Attachment Q - Delivery System Reform Incentive Payments (DSRIP)
Category 4 – Urgent Improvement in Quality and Safety Superset of Interventions

The goal of Category 4 is to make urgent improvement in care that:

1. 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, including in safety net hospitals;

2. 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

3. Is Meaningful to Populations Served in California's Public Hospital Systems because, without significant improvement in this intervention, California public hospitals' patients are at risk of harm, needless suffering, or premature/preventable death.

Interventions:

1. The superset includes 7 interventions, and for each, specifies the measures that designated public hospital (DPH) system DSRIP plans must include for each intervention.

2. DPH systems will select two common interventions, and an additional two interventions of their own choosing from the superset below (please see pages 4-12).

3. DPH systems may choose interventions that, according to their local circumstances, are identified as a high priority.

   a. DPH system plans must articulate the reasons for choosing the two interventions selected.

   b. For its two additional interventions, a DPH system is precluded from choosing an intervention for which it has achieved top performance for at least 4 consecutive quarters, in aggregate in all Process and Outcome Measures within the intervention, where "top performance" is defined as being in the Top Quartile.

   c. No DPH system may choose both Hospital-Acquired Pressure Ulcer Prevention and Falls with Injury Prevention as its two selected interventions because both are rare events.

4. For DPH system plans that cover multiple campuses that are included within the scope of the DSRIP Category 4 plan, the plan may specify if the data will be reported on an aggregated basis.

Milestones:

1. 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).

2. Both Process milestones and Outcome milestones will include Improvement Targets.

   a. The superset below specifies the Improvement Targets, or a process to establish an Improvement Target, for each measure per intervention.

b. The Improvement Target for each measure per intervention will be determined based on the progress a DPH system has already made by DY 6-7 pursuant to baseline data starting no earlier than July 2009.

c. In the case where no baseline data is available by DY 6, a baseline will be determined in DY 7 based on 6-12 months of data. In the case where no benchmark is available by DY 6 due to the lack of baseline data, a benchmark may be determined in DY 7 if a sufficient comparable dataset has been established.

d. Process milestones' Improvement Targets will be improvement over a DPH system's baseline (i.e., improvement over self).

e. 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:

   i. Improvement bands, where DPH systems will benchmark themselves against a comparable peer group:

      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);

   ii. Improvement over self;

   iii. Reporting of performance only, not specific achievement targets; and

   iv. Achievement of absolute targets.

f. DPH systems' plans are required to include milestones that achieve the Improvement Targets by DY 10.

g. Maintenance of an Improvement Target is a permissible milestone.

3. For DY 7-10, DPH system plans must also include a milestone for reporting to the State of California.

4. DPH system plans may include additional process milestones to enable the implementation of the measures specified for the intervention, such as:

   a. Implementation of improved processes and/or process improvement methodologies;

   b. The reporting and sharing of results and/or data;

   c. Participation in a collaborative;

   d. 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;

   e. Designation of/hiring personnel and/or process improvement teams;

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    f.   Training of personnel and/or process improvement teams;

    g.   Implementation of a measurement system and/or process;

    h.   Reporting and/or conducting an assessment of progress and/or the efficacy of the process improvements;

    i.   Establishment of a baseline and/or implementation of a process to establish a baseline and/or begin collecting baseline data;

    j.   Putting in place data collection, reporting or management infrastructure; and/or

    k.   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:

- DPH system plans will include Category 4 milestones for DY 6-10.

- Per the *Incentive Pool – Program Mechanics and Review Process* (pages XX-XX), in the first 6 months of DY 8, there will be a Mid-Point Assessment that will include reviewing the superset of Category 4 interventions, including whether an intervention should be removed, updated, or added to the superset for DY 9-10.

Two Common Interventions for All DPH Systems:

1. **Severe Sepsis Detection and Management**

    a.   <u>Elements</u>

        i.   Implement the Sepsis Resuscitation Bundle: to be completed within 6 hours for patients with severe sepsis, septic shock, and/or lactate > 4mmol/L (36mg/dl)

        ii.   Make the elements of the Sepsis Bundle more reliable

    b.   <u>Key Measures:</u>

        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. The learnings will inform ongoing DPH system efforts to reduce sepsis mortality.

        i.   Process Measure: Percent compliance with elements of the Sepsis Resuscitation Bundle (4 elements are outlined below), as measured by percent of hospitalization with sepsis, severe sepsis or septic shock and/or an infection and organ dysfunction where targeted elements of the Sepsis Resuscitation Bundle were completed.

