Specifications Manual for National Hospital Inpatient Quality Measures

Guidelines for Using Release Notes

Release Notes 3.3 provide modifications to the *Specifications Manual for National Hospital Inpatient Quality Measures*. The Release Notes are provided as a reference tool and are not intended to be used to program abstraction tools. Please refer to the *Specifications Manual for National Hospital Inpatient Quality Measures* for the complete and current technical specifications and abstraction information.

The notes are organized to follow the order of the Table of Contents. Within each topic section, a row represents a change beginning with general changes followed by data elements in alphabetical order. The implementation date is 04-01-2011 unless otherwise specified. The headings are described below:

- **Impacts** - used to identify which portion(s) of the Manual Section is impacted by the change listed. Examples are Alphabetical Data Dictionary, (Measure Set) Data Element List, Measure Information Form (MIF) and Flowchart (Algorithm). The measures that the data element is collected for are identified.
- **Description of Changes** - used to identify the section within the document where the change occurs, e.g., Definition, Data Collection Question, Allowable Values, and Denominator Statement - Data Elements.
- **Rationale** - provided for the change being made.

NOTE: In addition to being called out specifically in the Release Notes document, additions and deletions are listed and additions are yellow highlighted in the corresponding document. Exceptions: The additions and changes to the Algorithms are not yellow highlighted, and the Hospital Initial Patient Population and Clinical Data XML File Layouts are yellow highlighted in the cells that have a change in them and the actual changes are **bolded**.

Data elements that cross multiple measures and contain the same changes will be consolidated.

Release Notes Table of Contents

Specifications Manual for National Hospital Inpatient Quality Measures

Impacts: All Sections

Description of Changes:
All Sections
Change: Reporting Hospital Quality Data for Annual Payment Update (RHQDAPU) program to Hospital Inpatient Quality Reporting Program

Rationale: To align with the CMS program name change.

Using the Specifications Manual for National Hospital Inpatient Quality Measures

Impacts: N/A

Description of Changes:
Remove "for Collected Measures" from the title in Appendix E.

Rationale: To reflect changes to the title of Appendix E.

Table of Contents

Impacts: AMI-T1a, AMI-T2

Description of Changes:
Section 2 Measure Information
Remove:
AMI-T1a and AMI-T2 from AMI Measure Information Form (MIF) and Flowchart (Algorithm)

Rationale: Maintain concordance with latest ACC/AHA performance measures and clinical guidelines. AMI-10 covers lipid management for AMI patients.

Impacts: N/A

Description of Changes:
Appendices
Remove "for Collected Measures" from the title in Appendix E.

Rationale: To reflect changes to the title of Appendix E.

Introduction to the Data Dictionary

Impacts: All

Description of Changes:
Introduction
Remove *Discharge Status* from the listing of the general data elements.

Rationale: To reduce the number of changes and potential addendums related to changes by the NUBC and make the data element more applicable to the quality measures.

Alphabetical Data Dictionary

Data Element Name: *ACEI Prescribed at Discharge*

Impacts: AMI-3, HF-3

Description of Changes:
Notes for Abstraction:
Change from:

- If two discharge summaries are included in the medical record, use the one with the latest date. If one or both are not dated, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms.
  Examples:
  - Two discharge summaries, one dated 5/22 (day of discharge) and one dated 5/27 - Use the 5/27 discharge summary.

To

- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
  Examples:
  - Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.

Rationale: Clarify for the abstractor how to determine discharge medications where there is more than one discharge summary (or discharge medication reconciliation form) in the record that have the same date but different times.

Data Element Name: *Admission Date*

Impacts: All

Description of Changes:
Notes for Abstraction
Remove bullets:

- A patient of a hospital is considered an inpatient upon issuance of written doctor's order to that effect. (Refer to the Medicare Claims Processing Manual, Chapter 3, Section 40.2.2.)
- For patients that are admitted for surgery and/or a procedure, if the admission order states the date the orders were written and they are effective for the surgery/procedure date, then the date of the surgery/procedure would be the admission date. If the medical record reflects that the admission order was written prior to the actual date the patient was admitted and there is no reference to the date of the surgery/procedure, then the date the order was written would be the admission date.

Change the last sentence in the 1st bullet from "If the abstractor determines through chart review that the date is incorrect, for purposes of abstraction, she/he should correct and override the downloaded value." to "If the abstractor determines through chart review that the date from billing is incorrect, for purposes of abstraction, she/he should correct and override the downloaded value."

Add to the 3rd bullet:

Example:

- Medical record documentation reflects that the patient was admitted to observation on 04-05-20xx. On 04-06-20xx the physician writes an order to admit to acute inpatient effective 04-05-2010. The *Admission Date* would be abstracted as 04-06-20xx; the date the determination was made to admit to acute inpatient care and the order was written.

Add bullet:

- If there are multiple inpatient orders, use the order that most accurately reflects the date that the patient was admitted. The admission date should not be abstracted from the earliest admission order without regards to substantiating documentation. If documentation suggests that the earliest admission order does not reflect the date the patient was admitted to inpatient care, this date should not be used.
  Example:
  Preoperative Orders are dated as 04-06-20xx with an order to admit to Inpatient. Postoperative Orders, dated 05-01-20xx, state to admit to acute inpatient. All other documentation supports that the patient presented to the hospital for surgery on 05-01-20xx. The admission date would be abstracted as 05-01-20xx.

Suggested Data Sources
Change "**PRIORITY ORDER FOR THESE SOURCES**" to "**ONLY ALLOWABLE SOURCES**"

Add:
Excluded Data Sources
UB-04, Field Location: 06

Rationale: To provide clarification and minimize the potential for abstracting an inaccurate admission date.

Data Element Name: *Adult Smoking History*

Impacts: AMI-4, HF-4, PN-4

Description of Changes:
Suggested Data Sources – Only Acceptable Sources:
Add:

- Smoking/Tobacco Use assessment forms

Rationale: Enable collection of smoking history information from these types of forms which are currently not covered in the Only Acceptable Sources list.

Data Element Name: *Anesthesia Start Time*

Impacts: SCIP-Inf-10, SCIP-VTE-1, SCIP-VTE-2

Description of Changes:
Inclusion Guidelines for Abstraction:
Add:
- Anesthesia start
- Anesthesia begin
- Anesthesia initiated

Rationale: Inadvertently omitted from the inclusion guidelines in Version 3.2c

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Data Element Name: *Another Source of Infection*

Impacts: PN6, PN-6a, PN-6b

Description of Changes:
Suggested Data Sources
Change:
'Lab Results' to be above '**PHYSICIAN/ADVANCED PRACTICE NURSE/PHYSICIAN ASSISTANT DOCUMENTATION ONLY'**

Rationale: Clarification for abstraction. Documentation from lab results do not have to be physician documentation.

Data Element Name: *Antibiotic Administration Date*

Impacts: PN-3b, PN-5, PN-5c, PN-6, PN-6a, PN-6b, SCIP-Inf-1, SCIP-Inf-2, SCIP-Inf-3

Description of Changes:
Note for Abstraction
Remove the 7th bullet, 2nd example:
An *Admission Date* of 11-20-20XX is documented but the *Antibiotic Administration Date* is documented as 11-19-20xx. If documentation cannot be found on that same source to support the correct date, that dose cannot be abstracted as given during the hospital stay but should be used to abstract *Antibiotic Received,* as applicable.

Rationale: Clarification in abstraction: Note for Abstraction the way it is may lead to confusion and the example is not correct.

Data Element Name: *Anticoagulation Therapy Prescribed at Discharge*

Impacts: STK-3

Description of Changes:
Notes for Abstraction:
Change from:

- If two discharge summaries are included in the medical record, use the one with the latest date. If one or both are not dated, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms.
  Examples:
  - Two discharge summaries, one dated 5/22 (day of discharge) and one dated 5/27 - Use the 5/27 discharge summary.

To

- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
  Examples:
  - Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.

Rationale: Clarify for the abstractor how to determine discharge medications where there is more than one discharge summary (or discharge medication reconciliation form) in the record that have the same date but different times.

Data Element Name: *Antithrombotic Therapy Prescribed at Discharge*

Impacts: STK-2

Description of Changes:
Notes for Abstraction:
Change from:

- If two discharge summaries are included in the medical record, use the one with the latest date. If one or both are not dated, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms.
  Examples:
  - Two discharge summaries, one dated 5/22 (day of discharge) and one dated 5/27 - Use the 5/27 discharge summary.

To

- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
  Examples:
  - Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.

Rationale: Clarify for the abstractor how to determine discharge medications where

there is more than one discharge summary (or discharge medication reconciliation form) in the record that have the same date but different times.

Data Element Name: *ARB Prescribed at Discharge*

Impacts: AMI-3, HF-3

Description of Changes:
Notes for Abstraction:
Change from:

- If two discharge summaries are included in the medical record, use the one with the latest date. If one or both are not dated, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms.
  Examples:
  - Two discharge summaries, one dated 5/22 (day of discharge) and one dated 5/27 - Use the 5/27 discharge summary.

To

- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
  Examples:
  - Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.

Rationale: Clarify for the abstractor how to determine discharge medications where there is more than one discharge summary (or discharge medication reconciliation form) in the record that have the same date but different times.

Data Element Name: *Aspirin Prescribed at Discharge*

Impacts: AMI-2

Description of Changes:
Notes for Abstraction:
Change from:

- If two discharge summaries are included in the medical record, use the one with the latest date. If one or both are not dated, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms.
  Examples:
  - Two discharge summaries, one dated 5/22 (day of discharge) and one dated 5/27 - Use the 5/27 discharge summary.

To

- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed and you cannot

determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
Examples:
- Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.

Rationale: Clarify for the abstractor how to determine discharge medications where there is more than one discharge summary (or discharge medication reconciliation form) in the record that have the same date but different times.

Data Element Name: *Aspirin Received Within 24 Hours Before or After Hospital Arrival*

Impacts: AMI-1

Description of Changes:
Notes for Abstraction:
Change from:
- When unable to determine for certain whether aspirin was received within 24 hours prior to arrival (e.g., last dose noted as 02-27-20XX and patient arrived at hospital on 02-28-20XX at 09:00), select "No."
  EXCEPTIONS:
  - When aspirin is listed only as a home or "current" medication, and the exact timing of the last dose the patient took is not noted, infer that the patient took aspirin within the 24 hour timeframe, unless documentation suggests otherwise.
  - When aspirin is noted only as received prior to arrival, without information about the exact time it was received (e.g., "Baby ASA X 4" per the "Treatment Prior to Arrival" section of the Triage Assessment), infer that the patient took aspirin within the 24 hour timeframe, unless documentation suggests otherwise.

To:
- Aspirin listed as "current" or "home" medication should be inferred as taken within 24 hours prior to arrival, unless documentation suggests otherwise.
  EXCEPTION: Aspirin documented as a PRN current/home medication does not count unless documentation is clear it was taken within 24 hours prior to arrival.
- When aspirin is noted only as received prior to arrival, without information about the exact time it was received (e.g., "Baby ASA X 4" per the "Treatment Prior to Arrival" section of the Triage Assessment), infer that the patient took aspirin within the 24 hour timeframe, unless documentation suggests otherwise.

Rationale: Change abstraction guidelines to clarify how to handle cases where aspirin is noted as a "home" medication with last dose date but no time. Additionally, add guideline to clarify how to handle aspirin taken at home on prn basis.

Data Element Name: *Beta-Blocker Prescribed at Discharge*

Impacts: AMI-5

Description of Changes:
Notes for Abstraction:
Change from:

- If two discharge summaries are included in the medical record, use the one with the latest date. If one or both are not dated, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms.
  Examples:
  - Two discharge summaries, one dated 5/22 (day of discharge) and one dated 5/27 - Use the 5/27 discharge summary.

To

- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
  Examples:
  - Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.

Rationale: Clarify for the abstractor how to determine discharge medications where there is more than one discharge summary (or discharge medication reconciliation form) in the record that have the same date but different times.

Data Element Name: *Clinical Trial*

Impacts: AMI-T1a, AMI-T2

Description of Changes:
Collected For – CMS Only:
Remove:
AMI-T1a (Optional Test Measure), AMI-T2 (Optional Test Measure)

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: *Comfort Measures Only*

Impacts: AMI-T1a, AMI-T2

Description of Changes:
Collected For – CMS Only:
Remove:
AMI-T1a (Optional Test Measure), AMI-T2 (Optional Test Measure)

Rationale: Retirement of AMI-T1a and AMI-T2.

Impacts: AMI-1, AMI-2, AMI-3, AMI-4, AMI-5, AMI-9, AMI-10, HF-1, HF-2, HF-3, HF-4, PN-2, PN-3, PN-3a, PN-4, PN-5, PN-5c, PN-6, PN-6a, PN-6b, PN-7, STK-1, STK-2, STK-3, STK-5, STK-6, STK-8, STK-10, VTE-1, VTE-2, VTE-3, VTE-4, VTE-6

Description of Changes:
Notes for Abstraction
Change 2nd bullet to:
Determine the earliest day the physician/APN/PA DOCUMENTED comfort measures only in the ONLY ACCEPTABLE SOURCES. Do not factor in when comfort measures only was actually instituted. E.g., "Discussed comfort care with family on arrival" noted in day 2 progress note – Select "2."

Remove the 4th bullet and its sub-bullets

Change 5th bullet to:
If any of the inclusions are documented in the ONLY ACCEPTABLE SOURCES, select "1," "2," or "3" accordingly, unless otherwise specified in this data element.

Add new bullet and sub-bullets:

- Documentation of an Inclusion term in the following situations should be disregarded. Continue to review the remainder of the ONLY ACCEPTABLE SOURCES for Inclusion terms. If the **ONLY** documentation found is an Inclusion term in the following situations, select value "4":
  - Documentation that is dated prior to arrival or documentation which refers to the pre-arrival time period (e.g., comfort measures only order in previous hospitalization record, "Pt. on hospice at home" in discharge summary).
    EXCEPTION:
    State-authorized portable orders (SAPOs). SAPOs are specialized forms, Out-of-Hospital DNR (OOH DNR) or Do Not Attempt Resuscitation (DNAR) orders, or identifiers authorized by state law, that translate a patient's preferences about specific-end-of-life treatment decisions into portable medical orders.
    Examples:
    - DNR-Comfort Care form
    - MOLST (Medical Orders for Life-Sustaining Treatment)
    - POLST (Physician Orders for Life-Sustaining Treatment)
  - Inclusion term not clearly selected on order form signed by the physician/APN/PA.
    Examples:
    - "DNR-Comfort Care" order form - The only option checked is "DNR/Allow Natural Death" (option "Comfort Care" remains unchecked)
    - "Home Health/Hospice" order form – "Hospice" has not been circled in the title or selected on the form
    - Inclusion term listed in pre-printed instruction for completing the form
  - Inclusion term clearly described as negative.
    Examples:
    - "No comfort care"
    - "Not a hospice candidate"
    - "Declines palliative care"
    - "Not appropriate for hospice care"
    - "I offered palliative care consult to discuss end of life issues. Family did not show any interest."

- "Patient declines hospice care at this time but I feel this will be an important plan of care when his condition deteriorates further"
- "Palliative care would also be reasonable - defer decision for now"

  - Comfort care when explicitly documented in any of the formats listed in the Exclusion List. Example: "DNR-CCA" box is checked on order form – **Disregard** ("DNR-CCA" is a listed exclusion).

Change 7th bullet to:

- If there is documentation of an Inclusion term clearly described as negative in one source, and an Inclusion term NOT described as negative in another source, that second source would still count for comfort measures only.
  Examples:
  - On Day 0 the physician documents "The patient is not a hospice candidate." On Day 3, the physician orders a hospice consult. Select "2."
  - On Day 1 the physician documents the patient is comfort measures only. On Day 2 the physician documents "The patient is refusing CMO." Select "1."

Remove 8th bullet:
If DNR-CC is documented, select "4," unless there is documented clarification that CC stands for "comfort care."

Suggested Data Sources
Add to PHYSICIAN/APN/PA DOCUMENTATION ONLY:
IN THE FOLLOWING ONLY ACCEPTABLE SOURCES:

Remove:
Admitting physician orders
Consultation notes
Emergency department record
History and physical
Physician admitting note

Add:
DNR/MOLST/POLST forms

Inclusion Guidelines for Abstraction
Add:
DNR-CC

Exclusion Guidelines for Abstraction
Change to:
DNR-Comfort Care Arrest (Only terms listed below count as an Exclusion. Other arrest terminology would NOT count as Exclusion - E.g., "Comfort Care Protocol will be implemented in the event of a cardiac arrest or a respiratory arrest")

Add: DNR-Comfort Care Arrest

Rationale: Reduce number of false positives (false measure exclusions). Provide clarification for abstractors. Reduce abstraction burden. Improve consistency.

Data Element Name: *Compromised*

Impacts: PN-6, PN-6a, PN-6b

Description of Changes:
Notes For Abstraction
Add to last bullet:
'value "1" ' after 'If there is physician/APN/PA documentation of "significant" or "marked" neutropenia, select '

Remove from last bullet:
'Yes' after 'If there is physician/APN/PA documentation of "significant" or "marked" neutropenia, select '

Inclusion Guidelines for Abstraction
Add to Compromising Conditions Within the Last 3 Months:
- Systemic Chemotherapy
- Systemic Corticosteroid/Prednisone therapy
- Systemic Immunosuppressive therapy

Rationale: Clarification for abstraction

Data Element Name: *Diagnostic Uncertainty*

Impacts: PN-5, PN-5c

Description of Changes:
Notes for Abstraction:
Change the 6th bullet to:
- Documentation of the delay can refer to either the pneumonia diagnosis or to antibiotic administration.

Rationale: Due to practitioner and physician feedback, documentation of a delay in antibiotic administration will now be accepted.

Data Element Name: *Discharge Disposition*

Impacts: AMI-1, AMI-2, AMI-3, AMI-4, AMI-5, AMI-9, AMI-10, HF-1, HF-2, HF-3, HF-4, PN-2, PN-3b, PN-4, PN-5, PN-5c, PN-7, CAC-3, STK-2, STK-3, STK-6, STK-8, STK-10, VTE-3, VTE-4, VTE-5, Prev-1, Prev-2

Description of Changes:
Add data element *Discharge Disposition*.

Rationale: To reflect what the final disposition of the patient was to determine if the appropriate care, treatment, education, etc. was provided.

Data Element Name: *Discharge Instructions Address Medications*

Impacts: HF-1

Description of Changes:
Notes for Abstraction:
Change from:

- If two discharge summaries are included in the medical record, use the one with the latest date. If one or both are not dated, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms.
  Examples:
  - Two discharge summaries, one dated 5/22 (day of discharge) and one dated 5/27 - Use the 5/27 discharge summary.

To

- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
  Examples:
  - Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.

Rationale: Clarify for the abstractor how to determine discharge medications where there is more than one discharge summary (or discharge medication reconciliation form) in the record that have the same date but different times.

Data Element Name: *Discharge Status*

Impacts: AMI-1, AMI-2, AMI-3, AMI-4, AMI-5, AMI-9, AMI-10, HF-1, HF-2, HF-3, HF-4, PN-2, PN-3b, PN-4, PN-5, PN-5c, PN-7, CAC-3, STK-2, STK-3, STK-6, STK-8, STK-10, VTE-5, Prev-1, Prev-2

Description of Changes:
Alphabetical Data Dictionary
Remove data element *Discharge Status* from the Alphabetical Data Element List and the Data Dictionary.

Rationale: To reduce the number of changes and potential addendums related to changes by the NUBC and make the data element more applicable to the quality measures.

Data Element Name: *Education Addresses Medications Prescribed at Discharge*

Impacts: STK-8

Description of Changes:
Notes for Abstraction:
Change from:

- If two discharge summaries are included in the medical record, use the one with the latest date. If one or both are not dated, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms.
  Examples:
  - Two discharge summaries, one dated 5/22 (day of discharge) and one dated 5/27 - Use the 5/27 discharge summary.

