Category 3 Improvement in Quality and Safety

Attachment I
Regional Healthcare Partnership (RHP) Planning Protocol

I. Category 3 Introduction

The goal of Category 3 is to make urgent improvement in care that:

- Has a Promised Impact on the Patient Population, including interventions that have been demonstrated to produce measurable and significant results across different types of hospital settings.
- Has a Strong Evidence Base, meaning interventions that have been endorsed by a major national quality organization, with reasonably strong evidence established in the peer reviewed literature, including within the safety net; and
- Is Meaningful to Populations Served in the Texas Healthcare System, because without significant improvement in this intervention, Texas hospitals patients are at risk of harm, needless suffering, or premature/preventable death.

Intervention overview:

- Category 3 includes a number of interventions, and for each, specifies the measures that hospitals required to report must include for each intervention.
- RHP performing providers that are required to report, as specified in the *Program Funding and Mechanics Protocol*, must complete the common intervention on Severe Sepsis Resuscitation and Management and one or more additional intervention(s) of their choosing from the list of optional interventions.
- Performing provider hospitals should choose interventions that, according to their local circumstances, are identified as a high priority.
    - Within the plans, Performing Providers must articulate the reasons for choosing the intervention selected.
    - For its additional intervention, a performing provider may not choose an intervention related to a Potentially Preventable Readmission (PPR) or Potentially Preventable Complication (PPC) for which it has achieved top performance (for at least four consecutive quarters for state-reported PPRs and PPCs). "Top performance" is defined as being in the top quartile.
    - For its additional intervention, each participating provider should choose an intervention for which it can document a need for improvement.

Milestones:

- Milestones will include the measures specified for the interventions below. The measures specified for the interventions may include: (1) Process Measures (e.g., a bundle); and/or (2) Outcome Measures (e.g., clinical outcomes such as mortality rate).
- Both process milestones and outcome milestones will include improvement targets.
    - The interventions in this category specify the improvement targets, or a process to establish an improvement target, for each measure.
    - The improvement target for each measure will be determined based on the progress a performing provider has already made by DY 2-3 pursuant to baseline data from no earlier than December 2011.

- In a case in which no baseline data is available by DY 1, a baseline will be determined in DY 2 based on six to twelve months of data. In the case in which no benchmark is available by DY 1 due to the lack of baseline data, a benchmark may be determined in DY 2 if a sufficient comparable dataset has been established.
- Process milestones' improvement targets will be improvement over a performing provider's baseline (i.e., improvement over self).
- Outcome milestones' improvement targets will be consistent with achieving improvement and/or reporting performance for each intervention. As designated for each intervention below, there are four ways improvement will be assessed, based on the type of metric and the availability of benchmarking data:
    1. Improvement bands, in which performing providers will benchmark themselves against a comparable peer group, if available:
        a. "Lower band" performers, as defined as the bottom one-third (1-33 percentile) of hospitals, will target moving into the middle performance band;
        b. "Middle band" performers, as defined as the middle third (34-66 percentile) of hospitals, will target moving into the top performance band; and
        c. "Top band" performers, as defined as the top third (67-100 percentile) of hospitals, will target moving into the Top Quartile (76-100 percentile).
    2. Improvement over self;
    3. Reporting of performance only, not specific achievement targets; and
    4. Achievement of absolute targets.
- Plans are required to include milestones that achieve the improvement targets by DY 5.
- Maintenance of an improvement target is a permissible milestone.

- For DY 2-5, performing providers also must include a milestone for reporting to the State.
- Plans may include additional process milestones to enable the implementation of the measures specified for the intervention, such as:
    - Implementation of improved processes and/or process improvement methodologies;
    - The reporting and sharing of results and/or data;
    - Participation in a collaborative;
    - Sharing data, promising practices, and/or findings with peer groups and/or a quality improvement entity to foster shared learning and/or to conduct benchmarking;
    - Designation of/hiring personnel and/or process improvement teams;
    - Training of personnel and/or process improvement teams;
    - Implementation of a measurement system and/or process;

- Reporting and/or conducting an assessment of progress and/or the efficacy of the process improvements;
- Establishment of a baseline and/or implementation of a process to establish a baseline and/or begin collecting baseline data;
- Putting in place data collection, reporting, or management infrastructure; and/or
- Other process milestones aligned with implementing the intervention (e.g., infrastructure, redesign, implementation of evidence-based processes, and measurement of evidence-based outcomes related milestones).