            1.   Metric: The 4 elements of the sepsis resuscitation bundle for which there is the most evidence of reliability and efficacy (based on the recommendations of the Gordon and Betty Moore Foundation's Integrated

Nurse Leadership Program and other sepsis prevention collaboratives) include:

  a. Serum lactate measured

  b. Blood cultures obtained prior to antibiotic administration

  c. Improve time to broad-spectrum antibiotics: within 3 hours for ED admissions and 1 hour for non-ED ICU admissions

  d. In the event of hypotension and/or lactate >4 mmol/L (36mg/dl):

    i. Deliver an initial minimum of 20 ml/kg of crystalloid (or colloid equivalent)

    ii. Apply vasopressors for hypotension not responding to initial fluid resuscitation to maintain mean arterial pressure (MAP) >65 mm Hg.

2. Source of Data Definition[1]: DPH System Data

3. Improvement Target: Since reliable benchmark and/or baseline data is not available for this measure, DPH systems will report a baseline in DY 7. Based on the baseline data, each DPH system will target improvement over its baseline.

 ii. Outcome Measure: Sepsis mortality

  1. Metric:

    a. Numerator: Number of patients in population 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 in the population that month with sepsis, severe sepsis or septic shock and/or an infection and organ dysfunction.

  2. Source of Data Definition: DPH System Data

  3. Improvement Target: Since deep evidence does not exist linking a particular process bundle to predictable levels of improvement in outcomes, DPH systems will measure and report on mortality, but will not have milestones associated with achievement of specific improvements in mortality.

2. Central Line-Associated Bloodstream Infection (CLABSI) Prevention

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[1] Please refer to Appendix A: Sources of Data Definitions for further information on all Category 4 sources that include the definitions for the data.

Attachment Q - Delivery System Reform Incentive Payments (DSRIP)
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a. Elements

    i. Implement the Central Line Bundle

    ii. Make the process for delivering all bundle elements more reliable

b. Key Measures

    i. Process Measure: Compliance with Central Line Insertion Practices (CLIP)

        1. Metric:

            a. Numerator: Number of patients with central lines that occur in all intensive care units (ICUs) including adult, pediatric and NICUs within the facility for whom all elements of the CLIP are documented

            b. Denominator: Total number of patients with central lines that occur in all intensive care units (ICUs) including adult, pediatric and NICUs within the facility

        2. Source of Data Definition: DPH System Data

        3. Improvement Target: Since reliable benchmark and/or baseline data is not available for this measure, DPH systems will report a baseline in DY 7. Based on the baseline data, each DPH system will target improvement over its baseline.

    ii. Outcome Measure: Central Line-Associated Bloodstream Infections (CLABSI)

        1. Metric:

            a. Numerator: Laboratory-confirmed primary bloodstream infections that are not secondary to another infection and that occur in critical care units or inpatient ward patients in whom a central line was in place at the time of, or within 48 hours before, onset of infection

            b. Denominator: Device days, i.e., number of critical care units or inpatient ward patients with one or more central lines or umbilical catheters enumerated daily and summed over the measurement interval

        2. Source of Data Definition: DPH System Data, or California Department of Public Health (CDPH)

        3. Improvement Target: Since reliable benchmark and/or baseline data is currently not available for this measure, DPH systems will report baseline data in DY 7. Based on the baseline data, each DPH system will target improvement over its baseline. By the end of DY 6, if the California Department of Public Health Healthcare-Acquired Infection (HAI) database has had significant improvements to ensure reliability, validity and comparability, that dataset could be chosen for setting improvement targets. The current report has several self acknowledged significant

limitations. For example, because of the way data were collected, it's impossible to compare rates of infections from hospital to hospital. CDPH expects this will change. The state is now using CDC's National Healthcare Safety Network -- a standardized system that will risk adjust and allow for true hospital-to-hospital comparisons. If the CDPH dataset is selected, Improvement Targets could be stratified by academic medical center status in order to recognize differences, as demonstrated in the literature.

