Quality Measures to Demonstrate the Value of Age-Friendly 4Ms Care

Process measures:

- Reflect the type of care a patient can expect to receive in a healthcare organization.
- Reflect the care generally accepted for clinical practice.
- Are associated with outcome measures.

Outcome measures:

- Reflect the impact of the healthcare service or intervention on the health status of patients.
- Relate to high-level clinical or financial outcomes that concern healthcare organizations.
- Are quality and cost measures that can be related to value.

Purpose:

- To standardize a "menu" of quality metrics, tracked monthly, from which a care setting can choose to measure the longitudinal impact of Age-Friendly 4Ms care.
- To integrate these metrics into a 4Ms care tracker/dashboard that is adapted for each care setting.
- To compare baseline data to data collected after the implementation of setting-specific Age-Friendly programming.
- To identify quantitative trends in 4Ms care across health settings in New York State.

Notes:

- Stipend recipients should select six process and three outcome measures to track.
- Stipend recipients should track outcomes monthly.
- Outcome measures should be standardized (use the calculations provided).
- Process measures do not need to be standardized (use the calculations provided as a guide; inclusion criteria may differ between care settings).
- Stipend recipients may choose to track process and outcome measures not included in this document.
- For guidance or questions related to this menu, contact Lance San Souci, Project Manager, at ActionCommunity@hanys.org.

Outcome Measures (LOS and falls required, choose one other):

1. **Average Emergency Department length-of-stay (EDLOS)**
   Average time interval between 65+ patients' arrival to the ED and time of departure

   Calculation = Average of all time in minutes elapsed between arrival time and admission time for all patients 65+

   Measure details:
   - Also referred to by ACEP as "boarding time"
   - Lower is better.
   - Rationale for use here and here.

2. **Average Length of Stay (LOS)**
   Average length of stay for patients 65+

   Calculation = Average of all inpatient 65+ LOS' (defined by how many overnights the patient was inpatient; discharge date – admission date)

   Measure details:
   - Lower is better.
   - The measure outlined here is a raw measure. There are no proposed exclusions or adjustments for risk.
   - If the hospital uses a length of stay measure as part of its regular reporting calculated by a different formula, the hospital should continue to use that definition applied to patients 65 years and older

3. **Total resident falls (skilled nursing setting)**
   Rate of falls per 1,000 occupied bed days for patients 65+*resulting in no harm or any harm*

   Denominator=Number of patient bed days for patients 65+
   Numerator=Number of patients' falls for patients 65+
   Then, multiply by 1000

   Measure details:
   - Lower is better.
   - This metric includes both falls that do not result in harm as well as falls that result in any harm.
   - Definitions of harm (derived from NDNQI):
     - **None**—resulted in no signs or symptoms of injury as determined by post-fall evaluation (which may include x-ray or CT scan)

        - NOTE: Do not select this classification if any signs or symptoms resulted from the fall, even if they were of limited severity or short duration. For example, pain or swelling that resulted from a fall should be categorized as "Minor" rather than "None" in the absence of other signs or symptoms, even if it was not treated and/or resolved within 24 hours.
    - **Minor**—resulted in application of ice or dressing, cleaning of a wound, limb elevation, topical medication, pain, bruise or abrasion
    - **Moderate**—resulted in suturing, application of steri-strips or skin glue, splinting, or muscle/joint strain
    - **Major**—resulted in surgery, casting, traction, required consultation for neurological (e.g., basilar skull fracture, small subdural hematoma) or internal injury (e.g., rib fracture, small liver laceration), or patients with any type of fracture regardless of treatment, or patients who have coagulopathy who receive blood products as a result of a fall
    - **Death**—the patient died as a result of injuries sustained from the fall (not from physiologic events causing the fall)

4. **Resident falls resulting in any harm (skilled nursing setting)**
   Rate of falls per 1,000 occupied bed days that resulted in any level of harm (minor-death) for patients 65+

   Denominator=Number of patient 65+ bed days
   Numerator=Number of patient 65+ falls that resulted in harm level Minor, Moderate, Major, or Death
   Then, multiply by 1000

   Measure details:
   - Lower is better.
   - Measure set ALC-02.
   - Rationale and example process flow HERE.
   - Definitions of harm (derived from NDNQI):
     - **None**—resulted in no signs or symptoms of injury as determined by post-fall evaluation (which may include x-ray or CT scan)
       - NOTE: Do not select this classification if any signs or symptoms resulted from the fall, even if they were of limited severity or short duration. For example, pain or swelling that resulted from a fall should be categorized as "Minor" rather than "None" in the absence of other signs or symptoms, even if it was not treated and/or resolved within 24 hours.
     - **Minor**—resulted in application of ice or dressing, cleaning of a wound, limb elevation, topical medication, pain, bruise or abrasion
     - **Moderate**—resulted in suturing, application of steri-strips or skin glue, splinting, or muscle/joint strain
     - **Major**—resulted in surgery, casting, traction, required consultation for neurological (e.g., basilar skull fracture, small subdural hematoma) or internal injury (e.g., rib fracture, small liver laceration), or patients with any type of fracture regardless of treatment, or patients who have coagulopathy who receive blood products as a result of a fall
     - **Death**—the patient died as a result of injuries sustained from the fall (not from physiologic events causing the fall)