Timeline:

- Plans will include Category 3 milestones for DY 2-5.

II. Required Intervention: Severe Sepsis Resuscitation and Management

For most hospital performing providers, as specified in the *Program Funding and Mechanics Protocol*, the Severe Sepsis Resuscitation and Management intervention is required. This intervention consists of the implementation of both the Sepsis Resuscitation[1] and Sepsis Management[2] bundles as treatment for severe sepsis, septic shock, and/or lactate>4mmol/L(36mg/dl). Resultant improvements in care will be gauged through the assessment and monitoring of process and outcome measures across the lifespan of the project. Initial measurements will constitute a baseline from which improvements at subsequent intervals will be gauged.

CMS has indicated that it is interested in using this intervention as a learning laboratory. Therefore, the emphasis of this intervention will be on learning, testing, and innovation through assessment and monitoring of the following measures.

Elements:

- Implement the Sepsis Resuscitation Bundle: Assess improvements in delivery reliability through the assessment of process measures.
- Implement the Sepsis Management Bundle: Assess improvements in delivery reliability through the assessment of process measures.
- Assess resulting improvements in patient outcomes through assessment of outcome measures.

A. Implementation of the Sepsis Resuscitation Bundle

- **Process Measures:**
  i. Process measure Number 1: Compliance with use of the Sepsis Resuscitation Bundle, as a percentage of total diagnoses for severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl).

[1] Institute for Healthcare Improvement. Sepsis Resuscitation Bundle. Available at http://www.ihi.org/knowledge/Pages/Changes/ImplementtheSepsisResuscitationBundle.aspx

[2] Institute for Healthcare Improvement. Sepsis Management Bundle. Available at http://www.ihi.org/knowledge/Pages/Changes/ImplementtheSepsisManagementBundle.aspx

a. **Numerator:** Number of diagnoses of severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl), where at least 1 Sepsis Resuscitation bundle was used in its entirety.
b. **Denominator:** Total number of diagnoses of severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl)
c. **ICD-9 Codes:** 038.x, 995.9x, 995.91, 995.92, 785.52, 998.02)

ii. Process measure Number 2: Incomplete use of Sepsis Resuscitation Bundle, as a percentage of total Sepsis Resuscitation Bundles attempted.
   a. **Numerator**: Number of diagnoses of severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl), where at least one Sepsis Resuscitation bundle was used in its entirety.
   b. **Denominator**: Number of diagnoses of severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl), where any component of the Sepsis Resuscitation Bundle was used (complete and incomplete bundles).

iii. Process measure Number 3: Use of initial Sepsis Resuscitation Bundle within the recommended time frame, as a percentage of complete initial Sepsis Resuscitation Bundle used.
   a. **Numerator**: Number of complete, initial Sepsis Resuscitation Bundles used within 6 hours for patients with severe sepsis, septic shock, and/or lactate>4mmol/L(36mg/dl).
   b. **Denominator**: Total number of complete, initial Sepsis Resuscitation Bundles used.

iv. Process measure Number 4: Average number of Sepsis Resuscitation Bundles used, per diagnoses of severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl).
   a. **Numerator**: Total number of Sepsis Resuscitation Bundles used.
   b. **Denominator**: Total number of diagnoses of severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl).

v. Process measures 5a-5d: Compliance with only individual elements of the Sepsis Resuscitation Bundle (4 elements are outlined below), as a percentage of total components of the Sepsis Resuscitation Bundle used, outside of bundles completed.
   a. **Numerator**: Number of times the individual element of the Sepsis Resuscitation bundle was used, outside of a complete bundle.
   b. **Denominator**: Number of times any component of the Sepsis Resuscitation Bundle was used, outside of a complete bundle.

The Institute for Healthcare Improvement outlines the seven critical elements of the Sepsis Resuscitation Bundle that, according to evidence based practices, must be completed in order to maximize patient outcomes[3]. For the sake of efficiency in measurement, we have condensed the last four elements into one larger group

[3] Resar R, Griffin FA, Haraden C, Nolan TW. Using Care Bundles to Improve Health Care Quality. IHI Innovation Series white paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2012. (Available on www.IHI.org)

of components that must all be performed in order to successfully achieve completion for the process measure.