DPH Systems Must Choose a Minimum of Two of the Following Interventions:

1. **Surgical Site Infection (SSI) Prevention**

   a. <u>Element</u>

      i. Surgical site infection prevention

   b. <u>Key Measure</u>

      i. Outcome Measure: SSI

         1. Metric: Rate of surgical site infection for Class 1 and 2 wounds.

         2. Source of Data Definition: DPH System Data, or California Department of Public Health (CDPH)

         3. Improvement Target: Since reliable benchmark and/or baseline data is currently not available for this measure, DPH systems will report baseline data in DY 7. Based on the baseline data, each DPH system will target improvement over its baseline. By the end of DY 6, if the California Department of Public Health Healthcare-Acquired Infection (HAI) database has had significant improvements to ensure reliability, validity and comparability, that dataset could be chosen for setting improvement targets. The current report has several self acknowledged significant limitations. For example, because of the way data were collected, it's impossible to compare rates of infections from hospital to hospital. CDPH expects this will change. The state is now using CDC's National Healthcare Safety Network -- a standardized system that will risk adjust and allow for true hospital-to-hospital comparisons. If CDPH dataset is selected, Improvement Targets could be stratified by academic medical center status in order to recognize differences, as demonstrated in the literature.

2. **Hospital-Acquired Pressure Ulcer Prevention**

   a. <u>Elements</u>

      i. Conduct a pressure ulcer admission assessment for all patients

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b. Key Measure

    i. Outcome Measure: Pressure ulcer prevalence

        1. Metric:

           a. Numerator: Patients with Category II, III, IV or unstageable pressure ulcers

           b. Denominator: All patients 16 years or older assessed on the day of the study

        2. Source of Data Definition: Collaborative Alliance for Nursing Outcomes (CALNOC)

        3. Improvement Target: Hospitals will achieve Top Quartile of less than 1.1%

3. **Stroke Management**

  a. Elements

    i. Discharged on Antithrombotic Therapy

    ii. Anticoagulation Therapy for Atrial Fibrillation/Flutter

    iii. Thrombolytic Therapy

    iv. Antithrombotic Therapy By End of Hospital Day 2

    v. Discharged on Statin Medication

    vi. Stroke Education

    vii. Assessed for Rehabilitation

  b. Key Measures

    i. Process Measures:

        1. Discharged on Antithrombotic Therapy

        2. Anticoagulation Therapy for Atrial Fibrillation/Flutter

        3. Thrombolytic Therapy

        4. Antithrombotic Therapy By End of Hospital Day 2

        5. Discharged on Statin Medication

        6. Stroke Education

        7. Assessed for Rehabilitation

        8. Source of Data Definition: DPH System Data

9. Improvement Target: For the 7 Process Measures enumerated above, DPH systems will report baseline data in DY 7. Based on the baseline data, each DPH system will target improvement over its baseline.

ii. Outcome Measure: Reporting on stroke mortality rates

1. Metric:

   a. Numerator: Number of acute stroke deaths

   b. Denominator: Number of acute stroke cases

2. Source of Data Definition: Office of Statewide Health Planning and Development (OSHPD)

3. Improvement Target: Since deep evidence does not exist linking a particular process bundle to predictable levels of improvement in outcomes, DPH systems will measure and report on mortality, but are not required to have milestones associated with the achievement of specific improvements in mortality.

4. Venous Thromboembolism (VTE) Prevention and Treatment

a. Elements

   i. VTE Prophylaxis

   ii. Intensive Care Unit VTE Prophylaxis

   iii. Venous Thromboembolism Patients with Anticoagulation Overlap Therapy

   iv. Venous Thromboembolism Patients Receiving Unfractionated Heparin with Dosages/Platelet Count Monitoring by Protocol

   v. VTE Discharge Instructions

   vi. Incidence of Potentially-Preventable Venous Thromboembolism

b. Key Measures

   i. Process Measures:

   1. VTE Prophylaxis

      a. Metric:

         i. Numerator: Patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given:

            1. the day of or the day after hospital admission

            2. the day of or the day after surgery end date for surgeries that start the day of or the day after hospital admission

       ii. Denominator: All patients except as outlined by the Specifications Manual for National Hospital Inpatient Quality Measures

   b. Source of Data Definition: DPH System Data

   c. Improvement Target: Since reliable benchmark and/or baseline data is not available for this measure, DPH systems will report a baseline in DY 7. Based on the baseline data, each DPH system will target improvement over its baseline.

