Meaningful Use Stage 1 Quality Measures for Hospitals

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Regional Extension Assistance Center for HIT

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Objectives:

- Identify the clinical quality measures that hospitals will be required to report for the stage I meaningful use criteria
- Identify the data requirements needed to be able to accurately collect information in order to produce accurate results
- Identify the workflow changes necessary to be able to collect this information
- Understand the implications these measures have on the selection and optimization of your certified EHR

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Reporting of Quality Measures

- Report to Whom:
  - Report quality measures to CMS or the States
    - CMS if pursuing Medicare or both Medicare & Medicaid
    - State if only pursuing Medicaid
- On Which Patients:
  - Must report clinical quality measures for all applicable cases, without regard to payer
- What to Report:
  - Depends on when…
    - For FY-2011, an eligible hospital will provide the aggregate numerator and denominator through “attestation”.
    - For FY-2012 (or later depending on CMS readiness), an eligible hospital will electronically submit the measure data at the patient level

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EH Quality Measures

- In 2011 payment year eligible hospitals will be required to report summary data to CMS on a set of clinical quality measures
- For the 2012 payment year, hospitals will be required to submit these measures to CMS electronically if eligible for both Medicare and the Medicaid EHR incentives
- For hospitals only eligible for Medicaid incentives they will report to the states

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2011 Quality Reporting Requirements

- The numerators, denominators, and exclusions for each clinical quality measure result reported
- Generated as output from certified EHR technology.
- Attest that the information submitted is accurate
- On all patients to whom the measure applies regardless of payer
- The identifying information for the eligible hospital
- If one or more measures not reported, an attestation that the measures do not apply to any patients treated
- The reporting period beginning and end dates

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2012+ Quality Reporting Requirements

- Three potential routes for electronic reporting:
  - Use the CMS portal to perform upload process based on specified structures and accompanying templates produced as output from your "certified" EHR module.
  - Submit the required clinical quality measures data using "certified" EHR technology through Health Information Exchange (HIE) / Health Information Organizations (HIO).
  - Submit data to registries via "certified" EHR technology
    - This is dependent upon the future development of the necessary capacity and infrastructure to do so using certified EHRs.
    - Primarily envisioned to support reporting for EPs
- Technical specifications for reporting quality measures for hospitals planned to be released by April 1, 2011

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Clinical Quality Measures for Hospitals

- 15 quality Measures
- Hospitals must report values on all the measures
- Some hospitals, such as children's hospitals, will have zero in the denominator of some measures
- Specifications can be found at:
  - https://www.cms.gov/QualityMeasures/Downloads/EH_EDThroughputStratificationTable.pdf
  - http://www.hitsp.org/ConstructSet_Details.aspx?&PrefixAlpha=5&PrefixNumeric=906

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Hospital Measures

Measure Number	Clinical Quality Measure Title & Description
ED-1 NQF 0495	ED Throughput – admitted patients: Median time from ED arrival to ED departure for admitted patients
ED-2 NQF 0497	ED Throughput – admitted patients: Admission decision time to ED departure time for admitted patients
Stroke-2 NQF 0435	Ischemic stroke – Discharge on anti-thrombotics
Stroke-3 NQF 0436	Ischemic stroke – Anticoagulation for A-fib/flutter
Stroke-4 NQF 0437	Ischemic stroke – Thrombolytic therapy for patients arriving within 2 hours of symptom onset
Stroke-5 NQF 0438	Ischemic or hemorrhagic stroke – Antithrombotic therapy by day 2
Stroke-6 NQF 0439	Ischemic stroke – Discharge on statins

Measure Number	Clinical Quality Measure Title & Description
Stroke-8 NQF 0440	Ischemic or hemorrhagic stroke – Stroke education
Stroke-10 NQF 0441	Ischemic or hemorrhagic stroke – Rehabilitation assessment
VTE-1 NQF 0371	VTE prophylaxis within 24 hours of arrival
VTE-2 NQF 0372	Intensive Care Unit VTE prophylaxis
VTE-3 NQF 0373	Anticoagulation overlap therapy
VTE-4 NQF 0374	Platelet monitoring on unfractionated heparin
VTE-5 NQF 0375	VTE discharge instructions
VTE-6 NQF 0376	Incidence of potentially preventable VTE