5a. Serum lactate measured
5b. Blood cultures obtained prior to antibiotic administration
5c. Improve time to broad-spectrum antibiotics: within 3 hours for ED admissions and 1 hour for non-ED ICU admissions
5d. In the event of hypotension and/or lactate >4 mmol/L (36mg/dl):
- Deliver an initial minimum of 20 ml/kg of crystalloid (or colloid equivalent)
- Apply vasopressors for hypotension not responding to initial fluid resuscitation to maintain mean arterial pressure (MAP) >65 mm Hg.
- Achieve a central venous pressure (CVP) of >8 cm/H20.
- Achieve a central venous oxygen saturation (Scv02) of >70% or mixed venous oxygen saturation (Sv02) of >65%

B. Implementation of the Sepsis Management Bundle

- **Process Measures:**

i. Process measure Number 1: Compliance with use of the Sepsis Management Bundle, as a percentage of total diagnoses of severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl).
   a. **Numerator**: Number of diagnoses of severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl), where at least 1Sepsis Management bundle was used in its entirety
   b. **Denominator**: Total number of diagnoses of severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl)

ii. Process measure Number 2: Incomplete use of Sepsis Management Bundle, as a percentage of total Sepsis Management bundles attempted.
   a. **Numerator**: Number of diagnoses of severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl), where at least one Sepsis Management bundle was used in its entirety.
   b. **Denominator**: Number of diagnoses of severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl), where any component of the Sepsis Management Bundle was used (complete and incomplete bundles).

iii. Process measure Number 3: Use of initial Sepsis Management Bundle within the recommended time frame, as a percentage of complete initial Sepsis Management Bundle used.
   a. **Numerator**: Number of complete, initial Sepsis Management Bundles used within 24 hours for patients with severe sepsis, septic shock, and/or lactate>4mmol/L(36mg/dl).
   b. **Denominator**: Total number of complete, initial Sepsis Management Bundles used.

iv. Process measure Number 4: Average number of Sepsis Management Bundles used, per diagnoses of severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl).
   a. **Numerator**: Total number of Sepsis Management Bundles used.

b. **Denominator**: Total number of diagnoses of severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl).

v. Process measures 5a-5c: Compliance with only individual elements of the Sepsis Management Bundle (3 elements are outlined below), as a percentage of total components of the Sepsis Management Bundle used, outside of bundles completed.
   a. **Numerator**: Number of times the individual element of the Sepsis Management Bundle was used, outside of a complete bundle.
   b. **Denominator**: Number of times any component of the Sepsis Management Bundle was used, outside of a complete bundle.

The Institute for Healthcare Improvement outlines the three critical elements of the Sepsis Management Bundle that, according to evidence based practices, must be completed in order to maximize patient outcomes[4].

5a. Administer low-dose steroids by a standard policy
5b. Maintain adequate glycemic control
5c. Prevent excessive inspiratory plateau pressures

C. Assessing Improvements in Patient Outcomes

The Institute for Healthcare Improvement,[5] and other sources,[6,7,8] cite improvements in sepsis mortality and length of stay as outcome measures with a documented positive response to proper implementation of both the Sepsis Resuscitation and Sepsis Management bundles.

- **Outcome measures**
  i. Sepsis mortality
     a. **Numerator:** Number of patients expiring during current month hospitalization with sepsis, severe sepsis or septic shock and/or an infection and organ dysfunction.
     b. **Denominator:** Number of patients identified that month with sepsis, severe sepsis or septic shock and/or an infection and organ dysfunction.

[4] Resar R, Griffin FA, Haraden C, Nolan TW. Using Care Bundles to Improve Health Care Quality. IHI Innovation Series white paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2012. (Available on www.IHI.org)

[5] Resar R, Griffin FA, Haraden C, Nolan TW. Using Care Bundles to Improve Health Care Quality. IHI Innovation Series white paper. Cambridge, Massachusetts: Institute for Healthcare Improvement; 2012. (Available on www.IHI.org)

[6] Nguyen HB, Corbett SW, Steele R, et al. "Implementation of a Bundle of Quality Indicators for the Early Management of Severe Sepsis and Septic Shock is Associated with Decreased Mortality. " *Critical Care Medicine.* 2007. April; 235(4): 1105-1112.

[7] Zambon M, Ceola M, Almeida de Castro R, Gullo A, Vincent JL. "Implementation of the Surviving Sepsis Campaign Guidelines for Severe Sepsis and Septic Shock: We Could Go Faster." Journal of Critical Care. 2008. Dec;23(4):455-460.

