NATIONAL QUALITY FORUM

TO: NQF Members and Public

FR: NQF Staff

RE: *National Voluntary Consensus Standards for Imaging Efficiency: A Consensus Report: Addendum*

DA: November 5, 2010

The Imaging Efficiency project sought to expand the availability of imaging efficiency measures in the outpatient setting. This addendum report includes one measure that has been harmonized with a similar NQF-endorsed® measure. Specifically, the Imaging Efficiency Steering Committee requested that the measure stewards of the two similar measures work together to incorporate CT imaging of the cervical spine into the existing NQF-endorsed measure. Rather than incorporating this test into the existing endorsed measure, Brigham and Women's Hospital as the measure developer recommended that measure IEP-008-10 "Appropriate cervical spine CT imaging in trauma" be harmonized with NQF# 0512, "Percentage of patients who do not have neck pain, distracting pain, neurological deficits, reduced level of consciousness, or intoxication" from Harborview Medical Center. The Committee reviewed the harmonized measure and agreed to recommend it for endorsement. Measure IEP-008-10 is now being released for the 30-day member and public comment period as a part of the Consensus Development Process followed by the 30-day member voting period.

The draft document, *National Voluntary Consensus Standards for Outpatient Imaging Efficiency: A Consensus Report*, is posted on the NQF website, http://www.qualityforum.org/projects/imaging_efficiency.aspx#t=1&p=&s= , along with the following additional information:

- measure submission form and additional technical information;
- meeting and call summaries for the Steering Committee.

Pursuant to section II.A of the Consensus Development Process v. 1.8, this draft document, along with the accompanying material, is being provided to you at this time for review and comment only—not voting. You may post your comments and view the comments of others on the NQF website.

NQF Member comments must be submitted no later than 6:00 pm ET, December 9, 2010.
Public comments must be submitted no later than 6:00 pm ET, December 2, 2010.

NQF is now using a program that facilitates electronic submission of comments on this draft report. **All comments must be submitted using the online submission process.**

Supporting documents related to your comments may be submitted by **e-mail** to imagingefficiency2@qualityforum.org , with "*Comment – Imaging Efficiency*" in the subject line and your contact information in the body of the e-mail.

Thank you for your interest in NQF's work. We look forward to your review and comments.

NATIONAL VOLUNTARY CONSENSUS STANDARDS FOR IMAGING EFFICIENCY: A CONSENSUS REPORT

NATIONAL QUALITY FORUM

ADDENDUM – IMAGING EFFICIENCY MEASURES

DRAFT REPORT FOR VOTING

NATIONAL QUALITY FORUM

NATIONAL VOLUNTARY CONSENSUS STANDARDS FOR IMAGING EFFICIENCY: A CONSENSUS REPORT

ADDENDUM – IMAGING EFFICIENCY MEASURES

NQF's draft report, National Voluntary Consensus Standards for Imaging Efficiency: A Consensus Report, recommended six measures for NQF endorsement. The Steering Committee requested that Measure IEP-008-10 "Appropriate cervical spine CT imaging in trauma" (Brigham and Women's Hospital) submitted in this project be incorporated into the existing NQF-endorsed measure # 0512 "Percentage of patients who do not have neck pain, distracting pain, neurological deficits, reduced level of consciousness, or intoxication" (Harborview Medical Center). Both measure stewards agreed to work together and ultimately recommended that the measures remain separate but harmonized. . Given the time needed to address the Steering Committee's request, the harmonized measure #IEP-008-09 was unable to undergo public and Member comment and Member voting during the same time period as the other imaging efficiency candidate standards.

RECOMMENDATION FOR ENDORSEMENT

This clinician, facility, or population level measure assesses whether adult patients who undergo cervical spine CT scans for trauma have documented evidence-based indications prior to imaging (Canadian C-Spine Rule or the NEXUS Low-Risk Criteria). In 2006, more than 13 million trauma patients at risk of cervical spine injury presented to emergency departments across the U.S[1] .Clinical decision rules (NEXUS and Canadian C-Spine Rule) were developed to identify patients at low risk for cervical spine injury and therefore safe to discharge without imaging of the cervical spine. These validated decision rules were meant to improve efficiency and decrease variation in radiography utilization, but remain underutilized[2] .

With the introduction of new technologies (CT), clinical practice in the U.S. is shifting toward the use of plain CT rather than radiography as the initial routine imaging modality in screening for cervical spine injury[3]. This measure aims to ensure that if a CT scan is ordered as the initial imaging modality for patients at low risk of a cervical spine fracture, the radiography decision guidelines should be followed.

The Steering Committee agreed the measure targets an important imaging modality with significant potential for improvement and meets the measure evaluation criteria. The Steering Committee requested that the measure stewards of Measure IEP-008-10 and NQF # 0512 work together to incorporate CT imaging of the cervical spine into the existing NQF-endorsed measure. Rather than incorporating this test into the existing endorsed measure, Brigham and Women's Hospital as the measure developer recommended that measure IEP-008-10 be harmonized with NQF# 0512 from Harborview Medical Center.

