to implement and have unintended consequences, such as artificially driving referral patterns.

CMS should modify the second portion of the objective to require meaningful users to electronically transmit summary of care documents 65% of the time. This is a reasonable expectation for several reasons. Stage 2 of Meaningful Use is intended to focus on information exchange, the implementation date of 2014 provides enough time to develop these capabilities, and most importantly, this effort underscores the sizeable investment being made by the federal government to promote and support health IT.

We also encourage CMS to require a percentage of all electronic exchanges be done with entities not eligible for Meaningful Use incentives (e.g., nursing homes, home health agencies, VA, etc.). Fostering electronic information exchange with these entities will support coordinated care and help hospitals avoid penalties for preventable readmissions (as required by the ACA beginning in October 2012).

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The summary of care document will include – amongst other information – the patient’s known care
team members, care plan, medication list, and problem list. CMS should:

- Stipulate that team members include family caregivers. In many cases, family caregivers are the
  main providers of care. In carrying this out, CMS can leverage the Care Transitions Program’s
  standardized approach to defining the type and intensity of the roles family caregivers play (called
  “DECAF”).
- Add new content to the care plan (i.e., “timeline” and “responsible party”). Without these pieces
  of information, care team members will not know who is responsible for which actions and when
  they must be performed. It should also be clear that the care plan should be developed in
  collaboration with the patient.
- Include prescriber’s name and the date of medication to the medication list.
- Do not add “functional and cognitive limitations” to the problem list. These characteristics should
  be maintained separately from the problem list, which includes a list of diagnoses that may
  require treatment. Functional and cognitive limitations are characteristics that may necessitate
  special accommodations, but not necessarily treatment. Kept in a distinct list, clinicians will be
  more likely to see them and make arrangements necessary for the patient’s well-being and
  engagement.

These considerations apply to other sections of the proposed rule (e.g., clinical summaries for
patients).

8. Advance directives

CMS must strengthen the advance directive objective by:

- Adding it as a menu item for clinicians.
- Making it a core requirement for hospitals.
- Increasing the threshold.
- Requiring that providers have access to the advance directive or instructions on where to obtain
  the latest version.

Without these changes, Meaningful Use will miss a critical opportunity to foster greater patient
engagement, better ensure adherence to what may be patients’ most critical preferences, and
support compliance with the Patient-Self-Determination Act. These modifications also represent a
natural progression given the advance directive objective’s popularity in Stage 1.

9. Generating lists by condition

We support CMS’ decision to make this a core requirement for clinicians and hospitals but
recommend the following modifications:

- Expand the number of reports that providers must generate by condition (from one to four).
  Where providers lack enough sample size for four conditions, they can create lists of their
  patients by demographic variables. This will help providers understand, for example, how many
  of their patients speak different languages and the diversity of their patient populations.
- Require that reports be stratified by demographics to better understand and address health
disparities.

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7 http://www.caretransitions.org/decaf.asp
• Ensure that EHRs are equipped to identify and generate reports on patients with multiple chronic conditions.

10. Follow-up and preventive reminders

We support removing age restrictions from this objective, but urge CMS to maintain a threshold of 20% (from Stage 1) instead of decreasing it to 10%.

11. Patient online access to health information

Under the proposed rule, patients will have online access to their health information and providers will be accountable for getting patients to use it. Consumers and purchasers strongly back this objective, which aligns with the National Quality Strategy’s focus on patient engagement. CMS must maintain this requirement for the following reasons:

• Patients want and need online access to their health information to better manage their health, ask questions, and work in partnership with their providers. A recent survey found that 80 percent of patients with this type of access use it. Compared to their counterparts without online access to their health information, these individuals tend to understand their health condition better and keep up more with their medications.8

• Providers have a major role in helping patients understand the importance of using their health information. While patients’ options for obtaining answers to their questions are far greater than they used to be, their providers remain one of the most trusted sources of information.

• We learned from Stage 1 that simply making information available to patients is not sufficient. Providers need to be held accountable for getting patients to access it. In Stage 1, providers have to give patients an electronic copy of their health information, if patients ask for it. Unfortunately more than half of providers said they were unable to fulfill this objective. This suggests that patients may be unaware of the availability of this information and that providers didn’t encourage patients to obtain and use it.

