LOS ANGELES COUNTY DEPARTMENT OF HEALTH SERVICES

Overview

The Los Angeles County Department of Health Services (LAC DHS) is an integrated healthcare delivery network with the mission to ensure access to high-quality, patient-centered, cost-effective health care to Los Angeles County residents through direct services at DHS facilities and through collaboration with community and university partners. LAC DHS provides a full range of primary care, specialty care and diagnostic, inpatient, emergency, trauma and rehabilitation services. The LAC DHS delivery system operates four hospitals, which include three medical centers and a nationally recognized rehabilitation hospital. The three medical centers operate three emergency departments (ED), two trauma centers, and one burn center and all three provide psychiatric emergency services and acute inpatient psychiatric care. The LAC DHS outpatient delivery system includes hospital-based clinics, two Multi-Service Ambulatory Care Centers (MACC), six Comprehensive Health Centers (CHC), and ten Health Centers (HC). In addition, LAC DHS partners with over 50 community providers who provide primary care services in over 100 sites through the LAC DHS Public Private Partnership (PPP) program.

The LAC DHS delivery system is organized around three healthcare networks: LAC+USC Healthcare Network, ValleyCare Network, and MetroCare Network. Each network includes a medical center – LAC+USC Medical Center, Olive-View/UCLA Medical Center, and Harbor/UCLA Medical Center – and affiliated HCs, CHCs, MACCs, and PPP program providers that work together to provide a full range of outpatient, inpatient, and emergency services. Patients typically receive most of their care within the healthcare network that is most geographically convenient for them, though care for patients is also coordinated across networks when indicated (e.g. patient needs highly specialized services that are only available in a particular facility). Rancho Los Amigos National Rehabilitation Center provides pediatric and adult rehabilitation services that serve all residents of Los Angeles County. Rancho Los Amigos is the only rehabilitation hospital in California consistently ranked in the annual U.S. News and World Reports “Best Hospitals” ranking for rehabilitation.

LAC DHS provides care for over 730,000 unique patients annually. Services include 2.7 million outpatient visits, 290,000 ED visits and 75,000 inpatient discharges. The four LAC DHS hospitals have a total of 2,034 licensed and 1,469 budgeted beds. Of the individuals served by LAC DHS, approximately 70% are uninsured, 22% are Medicaid beneficiaries, 4% are Medicare beneficiaries, and 4% have third-party insurance. The patient population is diverse with approximately 62% of patients identifying as Hispanic, 13% Black, 10% White, and 6% Asian. Over 50% of patients speak a primary language other than English. The median annual income of LAC DHS patients is between $5,000 and $10,000. Chronic conditions are prevalent. Thirty-four percent (34%) of patients have hypertension, 31% high cholesterol, 22% diabetes, and 14% depression.

In addition to the challenge of poverty and illness burden, the annual turnover of patients provides special challenge. Nearly 50% of our 730,000 patients are new each year. Even in the continuity population, this annual turnover rate is greater than 33%. Needless to say, this presents enormous operational and disease management challenges.

LAC DHS is the core of the healthcare safety net in Los Angeles County. LAC DHS operates almost 10% of the available general acute care beds in the county, provides 13% of all ED visits, 34% of trauma care, and 42% of all inpatient burn care. LAC DHS provides a significant amount of complex, tertiary care services that are not sufficiently available in the private sector to meet demand. LAC DHS hospitals play a critical role in trauma, burn, tertiary pediatrics, intensive care, acute rehabilitation, and surgical subspecialties such as neurosurgery, otolaryngology, and orthopedics for the entire county. LAC DHS serves a disproportionate percentage of special populations and those with a high disease burden. This includes individuals with chronic medical conditions who are costly to care for and those who are homeless, mentally ill, or under the jurisdiction of child welfare agencies and law enforcement agencies.

LAC DHS is a leader in healthcare professional training. Through its affiliations with the University of California at Los Angeles and the University of Southern California, over 40% of the graduating physician workforce in the County are trained in LAC DHS hospitals. LAC DHS operates the College of Nursing and Allied Health and is a training ground for nurses and other health professionals.