To

- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
  Examples:
  - Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.

Rationale: Clarify for the abstractor how to determine discharge medications where there is more than one discharge summary (or discharge medication reconciliation form) in the record that have the same date but different times.

Data Element Name: *Elective Carotid Intervention*

Impacts: All Stroke

Description of Changes:
Notes for Abstraction:
Remove:

- When conflicting information is documented in a medical record, e.g., internist documents “elective” and surgeon documents “non-elective” or unspecified, select “No”.

Change bullet
From:

- When documentation clearly indicates that the carotid intervention is elective, (e.g., “admitting orders to obtain informed consent for a carotid procedure”, “pre-operative testing completed prior to admission”), select “Yes”.

To:

- When documentation clearly indicates that the carotid intervention is elective, (e.g., admitting orders to obtain informed consent for a carotid procedure; pre-operative testing completed prior to admission; surgical orders for carotid endarterectomy dated prior to arrival; physician office visit documentation prior to arrival stating, “CEA with Dr. X planned in the near future”), select “Yes”.

Change bullet from:

- If the patient was admitted following elective carotid intervention performed as outpatient, select "No".

To:

- When the patient is directly admitted to the hospital post-procedure following an elective carotid intervention performed as an outpatient, select "Yes".
  Example:
  Patient scheduled for elective carotid endarterectomy right side on 05/17/20XX at 08:30. Patient checks into outpatient surgery at 06:13 and proceeds to the O.R, then to PACU. Patient status is changed to inpatient at 11:35 on 05/17/20XX. Patient discharged home on 05/18/20XX.
  EXCEPTION:
  Patients with documentation of an elective carotid intervention performed and discharged from the outpatient setting prior to hospital admission for stroke.
  Example: Patient scheduled for outpatient placement of an elective right carotid stent on 05/17/20XX. Patient discharged home on 05/17/2010 following the procedure. Patient arrives in the ED two days later with complaints of syncope and left-sided numbness, and is admitted to the hospital on 05/19/20XX.

Guidelines for Abstraction - Inclusion:
Add sub-bullet

- Asymptomatic
- Prophylactic

Rationale: Provide clarification for the abstractor.

Data Element Name: *First In-Hospital LDL-Cholesterol Qualitative Description*

Impacts: AMI-T2

Description of Changes:
Remove data element from the data dictionary

Rationale: Retirement of AMI-T2

Data Element Name: *First In-Hospital LDL-Cholesterol Value*

Impacts: AMI-T2

Description of Changes:
Remove data element from the data dictionary

Rationale: Retirement of AMI-T2.

Data Element Name: *Healthcare Associated PN*

Impacts: PN-6, PN-6a, PN-6b

Description of Changes:
Definition:
Remove:
calendar days

Notes for Abstraction:
Change the 5th bullet to:
Do not make an assumption as to the patient's admission or hospitalization based on the procedure they received. Only use phrases such as "in the hospital last month," etc.

Rationale: Clarification that documentation of length of stay is not required. If there is documentation of a hospitalization or admission, assume it was an acute care hospitalization unless there is documentation that states otherwise.

Data Element Name: *Home Management Plan of Care Document Addresses Arrangements for Follow-up Care*

Impacts: CAC-3

Description of Changes:
Notes for Abstraction
Add a 4th bullet:

- If the patient's home is out of state or out of the country and there is documentation that provider contact information is not accessible to the health care organization, AND there is documentation that the patient/caregiver were given a time frame for appointment for follow-up care, select Allowable Value 2.
  Example:
  Patient lives outside of US, unable to access provider contact information. Caregiver instructed to make appointment for follow-up care as soon as possible upon return home.

Rationale: A revision is being made to the data element to address circumstances beyond provider control that could cause a case to fail the measure.

Data Element Name: *ICD-9-CM Other Diagnosis Codes*

Impacts: All Records

Description of Changes:
Format:
Change Occurs from "17" to "24"

Rationale: To align with the IPPS Final Rule.

Data Element Name: *ICD-9-CM Other Procedure Codes*

Impacts: All Records

Description of Changes:
Format:
Change Occurs from "5" to "24"

Rationale: To align with the IPPS Final Rule.

Data Element Name: *ICD-9-CM Other Procedure Dates*

Impacts: All Records

Description of Changes:
Format:
Change Occurs from "5" to "24"

Rationale: To align with the IPPS Final Rule.

Data Element Name: *ICU VTE Prophylaxis*

Impacts: VTE-2

Description of Changes:
Format
Change Occurs from "1-8" to "1-7"

Allowable Values
Remove:
8 Oral Factor Xa Inhibitor

Notes for Abstraction
Change first bullet from:
Selection of allowable values 1-8 includes any prophylaxis that was initially admintered on the same date.
To:
Selection of allowable values 1-7 includes any prophylaxis that was initially admintered on the same date.

Rationale: Rivaroxaban has not been approved by the FDA

Data Element Name: *In-Hospital LDL-Cholesterol Test*

Impacts: AMI-T1a, AMI-T2

Description of Changes:
Remove data element from data dictionary

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: *Initial ECG Interpretation*

Impacts: AMI-7, AMI-7a, AMI-8, AMI-8a

Description of Changes:
Notes for Abstraction
Change from:

3. If there is no signed tracing, or in the absence of an Exclusion on the signed tracing, proceed to other interpretations that you can say clearly refer to the ECG done closest to arrival. Documentation which cannot be tied to the ECG performed closest to arrival should not be used. Do not cross reference findings between interpretations unless otherwise specified. If you encounter an Exclusion in any of the other interpretations, select "No," regardless of other documentation, and there is no need to review further.

To

3. If there is no signed tracing, or in the absence of an Exclusion on the signed tracing, proceed to other interpretations that you can say clearly refer to the ECG done closest to arrival. Only those terms specifically identified or referred to by the physician/APN/PA as **ECG findings** AND where documentation is clear it is from the ECG performed closest to arrival should be considered in abstraction (e.g., "STEMI" listed only as a physician diagnosis or impression would not be used). Do not cross reference findings between interpretations unless otherwise specified. If you encounter an Exclusion in any of the other interpretations, select "No," regardless of other documentation, and there is no need to review further.

Rationale: Clarify for the abstractor how to handle notations not specifically identified as initial ECG findings (e.g., Impressions, Diagnoses).

Change from:

- If at least one interpretation describes an LBBB as old, chronic, or previously seen, all LBBB findings should be disregarded.

To:

- If at least one interpretation describes an LBBB as old, chronic, or previously seen, or states LBBB and "no changes," "unchanged," "no acute changes," "no new changes," or "no significant changes" when compared to a prior ECG, **all** LBBB findings should be disregarded.

Change from:

- Notations which describe ST-elevation as old, chronic, or previously seen, or as a range where it cannot be determined if elevation is less than 1 mm/.10mV (e.g., "0.5-1 mm ST-elevation"), should be disregarded. Other documentation of ST-elevation not described as such may still count as an Inclusion.

To:

- Notations which describe ST-elevation as old, chronic, or previously seen, or which state ST-elevation and "no changes," "unchanged," "no acute changes," "no new changes," or "no significant changes" when compared to a prior ECG should be disregarded. Other documentation of ST-elevation not described as such may still count as an Inclusion.

- Notations which describe ST-elevation as a range where it cannot be determined if elevation is less than 1 mm/.10mV (e.g., "0.5-1 mm ST-elevation"), should be disregarded. Other documentation of ST-elevation not described as such may still count as an Inclusion.

Rationale: Provide clarification for abstractors and reduce the number of false measure inclusions.

Guidelines for Abstraction - Left bundle branch block (LBBB) - Exclusion
Remove:
Intraventricular conduction delay (IVCD) or block

Rationale: Reduce number of false measure exclusions by allowing IVCD findings (not described as LBBB type) to be disregarded.

Data Element Name: *IV Thrombolytic Initiation*

Impacts: STK-4

Description of Changes:
Notes for Abstraction:
Add

- When IV thrombolytic therapy is administered beyond 3 hours (180 min.) because a reason for not initiating IV thrombolytic therapy existed during the 3 hour timeframe, select “No”.
  Examples:
  - Patient arrives in the emergency department within 2 hours of time last known well. Blood pressure 195/110 mmHg on arrival. Physician documents that patient is within the t-PA window, but blood pressure is an issue. Elevated blood pressure treated prior to t-PA administration. IV thrombolytic therapy administered at 3 hours and 30 minutes from time last known well.
  - Patient arrives in the emergency department within 2 hours of time last known well and refuses t-PA. Family arrives and after further discussion with them, patient consents to t-PA. IV thrombolytic therapy administered 4 hours later.

Rationale: Prevent false inclusions.

Data Element Name: *Lipid-Lowering Agent Prescribed at Discharge*

Impacts: AMI-T2

Description of Changes:
Remove data element from data dictionary

Rationale: Retirement of AMI-T2.

Data Element Name: *Monitoring Documentation*

Impacts: VTE-4

Description of Changes:
Definition
Change from:
Documentation that defined parameters such as a nomogram or protocol were used to manage the intravenous (IV) unfractionated heparin (UFH) AND platelet counts were monitored according to the defined specifications.
To:
Documentation that defined parameters such as a nomogram or protocol were used to manage the intravenous (IV) unfractionated heparin (UFH) AND platelet counts.

Notes for Abstraction
Change 1st bullet from**:**

- Pathways or orders that state that a nomogram or protocol was used to calculate the UFH therapy dosages are acceptable. The pathways or orders must specify that the platelet counts were being monitoring within the defined specifications.

To:

- Pathways, orders or documentation that state that a nomogram or protocol was used to calculate the UFH therapy dosages and platelet count monitoring are acceptable**.**

Remove 3rd bullet:

- Platelet count monitoring must be within the defined specifications of the inclusion guidelines in order to select "Yes."

Change 4th bullet from:

- For orders that state that UFH therapy is ordered per pharmacy dosing or per pharmacy protocol select "Yes" if the platelet counts were also monitored within the defined specifications.

To:

- For orders that state that UFH therapy is ordered per pharmacy dosing or per pharmacy protocol select "Yes" if there is documentation that platelet counts were also monitored.

Suggested Data Sources
Add 2nd bullet

- Physician and Pharmacist Notes

Rationale: Since none of the ACCP platelet count monitoring recommendations are Grade 1A and the platelet count monitoring varies based on the patients' risk for heparin-induced thrombocytopenia (HIT) the inclusion guidelines cannot be applied to all patient receiving UFH therapy.

Data Element Name: *Parenteral Anticoagulant Prescribed at Discharge*

Impacts: VTE-3

Description of Changes:
Notes for Abstraction:
Change from:

- If two discharge summaries are included in the medical record, use the one with the latest date. If one or both are not dated, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms.
  Examples:
  - Two discharge summaries, one dated 5/22 (day of discharge) and one dated 5/27 - Use the 5/27 discharge summary.

To

- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
  Examples:
  - Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.

Rationale: Clarify for the abstractor how to determine discharge medications where there is more than one discharge summary (or discharge medication reconciliation form) in the record that have the same date but different times.

Data Element Name: *Plan for LDL-Cholesterol Test*

Impacts: AMI-T1a

Description of Changes:
Remove data element from data dictionary

Rationale: Retirement of AMI-T1a.

Data Element Name: *Pneumococcal Vaccination Status*

Impacts: PN-2

Description of Changes:
Allowable Values
Add to Value 4:

OR received the shingles vaccine (Zostavax) within the last 4 weeks

Rationale: Clinical evidence of drug- drug interaction with concomitant administration of vaccines.

Data Element Name: *Pneumonia Diagnosis: ED/Direct Admit*

Impacts: PN-3a, PN-3b, PN-5, PN-5c, PN-6, PN-6a, PN-6b

Description of Changes:
Notes for Abstraction:
Pneumonia Diagnosis in the Emergency Department
Add as 7th bullet:

- ED face sheets can only be used if signed by a physician/APN/PA

Medical Records containing an ED form completed by the ED physician:
Add at end of heading: APN/PA

Inclusion Guidelines for Abstraction: This list is ALL Inclusive
Add
Admission Pneumonia Diagnosis Codes (except for aspiration pneumonia)

Rationale: Clarification for abstraction.

Data Element Name: *Pre-Arrival LDL-Cholesterol Qualitative Description*

Impacts: AMI-T1a, AMI-T2

Description of Changes:
Remove data element from data dictionary

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: *Pre-Arrival LDL-Cholesterol Test*

Impacts: AMI-T1a, AMI-T2

Description of Changes:
Remove data element from data dictionary

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: *Pre-Arrival LDL-Cholesterol Value*

Impacts: AMI-T1a, AMI-T2

Description of Changes:
Remove data element from data dictionary

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: *Pre-Arrival Lipid-Lowering Agent*

Impacts: AMI-T1a

Description of Changes:
Collected For – CMS Only:
Remove:
AMI-T1a (Optional Test Measure)

Rationale: Retirement of AMI-T1a.

Data Element Name: *Reason for No Aspirin at Discharge*

Impacts: AMI-2

Description of Changes:
Notes for Abstraction:
Change from:

- Reason documentation which refers to a more general medication class is not acceptable (e.g., “Hold all anticoagulants”).

To:

- Reason documentation which refers to a more general medication class is not acceptable (e.g., “Hold all anticoagulants”). Exception: Documentation of a reason for not prescribing "antiplatelets" should be considered implicit documentation of a reason for no aspirin at discharge (e.g., "Antiplatelet therapy contraindicated”).

Rationale: Reduce number of false measure inclusions. A documented reason for not prescribing antiplatelets is an acceptable reason for not prescribing aspirin.

Change from:

- If two discharge summaries are included in the medical record, use the one with the latest date. If one or both are not dated, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms.
  Examples:
  - Two discharge summaries, one dated 5/22 (day of discharge) and one dated 5/27 - Use the 5/27 discharge summary.

To

- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
  Examples:
  - Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.

Rationale: Clarify for the abstractor how to determine discharge medications where

there is more than one discharge summary (or discharge medication reconciliation form) in the record that have the same date but different times.

Data Element Name: *Reason for No Aspirin on Arrival*

Impacts: AMI-1

Description of Changes:
Notes for Abstraction:
Change from:

- Reason documentation which refers to a more general medication class is not acceptable (e.g., “Hold all anticoagulants”).

To:

- Reason documentation which refers to a more general medication class is not acceptable (e.g., “Hold all anticoagulants”). Exception: Documentation of a reason for not prescribing "antiplatelets" should be considered implicit documentation of a reason for no aspirin on arrival (e.g., "Antiplatelet therapy contraindicated”).

Rationale: Reduce number of false measure inclusions. A documented reason for not prescribing antiplatelets is an acceptable reason for not prescribing aspirin.

Data Element Name: *Reason for No LDL-Cholesterol Testing*

Impacts: AMI-T1a

Description of Changes:
Remove data element from data dictionary

Rationale: Retirement of AMI-T1a.

Data Element Name: *Reason for No Lipid-Lowering Therapy*

Impacts: AMI-T2

Description of Changes:
Remove data element from data dictionary

Rationale: Retirement of AMI-T2..

Data Element Name: *Reason for No VTE Prophylaxis-Hospital Admission*

Impacts: STK-1, VTE-1

Description of Changes:
Notes for Abstraction:

Change bullet
From:

- Patient refusal may be documented by a nurse, but should be documented within the same timeframe as the reason for no VTE prophylaxis.

To:

- Patient/family refusal may be documented by a nurse, but should be documented within the same timeframe as the reason for no VTE prophylaxis. Patient/family refusal of any form of prophylaxis is acceptable to select "Yes". For example, "patient refused heparin", select "Yes".

Add bullet

- If VTE prophylaxis is not administered because the patient is ambulatory, documentation must explicitly state that ambulation is the reason. For example, "No VTE prophylaxis needed. Patient OOB and ambulating in hallway." Documentation that the patient is ambulating alone without mention of VTE prophylaxis is insufficient.

Rationale: Provide clarification for the abstractor.

Add 4th bullet:

- Select "Yes" if Comfort Measures Only (CMO) was documented beyond the day after arrival (Day 1) but by the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission.
  Examples:
  - Patient arrives in the ED on 06/01/20XX but is in observation until admission to the hospital on 06/03/20XX. If CMO is documented by 06/04/20XX, select "Yes".
  - The patient was admitted on 5/31/20XX and the surgery end date was 06/01/20XX, select "Yes" if CMO was documented by 06/02/XX.

Rationale: The definition for Comfort Measures Only (CMO) is based on arrival date and the measure numerator statements use admission date to calculate the timeframe for prophylaxis. Since only allowable value '1' can be used to exclude cases from prophylaxis, patients with CMO value '2' documented the day after arrival date but prior to the day after admission should select "Yes" for this data element.

Notes for Abstraction
Change 1st sentence in the 1st bullet from:

- Documentation of the reason for no VTE prophylaxis must be located within the timeframe of the day of or the day after hospital admission.

To

- Documentation of the reason for no VTE prophylaxis must be written by the day after hospital admission or surgery end date. Documentation written after arrival but prior to admission is acceptable.

Rationale: Need to expand the acceptable timeframe for documentation of a reason for 'No Prophylaxis'. Documentation of a reason for no VTE prophylaxis written after arrival and up to the day after admission (non-ICU) would be acceptable. For ICU Admission, documentation of the reason should be written by the day after ICU admission/transfer and be associated with the ICU admission/transfer.

Add sub bullet:

- If documentation of "No VTE Prophylaxis needed" is written, then it will be inferred that both mechanical and pharmacologic options were not indicated for the patient.

Rationale: To clarify documentation that is acceptable

Guidelines for Abstraction - Inclusion:
Add bullet

- Patient/family refusal

Rationale: Provide clarification for the abstractor.

Data Element Name: *Reason for No VTE Prophylaxis-ICU Admission*

Impacts: VTE-2

Description of Changes:
Notes for Abstraction:
Change bullet
From:

- Patient refusal may be documented by a nurse, but should be documented within the same timeframe as the reason for no VTE prophylaxis.

To:

- Patient/family refusal may be documented by a nurse, but should be documented within the same timeframe as the reason for no VTE prophylaxis. Patient/family refusal of any form of prophylaxis is acceptable to select "Yes". For example, "patient refused heparin", select "Yes".

Rationale: Provide clarification for the abstractor.

Change 1st sentence in the 1st bullet from:

- Documentation of the reason for no VTE prophylaxis must be located within the timeframe of the day of or the day after ICU admission/transfer.

To

- Documentation of the reason for no VTE prophylaxis must be written by the day after ICU admission/transfer or surgery end date. Patients that are transferred to the ICU need documentation that the reason for no VTE prophylaxis is associated with the ICU transfer.

Rationale: Need to expand the acceptable timeframe for documentation of a reason for 'No Prophylaxis'. Documentation of a reason for no VTE prophylaxis written after arrival and up to the day after admission (non-ICU) would be acceptable. For ICU Admission, documentation of the reason should be written by the day after ICU admission/transfer and be associated with the ICU admission/transfer.

Add 4th bullet

- Select "Yes" if CMO was documented after the day after arrival (Day 1) but by the day after ICU admission or surgery end date for surgeries that start the day of or the day after ICU admission.
  Example:
  - Patient arrives in the ED on 06/01/20XX but is in observation till admission to the ICU on 06/03/20XX. If CMO is documented by 06/04/20XX, select "Yes".
  - The patient was admitted on 5/31/20XX and the surgery end date was 06/01/20XX, select "Yes" if CMO was documented by 06/02/XX.

Rationale: The definition for Comfort Measures Only (CMO) is based on arrival date and the measure numerator statements use admission date to calculate the timeframe for prophylaxis. Since only allowable value '1' can be used to exclude cases from prophylaxis, patients with CMO value '2' documented the day after arrival date but prior to the day after admission should select "Yes" for this data element.