[8] Hoo WE, Muehlberg K, Ferraro RG, Jumaoas MC. "Successes and Lessons Learned Implementing the Sepsis Bundle." *Journal of Healthcare Quality*. 2009. Jul-Aug;31(4):9-14.

c. Source of Data Definition: Performing Provider data
d. Improvement Target: Since deep evidence does not exist linking a particular process bundle to predictable levels of improvement in outcomes, performing providers will measure and report on mortality, but will not have milestones associated with achievement of specific improvements in mortality.

ii. Average length of stay
a. **Numerator**: Total number of inpatient days for patients diagnosed with severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl).
b. **Denominator**: Total number of patients diagnosed with severe sepsis, septic shock, and/or lactate>4mmol/L (36mg/dl).

III. Optional Interventions

The following section includes the optional interventions among which performing providers that are required to perform Category 3 interventions to receive certain payments (as specified in the *Program Funding and Mechanics Protocol*) may choose. These optional interventions include potentially preventable events that have been included to enhance continuity with all categories of the protocol. The potentially preventable events particularly build continuity with the required reporting measures in Category 4.

A. Potentially Preventable Admissions (PPAs)

- Elements
  - Congestive Heart Failure admission rate – identification of baseline rates, priority areas, interventions, and milestones.
  - Diabetes, short-term complications, Admission rate – identification of baseline rates, priority areas, interventions, and milestones.
  - Diabetes, uncontrolled diabetes, Admission rate – identification of baseline rates, priority areas, interventions, and milestones.
  - Behavioral health potentially preventable admission rate- identification of baseline rates, priority areas, intervention, and milestones.
  - Chronic obstructive pulmonary disease or asthma in adults admission rate – identification of baseline rates, priority areas, interventions, and milestones.
  - Hypertension admission rate – identification of baseline rates, priority areas, interventions, and milestones.
  - Diagnosis and Management of Asthma

- Key Measures
  - **Process Measures:**
    i. Determination of baseline PPA rates or if PPA data unavailable, determination of related admission rate (defined below) (CHF, diabetes, behavioral health, COPD, and HTN)
    ii. Development of strategic plan to reduce priority PPA rates

  - **Outcome Measure:**
    i. Potentially preventable admission rate or if PPA data unavailable, reporting on related admission rates (defined below)

1. **Congestive Heart Failure Admission rate** (derived from AHRQ Prevention Quality Indicator (PQI) #8)[9]
    - **Metric:**
        i. **Numerator:** All inpatient discharges from the hospitals of patients age 18 years and older with ICD-9-CM principal diagnosis code for heart failure within the demonstration year reporting period
        ii. **Denominator:** Number of residents age 18 and older living in the RHP counties

2. **Diabetes Admission Rates**
    - **Metrics**
        i. Diabetes, short term complications (derived from AHRQ PQI #1)[10]
            1. **Numerator**: All inpatient discharges from [11] with ICD-9-CM principal diagnosis code for short-term complications (ketoacidosis, hyperosmolarity, coma) within the demonstration year reporting period
            2. **Denominator**: Number of patients residents age 18 and over years with diabetes who have visited the performing provider's primary care clinic(s) two or more times in the past 12 months living in the RHP counties

        ii. Uncontrolled Diabetes (derived from AHRQ Prevention Quality Indicator (PQI) #14)[12]
            1. **Numerator:** All inpatient discharges from all participating hospital age 18 and older with ICD-9-CM principal diagnosis code for uncontrolled diabetes, without mention of a short-term or long-term complication within the demonstration year
            2. **Denominator:** Number of residents age 18 and older living in the RHP counties

3. **Behavioral Health and Substance Abuse Admission rate**
    - **Metric (based on other selected PPA primary diagnoses)**
        i. **Numerator:** Number of patients with a potentially preventable admission for a select primary diagnosis that have mental health or substance abuse as a secondary diagnosis
        ii. **Denominator:** Number of patients with a potentially preventable admission for a select primary diagnosis

4. **Chronic Obstructive Pulmonary Disease or Asthma in Adults Admission rate** (derived from AHRQ PQI #5)[13]

---

[9] Derived from: http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V44/TechSpecs/PQI%2008%20Heart%20Failure%20Admission%20Rate.pdf