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ED-1, NQF 0495: ED Throughput - Arrival to Departure

- **Description:**
  - Median time from emergency department arrival to time of departure from the emergency room for patients admitted to the facility from the emergency department.
- **Numerator**
  - Median time (in minutes) from ED arrival to ED departure for all patients in the denominator.
- **Denominator**
  - All Emergency Department (ED) patients admitted to the facility from the ED.
- **Stratification**
  - Non observation or mental health patients
  - ED observation patients
  - Mental health patients

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ED-2, NQF 0497: ED Throughput - Admission Decision to Departure

- **Description**:
  - Median time from admit decision time to time of departure from the emergency department of emergency department patients admitted to inpatient status.
- **Numerator**
  - Median time (in minutes) from admit decision time to time of departure from the ED for all patients in the denominator.
- **Denominator**
  - All Emergency Department (ED) patients admitted to the facility from the ED to inpatient status.
- **Stratification**
  - Non-observation & mental health patients
  - ED observation patients
  - Mental health patients as principal diagnosis

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Stroke-2, NQF 0435: Ischemic stroke - D/C on anti-thrombotics

- **Description:**
  - Ischemic stroke patients prescribed antithrombotic therapy at hospital discharge
- **Numerator**
  - All patients in the denominator prescribed anti-thrombotic therapy at hospital discharge
- **Denominator**
  - Patients admitted to and discharged from the hospital for inpatient acute care with a Principal Diagnosis Code for ischemic stroke as defined by value set "Joint Commission Ischemic Stroke Value Set"
- **Exclusions**
  - Patients with (Age < 18)
  - Patients with (Length of Stay >120 Days)
  - Patients with Comfort Measures Only documented
  - Patients enrolled in Clinical Trial
  - Patients admitted for Elective Carotid Intervention
  - Patients discharged/transferred to another hospital for inpatient care
  - Patients who left against medical advice or discontinued care
  - Patients who expired
  - Patients discharged/transferred to a federal healthcare facility
  - Patients discharged/transferred to hospice
  - Patients with a documented reason for not prescribing anti-thrombotic therapy at discharge

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Stroke-3, NQF 0436: Ischemic Stroke - Anticoagulation for A-fib/flutter

- **Description:**
  - Ischemic stroke patients with atrial fibrillation/flutter who are prescribed anticoagulation therapy at hospital discharge.
- **Numerator**
  - All patients in the denominator prescribed anti-thrombotic therapy at hospital discharge and with documented atrial fibrillation/flutter
- **Denominator**
  - Patients admitted to and discharged from the hospital for inpatient acute care with a Principal Diagnosis Code for ischemic stroke as defined by value set "Joint Commission Ischemic Stroke Value Set" and with with documented Atrial Fibrillation/Flutter
- **Exclusions**
  - Patients with (Age < 18)
  - Patients with (Length of Stay >120 Days)
  - Patients with Comfort Measures Only documented
  - Patients enrolled in Clinical Trial
  - Patients admitted for Elective Carotid Intervention
  - Patients discharged/transferred to another hospital for inpatient care
  - Patients who left against medical advice or discontinued care
  - Patients who expired
  - Patients discharged/transferred to a federal healthcare facility
  - Patients discharged/transferred to hospice
  - Patients with a documented reason for not prescribing anti-thrombotic therapy at discharge

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Stroke-4, NQF 0437: Ischemic Stroke - Thrombolytic therapy

- **Description:**
  - Acute ischemic stroke patients who arrive at this hospital within 2 hours of time last known well and for whom IV t-PA was initiated at this hospital within 3 hours of time last known well.
- **Numerator**
  - All patients in the denominator for whom IV thrombolytic therapy was initiated at this hospital within 3 hours (<= 180 minutes) of time last known well.
- **Denominator**
  - Acute ischemic stroke patients whose time of arrival is within 2 hours (< =120 minutes) of time last known well, admitted to and discharged from the hospital for inpatient acute care with a Principal Diagnosis Code for ischemic stroke as defined by value set "Joint Commission Ischemic Stroke Value Set"
- **Exclusions**
  - Patients with (age < 18)
  - Patients with (length of stay >120 days)
  - Patients enrolled in clinical trial
  - Patients admitted for elective carotid intervention
  - Time last known well to arrival in the emergency department greater than (>) 2 hours [120 minutes]
  - Patients with a documented reason for not initiating IV thrombolytic therapy