Add sub bullet:

- If documentation of "No VTE Prophylaxis needed" is written, then it will be inferred that both mechanical and pharmacologic options were not indicated for the patient.

Rationale: To clarify documentation that is acceptable

Guidelines for Abstraction - Inclusion:
Add bullet

- Patient/family refusal

Rationale: Provide clarification for the abstractor.

Data Element Name: *Reason for Not Administering Systemic Corticosteroids*

Impacts: CAC-2

Description of Changes:
Definition
Add to 2nd bullet and last note:
'IM' after 'oral,'

Notes for Abstraction
Add to 3rd bullet:
'IM' after 'oral,'

Rationale: The performance measure states "systemic corticosteroids for inpatient asthma." Systemic means that the drug is absorbed and is circulated throughout the whole body. IV, oral and IM corticosteroids qualify as systemic therapy. This change is being made to add IM as a route of administration for systemic corticosteroids.

Data Element Name: *Reasons for Not Administering VTE Prophylaxis*

Impacts: SCIP-VTE-1, SCIP-VTE-2

Description of Changes:
Notes for Abstraction
Change 5th Bullet to:

- The physician documents "Patient is allergic to coumadin." Do NOT select that the physician has a reason for not administering all pharmacological prophylaxis because that is not documented, select "4."

Rationale: The word, patient, in the 5th bullet should be the word physician in the notes for abstraction.

Data Element Name: *Reason for Not Initiating IV Thrombolytic*

Impacts: STK-4

Description of Changes:
Notes for Abstraction:
Add

- Reason documentation which refers to a more general medication class is not acceptable (e.g., "Hold IV medications", "No IVs".

Change bullet
From:

- Reasons for not initiating IV thrombolytic therapy must be documented by a physician/APN/PA or pharmacist with three exceptions: Patient/family refusal, NIHSS score of zero, and initiation of IV or IA thrombolytic at a transferring hospital do not have to be documented by a physician/APN/PA or pharmacist.

To:

- Reasons for not initiating IV thrombolytic therapy must be documented by a physician/APN/PA or pharmacist with three exceptions: Patient/family refusal, NIHSS score of zero, and initiation of IV or IA thrombolytic at a transferring hospital. These three exceptions may be documented by a nurse. Reason documentation must refer to the timeframe for thrombolytic therapy.

Change bullet
From:

- If documentation indicates a National Institute of Health Stroke Scale (NIHSS) score of zero, select "Yes".

To:

- If documentation indicates a National Institute of Health Stroke Scale (NIHSS) score of zero, select "Yes. Score documentation must refer to the timeframe for thrombolytic therapy.

Change bullet
From:

- Documentation of the initiation of IV or IA thrombolytic at a transferring hospital is a stand-alone reason and sufficient to meet the intent of this measure. No further

documentation of it as the reason for not initiating IV t-PA at this hospital is needed.

To:

- Documentation of the initiation of IV or IA thrombolytic at a transferring hospital is a stand-alone reason and sufficient to meet the intent of this data element. No further documentation of it as the reason for not initiating IV t-PA at this hospital is needed.

Rationale: Provide clarification for the abstractor.

Data Element Name: *Reason for Not Prescribing **Anticoagulation** Therapy at Discharge*

Impacts: STK-3

Description of Changes:
Notes for Abstraction
Change bullets from:

- Reasons for not prescribing anticoagulation therapy at hospital discharge must be documented by a physician/APN/PA or pharmacist.
- **If reasons are not mentioned in the context of anticoagulation therapy, do not make inferences** (e.g., do not assume that anticoagulation therapy was not prescribed because of a bleeding disorder unless documentation explicitly states so).
- See the inclusion list for acceptable reasons for not prescribing anticoagulation therapy. The list is not all-inclusive.
- An allergy or adverse reaction to one type of anticoagulant would NOT be a reason for not administering all anticoagulants. Another medication can be ordered.

To:

- Reasons for not prescribing anticoagulation therapy at hospital discharge must be documented by a physician/APN/PA or pharmacist.
- **If reasons are not mentioned in the context of anticoagulation therapy, do not make inferences** (e.g., do not assume that anticoagulation therapy was not prescribed because of a bleeding disorder unless documentation explicitly states so).
  - Reasons must be explicitly documented (e.g., “Active GI bleed – anticoagulation therapy contraindicated, “No warfarin” [no reason given].
  - Physician/APN/PA or pharmacist documentation of a hold on an anticoagulant medication or discontinuation of an anticoagulant medication that occurs during the hospital stay constitutes a “clearly implied” reason for not prescribing anticoagulation therapy at discharge. A hold/discontinuation of all p.o. medications counts if an oral anticoagulant medication (e.g., warfarin) was on order at the time of the notation.
    EXCEPTION:
    Documentation of a conditional hold or discontinuation of an anticoagulant medication (e.g., “Hold Coumadin if guaiac positive”, “Stop warfarin if rash persists.”

- Deferral of anticoagulation therapy from one physician/APN/PA or pharmacist to another does NOT count as a reason for not prescribing anticoagulation therapy at discharge unless the problem underlying the deferral is also noted. Examples:
  - "Consulting neurologist to evaluate pt. for warfarin therapy." - select "**No**."
  - "Rule out GI bleed. Start Coumadin if OK with neurology." - select "**Yes**."
- If there is documentation of a plan to initiate/restart anticoagulation therapy, and the reason/problem underlying the delay in starting/restarting anticoagulation therapy is also noted, this constitutes a "clearly implied" reason for not prescribing anticoagulation therapy at discharge.
  Acceptable examples (select "Yes"):
  - "Stool Occult Blood positive. May start Coumadin as outpatient."
  - "Start warfarin if hematuria subsides."

  Unacceptable examples (select "No"):
  - "Consider starting Coumadin in a.m."
  - "May add warfarin when pt. can tolerate"
- Reasons do NOT need to be documented at discharge or otherwise linked to the discharge timeframe: Documentation of reasons anytime during the hospital stay are acceptable (e.g., mid-hospitalization note stating "no warfarin due to rectal bleeding" - select "Yes," even if documentation indicates that the rectal bleeding has resolved by the time of discharge and warfarin was restarted).
- Crossing out of an anticoagulant medication counts as a "clearly implied reason" for not prescribing anticoagulation therapy at discharge only if on a pre-printed form.

- An allergy or adverse reaction to one type of anticoagulant would NOT be a reason for not administering all anticoagulants. Another medication can be ordered.
- When conflicting information is documented in a medical record, select "Yes."
- When the current record includes documentation of a pre-arrival reason for no anticoagulation threrapy, the following counts regardless of whether this documentation is included in a pre-arrival record made part of the current record or whether it is noted by hospital staff during the current hospital stay:
  - Pre-arrival hold/discontinuation or notation such as "No Coumadin" IF the underlying reason/problem is also noted (e.g., "Coumadin held in transferring hospital due to possible GI bleed").
  - Pre-arrival "other reason" (other than hold/discontinuation or notation of "No warfarin") (e.g., "Hx GI bleeding with warfarin" in transferring ED record).

Suggested Data Sources

Add

- Emergency department record
- Medication administration record
- Physician orders

Inclusion Guidelines for Abstraction:

Change bullet from:

- Allergy to or complication related to anticoagulant

To:

- Allergy to all anticoagulant medications

Definition
Change bullet from:
Definition: Reason for not prescribing **anticoagulation** therapy at hospital discharge.
- Anticoagulant medication allergy
- Other reason documented by physician/APN/PA or pharmacist

To
Definition: Reason for not prescribing **anticoagulation** therapy at hospital discharge.
- Hemorrhagic stroke
- Other reason documented by physician/APN/PA or pharmacist

Rationale: Consistency with other data element definitions for Reason for Not Prescribing a medication at discharge.

Data Element Name: *Reason for Not Prescribing **Antithrombotic** Therapy at Discharge*

Impacts: STK-2

Description of Changes:
Notes for Abstraction:
Change bullets from:
- Reasons for not prescribing antithrombotic therapy at hospital discharge must be documented by a physician/APN/PA or pharmacist.
- **If reasons are not mentioned in the context of antithrombotics, do not make inferences** (e.g., do not assume that antithrombotic therapy was not prescribed because of a bleeding disorder unless documentation explicitly states so).
- See the inclusion list for acceptable reasons for not prescribing antithrombotic therapy. The list is not all-inclusive.
- An allergy or adverse reaction to one type of antithrombotic would NOT be a reason for not administering all antithrombotics. Another medication can be ordered.

To:
- Reasons for not prescribing antithrombotic therapy at hospital discharge must be documented by a physician/APN/PA or pharmacist.
- **If reasons are not mentioned in the context of antithrombotics, do not make inferences** (e.g., do not assume that antithrombotic therapy was not prescribed because of a bleeding disorder unless documentation explicitly states so).
    - Reasons must be explicitly documented (e.g., “Active GI bleed – antithrombotic therapy contraindicated, “No ASA” [no reason given].
    - Physician/APN/PA or pharmacist documentation of a hold on an antithrombotic medication or discontinuation of an antithrombotic medication that occurs during the hospital stay constitutes a “clearly implied” reason for not prescribing antithrombotic therapy at discharge. A hold/discontinuation of all p.o. medications counts if an oral antithrombotic medication (e.g., Plavix) was on order at the time of the notation.
      EXCEPTION:
      Documentation of a conditional hold or discontinuation of an antithrombotic medication (e.g., “Hold ASA if guaiac positive”, “Stop Plavix if rash persists.”

- Deferral of antithrombotic therapy from one physician/APN/PA or pharmacist to another does NOT count as a reason for not prescribing antithrombotic therapy at discharge unless the problem underlying the deferral is also noted.
  Examples:
  - "Consulting neurologist to evaluate pt, for warfarin therapy." - select "**No**."
  - "Rule out GI bleed. Start ASA if OK with neurology." - select "**Yes**."
- If there is documentation of a plan to initiate/restart antithrombotic therapy, and the reason/problem underlying the delay in starting/restarting antithrombotic therapy is also noted, this constitutes a "clearly implied" reason for not prescribing antithrombotic therapy at discharge.
  Acceptable examples (select "Yes"):
  - "Stool Occult Blood positive. May start Coumadin as outpatient."
  - "Start ASA if hematuria subsides."

  Unacceptable examples (select "No"):
  - "Consider starting Coumadin in a.m."
  - "May add Plavix when pt. can tolerate"
- Reasons do NOT need to be documented at discharge or otherwise linked to the discharge timeframe: Documentation of reasons anytime during the hospital stay are acceptable (e.g., mid-hospitalization note stating "no ASA due to rectal bleeding" - select "Yes," even if documentation indicates that the rectal bleeding has resolved by the time of discharge and ASA was restarted).
- Crossing out of an antithrombotic medication counts as a "clearly implied reason" for not prescribing antithrombotic therapy at discharge only if on a pre-printed form.

- An allergy or adverse reaction to one type of antithrombotic would NOT be a reason for not administering all antithrombotics. Another medication can be ordered.
- When conflicting information is documented in a medical record, select "Yes."
- When the current record includes documentation of a pre-arrival reason for no antithrombotic threrapy, the following counts regardless of whether this documentation is included in a pre-arrival record made part of the current record or whether it is noted by hospital staff during the current hospital stay:
  - Pre-arrival hold/discontinuation or notation such as "No Coumadin" IF the underlying reason/problem is also noted (e.g., "Coumadin held in transferring hospital due to possible GI bleed").
  - Pre-arrival "other reason" (other than hold/discontinuation or notation of "No ASA") (e.g., "Hx GI bleeding with ASA" in transferring ED record).

Suggested Data Sources

Add:

- Emergency department record
- Medication administration record
- Physician orders

Inclusion Guidelines for Abstraction

Change bullet from:
- Allergy to or complication related to antithrombotic

To:
- Allergy to all antithrombotic medications

Definition
Change bullet from:
Definition: Reason for not prescribing **antithrombotic** therapy at hospital discharge.
- Antithrombotic medication allergy
- Other reason documented by physician/APN/PA or pharmacist

To:
Definition: Reason for not prescribing **antithrombotic** therapy at hospital discharge.
- Hemorrhagic stroke
- Other reason documented by physician/APN/PA or pharmacist

Rationale: Consistency with other data element definitions for Reason for Not Prescribing a medication at discharge.

Data Element Name: *Reason for Not Prescribing Statin Medication at Discharge*

Impacts: AMI-10, STK-6

Description of Changes:
Suggested Data Sources
Add:
- Emergency department record
- Medication administration record
- Physician orders

Rationale: Consistency with data sources for similar data element definitions.

Inclusion Guidelines for Abstraction:
Change bullet from:
- Rhabdomyolosis

To:
- Rhabdomyolysis

Rationale: Correct spelling/typographical error

Inclusion Guidelines for Abstraction:
Remove:
- Arrhythmias
- Hypoglycemia
- Rectal Hemorrhage

Add:
- Myalgias

Rationale: Revised inclusion list to reflect most significant contraindications.

Data Element Name: *Reasons to Extend Antibiotics*

Impacts: SCIP-Inf-3

Description of Changes:
Suggested Data Collection Question:
Change to:
What reason was documented by a physician/APN/PA for extending the duration of the antibiotic administration past 24 hours (48 hours for CABG or Other Cardiac Surgery) after *Anesthesia End Time*?

Format:
Change to Occurs from "1-6" to **"**1-3"

Allowable Values:
Change to:
Select all that apply:

1. There is physician/advanced practice nurse/physician assistant (physician/APN/PA) documentation that the patient had an infection postoperatively following the principal procedure.
2. The principal procedure was a lower extremity original or revision arthroplasty and there is physician/APN/PA documentation of a current benign or malignant bone tumor of the operative extremity.
3. There is physician/APN/PA documentation of any of (and only) the following reasons to extend antibiotics:
   Erythromycin was administered postoperatively for the purpose of increasing gastric motility
   OR
   An antibiotic was administered postoperatively for the treatment of hepatic encephalopathy
   OR
   An antibiotic was administered postoperatively as prophylaxis of Pneumocystis pneumonia (PCP) to a patient with a diagnosis of AIDS.
4. No documented reason/Unable to Determine.

Notes for Abstraction:
Remove: 1st and 2nd bullets

Change 3rd bullet to:

- If a value of "4" is selected, no other selections should be recorded.

For Value 1:

- If documentation of an infection occurs more than 2 days (3 days for CABG or Other Cardiac Surgery) after *Anesthesia End Time* DO NOT abstract value 1.
- There must be documentation of a current infection or current possible/suspected infection.

- Documentation of symptoms (example: fever, elevated white blood cells, wound condition, etc.) should not be considered infections unless documented as a current infection or current possible/suspected infection.

Note: Do NOT use Table 5.09 as a reference for identifying infections. This data element has an inclusion table to use as a guideline that provides the types of infection that are acceptable. Please reference this inclusion table when answering this data element.

For Value 2:
- Documentation of a current bone tumor can be found preoperatively or postoperatively.
- Documentation of a current bone tumor of the lower extremity includes but is not limited to the examples listed in the inclusion list.
- The lower extremity includes the hip, knee and foot joints.

For Value 3:
- Documentation of these reasons can be found preoperatively or postoperatively.
- The physician/APN/PA documentation must include reasons that are specific to the 3 conditions in Allowable Value 3.
- Documentation of other terms for "increasing gastric motility" may include but is not limited to: treatment of gastroparesis, treatment of delayed gastric emptying, postoperative ileus, decreased gastric motility or a prokinetic effect.
- Please reference Table 2.1 Antimicrobial Medications for the names of medications that are erythromycin.
- Documentation of Pneumocystis pneumonia can include but is not limited to: pneumocystis carinii pneumonia or PCP in a patient with a diagnosis of AIDS.

Suggested Data Sources:
Change to:
Suggested Data Sources:
PHYSICIAN/APN/PA DOCUMENTATION ONLY
- Anesthesia record
- Consultation notes
- Discharge summary
- Operative Report
- Physician order forms
- Progress notes

Excluded Data Sources:
For Value 1:
- Any postoperative documentation of infection from pathology reports.
- Any preoperative documentation.

Inclusion Guidelines for Abstraction:
For Value 1:
- Abscess
- Acute abdomen
- Aspiration pneumonia
- Bloodstream infection

- Bone infection
- Cellulitis
- Endometritis
- Fecal Contamination
- Free air in abdomen
- Gangrene
- H. pylori
- Necrosis
- Necrotic/ischemic/infarcted bowel
- Osteomyelitis
- Other documented infection
- Penetrating abdominal trauma
- Perforation of bowel
- Pneumonia or other lung infection
- Purulence/pus
- Sepsis
- Surgical site or wound infection
- Urinary tract infection (UTI)

For Value 2: Current benign or malignant bone tumors may be represented by the following documentation:

- Bony tumor of lower operative extremity
- Sarcoma of lower operative extremity
- Primary malignancy of lower operative extremity
- Metastatic malignancy of lower operative extremity

Exclusion Guidelines for Abstraction:
For Value 1:

- Bacteria in urine (Bacteriuria)
- "carditis" (such as pericarditis) without mention of an infection
- Colonization or positive screens for MRSA, VRE, or for other bacteria
- Fungal infections
- History of infection, recent infection or recurrent infection not documented as a current or active infection
- Viral infections

Rationale: The data element is being revised by condensing the values to clearly delineate which allowable values require correlated documentation with the use of an antibiotic and the reasons that the use of the antibiotic was extended. Value 6 was removed because it was redundant to a value in *Infection Prior to Anesthesia.*

Data Element Name: *Statin Medication Prescribed at Discharge*

Impacts: AMI-10, STK-6

Description of Changes:
Notes for Abstraction:
Change from:

- If two discharge summaries are included in the medical record, use the one with the latest date. If one or both are not dated, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms.
  Examples:
  - Two discharge summaries, one dated 5/22 (day of discharge) and one dated 5/27 - Use the 5/27 discharge summary.

To

- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
  Examples:
  - Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.

Rationale: Clarify for the abstractor how to determine discharge medications where there is more than one discharge summary (or discharge medication reconciliation form) in the record that have the same date but different times.

Data Element Name: *Systemic Corticosteroids Administered*

Impacts: CAC-2

Description of Changes:
Definition
Add to 1st and 2nd paragraph:
'IM' after 'oral,'

Suggested Data Collection Question
Add:
'IM' after 'oral,'

Allowable Values
Add to Yes:
'IM' after 'oral,'

Add to No:
'IM' after 'oral,'

Notes for Abstraction
Add to 2nd bullet:
'IM' after 'oral,'

Inclusion Guidelines for Abstraction
Add:
Intramuscular:
IM

Add in Appendix C reference note:
'IM' after 'oral,'

Rationale: The performance measure states "systemic corticosteroids for inpatient asthma." Systemic means that the drug is absorbed and is circulated throughout the whole body. IV, oral and IM corticosteroids qualify as systemic therapy. This change is being made to add IM as a route of administration for systemic corticosteroids.

Data Element Name: *VTE Diagnostic Test*

Impacts: VTE-3, VTE-4, VTE-5, VTE-6

Description of Changes:
Inclusion Guidelines for Abstraction
Change 2 – 4th bullet from:

- Venography/Venogram of femoral and other lower extremity veins using contrast material
- Computed tomography (CT) of thorax with contrast
- Magnetic resonance imaging (MRI or MRV) of the thorax or lower extremity leg veins

To:

- Venography/Venogram of pelvic, femoral and other lower extremity veins using contrast material
- Computed tomography (CT) of thorax (chest), abdomen/pelvis, or lower extremity leg veins with contrast
- Magnetic resonance imaging (MRI or MRV) of the thorax (chest) abdomen/pelvis or lower extremity leg veins

Rationale: Additional tests were identified that may diagnose VTE

Data Element Name: *VTE Prophylaxis*

Impacts: SCIP-VTE-1, SCIP-VTE-2, VTE-1, STK-1

Description of Changes:
Notes for Abstraction – VTE
Change heading statement to:
VTE Prophylaxis must be administered the day of or the day after hospital admission (non-ICU setting) or the day of or the day after *Surgery End Date* for surgeries that start the day of or the day after hospital admission (non-ICU setting).
Change the 1st bullet to:

- Select the initial prophylaxis that was administered in a non-ICU setting

Rationale: Need to clarify that VTE prophylaxis was administered in a non-ICU setting after hospital admission.