2. Intensive Care Unit VTE Prophylaxis

   a. Metric:

       i. Numerator: Patients who received VTE prophylaxis or have documentation why no VTE was given:

          1. The day of or the day after ICU admission or transfer

          2. The day of or the day after surgery end date for surgeries that start the day or the day after ICU admission or transfer

       ii. Denominator: Patients directly admitted or transferred to ICU

   b. Source of Data Definition: DPH System Data

   c. Improvement Target: Since reliable benchmark and/or baseline data is not available for this measure, DPH systems will report a baseline in DY 7. Based on the baseline data, each DPH system will target improvement over its baseline.

3. Venous Thromboembolism Patients with Anticoagulation Overlap Therapy

   a. Metric:

       i. Numerator: Patients who received overlap therapy

       ii. Denominator: Patients with confirmed VTE who received warfarin

   b. Source of Data Definition: DPH System Data

   c. Improvement Target: Since reliable benchmark and/or baseline data is not available for this measure, DPH systems will report a baseline in DY 7. Based on the baseline data, each DPH system will target improvement over its baseline.

4. Venous Thromboembolism Patients Receiving Unfractionated Heparin with Dosages/Platelet Count Monitoring by Protocol

   a. Metric:

      i. Numerator: Patients who have their IV UFH therapy dosages and platelet counts monitored according to defined parameters such as nomogram or protocol

      ii. Denominator: Patients with confirmed VTE receiving IV UFH therapy

   b. Source of Data Definition: DPH System Data

   c. Improvement Target: Since reliable benchmark and/or baseline data is not available for this measure, DPH systems will report a baseline in DY 7. Based on the baseline data, each DPH system will target improvement over its baseline.

5. VTE Discharge Instructions

   a. Metric: VTE patients with documentation that they or their caregivers were given written discharge instructions or other educational material addressing all of the following:

      i. Follow-up monitoring

      ii. Compliance issues

      iii. Dietary restrictions

      iv. Potential for adverse drug reactions/interactions

      v. Activity requirements or restrictions

   b. Source of Data Definition: DPH System Data

   c. Improvement Target: Since reliable benchmark and/or baseline data is not available for this measure, DPH systems will report a baseline in DY 7. Based on the baseline data, each DPH system will target improvement over its baseline.

ii. Outcome Measure: Incidence of Potentially-Preventable Venous Thromboembolism

   1. Metric:

      a. Numerator: Patients who received no VTE prophylaxis prior to the VTE diagnostic test order date

      b. Denominator: Patients who developed confirmed VTE during hospitalization

    2. Source of Data Definition: DPH System Data

    3. Improvement Target: Since deep evidence does not exist linking a particular process bundle to predictable levels of improvement in outcomes, DPH systems will measure and report on incidence of potentially-preventable venous thromboembolism, but are not required to have milestones associated with the achievement of specific improvements.

5. Falls with Injury Prevention

  a. <u>Elements</u>

    i. Prevalence of patient falls with injury

  b. <u>Key Measure</u>

    i. Outcome Measure: Prevalence of patient falls with injury

      1. Metric:

        a. Numerator: Falls with injury

        b. Denominator: Per 1000 patient days

      2. Source of Data Definition: Collaborative Alliance for Nursing Outcomes (CALNOC)

      3. Improvement Target: Zero falls with injury per 1000 patient days for at least six months out of a year (months are not necessarily consecutive)

Appendix A: Sources of Data Definitions

1. University HealthSystem Consortium

https://www.uhc.edu

The University HealthSystem Consortium (UHC), Oak Brook, Illinois, formed in 1984, is an alliance of 112 academic medical centers and 255 of their affiliated hospitals representing approximately 90% of the nation's non-profit academic medical centers.