[1] McCaig LF, Nawar EW, 1-32.
[2] Hoffman JR, Mower WR, Wolfson AB, et al., Validity of a set of clinical criteria to rule out injury to the cervical spine in patients with blunt trauma, National Emergency X-Radiography Utilization Study Group, *N Engl J Med*, 2000;343(2):94-99. Erratum in: *N Engl J Med* 2001;344(6):464.
[3] National Quality Forum. Voting Draft for National Voluntary Consensus Standards for Imaging Efficiency: A Consensus Report, 2010.

Once the measure was harmonized with the similar endorsed measure, to include CT imaging of the cervical spine, the Steering Committee reviewed it again and recommended the amended measure for time-limited endorsement.

NATIONAL VOLUNTARY CONSENSUS STANDARDS FOR IMAGING EFFICIENCY
APPENDIX A: MEASURE SPECIFICATIONS

Appendix A: Specifications of the National Voluntary Consensus Standards for Imaging Efficiency

The following table presents the detailed specifications for the Nation Quality Forum (NQF)-endorsed® *National Voluntary Consensus Standards for Imaging Efficiency*. All information presented has been derived directly from measure sources/developers without modification or alteration (except when the measure developed agreed to such modification during the NQF Consensus Development Process) and is current as of May 4, 2010. All NQF-endorsed voluntary consensus standards are open source, meaning they are fully accessible and disclosed. Measures were developed by the American College of Radiology, Brigham and Women's Hospital, Centers for Medicare and Medicaid Services and the American College of Cardiology.

Measure Numbers	Measure Title	Measure Steward	Measure Description	Numerator	Denominator	Exclusions	Data Source	Level of Analysis
Measure ID #: IEP-008-10	Appropriate Cervical Spine Radiography and CT Imaging in Trauma	Brigham and Women's Hospital	Percent of adult patients undergoing cervical spine radiography or CT imaging for trauma who have a documented evidence-based indication prior to imaging (Canadian C-Spine Rule or the NEXUS Low-Risk Criteria).	Number of denominator patients who have a documented evidence-based indication prior to imaging.	Number of adult patients undergoing cervical spine radiography or CT for trauma (as initial imaging of C-spine).	Patients who have not experienced trauma <16 years of age or >65 years of age Patients with a reduced ability to communicate (verbal or cognitive dysfunction) Underwent prior cervical spine radiograph (3 view or more) that is interpreted as inadequate to fully assess fracture Underwent prior imaging concerning or diagnostic for injury of the cervical spine requiring further imaging	Paper medical record/flow-sheet, Electronic administrative data/claims, Electronic clinical data	Clinicians: Group, Facility/Agency, Population: national, Population: regional/network, Population: states

To see the measure specifications for all imaging efficiency measures recommended for NQF endorsement, please click here, and look under Appendix A.

National Voluntary Consensus Standards for Imaging Efficiency
Appendix B –Steering Committee

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NATIONAL VOLUNTARY CONSENSUS STANDARDS FOR IMAGING EFFICIENCY
APPENDIX C: Other NQF-Endorsed Imaging Efficiency Consensus Standards

Measure Number	Measure Title	Measure Steward	Measure Description	Numerator	Denominator	Exclusions	Data Source	Level of Analysis
Measure ID #: 0512	Percentage of patients undergoing cervical spine radiographs in trauma who do not have neck pain, distracting pain, neurological deficits, reduced level of consciousness, or intoxication	Harborview Medical Center	Percentage of adult patients undergoing cervical spine radiology or CT imaging for trauma who have a documented, evidence-based indication prior to imaging	Number of patients who receive cervical spine radiographs for trauma who either: 1. Do not fulfill the NEXUS Low-Risk Criteria for cervical spine injury: neck pain or posterior mid-line cervical spine tenderness, distracting pain, neurological deficits, reduced level of consciousness or intoxication, or 2. Do not fulfill the Canadian C-Spine Rule Criteria for cervical spine radiography (applies to stable trauma patients with a GCS of 15 and a potential C-Spine Injury).a. If there is a high-risk factor, radiography is necessitated (Age 65 or older, significant mechanism** or parathesias in the extremities). b. If there is a low risk factor which does not permit safe assessment of the range of motion then radiography should be performed. Low-risk factors permitting safe range of motion assessment include: i. Simple rear-end collision (excluding rollover, collision with bus, large truck, vehicle traveling at high speeds or being pushed into oncoming traffic), or ii. Patient found sitting in the Emergency Department or ambulatory after the incident or delayed onset of neck pain, or iii. Absence of any midline cervical tenderness. c. Range of motion assessment: Is the patient able to actively rotate the neck 45 degrees to the left and right? If the patient is unable, radiography	Number of cervical spine radiographs performed on trauma patients.	Patients who have not experienced trauma. Patients <16 years of age. Patients >65 years of age. Patients with reduced ability to communicate (permanent verbal or cognitive dysfunction).	Lab data, Paper Medical Data/Flow-sheet, Registry	Clinician: individual, group; Facility/Agency

				should be performed, otherwise radiography should not be performed. Numerous well-designed large prospective studies (specifically the NEXUS and Canadian cervical spine rule studies) have evaluated the efficacy of cervical spine radiography in trauma, and they have found that no patient has had a clinically significant cervical spine injury if they had no neck pain, no distracting pain, no neurological deficits, a normal level of consciousness, and no intoxication.				