[10] Derived from: http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V44/TechSpecs/PQI%2001%20Diabetes%20Short-term%20Complications%20Admissions%20Rate.pdf

[12] Derived from: http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V44/TechSpecs/PQI%2014%20Uncontrolled%20Diabetes%20Admission%20Rate.pdf

- **Metric**
  i. **Numerator**: All discharges of age 40 years and older with ICD-9-CM principal diagnosis code for COPD or asthma
  ii. **Denominator**: Number of residents age 18 and older living in the RHP counties

5. **Hypertension Admission rate** (derived from AHRQ PQI #7)[14]
   - **Metric**
     i. **Numerator**: All discharges of age 18 years and older with ICD-9-CM principal diagnosis code for hypertension
     ii. **Denominator**: Number of residents age 18 and older living in the RHP counties

6. **Diagnosis and management of asthma**
   - **Metric Diagnosis and management of asthma**
     i. **Numerator:** Number of asthma patients age 5 and older who return to the emergency department for treatment of asthma within 30 days of the last visit to the ED
     ii. **Denominator:** Number of asthma patients age 5 and older who were seen in emergency department for asthma treatment (ICD-9 codes: 493.00, 493.01, 493.10, 493.11, 493.90, and 493.91).
     iii. Source of Data Definition: Performing provider's data or Texas Department of State Health Services (DSHS)
     iv. Improvement Target: Since reliable benchmark and/or baseline data will vary across condition and intervention type, performing providers will report a baseline in DY 2. Based on the baseline data, each performing provider will target improvement over its baseline.

7. **Bacterial pneumonia immunization**
   - **Metric:** Pneumococcal Immunization (PPV23) – Overall Rate (CMS IQR/Joint Commission measure IMM-1a)

8. **Influenza Immunization**
   - **Metric**: Influenza Immunization (CMS IQR/Joint Commission measure IMM-2)

B. Potentially Preventable Re-admissions

- Elements
  - All cause potentially preventable re-admission rate- identification of baseline rates, priority areas, intervention, and milestones.
  - Congestive Heart Failure Readmission rate - identification of baseline rates, priority areas, intervention, and milestones.

---

[13] Derived from: http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V44/TechSpecs/PQI%2005%20COPD%20or%20Asthma%20in%20Older%20Adults%20Admission%20Rate.pdf

[14]http://www.qualityindicators.ahrq.gov/Downloads/Modules/PQI/V44/TechSpecs/PQI%2007%20Hypertension%20Admission%20Rate.pdf

- Diabetes Readmission rate - identification of baseline rates, priority areas, intervention, and milestones.
- Behavioral health potentially preventable re-admission rate- identification of baseline rates, priority areas, intervention, and milestones.
- COPD readmission rate - identification of baseline rates, priority areas, intervention, and milestones.
- Stroke readmission rate identification of baseline rates, priority areas, intervention, and milestones.

- Key Measures
  - **Process Measures: Determination of baseline PPR rates (all cause and behavioral health)**
    i. Development of strategic plan to reduce priority PPR rates
    ii. Source of Data Definition: performing provider data
    iii. Improvement Target: Since reliable benchmark and/or baseline data will vary across condition and intervention type, performing providers will report a baseline in DY 2. Based on the baseline data, each performing provider will target improvement over its baseline.

  - **Outcome Measure: Potentially preventable re-admission rate**
    i. **Metric**:
       a. **Numerator:** # patients readmitted to same hospital within 15 days.
       b. **Denominator:** # patients discharged from selected target population (i.e. CHF patients, diabetes patients, behavioral health patients, etc.)
    ii. Source of Data Definition: Performing provider Data
    iii. Improvement Target: Since reliable benchmark and/or baseline data will vary across condition and intervention type, performing providers will report a baseline in DY 2. Based on the baseline data, each performing provider will target improvement over its baseline.

C. Potentially Preventable Complications (PPCs) (For DY 4 and after)

- Key Measures
  - **Process measures:**
    i. Determine baseline PPC rates. Note: These will be used for reporting in Category 4. Select five from the list of the ten highest volume complications or the list of complications with rates higher than the state rate. Design and implement a PPC-specific improvement plan. Report on the selected five measures.
    ii. Each performing provider will be responsible for determining appropriate proxy measures for the five selected PPCs to allow the RHP to monitor improvement in real time. Performance on these proxy measures will be reported to HHSC every 6 months.