Data Sources: UHC Clinical Data Base/Resource Manager, 3Q09 - 2Q10 discharges

UHC HQMR Report (reports Core Measures), 2Q09 - 1Q10 discharges

N = 47 National Association of Public Hospitals for UHC CDB/RM; 44 for Core Measures

Data compares 11 CAPH member average against NAPH reporting hospitals.

2. Collaborative Alliance for Nursing Outcomes (CalNOC)

https://www.calnoc.org

CalNOC has one of the largest regional nursing quality databases in the nation reporting nursing-sensitive quality measurements related to hospital performance and patient safety. Today more than 200 hospitals from across the United States and Europe have made CALNOC an International Advocate for patient safety and performance measurement.

Data Sources:

- Comparison Data (All Hospitals) for Care Hours and Falls --- Total Facility Injury Falls per 1000 Pt Days, October 2009 To September 2010, N = 180 California hospitals

- From OCTOBER 2009 To SEPTEMBER 2010\Comparison Data (All Hospitals) for Prevalence Studies: Total Facility % of Pt. with Hospital Acquired Pressure Ulcers Stage II, III, IV + unstageable, October 2009 To September 2010, N = 197 California hospitals

3. National Healthcare Safety Network (NHSN)

http://www.cdc.gov/nhsn/

The National Healthcare Safety Network (NHSN) is a voluntary, secure, internet-based surveillance system that integrates patient and healthcare personnel safety surveillance systems managed by the Division of Healthcare Quality Promotion (DHQP) at CDC.

Data Source: 2009 NHSN Report
(http://www.cdc.gov/nhsn/PDFs/dataStat/2009NHSNReport.PDF)

4. **California Department of Public Health**

http://www.cdph.ca.gov/programs/hai/Pages/HealthcareAssociatedInfections.aspx

The California Department of Public Health is dedicated to optimizing the health and well-being of the people in California.

Data Source: CDPH Technical Report: Healthcare-associated Bloodstream Infections in California Hospitals

5. **California Hospital Assessment and Reporting Taskforce (CHART)**

(also known as Cal Hospital Compare)

http://www.calhospitalcompare.org

A partnership among The California HealthCare Foundation, the University of California at San Francisco Philip R. Lee Institute for Health Policy Studies, and the California Hospitals Assessment and Reporting Taskforce (CHART), CHART is a not-for-profit public benefit corporation. CHART contains ratings for clinical care, patient safety, and patient experience for the more than 240 hospitals, representing over 85% of acute care hospital admissions in California, that have chosen to participate in this important voluntary effort.

6. **Office of Statewide Health Planning and Development (OSHPD)**

http://www.oshpd.ca.gov/

The Office of Statewide Health Planning and Development is one of 13 departments within the California Health and Human Services Agency. OSHPD administers programs which endeavor to implement the vision of "Equitable Healthcare Accessibility for California."

Data Source: AHRQ — Inpatient Quality Indicators (IQIs) Hospital Inpatient Mortality Indicators for California, 2007 Mortality Indicators Report

Appendix B: Additional Specifications

- According to California Department of Public Health's technical report on healthcare-associated bloodstream infections in California hospitals from January 2009 through March 2010:

    o There are substantial caveats in using the California Department of Public Health (CDPH) Healthcare-Acquired Infection (HAI) Report, including:

        ▪ Rate differences due to variations in surveillance practices as well as infection risk;

        ▪ Inter-facility variation may reflect different clinical practices related to deliver of health care including infection control practices, the underlying medical complexity of the patients being served, and the surveillance methods used to identify infections and persons at risk;

        ▪ Data is not risk adjusted in accordance with NHSN methods required in statue due to the way in which the data was reported to CDPH; and

        ▪ Risk stratification method used to attempt to characterize similar underlying infection risk among similar hospital types.

- However, the CDPH appears to be making significant improvements and will likely align measure definitions with NHSN.

- For Hospital-Acquired Pressure Ulcers, DPH systems will report to CALNOC, but CHART's report of the CALNOC data can be used for measuring performance and benchmarks.

- For the 3 measures in which hospitals typically experience very small incidences – Central Line-Associated Bloodstream Infections, Hospital-Acquired Pressure Ulcers, and prevalence of Falls with Injury – the Improvement Targets need to be set as absolute targets in order to be meaningful.