Impacts: SCIP-VTE-1, SCIP-VTE-2, VTE-1, STK-1

Description of Changes:
Format
Change: Occurs to 1-7

Allowable Values
Remove: 8 Oral Factor Xa Inhibitor

Notes For Abstraction
Change 2nd bullet under VTE and STK:
Allowable values 1-8
To
Allowable values 1-7

Rationale: Rivaroxaban has not been FDA approved.

Data Element Name: *VTE Prophylaxis Date*

Impacts: VTE-1, STK-1

Description of Changes:
Notes for Abstraction
Add bullet:
VTE

- If VTE prophylaxis was administered the day of and the day after hospital admission in a non-ICU setting, select the date that the **initial** VTE prophylaxis was administered.
  Example:
  If the patient was admitted on 12/8/20XX and bilateral GCS was applied at 13:00 on 12/8/20XX and LMWH was administered at 02:00 on 12/9/20XX, use the 12/8/20XX date.

Change the bullet to:
STK

- If VTE prophylaxis was administered the day of and the day after hospital admission, select the date that the **initial** VTE prophylaxis was administered.
  Example:
  If the patient was admitted on 12/8/20XX and bilateral IPC was applied at 13:00 on 12/8/20XX and LMWH was administered at 02:00 on 12/9/20XX, use the 12/8/20XX date with one exception.
  Note: For STK cases, use the date of the other form of prophylaxis as the initial date of VTE prophylaxis when GCS was applied the day of hospital admission and another form the day after hospital admission.

Rationale: Need to clarify that VTE prophylaxis was administered in a non-ICU setting after hospital admission.

Data Element Name: *VTE Prophylaxis Status*

Impacts: VTE-6

Description of Changes:
Inclusion Guidelines for Abstraction
Change 2 – 4th bullet from:

- Venography/Venogram of femoral and other lower extremity veins using contrast material
- Computed tomography (CT) of thorax with contrast
- Magnetic resonance imaging (MRI or MRV) of the thorax or lower extremity leg veins

To:

- Venography/Venogram of pelvic, femoral and other lower extremity veins using contrast material
- Computed tomography (CT) of thorax (chest), abdomen/pelvis, or lower extremity leg veins with contrast
- Magnetic resonance imaging (MRI or MRV) of the thorax (chest) abdomen/pelvis or lower extremity leg veins

Rationale: Additional tests were identified that may diagnose VTE

Change 4th bullet from:

- Patients that have documentation that VTE prophylaxis was not administered because the patient was at low risk for VTE, select "2."

To:

- For patients that have documentation that "No VTE prophylaxis- patient at low risk for VTE", select "2."

Change 5th bullet from:

- For example: There is physician documentation that a trauma patient has active bleeding and fractured femurs bilaterally, select "3."

To:

- For example: If there is physician documentation of "No VTE Prophylaxis due to active bleeding and fractured femurs bilaterally", select "3."

Change 7th bullet from:

- Patient refusal of all prophylaxis may be documented by a nurse. If the patient refused BOTH types of prophylaxis, select "3."

To:

- Patient/family refusal of prophylaxis may be documented by a nurse. If the patient refused the prophylaxis that was ordered, select "3."

Rationale: Clarification of several notes and needed to align with other data element revisions

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Data Element Name: *VTE Timely*

Impacts: SCIP-VTE-2

Description of Changes:
Format
Change: Occurs to 1-7

Rationale: Rivaroxaban has not been FDA approved.

Data Element Name: *Warfarin Prescribed at Discharge*

Impacts: VTE-5

Description of Changes:
Notes for Abstraction:
Change from:

- If two discharge summaries are included in the medical record, use the one with the latest date. If one or both are not dated, and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms.
  Examples:
  - Two discharge summaries, one dated 5/22 (day of discharge) and one dated 5/27 - Use the 5/27 discharge summary.

To

- If two discharge summaries are included in the medical record, use the one with the latest date/time. If one or both are not dated or timed and you cannot determine which was done last, use both. This also applies to discharge medication reconciliation forms. Use the dictated date/time over transcribed date/time, file date/time, etc.
  Examples:
  - Two discharge summaries, one dictated 5/22 (day of discharge) and one dictated 5/27 - Use the 5/27 discharge summary.

Rationale: Clarify for the abstractor how to determine discharge medications where there is more than one discharge summary (or discharge medication reconciliation form) in the record that have the same date but different times.

Acute Myocardial Infarction (AMI) Measure Information Form

Impacts: AMI-1, AMI-2, AMI-3, AMI-4, AMI-5, AMI-9, AMI-10

Description of Changes:
AMI Data Element List
Remove *Discharge Status* from the General Data Element Name and Collected For

Add *Discharge Disposition* to the AMI Data Element Name and AMI-1, AMI-2, AMI-3, AMI-4, AMI-5, AMI-9, AMI-10 to the Collected For

Rationale: To be consistent with changes made to the Data Dictionary.

Impacts: AMI-T1a, AMI-T2

Description of Changes:
ACUTE MYOCARDIAL INFARCTION NATIONAL HOSPITAL INPATIENT QUALITY MEASURES - Measure Short Name
Remove:
LDL-Cholesterol Assessment (Optional Test Measure)
Lipid-Lowering Therapy at Discharge (Optional Test Measure)

AMI Data Element List - AMI Data Element Name
Remove:
First In-Hospital LDL-Cholesterol Qualitative Description
First In-Hospital LDL-Cholesterol Value
In-Hospital LDL-Cholesterol Test
Lipid-Lowering Agent Prescribed at Discharge
Plan for LDL-Cholesterol Test
Pre-Arrival LDL-Cholesterol Qualitative Description
Pre-Arrival LDL-Cholesterol Test
Pre-Arrival LDL-Cholesterol Value
Pre-Arrival Lipid-Lowering Agent
Reason for No LDL-Cholesterol Testing
Reason for No Lipid-Lowering Therapy

AMI Data Element List – Collected For:
Comfort Measures Only
Remove:
AMI-T1a and AMI-T2

Rationale: Maintain concordance with latest ACC/AHA performance measures and clinical guidelines. AMI-10 covers lipid management for AMI patients.

Impacts: AMI-1

Description of Changes:
Rationale:

Change reference from:
Antman, 2004 and Anderson, 2007
To:
Antman, 2004; Antman, 2008; and Anderson, 2007

Selected References:
Add

- Antman EM, Hand M, Armstrong PW, Bates ER, Green LA, Halasyamani LK, et al. 2007 focused update of the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Writing Group to Review New Evidence and Update the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction). *J Am Coll Cardiol*. 2008;51:210–47.

Rationale: Update of Selected References list and Rationale.

Impacts: AMI-1

Description of Changes:
Excluded Populations
Change bullets

- Patients discharged/transferred to another hospital for inpatient care on day of or day after arrival to Patients discharged to another hospital on day of or day after arrival
- Patient who left against medical advice or discontinued care on day of or day after arrival to Patients who left against medical advice on day of or day after arrival

Remove bullet

- Patients discharged/transferred to a federal health care facility on day of or day after arrival

Data Elements
Change *Discharge Status* to *Discharge Disposition* in the list of Denominator Data Elements.

Rationale: To reflect the allowable value exclusions for the new data element Discharge Disposition.

Impacts: AMI-2, AMI-3, AMI-4, AMI-5, AMI-10

Description of Changes:
Excluded Populations
Change bullets

- Patients discharged/transferred to another hospital for inpatient care to Patients discharged to another hospital

- Patient who left against medical advice or discontinued care to Patients who left against medical advice
- Patients discharged/transferred to hospice to Patients discharged to home for hospice care

Add bullet

- Patients discharged to a health care facility for hospice care

Remove bullet

- Patients discharged/transferred to a federal health care facility

Data Elements
Change *Discharge Status* to *Discharge Disposition* in the list of Denominator Data Elements.

Rationale: To reflect the allowable value exclusions for the new data element Discharge Disposition.

Impacts: AMI-9

Description of Changes:
Selected References:
Add

- Antman EM, Hand M, Armstrong PW, Bates ER, Green LA, Halasyamani LK, et al. 2007 focused update of the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Writing Group to Review New Evidence and Update the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction). *J Am Coll Cardiol*. 2008;51:210–47.

Rationale: Update of Selected References list.

Impacts: AMI-4

Description of Changes:
Rationale:
Change reference from:
Fiore, 2008; Antman, 2004; Anderson, 2007; and Smith, 2006
To:
Fiore, 2008; Antman, 2004; Antman, 2008; Anderson, 2007; and Smith, 2006

Selected References:
Add

- Antman EM, Hand M, Armstrong PW, Bates ER, Green LA, Halasyamani LK, et al. 2007 focused update of the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice

Guidelines (Writing Group to Review New Evidence and Update the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction). *J Am Coll Cardiol*. 2008;51:210–47.

Rationale: Update of Selected References list and Rationale

Impacts: AMI-2, AMI-3, AMI-5

Description of Changes:
Rationale:
Change reference from:
Antman, 2004; Anderson, 2007; and Smith 2006
To:
Antman, 2004; Antman, 2008; Anderson, 2007; and Smith 2006

Selected References:
Add

- Antman EM, Hand M, Armstrong PW, Bates ER, Green LA, Halasyamani LK, et al. 2007 focused update of the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Writing Group to Review New Evidence and Update the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction). *J Am Coll Cardiol*. 2008;51:210–47.

Rationale: Update of Selected References list and Rationale.

Impacts: AMI-8, AMI-8a

Description of Changes:
Rationale:
Change reference from:
Antman, 2004
To:
Antman, 2004; Antman, 2008; and Kushner, 2009

Selected References:
Add

- Antman EM, Hand M, Armstrong PW, Bates ER, Green LA, Halasyamani LK, et al. 2007 focused update of the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Writing Group to Review New Evidence and Update the ACC/AHA 2004 Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction). *J Am Coll Cardiol*. 2008;51:210–47.
- Kushner FG, Hand M, Smith SC Jr, King SB 3rd, Anderson JL, Antman EM, et al. 2009 focused updates: ACC/AHA guidelines for the management of patients with ST-elevation myocardial infarction (updating the 2004 guideline and 2007

focused update) and ACC/AHA/SCAI guidelines on percutaneous coronary intervention (updating the 2005 guideline and 2007 focused update): a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. *J Am Coll Cardiol*. 2009;54:2205– 41.

Rationale: Update of Selected References list and Rationale.

Impacts: AMI-9

Description of Changes:
Excluded Populations
Change bullets

- Patients discharged/transferred to another hospital for inpatient care to Patients discharged to another hospital
- Patients discharged/transferred to hospice to Patients discharged to home for hospice care

Add bullet

- Patients discharged to a health care facility for hospice care

Remove bullet

- Patients discharged/transferred to a federal health care facility

Data Elements
Change *Discharge Status* to *Discharge Disposition* in the list of Denominator Data Elements.

Rationale: To reflect the allowable value exclusions for the new data element Discharge Disposition.

Acute Myocardial Infarction (AMI) Measure Information Flowchart (Algorithm)

Impacts: AMI-1, AMI-2, AMI-3, AMI-4, AMI-5, AMI-9, AMI-10

Description of Changes:
Remove *Discharge Status* decision point and associated logic from the algorithm.

Add new data element *Discharge Disposition* and associated logic in place of the *Discharge Status* decision point.

Rationale: To reflect the changes for the new data element Discharge Disposition.

Impacts: AMI-T1a

Description of Changes:
Measure Information Form - Collected For: CMS Only (Optional Test Measure)
Remove AMI-T1a MIF and Flowchart (Algorithm)

Add AMI-T1a LDL-Cholesterol Assessment was retired effective with April 01, 2011 discharges

Rationale: Maintain concordance with latest ACC/AHA performance measures and clinical guidelines. AMI-10 covers lipid management for AMI patients.

Impacts: AMI-T2

Description of Changes:
Measure Information Form - Collected For: CMS Only (Optional Test Measure)
Remove AMI-T2 MIF and Flowchart (Algorithm)

Add AMI-T2 Lipid-Lowering Therapy at Discharge was retired effective with April 01, 2011 discharges

Rationale: Maintain concordance with latest ACC/AHA performance measures and clinical guidelines. AMI-10 covers lipid management for AMI patients.

Heart Failure (HF) Measure Information Form

Impacts: HF-1, HF-2, HF-3, HF-4

Description of Changes:
HF Data Element List
Remove *Discharge Status* from the General Data Element Name and Collected For

Add *Discharge Disposition* to the HF Data Element Name and All HF Measures to the Collected For

Rationale: To be consistent with changes made to the Data Dictionary.

Impacts: HF-1

Description of Changes:
Included Populations
Change 2nd bullet under the Included Populations in the Denominator Statement to

- A discharge to home, home care or court/law enforcement

Data Elements
Change *Discharge Status* to *Discharge Disposition* in the list of Denominator Data Elements.

Rationale: To reflect the allowable value exclusions for the new data element Discharge Disposition.

Impacts: HF-2, HF-3, HF-4

Description of Changes:
Excluded Populations
Change bullets

- Patients discharged/transferred to another hospital for inpatient care to Patients discharged to another hospital
- Patient who left against medical advice or discontinued care to Patients who left against medical advice
- Patients discharged/transferred to hospice to Patients discharged to home for hospice care

Add bullet

- Patients discharged to a health care facility for hospice care

Remove bullet

- Patients discharged/transferred to a federal health care facility

Data Elements
Change *Discharge Status* to *Discharge Disposition* in the list of Denominator Data Elements.

Rationale: To reflect the allowable value exclusions for the new data element Discharge Disposition.

Heart Failure (HF) Measure Information Flowchart (Algorithm)

Impacts: HF-1, HF-2, HF-3, HF-4

Description of Changes:
Remove *Discharge Status* decision point and associated logic from the algorithm.

Add new data element *Discharge Disposition* and associated logic in place of the *Discharge Status* decision point.

Rationale: To reflect the changes for the new data element Discharge Disposition.

Pneumonia (PN) Measure Information Form

Impacts: PN-2, PN-3b, PN-4, PN-5, PN-5c, PN-7

Description of Changes:
PN Data Element List
Remove *Discharge Status* from the General Data Element Name and Collected For

Add *Discharge Disposition* to the PN Data Element Name and PN-2, PN-3b, PN-4, PN-5, PN-5c, PN-7 to the Collected For

Rationale: To be consistent with changes made to the Data Dictionary.

Impacts: PN-3a

Description of Changes:
Description:
Change to:
Pneumonia patients transferred or admitted to the ICU within 24 hours of hospital arrival, who had blood cultures performed within 24 hours prior to or the day prior to arrival, or within 24 hours after arrival to the hospital.

Rationale: Acceptance of documentation of blood culture collected the day prior to arrival

---

Impacts: PN-3a, PN-3b

Description of Changes:
Rationale:
Change:
CAP to pneumonia

Rationale: Clarification that the studies cited in the rationale included hospital acquired/ nosocomial pneumonia cases and community acquired pneumonia cases.

Impacts: PN-5, PN-5c

Description of Changes:
Rationale
Remove from first sentence:
'community acquired' before 'pneumonia'
"CAP' after 'pneumonia'

Remove from last sentence:
'CAP'

Add
'pneumonia'

Rationale: Clarification that the studies cited in the rationale included hospital acquired /nosocomial pneumonia cases and community acquired pneumonia cases.

Impacts: PN-2, PN-4, PN-7

Description of Changes:
Excluded Populations
Change bullets

- Patients discharged/transferred to another hospital for inpatient care to Patients discharged to another hospital
- Patient who left against medical advice or discontinued care to Patients who left against medical advice
- Patients discharged/transferred to hospice to Patients discharged to home for hospice care

Add bullet

- Patients discharged to a health care facility for hospice care

Remove bullet

- Patients discharged/transferred to a federal health care facility

Data Elements
Change *Discharge Status* to *Discharge Disposition* in the list of Denominator Data Elements.

Rationale: To reflect the allowable value exclusions for the new data element Discharge Disposition.

Impacts: PN-3b, PN-5, PN-5c

Description of Changes:
Excluded Populations
Change bullets

- Patients discharged/transferred to another hospital for inpatient care on day of or day after arrival to Patients discharged to another hospital on day of or day after arrival
- Patient who left against medical advice or discontinued care on day of or day after arrival to Patients who left against medical advice on day of or day after arrival

Remove bullet

- Patients discharged/transferred to a federal health care facility

Data Elements

Change *Discharge Status* to *Discharge Disposition* in the list of Denominator Data Elements.

Rationale: To reflect the allowable value exclusions for the new data element Discharge Disposition.

Impacts: PN-6, PN-6a, PN-6b

Description of Changes:
Pneumonia Antibiotic Consensus Recommendations
Non ICU Patient
Change to
β-lactam (IV or IM) Table 2.3 + either **Doxycycline (IV or PO)** Or **Tigecycline (IV)** Table 2.10

Rationale: Two recent studies have demonstrated Level 1 evidence for administration of Tigacycline. Even though there are a few patients that have allergies to both beta lactams and floroquinolones, this offers another option for the non ICU patient who cannot take another antibiotic regimen.

Impacts: PN-6, PN-6a, PN-6b

Description of Changes:
Pneumonia Antibiotic Consensus Recommendations
ICU Patient Under Antibiotic Recommendation
Change to
Antipseudomonal Quinolone (IV) Table 2.8 + either **β-lactam (IV)** Table 2.16 OR **Antipneumococcal**/ **Antipseudomonal β-lactam (IV)** Table 2.4 – *Regimen 2b*

Or

Antipneumococcal Quinolone (IV) Table 2.14 + either **β-lactam (IV)** Table 2.16 OR **Antipneumococcal**/ **Antipseudomonal β-lactam (IV)** Table 2.4 –*Regimen 2b*

Rationale: Clarification for abstractor

Impacts: PN-6, PN-6a, PN-6b

Description of Changes:
Pneumonia Antibiotic Consensus Recommendations
Add corresponding regimens from the algorithms to each of the antibiotic recommendations

Rationale: Regimen numbers from the PN 6 algorithm added after each recommendation in the table.

Impacts: PN-6, PN-6a, PN-6b

Description of Changes:
Pneumonia Antibiotic Consensus Recommendations
Non-ICU patient with Pseudomonal Risk
Add:
'Antipneumococcal' before **Antipseudomonal β-lactam**
For Regimen 5a and below where the antibiotics are listed out.

Rationale: Consistent with the name of Table 2.4

Pneumonia (PN) Measure Information Flowchart (Algorithm)

Impacts: PN-2, PN-3b, PN-4, PN-5, PN-5c, PN-7

Description of Changes:
Remove *Discharge Status* decision point and associated logic from the algorithm.

Add new data element *Discharge Disposition* and associated logic in place of the *Discharge Status* decision point.

Rationale: To reflect the changes for the new data element Discharge Disposition.

Impacts: PN-6, PN-6a, PN-6b

Description of Changes:
PN-6 Algorithm:
Remove variables "Regimen 1a, Regimen 2a, Regimen 3a, Regimen 4a, Regimen 5a, Regimen 6a, Regimen 7a" from the Variable Key, the "Initialize variables" process box, the non-ICU antibiotic regimen logic for PN-6.