LAC DHS operates the Los Angeles County Emergency Medical Services (EMS) Agency which serves as the lead county agency for the coordination of emergency medical services. The system responds to over 500,000 9-1-1 patients annually. It includes over 70 public and private hospitals with EDs, and certified EMS personnel employed by fire departments, law enforcement, and ambulance companies to provide lifesaving care 24 hours a day, seven days a week.

LAC DHS has undertaken a number of initiatives to strengthen its delivery system in recent years. These include the implementation of an electronic referral system to enable primary care providers (LAC DHS and PPP) to electronically refer patients to specialty services; the deployment of the Encounter Summary Sheet which is an internet-accessible aggregated summary of patient encounters across the LAC DHS networks and the PPP clinics; a recuperative bed initiative for homeless patients who are ready for hospital discharge but require some post-discharge health monitoring; a pilot Palliative Care program for terminally ill patients; and system-wide deployment of a Video Medical Interpretation system that provides real-time interpreter services in 14 languages.

Under the current Coverage Initiative, LAC DHS has expanded healthcare coverage to over 50,000 low-income adults through the Healthy Way LA (HWLA) program. HWLA enrollees are assigned to medical homes where they receive primary and preventive care services, coordination of specialty care services, chronic disease care management and disease management programs, and health education services to promote healthy lifestyles and prevent disease. HWLA enrollees receive a full range of services including primary and specialty care, diagnostic services, and inpatient and emergency care. HWLA enrollees also have access to 24/7 nurse advice line services which provide medical information and refer patients to the appropriate level of care, including coordinating urgent access appointments, when appropriate, to prevent inappropriate use of emergency services.

Executive Summary

In the current economic environment in which individuals and families have lost employer-based health care coverage, and with the implementation of HWLA, LAC DHS has experienced an increased demand for services. Through HWLA, enrollees have been assigned to medical home clinic sites and have access to a number of services that could reduce inappropriate use of EDs, such as the nurse advice line, urgent access to appointments, care coordination, health education and prevention programs, etc. Unfortunately, the expanded access to primary care has not been sufficient to meet demand. In addition, all LAC DHS patients, including those with assigned medical homes, experience challenges accessing specialty care and there continue to be barriers to coordination of care across the continuum from primary care to specialty care to inpatient and emergency services. Also, the overall demand for LAC DHS ED services has increased by 16% over the last three years.

The Delivery System Reform Incentive Pool (DSRIP) of the California Section 1115 Wavier special terms and conditions is an opportunity for LAC DHS to invest, expand, and attempt health care solutions now. LAC DHS welcomes this opportunity to invest and redesign to evidence-based projects and practices. LAC DHS plans to incorporate DSRIP milestones that are achievable but challenge our system of care to change in order to not only achieve the milestones but to become an improved health care system. LAC DHS believes it is able to change and that now is the opportune time to make this transition given the changes coming not only through the DSRIP but through the Waiver's other components, the Low Income Health Plan and the transition of Seniors and Persons with Disabilities to managed care, which are requiring system change to meet the programs' standards of care. These endeavors will only strengthen our ability to better serve Los Angeles County residents and improve their quality and experience of care.

Through the projects outlined in this proposal, LAC DHS can make real improvements in population health, the patient's experience of care, and the cost of care. These goals are the focus of the Triple Aim, an Institute for Healthcare Improvement initiative. The organizing principle of the Triple Aim is that simultaneously pursuing the three objectives enables health care organizations to identify and fix problems that lead to poor coordination and inefficient delivery of care. It also helps health care organizations focus attention on and redirect resources to those activities that will have the greatest impact on health. The DSRIP has created an opportunity for LAC DHS to improve health care through the simultaneous pursuit of the Triple Aim. This proposal shows how these Triple Aim goals will be achieved by undertaking delivery system reform in order to improve patient care and further prepare for the implementation of national health care reform.

In this proposal, LAC DHS establishes a five-year implementation plan to invest in three DSRIP categories: Infrastructure Development, Innovation and Redesign, and Urgent Improvement in Care (Population-focused Improvement will be developed in a subsequent proposal). Each category has select projects that we will develop and implement in our system to achieve improvement under the Triple Aim. The projects within each category were designed to be foundational to and compliment the next category's projects. For example, the disease management registry functionality and the urgent medical advice in category one are an important component of project efforts in subsequent category projects, e.g., medical homes and the chronic care model. The following explanation will provide a brief overview of the objectives LAC DHS expects to accomplish by the end of the Waiver's fifth year.