We recognize that flexibility in meeting this criterion must be offered to specialists to prevent a multitude of patient portals from being offered to individual patients and to increase the opportunity for specialists to meet the spirit of this criterion. CMS should explore options for allowing specialists to meet this criterion by electronically transmitting information to a patient’s primary care provider and the patient portal/online access tool used by their common patient. This approach will promote patients’ information needs, health information exchange, and better coordination between specialists and primary care.

We also encourage the agency to improve accessibility by:

• Providing guidance on how to make online information accessible to patients’ family caregivers. They play a significant role in preventing unnecessary readmissions and have a tremendous need for information relative to their loved one’s care.

• Adding requirements that allow patients to view, transmit, and download information through mobile devices.

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• Making the information easy to understand and available in the top 10 most common primary languages.

We only support offering “hardship exemptions” to providers working in areas with very limited broadband access.

13. Imaging

We strongly support the new menu objective that makes imaging results electronically accessible. It promotes efficiency and patient safety. We recommend that CMS require ONC’s Health IT Standards Committee develop standards linking image results to clinical decision-support to eliminate unnecessary repeat tests and scans in Stage 2.

14. Secure messaging

CMS adds a core requirement that gives 10% of patients access to their providers through secure electronic messaging. It is one of the most impactful objectives in Stage 2 and helps address a key consumer complaint about the health care system: lack of communication with providers. Relative to other industries, the health care system is extremely slow to adopt advanced communication methods, creating unnecessary barriers between patients and their care team. The objective signals that providers can expect, and encourage, patients to take a more active role in their care. It could also help providers get patients to access their online information. For example, a provider could use secure messaging after a visit to invite patients to review their clinical visit summary.

Alternatively, the agency could also promote the effective use of secure messaging by having providers send a certain percentage of their patients a clinically relevant, patient-specific electronic message (we advise a threshold of at least 30%). Since patient-specific messages are likely to elicit a response from patients, CMS should accompany this requirement with a measure of response timeliness. Providers should be required to respond to patient messages within two business days. Response timeliness is easy to measure and existing health IT systems have this capability.

CMS asks for input on whether there are special concerns around implementing this objective for behavioral health patients. This is a non-issue as long as providers use secure messaging methods. In fact, this objective will help these patients obtain needed support from their clinicians.

Clinical Quality Measures (CQMs)

15. Clinician CQM reporting options

To align with other federal programs, CMS proposes a number of ways for clinicians (individually or as a group) to meet Meaningful Use CQM requirements. Although we support the concept of streamlining federal programs to reduce burden on clinicians, we are deeply concerned that CMS’ strategy for alignment, in some cases, will dilute Meaningful Use.

Meaningful Use must support new models of care. Requiring Meaningful Use to adopt elements from legacy programs such as PQRS is counterproductive. For example, under PQRS, individual clinicians only need to select and report on any three measures (significantly less than what Meaningful Use currently requires) from a large inventory of measures (many of which are low-value and won’t improve patient care). Consumers and purchasers have long expressed concerns about PQRS.
The reporting options put forth in the proposed rule are not ideal. To make the best of them, CMS should make three options available to clinicians (with some critical modifications to the proposed CQMs in Tables 6 and 8 – see Section 16 for more details):

1. Make Option 1a available for specialists, in an attempt to make Meaningful Use as relevant to their practice as possible.
2. Make Option 1b available for individual and group reporting for clinicians in primary care, pediatrics, and obstetrics and gynecology.
3. Make the Medicare Shared Savings Program and Pioneer ACO model group reporting option available for primary care IF CMS expands sample size requirements to generate meaningful performance information for individual clinicians.

This will allow the program to:

- Cover a wide breadth of specialties.
- Maintain focus on the six domains (i.e., patient and family engagement, patient safety, care coordination, population and public health, efficient use of healthcare resources, clinical processes/effectiveness).
- Avoid alignment for the sake of alignment.
- Focus primary care on a parsimonious set of more meaningful measures.