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Stroke-5, NQF 0438: Ischemic Stroke – Anti-thrombotic Therapy

- **Description:**
  - Ischemic stroke patients administered antithrombotic therapy by the end of hospital day 2.
- **Numerator**
  - All patients in the denominator who had antithrombotic therapy administered by end of hospital day 2.
- **Denominator**
  - Acute ischemic stroke patients discharged from the hospital with a Principal Diagnosis Code for ischemic stroke as defined by value set "Joint Commission Ischemic Stroke Value Set"
- **Exclusions**
  - Patients with (age < 18)
  - Patients with (length of stay >120 days)
  - Patients discharged by end of hospital day 2 (duration of stay) patients with comfort measures only documented on day of or day after arrival
  - Patients enrolled in clinical trial
  - Patients admitted for elective carotid intervention
  - Patients with IV OR IA thrombolytic (t-pa) therapy administered at this hospital or within 24 hours prior to arrival
  - Patients with a documented reason for not administering antithrombotic therapy by end of hospital day 2

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Stroke-6, NQF 0439: Ischemic Stroke – Discharge on Statins

- **Description:**
  - Ischemic stroke patients with LDL ≥ 100 mg/dL, or LDL not measured, or, who were on a lipid-lowering medication prior to hospital arrival are prescribed statin medication at hospital discharge.
- **Numerator**
  - All patients in the denominator prescribed statin medication at hospital discharge.
- **Denominator**
  - Ischemic stroke patients with an LDL >= 100 mg/dL, OR LDL not measured, OR who were on a lipid-lowering medication prior to hospital arrival discharged from the hospital with a Principal Diagnosis Code for ischemic stroke as defined by value set "Joint Commission Ischemic Stroke Value Set"
- **Exclusions**
  - Patients with (age <18)
  - Patients with (length of stay >120 days)
  - Patients with comfort measures only documented
  - Patients enrolled in clinical trial
  - Patients admitted for elective carotid intervention
  - Patients without evidence of atherosclerosis
  - Patients discharged/transferred to another hospital for inpatient care
  - Patients who left against medical advice or discontinued care
  - Patients who expired
  - Patients discharged/transferred to a federal healthcare facility
  - Patients discharged/transferred to hospice
  - Patients with a reason for not prescribing statin medication at discharge

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Stroke-8, NQF 0440: All Stroke – Stroke Education

- **Description:**
  - Ischemic or hemorrhagic stroke patients or their caregivers who were given educational materials during the hospital stay addressing all of the following: activation of emergency medical system, need for follow-up after discharge, medications prescribed at discharge, risk factors for stroke, and warning signs and symptoms of stroke.
- **Numerator**
  - All patients in the denominator with documentation that they or their caregivers were given educational material addressing all of the following:
    - Activation of emergency medical system
    - Need for follow-up after discharge
    - Medications prescribed at discharge
    - Risk factors for stroke
    - Warning signs for stroke
- **Denominator**
  - Ischemic stroke or hemorrhagic stroke patients discharged home with a Principal Diagnosis Code for ischemic or hemorrhagic stroke as defined by value set "Joint Commission Ischemic Stroke Value Set"
- **Exclusions**
  - Patients with (Age < 18)
  - Patients with (Length of Stay >120 Days)
  - Patients with Comfort Measures Only documented
  - Patients enrolled in Clinical Trial
  - Patients admitted for Elective Carotid Intervention

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Stroke-10, NQF 0441: All Stroke – Rehabilitation Assessment