  - **Outcome measure:**
    i. An improvement of X% in the selected PPCs based on PPC reports (Medicaid data only)

D. Perinatal Outcomes

- Elements
  - Birth trauma rates
  - Pre-39-week elective inductions
  - Antenatal corticosteroid administration

- Key Measures
  - **Process measures:**
    i. Determine baseline rates for birth trauma.
    ii. Select intervention to address
    iii. Train staff
    iv. Implement program
    v. Plan-Do-Study-Act (PDSA) and learning cycles

  - **Outcome measures:**
    i. An improvement of X% in the birth trauma rates.
    ii. Percent of patients with elective vaginal deliveries or elective cesarean sections at greater than or equal to 37 weeks and less than 39 weeks of gestation completed.
        a. **Numerator**: Number of patients with elective vaginal deliveries or elective cesarean sections at greater than or equal to 37 weeks and less than 39 weeks of gestation completed
        b. **Denominator**: Total number of deliveries
    iii. Antenatal corticosteroid administration

E. Diabetes Composite Measures

Diabetes is the leading diagnosis for Medicaid encounters. According to HHSC data, diabetes is the single most frequent diagnosis for Medicaid encounters in our state and ranked number nine in terms of Medicaid expenditures. The disease is rapidly growing and affecting all aspects of our society: families, communities, schools and businesses. The State Demographer estimates that we will see a quadrupling of the number of adults with diagnosed diabetes by 2040.

- Key measures: Optimal Diabetes Care Composite (as adopted by the National Quality Forum):
  - The percentage of adult diabetes patients who have optimally managed modifiable risk factors (HbA1c, Blood Pressure, LDL, Eye Exam, Foot Exam, and Urine Microalbumin) with the intent of preventing or reducing future complications associated with poorly managed diabetes. The outcome measures apply to patients ages 18-75 with a diagnosis of diabetes.

  - **Outcomes Measures:** The percentage of individuals 18-75 years of age with diabetes (type 1 and type 2) who had each of the following:
    i. Percentage of patients 18-75 years of age with diabetes (type 1 or type 2) who had hemoglobin A1c (HbA1c) control < 8.0%. (NQF 0575);
        a. **Numerator:** HbA1c level is <8.0% during the measurement year.
        b. **Denominator:** Members 18 - 75 years of ages with diabetes.

ii. Percentage of patients 18-75 years of age with diabetes (type 1 or type 2) who had blood pressure < 140/90 mmHg.(NQF 0061);
   a. **Numerator:** Blood Pressure is <140/90 mmHg during the measurement year.
   b. **Denominator:** Patients 18-75 years of age as of December 31 of the measurement year who had a diagnosis of diabetes (type 1 or type 2).

iii. Percentage of patients 18-75 years of age with diabetes (type 1 or type 2) who had LDL-C < 100 mg/dL (NQF 0064);
   a. **Numerator:** LDL-C <100 mg/dL during the measurement year.
   b. **Denominator:** Patients 18-75 years of age as of December 31 of the measurement year who had a diagnosis of diabetes (type 1 or type 2).

iv. Percentage of patients 18 -75 years of age with diabetes (type 1 or type 2) who had a retinal or dilated eye exam or a negative retinal exam (no evidence of retinopathy) by an eye care professional (NQF 0055);
   a. **Numerator:** An eye screening for diabetic retinal disease.
   b. **Denominator:** Patients 18-75 years of age as of December 31 of the measurement year who had a diagnosis of diabetes (type 1 or type 2).

v. Percentage of patients aged 18-75 years with diabetes (type 1 or type 2) who had a foot exam (visual inspection, sensory exam with monofilament, or pulse exam) (NQF 0056);
   a. **Numerator:** Patients who received a foot exam (visual inspection, sensory exam with monofilament, or pulse exam) during the measurement year.
   b. **Denominator:** Patients 18-75 years of age as of December 31 of the measurement year who had a diagnosis of diabetes (type 1 or type 2).

vi. Percentage of adult diabetes patients aged 18-75 years with at least one test for microalbumin during the measurement year or who had evidence of medical attention for existing nephropathy (diagnosis of nephropathy or documentation of microalbuminuria or albuminuria) (NCF 0062);
   a. **Numerator:** A nephropathy screening test or evidence of nephropathy
   b. **Denominator:** Patients 18-75 years of age as of December 31 of the measurement year who had a diagnosis of diabetes (type 1 or type 2).