Current measurement sets don’t effectively support new payment and delivery models, and many important measures enabled by the benefits of health IT have yet to be developed. In fact, the measurement concepts that exhibit the most significant gaps (care coordination, patient engagement, patient-focused outcomes and efficiency) generally require functionalities that are only possible in an electronic environment, and are among the measure concepts most critical for supporting new payment models.

Meaningful Use is a unique opportunity to address measurement gaps. CMS could promote rapid-cycle measure development by encouraging eligible providers (with a focus on specialists) to test and report on measures in each of the 6 domains identified by CMS. This sort of real-world testing is a critical part of the endorsement process, and Meaningful Use provides a safe place for providers and vendors to work together to ensure the full benefit of health IT is leveraged in quality measurement. It will also encourage clinicians to use real-time, clinical data, rather than retrospective claims, to assess performance. Finally, testing new measures in an electronic environment helps to avoid re-tooling measure designed for the paper world.

16. Necessary modifications to CQMs in Tables 6 (clinician reporting option 1b), 8 (clinician reporting options 1a and 1b), and 9 (hospitals)

Meaningful Use CQMs should stretch EHRs to collect and report on more meaningful data about how providers care for their patients. Unfortunately, many of the proposed measures do not meet these expectations. A large number of the measures are process-oriented and will not drive improvements in patient outcomes. CMS should:

- Keep high-value measures (i.e., measures that will have a significant effect on patient care).
- Add widely accepted high-value measures that the proposed rule omitted.
- Make modifications to potentially promising measures.
- Remove or replace proposed measures that are low-value or listed in the inappropriate domain.\(^9\)
  Low-value measures are those that:
  - Reflect basic competencies
  - Mask outcomes
  - Allow providers to simply "check-the-box"
  - Are duplicative
  - Are topped out
  - Do not promote public-private sector alignment
  - Were withdrawn by developers

Below, we reviewed many of the CQMs in Tables 6, 8, and 9 from the proposed rule by applying the above standards. This review is not exhaustive. We encourage CMS to evaluate all CQMs through this lens.

**Grid 1: Review of Table 6 EP CQMs**
(These measures accompany EP reporting option 1b)

<table>
<thead>
<tr>
<th>Measure</th>
<th>Domain</th>
<th>Action</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>NQF 0059 – Blood sugar (HbA1c) control for patients with diabetes.</td>
<td>Clinical Process/Effectiveness</td>
<td>Add</td>
<td>The table should include NCQA’s intermediate outcome measure of blood sugar control for patients with diabetes. This is a critical area for primary care and the NCQA measure is used widely in the private sector.</td>
</tr>
<tr>
<td>Closing the referral loop: receipt of specialist report</td>
<td>Care coordination</td>
<td>Keep</td>
<td>We agree with the spirit of this measure, which encourages specialists to share information with referring physicians.</td>
</tr>
<tr>
<td>Functional status assessment for complex chronic conditions</td>
<td>Patient and Family Engagement</td>
<td>Modify</td>
<td>For Stage 2, the measure must require clinicians to capture specific patient risk factors and use a parsimonious list of acceptable survey instruments. By 2015, this measure needs to be modified to actually capture change in functional status pre- and post-op. See Appendix 2 for more details.</td>
</tr>
<tr>
<td>NQF 0018 – Controlling High Blood Pressure</td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
<td>This is an important intermediate outcome measure. CMS should ensure that it covers patients with diabetes.</td>
</tr>
<tr>
<td>NQF 0097 – Medication reconciliation</td>
<td>Patient Safety</td>
<td>Keep</td>
<td>CMS needs to consider how to address the fact that this CQM overlaps with its objective on medication reconciliation.</td>
</tr>
<tr>
<td>NQF 0418 – Screening for Clinical Depression</td>
<td>Population/Public Health</td>
<td>Keep</td>
<td>Depression is under diagnosed and treated. This measure will help to address this challenge.</td>
</tr>
<tr>
<td>NQF 0710 and 0711 -- Depression remission</td>
<td>Clinical Process/Effectiveness</td>
<td>Add</td>
<td>It’s not enough to simply screen a patient for depression. We need to know whether care is making a difference for the patient. We encourage CMS to add measures of “Depression Remission” at 6 and 12 months.</td>
</tr>
</tbody>
</table>

\(^9\) The six domains are: patient and family engagement, patient safety, care coordination, population and public health, efficient use of healthcare resources, and clinical processes/effectiveness.
Preventive Care and Screening:  
Cholesterol – Fasting Low Density Lipoprotein (LDL) Test Performed AND Risk-Stratified Fasting LDL  
Clinical Process/Effectiveness  
Keep  
This is an important intermediate outcome measure.