- **Description:**
  - Ischemic or hemorrhagic stroke patients who were assessed for rehabilitation services.
- **Numerator**
  - All patients in the denominator assessed for or who received rehabilitation services
- **Denominator**
  - Discharges with a Principal Diagnosis Code for ischemic or hemorrhagic stroke as defined by value set "Joint Commission Ischemic Stroke Value Set”
- **Exclusions**
  - Patients with (Age <18)
  - Patients with (Length of Stay >120 Days)
  - Patients with Comfort Measures Only documented
  - Patients enrolled in Clinical Trial
  - Patients admitted for Elective Carotid Intervention
  - Patients discharged/transferred to another hospital for inpatient car
  - Patients who left against medical advice or discontinued car
  - Patients who expired
  - Patients discharged/transferred to a federal healthcare facility
  - Patients discharged/transferred to hospice

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VTE-1, NQF 0371: Venous Thromboembolism
VTE Prophylaxis Within 24 Hours Of Arrival

- **Description:**
  - This measure assesses the number of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission.
- **Numerator**
  - All patients in the denominator who received VTE prophylaxis or have documentation why no VTE prophylaxis was given
    - the day of or the day after hospital admission
    - the day of or the day after surgery end date for surgeries that start the day of or the day after hospital
- **Denominator**
  - All patients.
- **Exclusions**
  - Patients with (Age < 18)
  - Patients who have a Length of Stay < 2 days
  - Patients with (Length of Stay >120 Days)
  - Patients with Comfort Measures Only documented on day of or day after hospital arrival
  - Patients enrolled in Clinical Trial
  - Patients who are direct admits to intensive care unit (ICU), or transferred to ICU the day of or the day after hospital admission with ICU LOS ≥ one day
  - Patients with Principal Diagnosis Code of Mental Disorders [Behavioral Health Inpatient Treatment Location]
  - Patients with Principal Diagnosis [Code] of Hemorrhagic or Ischemic Stroke
  - Patients with Principal Diagnosis [Code] of Obstetrics [Service Delivery Location of Obstetrics]
  - Patients with Principal Diagnosis [Code] of VTE

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VTE-2, NQF 0372: Venous Thromboembolism Intensive Care Unit VTE prophylaxis

- **Description:**
  - This measure assesses the number of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after the initial admission (or transfer) to the Intensive Care Unit (ICU) or surgery end date for surgeries that start the day of or the day after ICU admission (or transfer).
- **Numerator**
  - All patients in the denominator who received VTE prophylaxis or have documentation why no VTE prophylaxis was given
    - The day of or the day after ICU admission (or transfer)
    - The day of or the day after surgery end date for surgeries that start the day of or the day after ICU admission (or transfer
- **Denominator**
  - Patients who are direct admits to intensive care unit (ICU), or transferred to ICU the day of or the day after hospital admission with ICU LOS ≥ one day .
- **Exclusions**
  - Patients with (Age < 18)
  - Patients who have a Length of Stay < 2 days
  - Patients with (Length of Stay >120 Days)
  - Patients with Comfort Measures Only documented on day of or day after hospital arrival
  - Patients enrolled in Clinical Trial
  - Patients with ICU LOS < one day without VTE prophylaxis administered and [without] documentation for no VTE prophylaxis
  - Patients with Principal Diagnosis of Obstetrics
  - Patients with Principal Diagnosis of VTE

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VTE-3, NQF 0373: Venous Thromboembolism Anticoagulation Overlap Therapy

- **Description:**
  - This measure assesses the number of patients diagnosed with confirmed VTE who received an overlap of parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation and warfarin therapy. For patients who received less than five days of overlap therapy, they must be discharged on both medications. Overlap therapy must be administered for at least five days with an international normalized ratio (INR) ≥ 2 prior to discontinuation of the parenteral anticoagulation therapy or the patient must be discharged on both medications.
- **Numerator**
  - All patients in the denominator who received overlap therapy who received warfarin and parenteral anticoagulation:
    - Five or more days, with an INR ≥ 2 prior to discontinuation of parenteral therapy OR
    - Five or more days, with an INR < 2 and discharged on overlap.
- **Denominator**
  - Patients with confirmed VTE who received warfarin with a Principal Diagnosis Code or Other Diagnosis Code for VTE Confirmed as defined by Value set for —Joint Commission VTE Confirmed Value Set‖
- **Exclusions**
  - Patients with (Age < 18)
  - Patients with (Length of Stay >120 Days)
  - Patients with Comfort Measures Only
  - Patients enrolled in Clinical Trial
  - Patients without warfarin therapy during hospitalization
  - Patients without warfarin prescribed at discharge
  - Patients without VTE confirmed by diagnostic testing