Delete the offpage connector PN-6 P and replace it with measure category outcome 'E' in the non-ICU antibiotic regimen logic.

Change the offpage connectors for measure category outcomes 'E', 'B', 'D' and 'X' to on page connectors 'E', 'B' and 'X' respectively.

Delete all logic on page PN-6,6ab-16.

Add measure category outcome boxes and associated onpage and offpage measure category connectors to page PN-6, 6ab-15.

PN-6b Algorithm:
Remove variables "Regimen 1, Regimen 2, Regimen 3, Regimen 4, Regimen 5, Regimen 6, Regimen 7" from the Variable Key, "Initialize variables" process box, the non-ICU antibiotic regimen logic for PN-6b.
Delete the offpage connector PN-6 P and replace it with measure category outcome 'E' in the non-ICU antibiotic regimen logic.

Change the offpage connectors for measure category outcomes ‘E’, ‘B’, ‘D’ and ‘X’ to on page connectors ‘E’, ‘B’ and ‘X’ respectively.

Rationale:
The changes from the clinical impacts to the algorithms now no longer warrant the need for using internal variables in the logic. This eliminates the need for unnecessary code.

Surgical Care Improvement Project (SCIP) Measure Information Form

Impacts: N/A

Description of Changes:
SCIP Data Element List
Remove *Discharge Status* from the General Data Element Name and Collected For

Rationale: To be consistent with changes made to the Data Dictionary.

Impacts: SCIP-VTE-1, SCIP-VTE-2

Description of Changes:
SCIP-VTE-1 Denominator Statement - Excluded Populations
Change the 10th bullet to:

- Patients who stay less than two nights

SCIP-VTE-2 Denominator Statement - Excluded Populations
Change the 9th bullet to:

- Patients who stay less than two nights

Rationale: This change is to update to be consistent with the measure exclusions wherein patients with a Length of Stay that is less than 3 calendar days are excluded.

Impacts: SCIP-VTE-1, SCIP-VTE-2

Description of Changes:
Selected References
Change the last four references to:

- Abrams PJ, Emerson CR. Rivaroxaban: A Novel, Oral, Direct Factor Xa Inhibitor. *Pharmacotherapy.* February 2009:167-181
- Borris LC, Rivaroxaban, A New, Oral Direct Factor Xa Inhibitor for Thromboprophylaxis after Major Joint Arthroplasty. *Expert Opinion on Pharmacotherapy.* 2009 Apr,10(6):1083-8
- E*riksson B*I, *Kakkar A*K, Turpie AG, Gent M, Bandel TJ, Homering M, Misselwitz F, Lassen MR..Oral Rivaroxaban for the Prevention of symptomatic Venous Thromboembolism After Elective Hip and Knee Replacement. *Journal of Bone and Joint Surgery – British Volume.* Vol 91-B, Issue 5, 636-64
- Turpie AG, Lassen MR, Davidson BL, et. Al. Rivaroxaban versus enoxaprin for thromboprophylaxis after total knee arthroplasty (RECORD4): a randomized trial. *The Lancet,* Volume 373, Issue 9676, Pages 1673-180, 16 May 2009

Rationale: References updated

Surgical Care Improvement Project (SCIP) Measure Information Flowchart (Algorithm)

Impacts: SCIP-Inf-3

Description of Changes:
Algorithm
Remove allowable values '5', '6' and '7' from the logic for the data element *Reasons to Extend Antibiotics*.

Change the text in the branches flowing into the measure category 'B' from both the decision points for *Reasons to Extend Antibiotics,* from "Any = 1,2,3,4,5,6 and None = 7" to "Any = 1, 2, 3 and None = 4".

Change the text in the branches flowing into the measure category 'D' from both the decision points for *Reasons to Extend Antibiotics,* from "= 7" to "= 4".

Rationale: The data element is being revised by condensing the values to clearly delineate which allowable values require correlated documentation with the use of an antibiotic and the reasons that the use of the antibiotic was extended. Value 6 was removed because it was redundant to a value in Infection *Prior to Anesthesia.*

Impacts: SCIP-VTE-1, SCIP-VTE-2

Description of Changes:
Algorithm
Change the text in the arrow flowing to the right of the Length of Stay decision point from "<= 3" to "< 2".

Change the text in the arrow flowing down from the Length of Stay decision point from "> 2" to ">= 2".

Rationale: This change is to make the algorithm consistent with the measure exclusions wherein patients with Length of Stay less than 3 calendar days are excluded.

Impacts: SCIP-VTE-1, SCIP-VTE-2

Description of Changes:
Algorithm
Remove All entries of Value '8' coming off of each diamond labeled *VTE Prophyalaxis.*

Rationale: Rivaroxaban has not been approved FDA.

Impacts: SCIP-VTE-1, SCIP-VTE-2

Description of Changes:
Table: VTE Prophylaxis Options for Surgery
Under Surgery Type:
Elective Total Hip Replacement
Elective Total Knee Replacement
Hip Fracture Surgery

Remove from the following under: Recommended Prophylaxis Options1:
Oral Factor XA Inhibitor (Rivaroxaban)

Rationale: Rivaroxaban has not been FDA approved.

Children's Asthma Care (CAC) Measure Information Form

Impacts: CAC-3

Description of Changes:
CAC Data Element List
Remove: *Discharge Status* from the listing of the general data elements.

Add: *Discharge Disposition* to the listing of the Children's Asthma Care Data Elements

Rationale: To reflect what the final disposition of the patient was to determine if the appropriate care, treatment, education, etc. was provided.

Impacts: CAC-3

Description of Changes:
Included Populations
Change 3rd bullet under the Denominator Statement from Discharge to home to Patients discharged to home, home care, or court/law enforcement

Data Elements
Change *Discharge Status* to *Discharge Disposition* in the list of Denominator Data Elements.

Rationale: To reflect the allowable value exclusions for the new data element Discharge Disposition.

Impacts: CAC-1

Description of Changes:
Selected References
Add:

- Carroll W., Lenney W, Drug therapy in the management of acute asthma. Arch Dis Child Educ Pract Ed 2007;92:ep82-ep86
- National Institutes of Health, National Heart, Lung, and Blood Institute. National Asthma Education and Prevention Program. Expert panel report 3: guidelines for the diagnosis and management of asthma, National Institutes of Health, Bethesda (2007) NIH publication no. 07-4051.
- Stanley J. Szefler MD, Advances in pediatric asthma in 2009: Gaining control of childhood asthma. Journal of Allergy and Clinical Immunology Volume 125, Issue 1, January 2010, Pages 69-78

Remove:
Guidelines for the Diagnosis and Management of Asthma (EPR-3) (2007).
http://www.nhlbi.nih.gov

Rationale: Add current references which reflect updated guidelines.

Impacts: CAC-2

Description of Changes:
Selected References
Add:

- Carroll W., Lenney W, Drug therapy in the management of acute asthma. Arch Dis Child Educ Pract Ed 2007;92:ep82-ep86
- Fiel SB, Vincken W. Systemic corticosteroid therapy for acute asthma exacerbations.Asthma. J Asthma. 2006 Jun-Jul;43(5):321-31.
- National Institutes of Health, National Heart, Lung, and Blood Institute. National Asthma Education and Prevention Program. Expert panel report 3: guidelines for the diagnosis and management of asthma, National Institutes of Health, Bethesda (2007) NIH publication no. 07-4051.
- Schramm CM, Carroll CL. Advances in treating acute asthma exacerbations in children. Curr Opin Pediatr. 2009 Jun;21(3):326-32.
- Stanley J. Szefler MD, Advances in pediatric asthma in 2009: Gaining control of childhood asthma. Journal of Allergy and Clinical ImmunologyVolume 125, Issue 1, January 2010, Pages 69-78
- Tsai CL, Rowe BH, Sullivan AF, Camargo CA Jr. Factors associated with delayed use or nonuse of systemic corticosteroids in emergency department patients with acute asthma. Ann Allergy Asthma Immunol. 2009 Oct;103(4):318-24

Remove:
Guidelines for the Diagnosis and Management of Asthma (EPR-3) (2007). http://www.nhlbi.nih.gov

Rationale: Add current references which reflect updated guidelines.

Impacts: CAC-3

Description of Changes:
Algorithm Narrative
Change numbering of bullets to remove a duplicate #2 bullet

Rationale: Correction needed to algorithm narrative.

Impacts: CAC-3

Description of Changes:
Selected References
Add:

- Bhogal S, Zemek R, Ducharme FM, Written action plans for asthma in children. Cochrane Database Syst Rev. 2006 Jul 19;3:CD005306
- Ducharme FM, Bhogal SK. The role of written action plans in childhood asthma. Curr Opin Allergy Clin Immunol. 2008 Apr;8(2):177-88

- National Institutes of Health, National Heart, Lung, and Blood Institute. National Asthma Education and Prevention Program. Expert panel report 3: guidelines for the diagnosis and management of asthma, National Institutes of Health, Bethesda (2007) NIH publication no. 07-4051.
- Schramm CM, Carroll CL. Advances in treating acute asthma exacerbations in children. Curr Opin Pediatr. 2009 Jun;21(3):326-32.

Remove:
Guidelines for the Diagnosis and Management of Asthma (EPR-3) (2007).
http://www.nhlbi.nih.gov

Rationale: Add current references which reflect updated guidelines.

Children's Asthma Care (CAC) Measure Information Flowchart (Algorithm)

Impacts: CAC-3

Description of Changes:
Remove *Discharge Status* decision point and associated logic from the algorithm.

Add new data element *Discharge Disposition* and associated logic in place of the *Discharge Status* decision point.

Rationale: To reflect the changes for the new data element Discharge Disposition.

Venous Thromboembolism (VTE) Measure Information Form

Impacts: VTE-3, VTE-4, VTE-5

Description of Changes:
VTE Data Element List
Remove *Discharge Status* from the General Data Element Name and Collected For

Add *Discharge Disposition* to the VTE Data Element Name and VTE-3, VTE-4, VTE-5 to the Collected For

Rationale: To be consistent with changes made to the Data Dictionary

---

Impacts: VTE-3, VTE-4

Description of Changes:
Excluded Populations
Add bullets

- Patients discharged to another hospital
- Patients who left against medical advice
- Patients who expired
- Patients discharged to home for hospice care
- Patients discharged to a health care facility for hospice care

Add to **Denominator Data Elements:**

- *Discharge Disposition*

Rationale: To exclude patients with specific discharge dispositions from the denominator.

Impacts: VTE-5

Description of Changes:
Description
Change "Description" from:
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 **all** four criteria: compliance issues, dietary advice, follow-up monitoring, and information about the potential for adverse drug reactions/interactions.
To:
This measure assesses the number of patients diagnosed with confirmed VTE that are discharged to home, home care, court/law enforcement or home on hospice care on warfarin with written instructions that address **all** four criteria: compliance issues, dietary advice, follow-up monitoring, and information about the potential for adverse drug reactions/interactions.

Rationale: To reflect the allowable value exclusions for the new data element Discharge Disposition.

Impacts: VTE-5

Description of Changes:
Included Populations
Change 2nd bullet under the Included Populations in the Denominator Statement to:

- Discharged to home, home care or court/law enforcement

Change 3rd bullet under the Included Populations in the Denominator Statement to:

- Discharged to home for hospice care

Remove 4rd and 5th bullets:

- Discharged to home hospice
- Discharged/transferred to court/law enforcement

Data Elements
Change *Discharge Status* to *Discharge Disposition* in the list of Denominator Data Elements.

Rationale: To reflect the allowable value exclusions for the new data element Discharge Disposition.

Impacts: VTE-6

Description of Changes:
Sampling
Change the sampling information from:
Yes
To:
No

Rationale: The population for VTE-6 is 100% of 'Other 'VTE codes on Tables 7.03 and 7.04. No sampling is allowed.

Venous Thromboembolism (VTE) Measure Information Flowchart (Algorithm)

Impacts: VTE-1, VTE-2

Description of Changes:
Algorithm for VTE-1
Add branch to Initial Prophylaxis Day when day < 0 to flow to measure category outcome 'X'.

Algorithm for VTE-2

Add branch to ICU Initial Prophylaxis Day when day < 0 to flow to measure category outcome 'X'.

Rationale: Since the initial prophylaxis day is based on admission day, prophylaxis given in the ED results in a negative number that cannot be handled in the current algorithm. Adding a branch to the derived value that calculates the initial prophylaxis day will allow the abstractor an opportunity to evaluate prophylaxis on the day of or the day after admission.

Impacts: VTE-1

Description of Changes:
Algorithm for VTE-1
Change VTE Prophylaxis branch value = "ANY=1,2,3,4,5,6,7,8 And NONE=A" to "ANY=1,2,3,4,5,6,7 And NONE=A"

Rationale: Rivaroxaban has not been approved by the FDA.

Impacts: VTE-5

Description of Changes:
Remove *Discharge Status* decision point and associated logic from the algorithm.

Add new data element *Discharge Disposition* and associated logic in place of the *Discharge Status* decision point.

Rationale: To reflect the changes for the new data element Discharge Disposition.

Impacts: VTE-1

Description of Changes:
Algorithm
Change the branches, which start *"ICU Admission or Transfer"* and end *"Initial ICU Day"*,
from between *"Initial Prophylaxis Days"* and *"Surgical Procedure"*
to between *"Clinical Trial"* check equals 'N' and *"VTE Prophylaxis"*

Rationale: Need to move the data element ICU admission or Transfer to exclude patients who were direct admits to the ICU or stayed less than one day before checking VTE prophylaxis administration.

Impacts: VTE-2

Description of Changes:
Algorithm

Change ICU VTE Prophylaxis branch value = “ANY=1,2,3,4,5,6,7,8 and NOT =A” to “ANY=1,2,3,4,5,6,7 And NOT=A”

Rationale: Rivaroxaban has not been approved by the FDA

Impacts: VTE-3, VTE-4

Description of Changes:
Add new data element *Discharge Disposition* and associated logic below decision point *Clinical Trial* to exclude cases with allowable values “2, 3, 4, 6, 7” and allow cases with values “1, 5, 8” to flow through.

Rationale: To exclude patients with specific discharge dispositions and reflect the allowable value exclusions for the new data element Discharge Disposition.

Stroke (STK) Measure Information Form

Impacts: STK-4

Description of Changes:
References:
Add

- Del Zoppo, GJ, Saver JL, Jauch EC, Adams HP. Expansion of the Time Window for Treatment of Acute Ischemic Stroke With Intravenous Tissue Plasminogen Activator: A Science Advisory From the American Heart Association/ American Stroke Association. *Stroke*. 2009;40:2945-2948.
- Hacke W, Kaste M, Bluhmki E, Brozman M, Davalos A, Gidetti D, et. al. Thrombolysis with Alteplase 3 to 4.5 hours after acute ischemic stroke. The European Cooperative Acute Stroke Study (ECASS) Investigators. *NEJM.* 2008;359(13):1317-29.

Rationale: Update references.

Impacts: STK-2, STK-3, STK-6, STK-8, STK-10

Description of Changes:
STK Data Element List
Remove *Discharge Status* from the General Data Element Name and Collected For

Add *Discharge Disposition* to the STK Data Element Name and STK-2, STK-3, STK-6, STK-8, STK-10 to the Collected For

Rationale: To be consistent with changes made to the Data Dictionary.

Impacts: STK-8

Description of Changes:
Included Populations
Change 2nd bullet under the Included Populations in the Denominator Statement to

- A discharge to home, home care or court/law enforcement

Data Elements
Change *Discharge Status* to *Discharge Disposition* in the list of Denominator Data Elements.

Rationale: To reflect the allowable value exclusions for the new data element Discharge Disposition.

Impacts: STK-2, STK-3, STK-6, STK-10

Description of Changes:
Excluded Populations

Change bullets
- Patients discharged/transferred to another hospital for inpatient care to Patients discharged to another hospital
- Patient who left against medical advice or discontinued care to Patients who left against medical advice
- Patients discharged/transferred to hospice to Patients discharged to home for hospice care

Add bullet
- Patients discharged to a health care facility for hospice care

Remove bullet
- Patients discharged/transferred to a federal health care facility

Data Elements
Change *Discharge Status* to *Discharge Disposition* in the list of Denominator Data Elements.

Rationale: To reflect the allowable value exclusions for the new data element Discharge Disposition.

Stroke (STK) Measure Information Flowchart (Algorithm)

Impacts: STK-1

Description of Changes:
Algorithm for STK-1
Add branch to VTE Prophylaxis Day when day < 0 to flow to measure category outcome 'X'.

Rationale: Since the initial prophylaxis day is based on admission day, prophylaxis given in the ED results in a negative number that cannot be handled in the current algorithm. Adding a branch to the derived value that calculates the initial prophylaxis day will allow the abstractor an opportunity to evaluate prophylaxis on the day of or the day after admission.

Impacts: STK-1

Description of Changes:
Algorithm for STK-1
Change VTE Prophylaxis branch value = "ANY=1,2,3,5,6,7,8 And NONE=A,4" to "ANY=1,2,3,5,6,7 And NONE=A,4"

Rationale: Rivaroxaban has not been approved by the FDA.

Impacts: STK-2, STK-3, STK-6, STK-8, STK-10

Description of Changes:
Remove Discharge Status decision point and associated logic from the algorithm.

Add new data element Discharge Disposition and associated logic in place of the Discharge Status decision point.

Rationale: To reflect the changes for the new data element Discharge Disposition.

Emergency Department (ED) Measure Information Form

Impacts: N/A

Description of Changes:
ED Data Element List
Remove *Discharge Status* from the General Data Element Name and Collected For

Rationale: To be consistent with changes made to the Data Dictionary.

Emergency Department (ED) Measure Information Flowchart (Algorithm)

Impacts: ED-1

Description of Changes:
Algorithm
Remove the < 0 minutes branch going from Measurement Value to the "Y" measure outcome.

Rationale: The Arrival Date and Time cannot be prior to the ED Departure Date and Time.

Impacts: ED-2

Description of Changes:
Algorithm
Remove the < 0 minutes branch going from Measurement Value to the "Y" measure outcome.

Rationale: The ED Departure Date and Time should not be prior to the Decision to Admit Date and Time.

Prevention (Prev-Imm) Measure Information Form

Impacts: Prev-2

Description of Changes:
The Prevention Measures have been updated to reflect changes in the ACIP/CDC vaccination recommendations. These measures still remain Informational Only

Rationale: To be consistent with ACIP/CDC current influenza vaccination recommendations. New recommendations include all people age 6 months and older and highlights the importance of preventing influenza across the entire population.

Impacts: Prev-1, Prev-2

Description of Changes:
Prev Data Element List
Remove *Discharge Status* from the General Data Element Name and Collected For

Rationale: To be consistent with changes made to the Data Dictionary.

Impacts: Prev-1, Prev-2

Description of Changes:
Excluded Populations
Change bullet

- Patients who expire prior to hospital discharge to Patients who expired

Data Elements
Change *Discharge Status* to *Discharge Disposition* in the list of Denominator Data Elements.

Rationale: To reflect the allowable value exclusions for the new data element Discharge Disposition.

Prevention (Prev-Imm) Measure Information Flowchart (Algorithm)

Impacts: Prev-1, Prev-2

Description of Changes:
Remove *Discharge Status* decision point and associated logic from the algorithm.

Add new data element *Discharge Disposition* and associated logic in place of the *Discharge Status* decision point.

Rationale: To reflect the changes for the new data element Discharge Disposition.

Missing and Invalid Data

Impacts: N/A

Description of Changes:
Missing and Invalid Episode of Care (EOC) Data

Change 1st sentence of the 1st paragraph from "The QIO Clinical Warehouse and the Joint Commission's Data Warehouse evaluates patient data using the same missing, invalid and data integrity edits." to "The QIO Clinical Warehouse and the Joint Commission's Data Warehouse evaluate patient data using the missing, invalid and data integrity edits.