NQF 0022–Use of High-Risk Medications in the Elderly  
Patient safety  
Keep  
CMS proposes to add this new measure. However, this measure’s definition is extremely similar that of NCQA’s “Annual monitoring for patients on persistent medications” measure. Based on this, CMS should look into using the NCQA measure instead. As specified in the proposed rule, CMS’ measure is also misleadingly labeled as it doesn’t actually capture whether an adverse drug event was prevented.

Adverse Drug Event (ADE) Prevention: Outpatient therapeutic drug monitoring  
Patient safety  
Replace  
CMS proposes to add this new measure. However, this measure’s definition is extremely similar that of NCQA’s “Annual monitoring for patients on persistent medications” measure. Based on this, CMS should look into using the NCQA measure instead. As specified in the proposed rule, CMS’ measure is also misleadingly labeled as it doesn’t actually capture whether an adverse drug event was prevented.

<table>
<thead>
<tr>
<th>Grid 2: Review of Table 8 CQMs</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Measure</strong></td>
<td><strong>Domain</strong></td>
<td><strong>Action</strong></td>
</tr>
<tr>
<td>Closing the referral loop: receipt of specialist report</td>
<td>Care coordination</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0018 – Controlling High Blood Pressure.</td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0002 – Appropriate Testing for Children with Pharyngitis</td>
<td>Clinical Process/Effectiveness AND Efficient Use of Healthcare Resources</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0575 – Diabetes: Hemoglobin A1c Control (&lt;8.0%)</td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0059 – Diabetes: Hemoglobin A1c Poor Control (&gt;9.0%)</td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0061 – Diabetes: Blood Pressure Management</td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0064 – Diabetes: LDL Management and Control.</td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0073 – Ischemic Vascular Disease: Blood pressure management.</td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0075 – Ischemic Vascular Disease: Complete Lipid Panel and LDL Control.</td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0710 – Depression Remission at Twelve Months</td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0711 – Depression Remission at Six Months</td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0052 – Use of Imaging</td>
<td>Efficient Use of</td>
<td>Keep</td>
</tr>
<tr>
<td>Studies for Low Back Pain</td>
<td>Healthcare Resources</td>
<td></td>
</tr>
<tr>
<td>NQF 0058 – Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis</td>
<td>Efficient Use of Healthcare Resources</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0312 – Lower Back Pain: Repeat Imaging Studies</td>
<td>Efficient Use of Healthcare Resources</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0022 – Use of High-Risk Medications in the Elderly</td>
<td>Patient safety</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0031 – Breast Cancer Screening</td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0032 – Cervical Cancer Screening</td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0032 – Chlamydia Screening in Women</td>
<td>Population/Public Health</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0034 – Colorectal Cancer Screening</td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0038 – Childhood immunization status</td>
<td>Population/Public Health</td>
<td>Keep</td>
</tr>
<tr>
<td>Adverse Drug Event (ADE) Prevention: Outpatient therapeutic drug monitoring</td>
<td>Patient safety</td>
<td>Replace</td>
</tr>
<tr>
<td>Functional status for knee replacement</td>
<td>Patient and family engagement</td>
<td>Modify</td>
</tr>
<tr>
<td>Functional status for hip replacement</td>
<td>Patient and family engagement</td>
<td>Modify</td>
</tr>
<tr>
<td>Functional status assessment for complex chronic conditions</td>
<td>Patient and Family Engagement</td>
<td>Modify</td>
</tr>
<tr>
<td>Whether the patient achieved tobacco-free status</td>
<td>Clinical process/effectiveness</td>
<td>Add</td>
</tr>
<tr>
<td>Healthy term newborn</td>
<td>Clinical process/effectiveness</td>
<td>Add</td>
</tr>
<tr>
<td>Measure Description</td>
<td>Category</td>
<td>Action</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Cesarean Delivery for Nulliparous (NTSV) Women</td>
<td>Patient safety</td>
<td>Add</td>
</tr>
<tr>
<td>Spontaneous Labor and Birth</td>
<td>Patient safety</td>
<td>Add</td>
</tr>
<tr>
<td>NQF 0041 – Preventive care and screening</td>
<td>Population/Public Health</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0106 – Diagnosis of attention deficit hyperactivity disorder in primary care for school age children and adolescents</td>
<td>Care coordination</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0321 – Adult Kidney Disease: Peritoneal Dialysis Adequacy</td>
<td>Care coordination</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0323 – Adult Kidney Disease: Hemodialysis Adequacy: Solute Description</td>
<td>Care coordination</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0001 – Asthma: Assessment of Asthma Control.</td>
<td>Clinical Process/Effectiveness</td>
<td>Replace</td>
</tr>
<tr>
<td>NQF 0047 – Asthma Pharmacologic Therapy for Persistent Asthma</td>
<td>Clinical Process/Effectiveness</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0055 – Diabetes: Eye Exam.</td>
<td>Clinical Process/Effectiveness</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0056 – Diabetes: Foot exam.</td>
<td>Clinical Process/Effectiveness</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0062 – Diabetes: Urine Screening</td>
<td>Clinical Process/Effectiveness</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0074 – Coronary Artery Disease: Lipid Control</td>
<td>Clinical Process/Effectiveness</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0086 – Primary Open Angle Glaucoma (POAG): Optic Nerve Evaluation.)</td>
<td>Clinical Process/Effectiveness</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0047 – Asthma Pharmacologic Therapy for Persistent Asthma</td>
<td>Clinical process/effectiveness</td>
<td>Remove</td>
</tr>
</tbody>
</table>
| Hypertension: Blood Pressure Management | Clinical process/effectiveness | Remove | This measure is problematic for two reasons. First, it compounds an
Intermediate outcome measure with a process measure and masks the intermediate outcome by simply giving the clinician for credit for prescribing medications even if the patient’s BP isn’t under control. Second, CMS already proposes using NCQA’s measure of “Controlling High Blood Pressure” (NQF 0018) for patients with hypertension – a measure widely in use in the private sector.