5. **Total inpatient falls (inpatient/outpatient setting)**
   Rate of falls per 1,000 occupied bed days for patients 65+*resulting in no harm or any harm*

   Denominator=Number of patient 65+ bed days
   Numerator=Number of patient 65+' falls (with and without harm)

Then, multiply by 1000

Measure details:

- Lower is better.
- Rationale and considerations HERE.
- This metric includes both falls that do not result in harm as well as falls that result in any harm.
- Definitions of harm (derived from NDNQI):
    - **None**—resulted in no signs or symptoms of injury as determined by post-fall evaluation (which may include x-ray or CT scan)
        - NOTE: Do not select this classification if any signs or symptoms resulted from the fall, even if they were of limited severity or short duration. For example, pain or swelling that resulted from a fall should be categorized as "Minor" rather than "None" in the absence of other signs or symptoms, even if it was not treated and/or resolved within 24 hours.
    - **Minor**—resulted in application of ice or dressing, cleaning of a wound, limb elevation, topical medication, pain, bruise or abrasion
    - **Moderate**—resulted in suturing, application of steri-strips or skin glue, splinting, or muscle/joint strain
    - **Major**—resulted in surgery, casting, traction, required consultation for neurological (e.g., basilar skull fracture, small subdural hematoma) or internal injury (e.g., rib fracture, small liver laceration), or patients with any type of fracture regardless of treatment, or patients who have coagulopathy who receive blood products as a result of a fall
    - **Death**—the patient died as a result of injuries sustained from the fall (not from physiologic events causing the fall)

6. **Inpatient falls resulting in any harm**
Rate of falls per 1,000 occupied bed days that resulted in any level of harm (minor-death) for patients 65+

Denominator=Number of patient 65+ bed days
Numerator=Number of patient65+ falls resulting in harm level Minor, Moderate, Major, or Death
Then, multiply by 1000

- Definitions of harm (derived from NDNQI):
    - **None**—resulted in no signs or symptoms of injury as determined by post-fall evaluation (which may include x-ray or CT scan)
        - NOTE: Do not select this classification if any signs or symptoms resulted from the fall, even if they were of limited severity or short duration. For example, pain or swelling that resulted from a fall should be categorized as "Minor" rather than "None" in the absence of other signs or symptoms, even if it was not treated and/or resolved within 24 hours.
    - **Minor**—resulted in application of ice or dressing, cleaning of a wound, limb elevation, topical medication, pain, bruise or abrasion
    - **Moderate**—resulted in suturing, application of steri-strips or skin glue, splinting, or muscle/joint strain
    - **Major**—resulted in surgery, casting, traction, required consultation for neurological (e.g., basilar skull fracture, small subdural hematoma) or internal injury (e.g., rib fracture, small liver laceration), or patients with any type of fracture regardless of treatment, or patients who have coagulopathy who receive blood products as a result of a fall
    - **Death**—the patient died as a result of injuries sustained from the fall (not from physiologic events causing the fall)

7. **30-Day All-Cause Readmission Rate**
Percentage of patients 65+who are readmitted to hospital within 30 days following discharge.

Denominator = Total number of patients65+ discharged from the care setting per month
Numerator = Total number of patients 65+ in the denominator who are readmitted to the care setting within 30 days of discharge for any reason.
Then, multiply by 100

Measure details:

- Lower is better.
- Risk-standardized
- Consider working with health information exchange or entering into collaborative care agreements or data sharing agreements with hospitals outside of your health system to capture complete information about readmissions.
- Consider other data sources, such as health plans and/or ACO that may have complete information about care patients receive outside of your health system.
- Goal is for the percentage of readmission within 30-days to decrease from baseline to re-measurement period (pre- and post-implementation of 4Ms Care design).

8. **Stage 3 or Greater Pressure Injury Incidence Rate**
Rate per 1,000 of patients 65+with occurrence of hospital-acquired pressure injuries ≥ stage 3

Denominator= Total number of patients 65+ admitted per month
Numerator=Number of patients 65+ with documented occurrence of a new pressure injury stage 3 or greater per month
Then, multiply by 1000

9. **Rate of physical restraint use per 1,000 patient hours**
Rate of inpatient psychiatric physical restraints per 1,000 hours for patients 65+
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Denominator=Total number of psychiatric inpatient 65+ patient hours
Numerator= *The total number of hours that patients 65+ admitted to a hospital-based inpatient psychiatric setting were maintained in physical restraint* ***Then,*** multiply by 1000

Measure details:

- Lower is better.
- In order to further examine the issue of restraint use within a facility it may be useful to study the incidence of physical restraint use by collecting additional information about the clinical justification for use.
- Measure set ID is **HBIPS-2e.**
- Rationale on page 55 of THIS Joint Commission document.