Add after 1st sentence of the 1st paragraph:
Refer to the Edit Message documents located on QualityNet for CMS, and on the Upload/Download page in the HCD section on PET for Joint Commission, for a complete listing of all critical and informational edits.

Rationale: To provide clarification as to where the edit message documents can be found for the QIO Clinical Warehouse and The Joint Commission's Data Warehouse. In addition, to correct an error as there are edits not shared by both warehouses.

Impacts: SCIP-VTE-1, SCIP-VTE-2, STK-1, VTE-1

Description of Changes:
Missing and Invalid Episode of Care (EOC) Data
Change the allowable values for VTE Prophylaxis from 1 – 8 to 1 – 7 in the 5th sub-bullet of the 4th bullet.

Rationale: To be consistent with changes to the data element.

Data Transmission

Impacts: N/A

Description of Changes:
Introduction
Change the last sentence in the 7th paragraph from "In addition, it highlights the processing differences between the two warehouses." to "In addition, it highlights the processing differences between the two warehouses and the decision points as to when cases are rejected from the respective warehouses."

Add after the last sentence in the 7th paragraph: Refer to the Edit Message documents located on QualityNet for CMS, and on the Upload/Download page in the HCD section of PET for The Joint Commission, for a complete listing of all critical and informational edits.

Joint Commission Data Transmission – Hospital Clinical Data
Change the 2nd sentence in the 2nd bullet, Transaction Processing, from "In order to replace or delete an existing file at The Joint Commission, the files must match on the unique key data elements as defined above." to "In order to delete an existing file, the files must match on the unique key data elements as defined above."
Add after the 2nd sentence in the 2nd bullet, Transaction Processing: In order to update a key element in an existing file, the file must be deleted and a new file must be submitted. If the element to update is not a key element, then the file can be resubmitted using the 'Add' Action-Code; there is no need to delete the file first as long as the file matches on the unique key data elements.

CMS and Joint Commission Guidelines for Submission of Hospital Clinical Data – Patient-Level Clinical Data XML-File Layout
Change bullet 'a.' under Submission and Action-Code from "Add (applicable to a file submitted for the first time for the hospital/time period or to a file being submitted as a replacement of an existing file already submitted for a provider)." to "Add (applicable to a file submitted for the first time for the hospital/time period or to a file being submitted as an update/replacement of an existing file already submitted for a provider)."

Rationale: To provide clarification as to where the edit message documents can be found for the QIO Clinical Warehouse and The Joint Commission's Data Warehouse. And to provide clarification regarding where cases are rejected in the processing of a file and the replacing of a file for The Joint Commission.

Impacts: SCIP-VTE-1, SCIP-VTE-2, STK-1, VTE-1

Description of Changes:
CMS and Joint Commission Guidelines for Submission of Hospital Clinical Data – Missing Data Policy
Change the allowable values for VTE Prophylaxis from 1 – 8 to 1 – 7 in the 5th bullet.

Rationale: To be consistent with changes to the data element.

Transmission Alphabetical Data Dictionary

Data Element Name: *Predicted Value*

Description of Changes:
Allowable Values:
Change "seventeen" to "twenty-five" in the 2nd bullet under the JOINT COMMISSION NOTE TO PROGRAMMERS

Rationale: To be consistent with changes made to the data dictionary and align with the IPPS Final Rule.

Transmission Data Processing Flow: Population and Sampling

Impacts: N/A

Description of Changes:
Change last diamond in the algorithm from "Joint Commission Exception Database" to "Joint Commission Pending Database"

Rationale: To correct typo in the algorithm.

Hospital Clinical Data XML File Layout

Data Element Name: Clinical Trial

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Remove AMI-T1a and AMI-T2 from the Programming Notes

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: Comfort Measures Only

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Remove AMI-T1a and AMI-T2 from the Applicable Measure(s) and Programming Notes

Rationale: Retirement of AMI-T1a and AMI-T2

Data Element Name: Discharge Disposition

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Add Date Element: Discharge Disposition

Rationale: To align with changes to the Alphabetical Data Dictionary.

Data Element Name: Discharge Status

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Remove Discharge Status

Rationale: To align with changes to the Alphabetical Data Dictionary.

Data Element Name: First In-Hospital LDL-Cholesterol Qualitative Description

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Remove First In-Hospital LDL-Cholesterol Qualitative Description

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: First In-Hospital LDL-Cholesterol Value

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Remove First In-Hospital LDL-Cholesterol Value

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: ICD-9-CM Other Diagnsois Codes

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Change Occurs from 17 to 24

Rationale: To align with changes to the Alphabetical Data Dictionary.

Data Element Name: ICD-9-CM Other Procedure Codes

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Change Occurs from 5 to 24

Rationale: To align with changes to the Alphabetical Data Dictionary.

Data Element Name: ICD-9-CM Other Procedure Dates

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Change Occurs from 5 to 24

Rationale: To align with changes to the Alphabetical Data Dictionary.

Data Element Name: ICU VTE Prophylaxis

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Change Occurs from 1 – 8 to 1 – 7

Remove value 8 from Answer Code and Oral Factor Xa Inhibitor from Answer Value

Rationale: To align with changes to the Alphabetical Data Dictionary.

Data Element Name: In-Hospital LDL-Cholesterol Test

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Remove In-Hospital LDL-Cholesterol Test

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: Lipid-Lowering Agent Prescribed at Discharge

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Remove Lipid-Lowering Agent Prescribed at Discharge

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: Plan for LDL-Cholesterol Test

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Remove Plan for LDL-Cholesterol Test

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: Pneumococcal Vaccination Status

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Add to the end of value 4, in the Answer Value, "OR received the shingles vaccine (Zostavax) within the last 4 weeks

Rationale: To align with changes to the Alphabetical Data Dictionary.

Data Element Name: Pre-Arrival LDL-Cholesterol Qualitative Description

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Remove Pre-Arrival LDL-Cholesterol Qualitative Description

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: Pre-Arrival Cholesterol Test

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Remove Pre-Arrival LDL-Cholesterol Test

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: Pre-Arrival Cholesterol Value

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Remove Pre-Arrival Cholesterol Value

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: Pre-Arrival Lipid-Lowering Agent

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Remove AMI-T1a and AMI-T2 from the Applicable Measure(s) and Programming Notes

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: Reason for No LDL-Cholesterol Testing

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Remove Reason for No LDL-Cholesterol Testing

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: Reason for No Lipid-Lowering Therapy

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Remove Reason for No Lipid-Lowering Therapy

Rationale: Retirement of AMI-T1a and AMI-T2.

Data Element Name: Reasons to Extend Antibiotics

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Change "by the physician/APN/PA" to "by a physician/APN/PA" in the Suggested Data Collection Question

Change the Occurs from 1 - 6 to 1 – 3

Change the Answer Code and Answer Value to:

1. There is physician/advanced practice nurse/physician assistant (physician/APN/PA) documentation that the patient had an infection postoperatively following the principal procedure.

2. The principal procedure was a lower extremity original or revision arthroplasty and there is physician/APN/PA documentation of a current benign or malignant bone tumor of the operative extremity.
3. There is physician/APN/PA documentation of any of (and only) the following reasons to extend antibiotics: Erythromycin was administered postoperatively for the purpose of increasing gastric motility OR an antibiotic was administered postoperatively for the treatment of hepatic encephalopathy OR an antibiotic was administered postoperatively as prophylaxis of Pneumocystis pneumonia (PCP) to a patient with a diagnosis of AIDS.
4. No documented reason/Unable to Determine.

Change the number '7' to '4' in the last sentence in the Programming Notes

Rationale: To align with changes to the Alphabetical Data Dictionary.

Data Element Name: Systemic Corticosteroids Administered

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Change the Suggested Data Collection Question to "Did the patient receive oral, IM, or intravenous corticosteroids during this hospitalization?

Rationale: To align with changes to the Alphabetical Data Dictionary.

Data Element Name: VTE Prophylaxis

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Change the Occurs from 1 – 8 to 1 – 7

Remove value 8 from the Answer Code and Oral Factor Xa Inhibitor from the Answer Value

Rationale: To align with changes to the Alphabetical Data Dictionary.

Data Element Name: VTE Timely

Impacts: N/A

Description of Changes:
Hospital Clinical Data – Detail Elements Information
Change the Occurs from 1 – 8 to 1 – 7

Rationale: To align with changes to the Alphabetical Data Dictionary.

CMS Outcome Measures (Claim Based)

Risk Standardized Mortality Measures (MORT)

Impacts: N/A

Description of Changes:
Introduction
Change in the title CMS to:
Centers for Medicare & Medicaid Services (CMS)

Change the 3rd paragraph 1st sentence to:
These measures were developed by a team of clinical and statistical experts form the Yale University/Yale New Haven Health Services Corporation Center for Outcomes Research and Evaluation (YNHHSC-CORE) and Harvard University, through a CMS contract with the Colorado Foundation for Medical Care (CFMC).

Rationale: Adjusted language for clarity

Impacts: MORT-30-AMI

Description of Changes:
Improvement Noted As
Change:
'rate' to 'RSMR'

Numerator Statement
Add:
This outcome measure does not have a traditional numerator and denominator like a core process measure (e.g., percentage of adult patients with diabetes aged 18-75 years receiving one or more hemoglobin A1c tests per year); thus, we are using this field to define our statistically-adjusted outcome measure. The calculation of the rate is defined below under Measure Calculation.

The outcome for this measure is 30-day all-cause mortality. We define mortality as death from any cause within 30 days after the index admission date.

Denominator Statement
Add:
The target population for this measure includes admissions for Medicare Fee-For-Service (FFS) beneficiaries aged greater than or equal to 65 years discharged from the hospital with a principal discharge diagnosis of AMI and with a complete claims history for 12 months prior to admission.

Included Populations
Remove in the 1st sentence 'age' after 'beneficiaries'

Add in the 1st sentence 'of age' after 'years'

Change in the 3rd sentence 'episode' to 'outcome'

Excluded Populations

Add:

The measure excludes admissions for patients:

- Who were discharged on the day of admission or the following day and did not die or get transferred (because it is less likely they had a diagnosis of AMI);
- With inconsistent or unknown mortality status or other unreliable data (e.g. date of death precedes admission date);
- Enrolled in the Medicare Hospice program any time in the 12 months prior to the index hospitalization including the first day of the index admission (since it is likely these patients are continuing to seek comfort measures only);
- Who were discharged alive and against medical advice (AMA) (because providers did not have the opportunity to deliver full care and prepare the patient for discharge);
- That were not the first hospitalization in the 30 days prior to a patient's death. This exclusion criterion is applied after one admission per patient per year is randomly selected. It only applies when two randomly selected admissions occur during the transition months (December and January for calendar-year data) and the patient subsequently dies. For example: a patient is admitted on December 18th, 2006 and readmitted on January 2nd, 2007; the patient dies on January 15th, 2007. If both of these admissions are randomly selected for inclusion (one for the 2006 calendar year time period and the other for the 2007 calendar year time period), the January 2, 2007 admission will be excluded to avoid assigning the death to two admissions (one in 2006 and one in 2007).

Remove:

1. Admissions for patients who are discharged on the day of admission or the next day and did not die or transfer because it is unlikely they had an AMI.
2. Admissions in which the patient was transferred from another hospital because the death is attributed to the hospital where the patient was initially admitted.
3. Admissions for patients with inconsistent or unknown mortality status or other unreliable data (e.g. date of death (DoD) precedes admission date or DoD precedes discharge date of a patient who is discharged alive).
4. Admissions for patients enrolled in the Medicare Hospice program any time in the 12 months prior to the index hospitalization including the first day of the index admission since it is likely these patients are continuing to seek comfort measures only.
5. Admissions for patients who are discharged against medical advice (AMA) because providers did not have the opportunity to deliver full care and prepare the patient for discharge.
6. Admissions that were not the first hospitalization in the 30 days prior to a patient's death. This exclusion criterion was applied after one admission per patient per year was randomly selected. It *only* applies when two randomly selected admissions occur during the transition months (December and January for calendar-year data; June and July for split-year data) and the patient subsequently dies. For example: a patient is admitted on December 18th, 2006 and readmitted on January 2nd, 2007; the patient dies on January 15th, 2007. If both of these admissions are randomly selected for inclusion (one for the 2006 calendar year time period and the other for the 2007 calendar year time period),

the January 2, 2007 admission will be excluded to avoid assigning the death to two admissions (one in 2006 and one in 2007).

Risk Adjustment
Change the 1st sentence to:
Information from Medicare inpatient claims, physician Part B claims and hospital outpatient claims are used for risk adjustment.

Remove:
To account for the natural clustering of observations within hospitals, hierarchical generalized linear models (HGLM) are used to calculate the log-odds of mortality within 30 days of admission as a function of patient demographic and clinical variables and a random hospital-specific effect. This strategy accounts for within-hospital correlation of observed outcomes and separates within-hospital variation from between-hospital variation in mortality. This approach models the assumption that underlying differences in quality among hospitals lead to systematic differences among hospital outcomes. Risk-standardized mortality rates (RSMRs) for each hospital are calculated as the ratio of "predicted" to "expected" mortality, multiplied by the national observed mortality rate. Hospitals with small volumes of AMI cases, (particularly those with fewer than 10 patients), will have predicted risk-standardized mortality rates (RSMRs) that are near the national average because these institutions do not have sufficient patient-level information for an informed estimate of their performance.

Model Validation
Add in the 1st sentence 'Initiative' after 'Project'

Remove:
(SE-0.003)

Data Reported As
Add after 'rate':
'for Medicare FFS beneficiaries aged 65 years or older with a principal discharge diagnosis of AMI'

Measure Calculation
Add:
The measure estimates hospital-level 30-day all-cause RSMR for AMI using hierarchical logistic regression modeling (a form of hierarchical generalized linear modeling [HGLM]). In brief, the approach simultaneously models two levels (patient and hospital) to account for the variance in patient outcomes within and between hospitals. At the patient level, each model adjusts the log-odds of mortality within 30 days of discharge for age, sex, selected clinical covariates, and a hospital-specific intercept. The second level models the hospital-specific intercepts as arising from a normal distribution. The hospital intercept represents the underlying risk of mortality at the hospital, after accounting for patient risk. The hospital-specific intercepts are given a distribution in order to account for the clustering (non-independence) of patients within the same hospital. If there were no differences among hospitals, then adjustment for patient risk would yield hospital intercepts that should be identical across all hospitals.

The RSMR is calculated as the ratio of the number of "predicted" to the number of "expected" deaths, multiplied by the national unadjusted mortality rate. For each

hospital, the “numerator” of the ratio is the number of deaths within 30 days predicted on the basis of the hospital’s performance with its observed case mix, and the “denominator” is the number of deaths expected on the basis of the nation’s performance with that hospital’s case mix. This approach is analogous to a ratio of “observed” to “expected” used in other types of statistical analyses. It conceptually allows for a comparison of a particular hospital’s performance given its case mix to an average hospital’s performance with the same case mix. Thus, a lower ratio indicates lower-than-expected mortality (i.e., better quality), and a higher ratio indicates higher-than-expected mortality (i.e., worse quality).

The predicted hospital outcome (the numerator) is calculated by regressing the risk factors and the hospital-specific intercept on the risk of mortality, multiplying the estimated regression coefficients by the patient characteristics in the hospital, transforming, and then summing over all patients attributed to the hospital to get a value. The expected number of deaths (the denominator) is obtained by regressing the risk factors and a common intercept on the mortality outcome using all hospitals in our sample, multiplying the subsequent estimated regression coefficients by the patient characteristics observed in the hospital, transforming, and then summing over all patients in the hospital to get a value. To assess hospital performance in any reporting period, we re-estimate the model coefficients using the years of data in that period.

The statistical modeling approach is described fully in the original methodology report.

Selected References
Add:
Normand S-LT, Shahian DM. 2007. Statistical and clinical aspects of hospital outcomes profiling. *Stat Sci* 22(2):206-226.

Rationale:
- Adjusted language for clarity
- Added reference for those who would like additional background info
- Updated Exclusion Criteria field to reflect latest text in our reports (did not make any technical changes to exclusions, just text edits)
- Added Measure Calculation field and updated text in Numerator/Denominator fields to better explain how our we calculate the risk-standardized rates

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Impacts: MORT-30-HF

Description of Changes:
Improvement Noted As
Change to:
A decrease in the risk-standardized mortality rate (RSMR).

Numerator Statement
Add:
This outcome measure does not have a traditional numerator and denominator like a core process measure (e.g., percentage of adult patients with diabetes aged 18-75 years receiving one or more hemoglobin A1c tests per year); thus, we are using this field to

define our statistically-adjusted outcome measure. The calculation of the rate is defined below under Measure Calculation.

The outcome for this measure is 30 day all-cause mortality. We define mortality as death from any cause within 30 days after the index admission date.

Denominator Statement
Add:
The target population for this measure includes admissions for Medicare Fee-For-Service (FFS) beneficiaries ages greater than or equal to 65 years discharged from the hospital with a principal discharge diagnosis of HF and with a complete claims history for 12 months prior to admission.

Included Populations
Remove in the 1st sentence 'age' after 'beneficiaries'

Add in the 1st sentence 'of age' after 'years'

Excluded Populations
Add:
The measure excludes admissions for patients:

- Who were discharged on the day of admission or the following day and did not die or get transferred (because it is less likely they had a diagnosis of HF);
- With inconsistent or unknown mortality status or other unreliable data (e.g. date of death precedes admission date);
- Enrolled in the Medicare Hospice program any time in the 12 months prior to the index hospitalization including the first day of the index admission (since it is likely these patients are continuing to seek comfort measures only);
- Who were discharged alive and against medical advice (AMA) (because providers did not have the opportunity to deliver full care and prepare the patient for discharge);
- That were not the first hospitalization in the 30 days prior to a patient's death. This exclusion criterion is applied after one admission per patient per year is randomly selected. It only applies when two randomly selected admissions occur during the transition months (December and January for calendar-year data) and the patient subsequently dies. For example: a patient is admitted on December 18th, 2006 and readmitted on January 2nd, 2007; the patient dies on January 15th, 2007. If both of these admissions are randomly selected for inclusion (one for the 2006 calendar year time period and the other for the 2007 calendar year time period), the January 2, 2007 admission will be excluded to avoid assigning the death to two admissions (one in 2006 and one in 2007).

Remove:

1. Admissions for patients who are discharged on the day of admission or the next day and did not die or transfer because it is unlikely they had HF.
2. Admissions in which the patient was transferred from another hospital because the death is attributed to the hospital where the patient was initially admitted.
3. Admissions for patients with inconsistent or unknown mortality status or other unreliable data (e.g. date of death [DoD] precedes admission date or DoD precedes discharge date of a patient who is discharged alive).

4. Admissions for patients enrolled in the Medicare Hospice program any time in the 12 months prior to the index hospitalization including the first day of the index admission since it is likely these patients are continuing to seek comfort measures only, and the goal of these hospitalizations is not survival.
5. Admissions for patients who are discharged against medical advice (AMA) because providers did not have the opportunity to deliver full care and prepare the patient for discharge.
6. Admissions that were not the first hospitalization in the 30 days prior to a patient's death. This exclusion criterion was applied after one admission per patient per year was randomly selected. It *only* applies when two randomly selected admissions occur during the transition months (December and January for calendar-year data; June and July for split-year data) and the patient subsequently dies. For example: a patient is admitted on December 18th, 2006 and readmitted on January 2nd, 2007; the patient dies on January 15th, 2007. If both of these admissions are randomly selected for inclusion (one for the 2006 calendar year time period and the other for the 2007 calendar year time period), the January 2, 2007 admission will be excluded to avoid assigning the death to two admissions (one in 2006 and one in 2007).