Second, CMS already proposes using NCQA’s measure of “Controlling High Blood Pressure” (NQF 0018) for patients with hypertension – a measure widely in use in the private sector.

NQF 0312: Lower Back Pain: Initial Visit
- Efficient Use of Health Resources
- Remove
- This is a measure of basic competencies of care. It only asks whether a physician documented in the medical record that the initial visit covered certain elements (e.g., pain assessment, functional status, patient history, etc.).

NQF 0508 – Radiology: Inappropriate Use of “Probably Benign” Assessment Category in Mammography Screening
- Efficient Use of Health Resources
- Remove
- This is a measure of basic competencies of care.

NQF 0014 – Prenatal Care: Anti-D Immune Globulins
- Patient Safety
- Remove
- The developer retired this measure because it is considered a standard of care.

NQF 0012 – Prenatal Care: Screening for Human Immunodeficiency Virus (HIV)
- Population/Public Health
- Remove
- The developer retired this measure because it is considered a basic standard of care.

NQF 0606 – Pregnant Women that had HBsAg Testing
- Clinical Process/ Efficiency
- Remove
- The developer retired this measure; the concept is being incorporated into a new, higher-bar all-or-none prenatal screening measure that PCPI will test and submit for NQF endorsement.

Grid 3: Review of Table 9 Hospital CQMs

<table>
<thead>
<tr>
<th>Measure</th>
<th>Domain</th>
<th>Action</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>NQF 0132 – AMI-1-Aspirin at arrival for acute myocardial infarction (AMI)</td>
<td>Clinical Process/ Effectiveness</td>
<td>Remove</td>
<td>CMS is suspending data collection on this measure in the IQR program due to its topped-out status.</td>
</tr>
<tr>
<td>NQF 0136 – HF-1 Heart Failure (HF): Detailed Discharge Instructions</td>
<td>Patient &amp; Family Engagement</td>
<td>Remove</td>
<td>This is a check-the-box measure.</td>
</tr>
<tr>
<td>NQF 0137 – AMI-3-ACEI or ARB for Left Ventricular Systolic Dysfunction- Acute Myocardial Infarction (AMI) Patients</td>
<td>Clinical Process/ Effectiveness</td>
<td>Remove</td>
<td>CMS is suspending data collection on this measure in the IQR program due to its topped-out status.</td>
</tr>
<tr>
<td>NQF 0142 – AMI-2-Aspirin Prescribed at Discharge for AMI</td>
<td>Clinical Process/ Effectiveness</td>
<td>Remove</td>
<td>This measure is topped out.</td>
</tr>
<tr>
<td>NQF 0164 – AMI-7a- Fibrinolytic Therapy received within 30 minutes of hospital arrival</td>
<td>Clinical Process/ Effectiveness</td>
<td>Keep</td>
<td></td>
</tr>
<tr>
<td>NQF 0160 – Beta blocker prescribed at discharge for AMI</td>
<td>Clinical Process/ Effectiveness</td>
<td>Remove</td>
<td>CMS is suspending data collection on this measure in the IQR program due to its topped-out status.</td>
</tr>
<tr>
<td>NQF 0218 – SCIP-VTE-2 Surgery Patients Who Received Appropriate Venous Thromboembolism (VTE) Prophylaxis Within 24 hours Prior to Surgery to 24 Hours After Surgery End Time</td>
<td>Patient Safety</td>
<td>Remove</td>
<td></td>
</tr>
<tr>
<td>Measure ID</td>
<td>Measure Description</td>
<td>Domain</td>
<td>Recommendation</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>---------------------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>NQF 0284 -- SCIP-Card-2 Surgery</td>