10. **Rate of Catheter-associated Urinary Tract Infection (CAUTI)**
Rate per 1,000 of patients 65+with a catheter-associated UTI

Denominator= Number of urinary catheter days for patients 65+ during the previous month
Numerator=Number of CAUTIs for patients 65+ during the month
Then, multiply by 1000

Measure details:

- Lower is better.
- Rationale and additional criteria HERE.
- Collect data via NHSN. If not a NHSN unit, then these data may be collected another way (e.g., coordinating with a person in the care setting that reports into NHSN).

11. **Consumer Assessment of Healthcare Providers and Systems (CAHPS) – HCAHPS / CG-CAHPS**

Inpatient Settings of Care
Top-box percentages for two HCAHPS questions for patients 65+: (a) Rating of hospital (0-10) and (b) Recommendation to friends and family

Denominator = Number of patients 65+ seen during the baseline period (for inpatient sites of care) that responded to HCAHPS survey,
Numerator = Number of the patients 65+ that responded "top-box" to specified questions.

Measure details:

- Higher is better
- "Top-box" is explained here: https://www.hcahpsonline.org/en/summary-analyses/
- Stratification of responses by age different from the standard HCAHPS measures and the proposed measures. Responses will need to be put into age strata and then responses calculated.
- Goal is for the average scores for the two questions related to overall experience and willingness to recommend increase from baseline to re-measurement period (pre- and post-implementation of 4Ms Care design).

Ambulatory Settings of Care
Top-box percentage for CG-CAHPS communication questions composite for patients 65 years and older. The questions in the communication composite are numbered 11, 12, 14, and 15 in the basic CG-CAHPS version 3.0:

- *In the last 6 months, how often did this provider explain things in a way that was easy to understand?*
- *In the last 6 months, how often did this provider listen carefully to you?*
- *In the last 6 months, how often did this provider show respect for what you had to say?*
- *In the last 6 months, how often did this provider spend enough time with you?*

Measure details:

- Higher is better.

- https://www.ahrq.gov/sites/default/files/wysiwyg/cahps/surveys-guidance/cg/survey3.0/adult-eng-cg30-2351a.pdf
- Calculation of "top-box" for composite scores is explained here as a simple average of individual question "top-box" scores: https://cahpsdatabase.ahrq.gov/cahpsidb/Public/Files/Doc6_CG_How_Results_are_Calculated_2012.pdf
- Stratification of responses by age different from the standard CG-CAHPS measures and the proposed measures. Responses will need to be put into age strata and then responses calculated.
    - Goal is for the average scores for the four questions related to provider-patient communication increase from baseline to re-measurement period (pre- and post-implementation of 4Ms Care design).

Process Measures

"What Matters" Process Measures (choose 1):

1. **Average length of time between arrival and documented "What Matters" conversation**

   Calculation: Average time of what matters conversation – time of arrival in care setting for patients 65+ (in hours)

2. **Percentage of patients with advanced care planning (advanced care directive document) (number than do/number that should)**

   Denominator = Number of patients 65+ who have been seen in targeted unit/care setting
   Numerator = Number of patients 65+ who have a completed advanced care directive document

3. **Survey of Care Concordance with What Matters**
   Percentage collaboRATE top-box score for patients 65+

   Denominator=Number of completed surveys returned from patients 65+with length of stay greater than or equal to 1 day present on the unit between 12:01 AM on the first day of the measurement period and 11:59 PM on the last day of the measurement period (monthly)
   Numerator=Count of surveys for patients 65+ with top-box answers to all three questions ("all or nothing" score)

   Measure details:
   - For patients cognitively unable to respond to the questions, use the proxy version of collaboRATE.
   - PDF versions of the collaboRATE scale are available at: http://www.glynelwyn.com/collaborate-measure.html. We recommend the 10-point scale version, available in multiple languages and in proxy form
   - Measure development notes suggest: a) a minimum of 25 completed surveys to compute a top-box percentage; and b) the importance of respondent confidentiality: http://www.glynelwyn.com/scoring-collaboRATE.html
   - To support informed analysis and interpretation, units should track the total number of patients approached to obtain the number of completed surveys.
   - To address survey burden for staff and patients, there are two options for sampling: Ask every k-th patient such that N/(m*k) >= 25 for the measurement period OR gather responses from 25*m consecutive patients during the measurement period (a "pulse" approach). Here N is the expected number of patients in the population in the measurement period and m is a factor that accounts for refusal to respond to the survey. Typical ranges of m are 2.5 to 4 (personal communication with G. Elwyn, 30 May 2018).
   - Information derived from HERE.