Risk Adjustment
Change the 1st change to:
Information from Medicare inpatient claims, physician Part B claims and hospital outpatient claims are used for risk adjustment.

Remove:
To account for the natural clustering of observations within hospitals, hierarchical generalized linear models (HGLM) are used to calculate the log-odds of mortality within 30 days of admission as a function of patient demographic and clinical variables and a random hospital-specific effect. This strategy accounts for within-hospital correlation of observed outcomes and separates within-hospital variation from between-hospital variation in mortality. This approach models the assumption that underlying differences in quality among hospitals lead to systematic differences among hospital outcomes.

Risk-standardized mortality rates for each hospital are calculated as the ratio of "predicted" to "expected" mortality, multiplied by the national observed mortality rate. Hospitals with small volumes of HF cases, (particularly those with fewer than 10 patients), will have predicted risk-standardized mortality rates (RSMRs) that are near the national average because these institutions do not have sufficient patient-level information for an informed estimate of their performance.

Model Validation
Remove:
(SE-0.02)

Data Reported As
Remove:
Condition-specific, hospital-specific, risk-standardized, all-cause 30-day mortality rate.

Measure Calculation
Add:

The measure estimates hospital-level 30 day all-cause RSMR for HF using hierarchical logistic regression modeling (a form of hierarchical generalized linear modeling [HGLM]). In brief, the approach simultaneously models two levels (patient and hospital) to account for the variance in patient outcomes within and between hospitals. At the patient level, each model adjusts the log-odds of mortality within 30 days of discharge for age, sex, selected clinical covariates, and a hospital-specific intercept. The second level models the hospital-specific intercepts as arising from a normal distribution. The hospital intercept represents the underlying risk of mortality at the hospital, after accounting for patient risk. The hospital-specific intercepts are given a distribution in order to account for the clustering (non-independence) of patients within the same hospital. If there were no differences among hospitals, then adjustment for patient risk would yield hospital intercepts that should be identical across all hospitals.

The RSMR is calculated as the ratio of the number of "predicted" to the number of "expected" deaths, multiplied by the national unadjusted mortality rate. For each hospital, the "numerator" of the ratio is the number of deaths within 30 days predicted on the basis of the hospital's performance with its observed case mix, and the "denominator" is the number of deaths expected on the basis of the nation's performance with that hospital's case mix. This approach is analogous to a ratio of "observed" to "expected" used in other types of statistical analyses. It conceptually allows for a comparison of a particular hospital's performance given its case mix to an average hospital's performance with the same case mix. Thus, a lower ratio indicates lower-than-expected mortality (i.e., better quality), and a higher ratio indicates higher-than-expected mortality (i.e., worse quality).

The predicted hospital outcome (the numerator) is calculated by regressing the risk factors and the hospital-specific intercept on the risk of mortality, multiplying the estimated regression coefficients by the patient characteristics in the hospital, transforming, and then summing over all patients attributed to the hospital to get a value. The expected number of deaths (the denominator) is obtained by regressing the risk factors and a common intercept on the mortality outcome using all hospitals in our sample, multiplying the subsequent estimated regression coefficients by the patient characteristics observed in the hospital, transforming, and then summing over all patients in the hospital to get a value. To assess hospital performance in any reporting period, we re-estimate the model coefficients using the years of data in that period.

The statistical modeling approach is described fully in the original methodology report.

Selected References

Add:

- Normand S-LT, Shahian DM. 2007. Statistical and clinical aspects of hospital outcomes profiling. *Stat Sci* 22(2):206-226.

Rationale:

- Adjusted language for clarity
- Added reference for those who would like additional background info
- Updated Exclusion Criteria field to reflect latest text in our reports (did not make any technical changes to exclusions, just text edits)
- Added Measure Calculation field and updated text in Numerator/Denominator fields to better explain how our we calculate the risk-standardized rates

Impacts: MORT-30-PN

Description of Changes:
Improvement Noted As
Change:
'rate' to 'RSMR'

Numerator Statement
Add:
This outcome measure does not have a traditional numerator and denominator like a core process measure (e.g., percentage of adult patients with diabetes aged 18-75 years receiving one or more hemoglobin A1c tests per year); thus, we are using this field to define our statistically-adjusted outcome measure. The calculation of the rate is defined below under Measure Calculation.

The outcome for this measure is 30-day all-cause mortality. We define mortality as death from any cause within 30 days after the index admission date.

Denominator Statement
Add:
The target population for this measure includes admissions for Medicare Fee-For-Service (FFS) beneficiaries aged greater than or equal to 65 years discharged from the hospital with a principal discharge diagnosis of PN and with a complete claims history for 12 months prior to admission.

Included Populations
Remove in the 1st sentence 'age' after 'beneficiaries'

Add in the 1st sentence 'of age' after 'years'

Change in the 3rd sentence 'episode' to 'outcome'

Excluded Populations
Add:
The measure excludes admissions for patients:

- Who were discharged on the day of admission or the following day and did not die or get transferred (because it is less likely they had a diagnosis of PN);
- With inconsistent or unknown mortality status or other unreliable data (e.g. date of death precedes admission date);
- Enrolled in the Medicare Hospice program any time in the 12 months prior to the index hospitalization including the first day of the index admission (since it is likely these patients are continuing to seek comfort measures only);
- Who were discharged alive and against medical advice (AMA) (because providers did not have the opportunity to deliver full care and prepare the patient for discharge);
- That were not the first hospitalization in the 30 days prior to a patient's death. This exclusion criterion is applied after one admission per patient per year is randomly selected. It only applies when two randomly selected admissions occur

during the transition months (December and January for calendar-year data) and the patient subsequently dies. For example: a patient is admitted on December 18th, 2006 and readmitted on January 2nd, 2007; the patient dies on January 15th, 2007. If both of these admissions are randomly selected for inclusion (one for the 2006 calendar year time period and the other for the 2007 calendar year time period), the January 2, 2007 admission will be excluded to avoid assigning the death to two admissions (one in 2006 and one in 2007).

Remove:

1. Admissions for patients who are discharged on the day of admission or the next day and did not die or transfer because it is unlikely they had PN.
2. Admissions in which the patient was transferred from another hospital because the death is attributed to the hospital where the patient was initially admitted.
3. Admissions for patients with inconsistent or unknown mortality status or other unreliable data (e.g. date of death [DoD] precedes admission date or DoD precedes discharge date of a patient who is discharged alive).
4. Admissions for patients enrolled in the Medicare Hospice program any time in the 12 months prior to the index hospitalization including the first day of the index admission since it is likely these patients are continuing to seek comfort measures only, and the goal of these hospitalizations is not survival.
5. Admissions for patients who are discharged against medical advice (AMA) because providers did not have the opportunity to deliver full care and prepare the patient for discharge.
6. Admissions that were not the first hospitalization in the 30 days prior to a patient's death. This exclusion criterion was applied after one admission per patient per year was randomly selected. It *only* applies when two randomly selected admissions occur during the transition months (December and January for calendar-year data; June and July for split-year data) and the patient subsequently dies. For example: a patient is admitted on December 18th, 2006 and readmitted on January 2nd, 2007; the patient dies on January 15th, 2007. If both of these admissions are randomly selected for inclusion (one for the 2006 calendar year time period and the other for the 2007 calendar year time period), the January 2, 2007 admission would be excluded to avoid assigning the death to two admissions (one in 2006 and one in 2007).

Risk Adjustment

Change the 1st sentence to:

Information from Medicare inpatient claims, physician Part B claims and hospital outpatient claims are used for risk adjustment.

Remove:

To account for the natural clustering of observations within hospitals, hierarchical generalized linear models (HGLM) are used to calculate the log-odds of mortality within 30 days of admission as a function of patient demographic and clinical variables and a random hospital-specific effect. This strategy accounts for within-hospital correlation of observed outcomes and separates within-hospital variation from between-hospital variation in mortality. This approach models the assumption that underlying differences in quality among hospitals lead to systematic differences among hospital outcomes.

Risk-standardized mortality rates (RSMRs) for each hospital are calculated as the ratio of "predicted" to "expected" mortality, multiplied by the national observed mortality rate.

Hospitals with small volumes of pneumonia cases (particularly those with fewer than 10 patients), will have predicted risk-standardized mortality rates that are near the national average because these institutions do not have sufficient patient-level information for an informed estimate of their performance.

Model Validation
Change to:
Hospital-specific risk-standardized mortality estimates derived from this claims-based model were aggregated on the state level and compared to state-level RSMRs based on a model developed using medical record data from the Medicare National Pneumonia Project Initiative. The correlation coefficient of the standardized mortality rates from the claims-based and medical record models was 0.86 (SE=0.032).

Data Reported As
Add after 'rate':
'for Medicare FFS beneficiaries aged 65 years or older with a principal discharge diagnosis of PN'

Measure Calculation
Add:
The measure estimates hospital-level 30-day all-cause RSMR for PN using hierarchical logistic regression modeling (a form of hierarchical generalized linear modeling [HGLM]). In brief, the approach simultaneously models two levels (patient and hospital) to account for the variance in patient outcomes within and between hospitals. At the patient level, each model adjusts the log-odds of mortality within 30 days of discharge for age, sex, selected clinical covariates, and a hospital-specific intercept. The second level models the hospital-specific intercepts as arising from a normal distribution. The hospital intercept represents the underlying risk of mortality at the hospital, after accounting for patient risk. The hospital-specific intercepts are given a distribution in order to account for the clustering (non-independence) of patients within the same hospital. If there were no differences among hospitals, then adjustment for patient risk would yield hospital intercepts that should be identical across all hospitals.

The RSMR is calculated as the ratio of the number of "predicted" to the number of "expected" deaths, multiplied by the national unadjusted mortality rate. For each hospital, the "numerator" of the ratio is the number of deaths within 30 days predicted on the basis of the hospital's performance with its observed case mix, and the "denominator" is the number of deaths expected on the basis of the nation's performance with that hospital's case mix. This approach is analogous to a ratio of "observed" to "expected" used in other types of statistical analyses. It conceptually allows for a comparison of a particular hospital's performance given its case-mix to an average hospital's performance with the same case mix. Thus, a lower ratio indicates lower-than-expected mortality (i.e., better quality), and a higher ratio indicates higher-than-expected mortality (i.e., worse quality).

The predicted hospital outcome (the numerator) is calculated by regressing the risk factors and the hospital-specific intercept on the risk of mortality, multiplying the estimated regression coefficients by the patient characteristics in the hospital, transforming, and then summing over all patients attributed to the hospital to get a value. The expected number of deaths (the denominator) is obtained by regressing the risk factors and a common intercept on the mortality outcome using all hospitals in our

sample, multiplying the subsequent estimated regression coefficients by the patient characteristics observed in the hospital, transforming, and then summing over all patients in the hospital to get a value. To assess hospital performance in any reporting period, we re-estimate the model coefficients using the years of data in that period.

The statistical modeling approach is described fully in the original methodology report (Krumholz et al., 2006).

Selected References
Add:
Normand S-LT, Shahian DM. 2007. Statistical and clinical aspects of hospital outcomes profiling. *Stat Sci* 22(2):206-226.

Rationale:
- Adjusted language for clarity
- Added reference for those who would like additional background info
- Updated Exclusion Criteria field to reflect latest text in our reports (did not make any technical changes to exclusions, just text edits)
- Added Measure Calculation field and updated text in Numerator/Denominator fields to better explain how our we calculate the risk-standardized rates

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Risk Standardized Readmission Measures (READM)

Impacts: N/A

Description of Changes:
Introduction
Change in the title CMS to:
Centers for Medicare & Medicaid Services (CMS)

Rationale: Adjusted language for clarity

Impacts: READM-30-AMI

Description of Changes:
Description
Change to:
Hospital-level, risk-standardized, all-cause 30 day readmission (defined as readmission for any cause within 30 days from the date of discharge of the index admission).

Improvement Noted As
Change:
'rate' to 'RSRR'

Numerator Statement
Change to:
Note: This outcome measure does not have a traditional numerator and denominator like a core process measure (e.g., percentage of adult patients with diabetes aged 18-75

years receiving one or more hemoglobin A1c tests per year); thus, we are using this field to define our statistically-adjusted outcome measure. The calculation of the rate is defined below under Measure Calculation.

The outcome for this measure is 30 day all-cause readmission. We define this as readmission for any cause within 30 days from the date of discharge of the index AMI admission.

Denominator Statement
Change to:
The target population for this measure includes admissions for Medicare Fee-for-Service (FFS) beneficiaries aged greater than or equal to 65 years discharged from the hospital with a principal discharge diagnosis of AMI and with a complete claims history for 12 months prior to admission.

Remove:
Outcome measure cohort definition:
Admissions for Medicare Fee-For-Service (FFS) beneficiaries age greater than or equal to 65 years with a principal discharge diagnosis of AMI and with a complete claims history for 12 months prior to admission.

Add:
Included Populations:
Admissions for Medicare FFS beneficiaries greater than or equal to 65 years of age with a principal discharge diagnosis of AMI and with a complete claims history for 12 months prior to admission.

Cohort exclusions (excluded admissions)
Remove:
(2) from in front of Cohort

Remove: the 5th bullet

Add the following statement after the bullets**:**
In addition, if a patient has one or more AMI admissions within 30 days of discharge from the index AMI admission, only one is counted as a readmission. No admissions within 30 days of discharge from an index admission are considered as additional index admissions. The next eligible admission after the 30-day time period following an index admission will be considered another index admission.

Admissions not counted as readmissions
Remove:
(3) from in front of Admissions

Risk Adjustment
Add:
The measure adjusts for key variables that are clinically relevant and have strong relationships with the outcome (e.g., demographic factors, disease severity indicators, and indicators of frailty). For each patient, covariates are obtained from Medicare claims extending 12 months prior to, and including, the index admission. The model seeks to adjust for case differences based on the clinical status of the patient at the time of the

index admission. Accordingly, only comorbidities that convey information about the patient at that time or in the 12 months prior, and not complications that arise during the course of the index hospitalization are included in the risk adjustment.

Remove:
We developed a hierarchical logistic regression model to estimate the log-odds of readmission within 30 days of an AMI index admission as a function of patient demographic and clinical characteristics. The model includes a random hospital-specific intercept to account for within-hospital correlation of the observed outcomes. This assumes that underlying differences in quality among the hospitals being evaluated lead to systematic differences in outcomes.

Measure Calculation
Add:
The measure estimates hospital-level 30 day all-cause RSRR for AMI using hierarchical logistic regression modeling (a form of hierarchical generalized linear modeling [HGLM]). In brief, the approach simultaneously models two levels (patient and hospital) to account for the variance in patient outcomes within and between hospitals. At the patient level, each model adjusts the log-odds of a hospital readmission within 30 days of discharge for age, sex, selected clinical covariates, and a hospital-specific intercept. The second level models the hospital-specific intercepts as arising from a normal distribution. The hospital intercept represents the underlying risk of a readmission at the hospital, after accounting for patient risk. The hospital-specific intercepts are given a distribution in order to account for the clustering (non-independence) of patients within the same hospital. If there were no differences among hospitals, then adjustment for patient risk would yield hospital intercepts that should be identical across all hospitals.

The RSRR is calculated as the ratio of the number of “predicted” to the number of “expected” readmissions, multiplied by the national unadjusted readmission rate. For each hospital, the “numerator” of the ratio is the number of readmissions within 30 days predicted on the basis of the hospital’s performance with its observed case mix, and the “denominator” is the number of readmissions expected on the basis of the nation’s performance with that hospital’s case mix. This approach is analogous to a ratio of “observed” to “expected” used in other types of statistical analyses. It conceptually allows for a comparison of a particular hospital’s performance given its case mix to an average hospital’s performance with the same case mix. Thus, a lower ratio indicates lower-than-expected readmission (i.e., better quality), and a higher ratio indicates higher-than-expected readmission (i.e., worse quality).

The predicted hospital outcome (the numerator) is calculated by regressing the risk factors and the hospital-specific intercept on the risk of readmission, multiplying the estimated regression coefficients by the patient characteristics in the hospital, transforming, and then summing over all patients attributed to the hospital to get a value. The expected number of readmissions (the denominator) is obtained by regressing the risk factors and a common intercept on the readmission outcome using all hospitals in our sample, multiplying the subsequent estimated regression coefficients by the patient characteristics observed in the hospital, transforming, and then summing over all patients in the hospital to get a value. To assess hospital performance in any reporting period, we re-estimate the model coefficients using the years of data in that period.

The statistical modeling approach is described fully in the original methodology report (Krumholz et al., 2008).

Selected References
Add:

- Krumholz HM, Normand S-LT, Keenan PS, et al. 2008. Hospital 30-Day Acute Myocardial Infarction Readmission Measure: Methodology. Report prepared for the Centers for Medicare & Medicaid Services.
- Normand S-LT, Shahian DM. 2007. Statistical and clinical aspects of hospital outcomes profiling. *Stat Sci* 22 (2): 206-226.

Rationale:

- Adjusted language for clarity
- Added reference for those who would like additional background info
- Updated Exclusion Criteria field to reflect latest text in our reports (did not make any technical changes to exclusions, just text edits)
- Added Measure Calculation field and updated text in Numerator/Denominator fields to better explain how our we calculate the risk-standardized rates

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Impacts: READM-30-HF

Description of Changes:
Description
Change to:
Hospital-level, risk-standardized, all-cause 30 day readmission (defined as readmission for any cause within 30 days from the date of discharge of the index admission).

Improvement Noted As
Change:
'rate' to 'RSRR'

Numerator Statement
Change to:
Note: This outcome measure does not have a traditional numerator and denominator like a core process measure (e.g., percentage of adult patients with diabetes aged 18-75 years receiving one or more hemoglobin A1c tests per year); thus, we are using this field to define our statistically-adjusted outcome measure. The calculation of the rate is defined below under Measure Calculation.

The outcome for this measure is 30 day all-cause readmission. We define this as readmission for any cause within 30 days from the date of discharge of the index HF admission.

Denominator Statement
Change to:
The target population for this measure includes admissions for Medicare Fee-for-Service (FFS) beneficiaries aged greater than or equal to 65 years discharged from the hospital with a principal discharge diagnosis of HF and with a complete claims history for 12 months prior to admission.

The statistical modeling approach is described fully in the original methodology report (Krumholz et al., 2008)

Remove:
Outcome measure cohort definition:
Admissions for Medicare Fee-For-Service (FFS) beneficiaries age greater than or equal to 65 years of age with a principal discharge diagnosis of HF and with a complete claims history for 12 months prior to admission.

Add:
Included Populations:
Admissions for Medicare FFS beneficiaries greater than or equal to 65 years of age with a principal discharge diagnosis of HF and with a complete claims history for 12 months prior to admission.

Cohort exclusions (excluded admissions)
Remove:
(2) from in front of Cohort

Remove: the 4th bullet

Add the following statement after the bullets**:**
In addition, if a patient has one or more HF admissions within 30 days of discharge from the index HF admission, only one is counted as a readmission. No admissions within 30 days of discharge from an index admission are considered as additional index admissions. The next eligible admission after the 30-day time period following an index admission will be considered another index admission.

Risk Adjustment
Add:
The measures adjust for key variables that are clinically relevant and have strong relationships with the outcome (e.g., demographic factors, disease severity indicators, and indicators of frailty). For each patient, covariates are obtained from Medicare claims extending 12 months prior to, and including, the index admission. The models seek to adjust for case differences based on the clinical status of the patient at the time of the index admission. Accordingly, only comorbidities that convey information about the patient at that time or in the 12 months prior, and not complications that arise during the course of the index hospitalization are included in the risk adjustment.

Remove:
We developed a hierarchical logistic regression model to estimate the log-odds of readmission within 30 days of an HF index admission as a function of patient demographic and clinical characteristics. The model includes a random hospital-specific intercept to account for within-hospital correlation of the observed outcomes. This assumes that underlying differences in quality among the hospitals being evaluated lead to systematic differences in outcomes.