<td>Patients on a Beta Blocker Therapy Prior to Admission Who Received a Beta Blocker During the Perioperative Period</td>
<td>Clinical Process/Effectiveness</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0301 – SCIP-INF-6- Surgery patients with appropriate hair removal</td>
<td></td>
<td>Patient Safety</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0371 – VTE-2 Intensive Care Unit (ICU) VTE prophylaxis</td>
<td></td>
<td>Patient Safety</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0372 – VTE-2 Intensive Care Unit (ICU) VTE prophylaxis</td>
<td></td>
<td>Patient Safety</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0373 – VTE-3 VTE Patients with Overlap of Anticoagulation Therapy</td>
<td></td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0374 – VTE Patients Unfractionated Heparin (UFH) Dosages/Platelet Count Monitoring by Protocol (or Nomogram) Receiving Unfractionated Heparin (UFH) with Dosages/Platelet Count Monitored by Protocol (or Nomogram)</td>
<td></td>
<td>Clinical Process/Effectiveness</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0375 – VTE-5 VTE discharge instructions</td>
<td></td>
<td>Patient and Family Engagement</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0376 – Incidence of potentially preventable VTE</td>
<td></td>
<td>Patient Safety</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0434 – Stroke – 1 Venous Thromboembolism (VTE) Prophylaxis</td>
<td></td>
<td>Patient Safety</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0435 – Stroke-2 Ischemic stroke – Discharged on anti-thrombotic therapy</td>
<td></td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0436 – Stroke-3 Ischemic stroke – Anticoagulation Therapy for Atrial Fibrillation/Flutter</td>
<td></td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0437 – Stroke-4 Ischemic stroke – Thrombolytic Therapy</td>
<td></td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0438 – Stroke-5 Ischemic stroke – Antithrombotic therapy by end of hospital day two</td>
<td></td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0439 – Stroke-6 Ischemic stroke – Discharged on Statin Medication</td>
<td></td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0440–Stroke-8 Ischemic or hemorrhagic stroke – Stroke education</td>
<td></td>
<td>Patient &amp; Family Engagement</td>
<td>Keep</td>
</tr>
<tr>
<td>NQF 0453 -- SCIP-INF-9- Urinary catheter removed on Postoperative Day 1 (POD1) or Postoperative Day 2 (POD2) with day of surgery being day zero.</td>
<td></td>
<td>Patient Safety</td>
<td>Remove</td>
</tr>
<tr>
<td>NQF 0469: Elective Delivery Prior to 39 Completed Weeks Gestation</td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
<td></td>
</tr>
<tr>
<td>NQF 0471 -- Cesarean Section, Clinical Process/Efficiency</td>
<td>Add</td>
<td>This is an important Joint Commission measure due to practice variation, overuse, avoidable harms to women and newborns, and excess costs.</td>
<td></td>
</tr>
<tr>
<td>NQF 0477 -- Infant not Delivered at Appropriate Level of Care</td>
<td>Clinical Process/Effectiveness</td>
<td>Add</td>
<td>This CMQCC measure is a counterbalance to disincentives to avoid transport prior to birth.</td>