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VTE-4, NQF 0374: Venous Thromboembolism Platelet Monitoring On Unfract. Heparin

- **Description:**
  - This measure assesses the number of patients diagnosed with confirmed VTE who received intravenous (IV) unfractionated heparin (UFH) therapy dosages AND had their platelet counts monitored using defined parameters such as a nomogram or protocol.
- **Numerator**
  - All patients in the denominator who have their IV UFH therapy dosages AND platelet counts monitored according to defined parameters such as a nomogram or protocol.
- **Denominator**
  - Patients with confirmed VTE receiving IV UFH therapy||
- **Exclusions**
  - Patients with (Age < 18)
  - Patients with (Length of Stay >120 Days)
  - Patients with Comfort Measures Only
  - Patients enrolled in Clinical Trial
  - Patients without UFH Therapy Administration
  - Patients without VTE confirmed by diagnostic testing

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VTE-5, NQF 0375: Venous Thromboembolism VTE Discharge Instructions

- **Description:**
  - This measure assesses the number of patients diagnosed with confirmed VTE that are discharged to home, to home with home health, home hospice or discharged/transferred to court/law enforcement on warfarin with written discharge instructions that address specific criteria.
- **Numerator**
  - All patients in the denominator with documentation that they or their caregivers were given written discharge instructions or other educational material about warfarin that addressed all of the following:
    - Compliance issues
    - Dietary advice
    - Follow-up monitoring
    - Information about the potential for adverse drug reactions/interactions.
- **Denominator**
  - Patients with with a Principal Diagnosis Code or Other Diagnosis Code for VTE as defined by Value set for “Joint Commission VTE Confirmed” discharged on warfarin therapy or who received warfarin to home, to home with home health or to home hospice.
- **Exclusions**
  - Patients with (age < 18)
  - Patients with (length of stay >120 days)
  - Patients enrolled in clinical trial
  - Patients without warfarin prescribed at discharge
  - Patients without VTE confirmed by diagnostic testing

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VTE-6, NQF 0376: Venous Thromboembolism Incidence Of Potentially Preventable VTE

- **Description:**
  - This measure assesses the number of patients diagnosed with confirmed VTE during hospitalization (not present on arrival) who did not receive VTE prophylaxis between hospital admission and the day before the VTE diagnostic testing order date.
- **Numerator**
  - All patients in the denominator who received no VTE prophylaxis prior to the VTE diagnostic test order date
- **Denominator**
  - Patients who developed confirmed VTE during hospitalization discharged with a principal diagnosis code or other diagnosis code for VTE as defined by value set for "Joint Commission VTE."
- **Exclusions**
  - Patients with (age < 18)
  - Patients with (length of stay >120 days)
  - Patients enrolled in clinical trial
  - Patients with comfort measures only documented.
  - Patients with VTE Present on Arrival
  - Patients with reasons for not administering mechanical and pharmacologic prophylaxis
  - Patients without VTE confirmed by diagnostic testing

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So What's a Hospital To Do?

- Examine the data elements you will need to report
- Evaluate your EHRs ability to capture the necessary elements
- Identify individuals in the facility who can contribute to the data collection needed for the measures
- Test tracking the measures before you begin your reporting period
- Have all work at the top of their license

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Resources

- REACH
  - http://khaREACH.org/education/meaningful-use
- “Meaningful Use” information on the Health and Human Services web site:
  - http://healthit.hhs.gov/meaningfuluse/
- “Meaningful Use” on the CMS web site:
  - https://www.cms.gov/EHRIncentivePrograms/
- Testing criteria for each of the EHR modules:
  - http://healthcare.nist.gov/use_testing/effective_requirements.html
- HITSP Technical Notes:
  - http://www.hitsp.org/Handlers/HitspFileServer.aspx?FileGuid=088df74b-3bac-49ef-9de4-b99e24879035

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