Data Reported As
Add after 'rate':

'for Medicare FFS beneficiaries age 65 years or older with a principal discharge diagnosis of HF.'

Measure Calculation

Add:

The measure estimates hospital-level 30 day all-cause RSRR for HF using hierarchical logistic regression modeling (a form of hierarchical generalized linear modeling [HGLM]). In brief, the approach simultaneously models two levels (patient and hospital) to account for the variance in patient outcomes within and between hospitals. At the patient level, each model adjusts the log-odds of a hospital readmission within 30 days of discharge for age, sex, selected clinical covariates, and a hospital-specific intercept. The second level models the hospital-specific intercepts as arising from a normal distribution. The hospital intercept represents the underlying risk of a readmission at the hospital, after accounting for patient risk. The hospital-specific intercepts are given a distribution in order to account for the clustering (non-independence) of patients within the same hospital. If there were no differences among hospitals, then adjustment for patient risk would yield hospital intercepts that should be identical across all hospitals.

The RSRR is calculated as the ratio of the number of "predicted" to the number of "expected" readmissions, multiplied by the national unadjusted readmission rate. For each hospital, the "numerator" of the ratio is the number of readmissions within 30 days predicted on the basis of the hospital's performance with its observed case mix, and the "denominator" is the number of readmissions expected on the basis of the nation's performance with that hospital's case mix. This approach is analogous to a ratio of "observed" to "expected" used in other types of statistical analyses. It conceptually allows for a comparison of a particular hospital's performance given its case mix to an average hospital's performance with the same case mix. Thus, a lower ratio indicates lower-than-expected readmission (i.e., better quality), and a higher ratio indicates higher-than-expected readmission (i.e., worse quality).

The predicted hospital outcome (the numerator) is calculated by regressing the risk factors and the hospital-specific intercept on the risk of readmission, multiplying the estimated regression coefficients by the patient characteristics in the hospital, transforming, and then summing over all patients attributed to the hospital to get a value. The expected number of readmissions (the denominator) is obtained by regressing the risk factors and a common intercept on the readmission outcome using all hospitals in our sample, multiplying the subsequent estimated regression coefficients by the patient characteristics observed in the hospital, transforming, and then summing over all patients in the hospital to get a value. To assess hospital performance in any reporting period, we re-estimate the model coefficients using the years of data in that period.

Selected References

Add:

- Krumholz HM, Normand S-LT, Keenan PS, et al. 2008. Hospital 30-Day Heart Failure Readmission Measure: Methodology. Report prepared for the Centers for Medicare & Medicaid Services.
- Normand S-LT, Shahian DM. 2007. Statistical and clinical aspects of hospital outcomes profiling. *Stat Sci* 22 2):206-226.

Rationale:

- Adjusted language for clarity

- Added reference for those who would like additional background info
- Updated Exclusion Criteria field to reflect latest text in our reports (did not make any technical changes to exclusions, just text edits)
- Added Measure Calculation field and updated text in Numerator/Denominator fields to better explain how our we calculate the risk-standardized rates

---

Impacts: READM-30-PN

Description of Changes:
Description
Change to:
Hospital-level, risk-standardized, all-cause 30 day readmission (defined as readmission for any cause within 30 days from the date of discharge of the index admission)

Improvement Noted As
Change:
'rate' to 'RSRR'

Numerator Statement
Change to:
Note: This outcome measure does not have a traditional numerator and denominator like a core process measure (e.g., percentage of adult patients with diabetes aged 18-75 years receiving one or more hemoglobin A1c tests per year); thus, we are using this field to define our statistically-adjusted outcome measure. The calculation of the rate is defined below under Measure Calculation.

The outcome for this measure is 30 day all-cause readmission. We define this as readmission for any cause within 30 days from the date of discharge of the index PN admission.

Denominator Statement
Change to:
The target population for this measure includes admissions for Medicare Fee-for-Service (FFS) beneficiaries aged greater than or equal to 65 years discharged from the hospital with a principal discharge diagnosis of PN and with a complete claims history for 12 months prior to admission.

Remove:
Outcome measure cohort definition:
Admissions for Medicare Fee-For-Service (FFS) beneficiaries age greater than or equal to 65 years with a principal discharge diagnosis of pneumonia and with a complete claims history for 12 months prior to admission.

Add:
Included Populations:
Admissions for Medicare FFS beneficiaries greater than or equal to 65 years of age with a principal discharge diagnosis of PN and with a complete claims history for 12 months prior to admission.

Cohort exclusions (excluded admissions)
Remove:
(2) from in front of Cohort

Remove: the 4th bullet

Add the following statement after the bullets**:**
In addition, if a patient has one or more PN admissions within 30 days of discharge from the index PN admission, only one is counted as a readmission. No admissions within 30 days of discharge from an index admission are considered as additional index admissions. The next eligible admission after the 30-day time period following an index admission will be considered another index admission.

Risk Adjustment
Add:
The measure adjusts for key variables that are clinically relevant and have strong relationships with the outcome (e.g., demographic factors, disease severity indicators, and indicators of frailty). For each patient, covariates are obtained from Medicare claims extending 12 months prior to, and including, the index admission. The model seeks to adjust for case differences based on the clinical status of the patient at the time of the index admission. Accordingly, only comorbidities that convey information about the patient at that time or in the 12 months prior, and not complications that arise during the course of the index hospitalization are included in the risk adjustment.

Remove:
We developed a hierarchical logistic regression model to estimate the log-odds of readmission within 30 days of a pneumonia index admission as a function of patient demographic and clinical characteristics. The model includes a random hospital-specific intercept to account for within-hospital correlation of the observed outcomes. This assumes that underlying differences in quality among the hospitals being evaluated lead to systematic differences in outcomes.

Change under Comorbidity Table:
'Chronic atherosclerosis or angina'
To
'Coronary atherosclerosis or angina'

Data Reported As
Add after 'rate':
'for Medicare FFS beneficiaries age 65 years or older with a principal discharge diagnosis of PN.'

Measure Calculation
Add:
The measure estimates hospital-level 30-day all-cause RSRR for PN using hierarchical logistic regression modeling (a form of hierarchical generalized linear modeling [HGLM]). In brief, the approach simultaneously models two levels (patient and hospital) to account for the variance in patient outcomes within and between hospitals. At the patient level, each model adjusts the log-odds of a hospital readmission within 30-days of discharge for age, sex, selected clinical covariates, and a hospital-specific intercept. The second level models the hospital-specific intercepts as arising from a normal distribution. The

hospital intercept represents the underlying risk of a readmission at the hospital, after accounting for patient risk. The hospital-specific intercepts are given a distribution in order to account for the clustering (non-independence) of patients within the same hospital. If there were no differences among hospitals, then adjustment for patient risk would yield hospital intercepts that should be identical across all hospitals.

The RSRR is calculated as the ratio of the number of "predicted" to the number of "expected" readmissions, multiplied by the national unadjusted readmission rate. For each hospital, the "numerator" of the ratio is the number of readmissions within 30 days predicted on the basis of the hospital's performance with its observed case mix, and the "denominator" is the number of readmissions expected on the basis of the nation's performance with that hospital's case mix. This approach is analogous to a ratio of "observed" to "expected" used in other types of statistical analyses. It conceptually allows for a comparison of a particular hospital's performance given its case mix to an average hospital's performance with the same case mix. Thus, a lower ratio indicates lower-than-expected readmission (i.e., better quality), and a higher ratio indicates higher-than-expected readmission (i.e., worse quality).

The predicted hospital outcome (the numerator) is calculated by regressing the risk factors and the hospital-specific intercept on the risk of readmission, multiplying the estimated regression coefficients by the patient characteristics in the hospital, transforming, and then summing over all patients attributed to the hospital to get a value. The expected number of readmissions (the denominator) is obtained by regressing the risk factors and a common intercept on the readmission outcome using all hospitals in our sample, multiplying the subsequent estimated regression coefficients by the patient characteristics observed in the hospital, transforming, and then summing over all patients in the hospital to get a value. To assess hospital performance in any reporting period, we re-estimate the model coefficients using the years of data in that period.

The statistical modeling approach is described fully in the original methodology report (Krumholz et al., 2008)

Selected References

Add:

- Krumholz HM, Normand S-LT, Keenan PS, et al. 2008. Hospital 30-Day Pneumonia Readmission Measure: Methodology. Report prepared for the Centers for Medicare & Medicaid Services.
- Normand S-LT, Shahian DM. 2007. Statistical and clinical aspects of hospital outcomes profiling. *Stat Sci* 22(2):206-226.

Rationale:

- Adjusted language for clarity
- Added reference for those who would like additional background info
- Updated Exclusion Criteria field to reflect latest text in our reports (did not make any technical changes to exclusions, just text edits)
- Added Measure Calculation field and updated text in Numerator/Denominator fields to better explain how our we calculate the risk-standardized rates

Appendices

Appendix A

Impacts: VTE-1, ED-1, ED-2

Description of Changes:
Table 7.01
Add the following codes:
303.00 Ac alcohol intox-unspec
303.01 Ac alcohol intox-contin
303.02 Ac alcohol intox-episod
303.03 Ac alcohol intox-remiss
303.90 Alcoh dep NEC/NOS-unspec
303.91 Alcoh dep NEC/NOS-contin
303.92 Alcoh dep NEC/NOS-episod
303.93 Alcoh dep NEC/NOS-remiss
304.00 Opioid dependence-unspec
304.01 Opioid dependence-contin
304.02 Opioid dependence-episod
304.03 Opioid dependence-remiss
304.10 Sed,hyp,anxiolyt dep-NOS
304.11 Sed,hyp,anxiolyt dep-con
304.12 Sed,hyp,anxiolyt dep-epi
304.13 Sed,hyp,anxiolyt dep-rem
304.20 Cocaine depend-unspec
304.21 Cocaine depend-contin
304.22 Cocaine depend-episodic
304.23 Cocaine depend-remiss
304.30 Cannabis depend-unspec
304.31 Cannabis depend-contin
304.32 Cannabis depend-episodic
304.33 Cannabis depend-remiss
304.40 Amphetamin depend-unspec
304.41 Amphetamin depend-contin
304.42 Amphetamin depend-episod
304.43 Amphetamin depend-remiss
304.50 Hallucinogen dep-unspec
304.51 Hallucinogen dep-contin
304.52 Hallucinogen dep-episod
304.53 Hallucinogen dep-remiss
304.60 Drug depend NEC-unspec
304.61 Drug depend NEC-contin
304.62 Drug depend NEC-episodic
304.63 Drug depend NEC-in rem
304.70 Opioid/other dep-unspec
304.71 Opioid/other dep-contin
304.72 Opioid/other dep-episod
304.73 Opioid/other dep-remiss
304.80 Comb drug dep NEC-unspec
304.81 Comb drug dep NEC-contin

304.82 Comb drug dep NEC-episod
304.83 Comb drug dep NEC-remiss
304.90 Drug depend NOS-unspec
304.91 Drug depend NOS-contin
304.92 Drug depend NOS-episodic
304.93 Drug depend NOS-remiss
305.00 Alcohol abuse-unspec
305.01 Alcohol abuse-continuous
305.02 Alcohol abuse-episodic
305.03 Alcohol abuse-in remiss
305.1 Tobacco use disorder
305.20 Cannabis abuse-unspec
305.21 Cannabis abuse-contin
305.22 Cannabis abuse-episodic
305.23 Cannabis abuse-in remiss
305.30 Hallucinog abuse-unspec
305.31 Hallucinog abuse-contin
305.32 Hallucinog abuse-episod
305.33 Hallucinog abuse-remiss
305.40 Sed,hyp,anxiolytc ab-NOS
305.41 Sed,hyp,anxiolytc ab-con
305.42 Sed,hyp,anxiolytc ab-epi
305.43 Sed,hyp,anxiolytc ab-rem
305.50 Opioid abuse-unspec
305.51 Opioid abuse-continuous
305.52 Opioid abuse-episodic
305.53 Opioid abuse-in remiss
305.60 Cocaine abuse-unspec
305.61 Cocaine abuse-continuous
305.62 Cocaine abuse-episodic
305.63 Cocaine abuse-in remiss
305.70 Amphetamine abuse-unspec
305.71 Amphetamine abuse-contin
305.72 Amphetamine abuse-episod
305.73 Amphetamine abuse-remiss
305.80 Antidepress abuse-unspec
305.81 Antidepress abuse-contin
305.82 Antidepress abuse-episod
305.83 Antidepress abuse-remiss
305.90 Drug abuse NEC-unspec
305.91 Drug abuse NEC-contin
305.92 Drug abuse NEC-episodic
305.93 Drug abuse NEC-in remiss

Rationale: VTE-1 excludes patients with a principal diagnosis of Mental Disorders so all codes in the Mental Disorders section should be included. By adding all of the codes, the specifications will more closely match the EHR specifications which exclude all patients admitted to a psychiatric unit.

Impacts: SCIP-Inf-9

Description of Changes:
Table 5.16
Add:
46.03 LG BOWEL EXTERIORIZATION
45.95 ANAL ANASTOMOSIS

Rationale: These surgeries are extensive abdominal or rectal surgeries that often require urinary catheterization beyond 2 days therefore the codes are being excluded from Inf-9 by adding them to Table 5.16.

Impacts: SCIP-Inf-4

Description of Changes:
Table 5.11
Remove:
37.51 HEART TRANSPLANTATION

Rationale: Most transplant procedures are already excluded from Inf-4. To maintain consistency, heart transplants are being removed from Inf-4.

Impacts: SCIP-Inf-1, SCIP-Inf-2, SCIP-Inf-3

Description of Changes:
Table 5.08
Remove:
38.18 LOWER LIMB ENDARTERECT

Table 5.25
Add:
38.18 LOWER LIMB ENDARTERECT

Rationale: Antibiotics are not recommended for this procedure so it is being removed from the infection measures.

Impacts: SCIP-Inf-4

Description of Changes:
Table 5.10
Remove:
37.35 PARTIAL VENTRICULECTOMY
37.52 IMP TOT INT BI HT RP SYS
37.53 REPL/REP THR UNT TOT HRT
37.54 REPL/REP OTH TOT HRT SYS

Table 5.11
Remove:

37.35 PARTIAL VENTRICULECTOMY
37.52 IMP TOT INT BI HT RP SYS
37.53 REPL/REP THR UNT TOT HRT
37.54 REPL/REP OTH TOT HRT SYS

Table 5.25
Remove:
37.35 PARTIAL VENTRICULECTOMY
37.52 IMP TOT INT BI HT RP SYS
37.53 REPL/REP THR UNT TOT HRT
37.54 REPL/REP OTH TOT HRT SYS

Rationale: Providers will no longer be able to submit 'non-covered' procedure codes that are performed in the same inpatient stay with the covered procedure(s) on inpatient claims which means these 4 codes may no longer be included as principal procedure codes.

Appendix C

Impacts: PN5, PN5c, PN6, PN6a, PN6b

Description of Changes:
Table 2.1 Antimicrobial Medications
Add:
Prevpac: Lansoprazole/Amoxicillin/Clarithromycin
Lansoprazole/Amoxicillin/Clarithromycin: Lansoprazole/Amoxicillin/Clarithromycin

Table 2.10 Tetracyclines
Add:
Tygacil: Tigecycline
Tigecycline: Tigecycline

Rationale: Update medication tables: Prevpac added to Antimicrobial Table; Tigecycline added to Tetracycline Table

---

Impacts: CAC-3

Description of Changes:
Table 6.1 Controller Medications – CAC
Change:
Aerospan CFC free
To
Aerospan HFA

Remove:
Albuterol Sulfate: Albuterol Sulfate
Nedocromil Sodium: Nedocromil Sodium
Serevent: Salmeterol Xinafoate

Tilade: Nedocromil Sodium
Truphylline: Aminophylline
VoSpire ER: Albuterol Sulfate

Rationale: Update medication tables for the Children's Asthma measure set in order to provide the most current list of medications at the time of publication.

Impacts: CAC-1

Description of Changes:
Table 6.2 Reliever Medications - CAC
Add:
Adrenaclick: Epinephrine

Remove:
Alupent: Metaproterenol
Atrovent: Ipratropium Bromide
Primatene Mist: Epinephrine
Proventil: Albuterol Sulfate

Change:
Maxair Autoinhaler
To
Maxair Autohaler

Twinjet
To
Twinject

Rationale: Update medication tables for the Children's Asthma measure set in order to provide the most current list of medications at the time of publication.

Impacts: CAC-2

Description of Changes:
Table 6.3 Systemic Corticosteroid Medications – CAC
Add:
Baycadron: Dexamethasone

Rationale: Update medication tables for the Children's Asthma measure set in order to provide the most current list of medications at the time of publication.

Impacts: CAC-3

Description of Changes:
Table 6.1 Controller Medications – CAC
Add:

Dulera: Mometasone and Formoterol
Mometasone and Formoterol: Mometasone and Formoterol

Rationale: Update medication tables for the Children's Asthma measure set in order to provide the most current list of medications at the time of publication.

Impacts: SCIP

Description of Changes:
Table 2.1 Antimicrobial Medications
Add:
Utira C: Methenamine

Rationale: This was inadvertently left off of this table for the 3.2 Version release when it was added to table 3.11.

Impacts: AMI-3, HF-3

Description of Changes:
Table 1.7 ARBs
Add:
Olmesartan/amlodipine/hydrochlorothiazide
Tribenzor

Rationale: New FDA-approved ARB medication

Appendix D

Impacts: N/A

Description of Changes:
Glossary of Terms
Remove 'discharge status' from the definition for Administrative Billing/Data (data source)

Rationale: To be consistent with changes made to the Data Dictionary

---

Impacts: N/A

Description of Changes:
Glossary of Terms
Add:
Calculation Model
A description of the steps or statistical calculations (computations) used to derive the numerator and denominator or continuous variable values required for a measure. Measure Information Forms in this manual will include either an algorithm or calculation

model.

Rationale: Added calculation model to the MIF form for the mortality and readmission measures and this needed to be defined.

Appendix E

Impacts: N/A

Description of Changes:
Add after **Data Reported As** section:
Calculation Model
A description of the steps or statistical calculations (computations) used to derive the numerator and denominator or continuous variable values required for a measure. Measure Information Forms in this manual will include either an algorithm or calculation model.

Rationale: Added calculation model to the MIF form for the mortality and readmission measures and this needed to be defined.

Impacts: N/A

Description of Changes:
Add Measure Outcomes (CMS Only) section after the Flowchart Symbols

Rationale: To provide guidance regarding the definitions for the measure outcomes used in the algorithms and validation for CMS.

Impacts: N/A

Description of Changes:
Remove “for Collected Measures” from the title.

Rationale: Appendix E is an overview of all Measure Information Forms within the Specifications Manual, not just those measures that are ‘collected’.

Appendix F

Impacts: N/A

Description of Changes:
Remove columns for FY2009 and FY2010 payment determination

Add column for FY2012 payment determination

Add SCIP-Inf-1, SCIP-Inf-3, Mortality, Readmission and AHRQ measures to FY2011

and FY2012 payment determination columns

Rationale: To reflect the differences in the measure names as listed in the Specifications Manual and the IPPS Final Rule.

Appendix H

Impacts: N/A

Description of Changes:
Appendix H
Remove Table 2.5 Discharge Status Disposition

Rationale: To be consistent with changes made to the Data Dictionary.

Impacts: SCIP-VTE-1, SCIP-VTE-2, STK-1, VTE-1

Description of Changes:
Table 2.1 VTE Prophylaxis Inclusion Table
Remove from column VTE Prophylaxis:
Oral Factor XA Inhibitor

Remove from column Inclusions/Synonyms:
Rivaroxaban (Oral)

Rationale: Rivaroxaban has not been approved by the FDA.