</tr>
<tr>
<td>NQF 0480: Exclusive Breastfeeding at Hospital</td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
<td></td>
</tr>
<tr>
<td>NQF 0481 -- First temperature measured within one hour of admission to the NICU</td>
<td>Clinical Process/Effectiveness</td>
<td>Remove</td>
<td>This measure is no longer endorsed by NQF. The recent NQF Perinatal/Reproductive measure maintenance Steering Committee found that this measure did not meet NQF's importance criterion.</td>
</tr>
<tr>
<td>NQF 0482 -- First NICU Temperature &lt; 36 degrees C</td>
<td>Clinical Process/Effectiveness</td>
<td>Remove</td>
<td>This measure is no longer endorsed by NQF. The recent NQF Perinatal/Reproductive measure maintenance Steering Committee found that this measure did not meet NQF's scientific acceptability criterion.</td>
</tr>
<tr>
<td>NQF 0484 -- Proportion of infants 22 to 29 weeks gestation treated with surfactant who are treated within 2 hours of birth</td>
<td>Clinical Process/Effectiveness</td>
<td>Remove</td>
<td>No longer endorsed; developer withdrew this measure due to changing evidence and practice.</td>
</tr>
<tr>
<td>NQF 0495 – Emergency Department Throughput</td>
<td>Patient and Family Engagement</td>
<td>Keep</td>
<td></td>
</tr>
<tr>
<td>NQF 0496 – Median time from ED Arrival to ED Departure for Discharged ED Patients</td>
<td>Clinical Process/Effectiveness</td>
<td>Keep</td>
<td></td>
</tr>
<tr>
<td>NQF 0497 – Emergency Department Throughput: Admit decision time to ED departure time for admitted patients.</td>
<td>Patient and Family Engagement</td>
<td>Keep</td>
<td></td>
</tr>
<tr>
<td>NQF 0527 -- SCIP-INF-1 Prophylactic Antibiotic Received within 1 Hour Prior to Surgical Incision</td>
<td>Patient Safety</td>
<td>Remove</td>
<td>High performance on SCIP measures is not correlated with positive outcomes.</td>
</tr>
<tr>
<td>NQF 0528 -- SCIP-INF-2- Prophylactic Antibiotic Selection for Surgical Patients</td>
<td>Efficient Use of Healthcare Resources</td>
<td>Remove</td>
<td>This measure does not belong in this domain. Additionally, high performance on SCIP measures is not correlated with positive outcomes.</td>
</tr>
<tr>
<td>NQF 0529 -- SCIP-INF-3- Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time</td>
<td>Efficient Use of Healthcare Resources</td>
<td>Remove</td>
<td>This measure does not belong in this domain. Additionally, high performance on SCIP measures is not correlated with positive outcomes.</td>
</tr>
<tr>
<td>NQF 0716 -- Healthy Term Newborn</td>
<td>Patient Safety</td>
<td>Keep</td>
<td>This measure represents a key desired outcome in maternity care.</td>
</tr>
<tr>
<td>NQF 1354 – Hearing screening prior to hospital discharge (EHD1-1a)</td>
<td>Clinical Process/Effectiveness</td>
<td>Remove</td>
<td></td>
</tr>
<tr>
<td>NQF 0639 -- AMI-10 Statin Prescribed at Discharge</td>
<td>Clinical Process/Effectiveness</td>
<td>Remove</td>
<td></td>
</tr>
<tr>
<td>NQF 1653 -- IMM-1 Pneumococcal Immunization (PPV23)</td>
<td>Population/Public Health</td>
<td>Keep</td>
<td></td>
</tr>
<tr>
<td>NQF 01659 -- IMM-2 Influenza Immunization</td>
<td>Population/Public Health</td>
<td>Keep</td>
<td></td>
</tr>
</tbody>
</table>
Appendix 2