5. **Documented Goals of Care (skilled nursing setting)**
   Percentage of assisted living residents with documentation of preferences and goals of care.
   Denominator: Number of residents 65+ who are new to the assisted living community each month.

Numerator: Number of the new residents 65+ who have documentation in their record of their preferences and goals of care.

Measure details:

- Higher is better.
- Measure set ALC-03.
- A discussion about preferences and goals of care can be initiated by any member of the assisted living care team.
- Documentation must include the specific preferences discussed.
- Example: "discussed hospitalization and if needed Mr. Smith does not wish to be transferred to the hospital.
- Goals of care are related to quality of life and may include rehabilitation or comfort care.
- Facilities should have a conversation with the resident about their preferences and goals of care. The measure is not capturing the number of preferences/goals discussed.
- For the purpose of this resident-centered measure, the documentation should indicate that the resident, family or surrogate was involved in the discussion of preferences and goals of care and care planning (i.e. that it was not completed solely by the clinician without input by the resident).
- Preferences and goals of care should be derived based upon the residents expressed preferences, values, needs, concerns and/or desires, through clinician-led discussion, professional guidance and support for resident and family decision making.
- Family is determined by the resident. Family may be defined as a person or persons who play a significant role in an individual's life.
- A surrogate decision-maker is someone legally appointed to make decisions on behalf of another. This individual can be a family member, or someone not related to the individual. A surrogate decision-maker makes decisions when the individual is without decision-making capacity or when the individual has given permission to the surrogate to make decisions. Such an individual is sometimes referred to as a legally responsible representative.
- If the resident or family declines to discuss the goals of care, and the documentation reflects this, select 'Yes'.
- Process flow HERE.

"Mentation" Process Measures:

1. **Percentage of patients with delirium screen compliance (did have/should have had)**

   Denominator=Number of patients 65+ seen who should have received delirium screen (as specified by hospital-specific inclusion criteria)
   Numerator=Number of patients 65+ who received a delirium screen

2. **Percentage of patients with depression screen compliance (did have/should have had)**

   Denominator=Number of patients 65+ seen who should have received depression screen (as specified by hospital-specific inclusion criteria)
   Numerator=Number of patients 65+ who received a depression screen

3. **Percentage of patients with cognitive screen compliance (did have/should have had)**

   Denominator=Number of patients 65+ seen who should have received a cognitive screen (as specified by hospital-specific inclusion criteria)

Numerator=Number of patients 65+ who received a cognitive screen

"Mobility" Process Measures (choose 1):

1. **Percentage of patients with admit compliance**

   Denominator=Number of patients 65+ seen who should have received a mobility screen upon admission (as specified by hospital-specific inclusion criteria)
   Numerator=Number of patients 65+ who received a mobility screen upon admission

2. **Percentage of patients with discharge compliance (did have/should have had)**

   Denominator=Number of patients 65+ seen who should have received a mobility screen prior to discharge (as specified by hospital-specific inclusion criteria)
   Numerator=Number of patients 65+ who received a mobility screen prior to discharge

3. **Percentage of patients with increased score from admit to discharge (did have/should have had)**
   Higher score indicates fewer limitations in functional performance

   Denominator= Total number of patients 65+ who received a mobility screen at both admission and discharge
   Numerator= Total number of patients 65+ who had a higher mobility screen (e.g., AM-PAC, TUG) score at discharge compared to admission

"Medication" Process Measures (choose 1):

1. **Percentage of patients with Age-Friendly medication review (did have/should have had)**

   Denominator=Number of patients 65+ admitted to targeted unit/care setting over the past month
   Numerator=Number of patients 65+ currently on at least one medication with a completed medication review over the past month

2. **Percentage of patients discharged on multiple antipsychotic medications with appropriate justification**

   Denominator: Total psychiatric inpatients 65+ discharged on two or more routinely scheduled antipsychotic medications
   Numerator: Total psychiatric inpatients 65+ discharged on two or more routinely scheduled antipsychotic medications with appropriate justification

   Measure details:
   - Measure ID: HBIPS-5e.

3. **Prescribed Off-Label Antipsychotic Drug Use (skilled nursing setting)**
Percent of Residents with an off-label antipsychotic drug prescribed

Denominator=Number of residents 65+ who resided in the facility during the specified month
Numerator=Number of residents 65+ with an off-label antipsychotic drug prescribed during the specified month

Measure details:

- Lower is better.
- Measure set ACL-01.
- List of qualifying off-label medications HERE.
- Rationale on page 10 of THIS Joint Commission document.