CMS proposes to include three new functional status measures (i.e., chronic conditions, hip replacement, and knee replacement) in Stage 2. We are disappointed that the measures simply capture whether a clinician assessed a patient’s functional status and documented the results of the assessment in the EHR. CMS also needs to provide more details around the measures. For Stage 2, the measures must also require clinicians to capture specific patient risk factors and include a parsimonious list of acceptable survey instruments. By 2015, CMS must modify measures to actually capture change in functional status pre- and post-op.

See below for guidance on how to strengthen the knee replacement functional status measures for Stage 2. This is adapted from Minnesota Community Measurement’s patient-reported outcome measure for total knee replacement (http://mncm.org/site/upload/files/Total_Knee_Workgroup.pdf).

**Primary Total Knee Replacement**: (patients with bilateral procedures are included)

CPT
- 27445 Arthroplasty, knee hinge prosthesis
- 27446 Arthroplasty, knee condyle and plateau, medial OR lateral compartment
- 27447 Arthroplasty, knee condyle and plateau, medial AND lateral compartment with or without patellar resurfacing (total knee arthroplasty)

ICD-9
- 81.54 Total Knee Replacement (Bicompartmental, Partial Knee Replacement, Tricompartmental, Unicompartmental (hemijoint)

**Revision Total Knee Replacement:**

CPT
- 27486 Revision of total knee arthroplasty, with or without allograft, 1 component
- 27487 Revision of total knee arthroplasty, with or without allograft, femoral and entire tibial component

ICD-9
- 81.55 Revision of Knee Replacement, not otherwise specified

Exclusions: none

Eligible providers include: Orthopedic surgeons who perform total knee replacement procedures. Any provider or office staff may administer the pre and postoperative assessment tools and administration by telephone is acceptable.

Eligible specialties include: Orthopedic Surgery
Qualifying functional status instruments (clinicians can choose any one of the following):

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Items</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF-12</td>
<td>Medical Outcomes Study 12-Item Short Form Health Survey</td>
<td>12 Valid, responsive and efficient</td>
</tr>
<tr>
<td>SF-36</td>
<td>Medical Outcomes Study 36-Item Short Form Health Survey</td>
<td>36 Valid, responsive, widely-used nationally and internationally</td>
</tr>
<tr>
<td>EuroQol EQ-5D Index Visual Analog Scale</td>
<td>6 Other tools demonstrate superior psychometric properties</td>
<td></td>
</tr>
<tr>
<td>WOMAC Western Ontario and McMaster University Osteoarthritis Index</td>
<td>24 Valid, responsive, widely-used</td>
<td></td>
</tr>
<tr>
<td>HOOS Hip Injury and Osteoarthritis Outcome Score</td>
<td>42 Lengthy for registry application</td>
<td></td>
</tr>
<tr>
<td>KDOS Knee Injury and Osteoarthritis Outcome Score</td>
<td>42 Lengthy for registry application</td>
<td></td>
</tr>
<tr>
<td>Oxford Hip Score Oxford Knee Score</td>
<td>12 Valid, superior responsiveness, efficient. Not widely used in U.S.</td>
<td></td>
</tr>
<tr>
<td>Knee Society American Knee Society Score</td>
<td>4 Inconsistent validity</td>
<td></td>
</tr>
<tr>
<td>Harris Hip Score</td>
<td>8 Other tools demonstrate superior responsiveness</td>
<td></td>
</tr>
<tr>
<td>AAGOS Lower Limb Scale American Academy of Orthopedic Surgeons Hip and Knee Core Scale</td>
<td>7 Valid, responsive, efficient, but very limited testing. No clear comparability to other instruments</td>
<td></td>
</tr>
</tbody>
</table>

Risk adjustment variables to be extracted:

- Primary diagnosis
- Age
- Gender
- Educational level - surrogate for economic status
- Obesity/malnutrition – BMI
- Diabetes – Type I or II
- Tobacco use – current, past, never
- Fibromyalgia
- ASA class (surrogate for overall patient morbidity)