By the end of five years, LAC DHS will:

<u>Infrastructure Development</u>

- Implement use of registry functionality in at least 14 DHS hospital based, MACC and CHC sites. At least 75% of diabetes, heart failure and asthma patients seen in clinics with registry access will have data entered into the registry. Automated reporting will allow providers to track patient demographics, diagnoses, patients in need of services or not at goal, and preventive care status.
- Expand nurse advice line (NAL) utilization by 20% over baseline, with the goal that an additional 30% of patients over baseline who contact the NAL with intent to go to the ED for non-emergent conditions are redirected to non-ED resources.
- Enhance coding transaction sets to ensure regulatory compliance and improve data reporting and claiming capabilities.
- Expand performance improvement and reporting capacity through participation in a clinical database for standardized data sharing, and development of a quality dashboard or scorecard that is shared with DHS leadership, Board members, patients and other stakeholders via the internet.

<u>Innovation and Redesign</u>

- Implement the medical home model with at least 100 primary care providers delivering care using the model.
- Assign at least 100,000 patients to primary care medical home teams.
- Expand the chronic care management model into primary care sites by adapting tools and techniques from the Disease Management Program for use by primary care provider teams such as: 1) a comprehensive risk-reduction program for patients with Diabetes Mellitus, and 2) improve by 30% the number of patients in the registry in primary care with at least one recorded self-management goal compared to baseline.

- Implement a stroke medical home that will focus on secondary stroke prevention.
- Implement and maintain eight co-location sites with integrated mental health and physical health services and reduce the median wait time for an initial mental health visit to less than 30 business days.
- Implement depression screening for 60% of enrolled patients with patients assigned to co-located sites. Implement a structured care algorithm for pharmacologic treatment of depression in primary care medical homes.
- Implement a tracking mechanism for the number of referrals from primary care providers to on-site mental health professionals at co-location sites. Referral will lead to joint consultation and treatment planning to improve patient education, support, and compliance with medication regimen.

Population-focused Improvement

- Patient/Caregiver Experience
- Care coordination
- Patient safety
- Preventive Health
- At-risk population

Urgent Improvement in Care

- Improve severe sepsis detection and management through the implementation of the Sepsis Resuscitation Bundle.
- Reduce central line-associated bloodstream infections through the implementation of Central Line-Associated Bloodstream Infection Prevention practices.
- Reduce the rate of surgical site infections for Class 1 and 2 wounds through implementation of surgical complications core processes.

  Increase the rate of patients who receive appropriate Venous Thromboembolism (VTE) prophylaxis , and increase the rate of patients diagnosed with confirmed VTE who received appropriate treatment.

CATEGORY ONE

Infrastructure Development

The following projects will address our system's key infrastructure challenges, the delivery system solutions to address the challenge, and the five-year implementation milestones we commit to. LAC DHS has chosen the following four projects to strengthen our ability to better serve our population and improve services.

1. <u>Implement and Utilize Disease Management Registry Functionality:</u>

- **Project Goal**: Healthcare delivery in Los Angeles County has evolved for those with ambulatory sensitive conditions and the highest burden of illness. LAC DHS has successfully implemented three disease-specific, carve-out disease management programs that have reduced both disease burden and emergency department and inpatient costs for a population with the highest burden of illness. The Clinical Resource Management (CRM) Disease Management Program (DMP) is designed as an intensive program of care for patients with diabetes, heart failure and asthma. Instead of focusing on doctor-patient visits, the program uses nurses in an expanded role to communicate, evaluate and intervene with patients under the direction of a "clinical protocol", a stepwise algorithm of care developed by experts to guide care delivery by non-physicians. One key tool pivotal to the success of the program is a disease management registry that includes clinical decision support.

  Registry functionality, including patient tracking, assignment of each member of the care team, both licensed and unlicensed, and decision support to proactively alert staff to care gaps, will expand to our new medical homes. The registry was developed by the LAC DHS CRM DMP initially for patients with specific diseases and the highest burden of illness. Our proposal will expand the disease management registry functionality beyond the CRM DMP to include empaneled patients with diabetes, asthma, and/or heart failure. We will track the target population, prompt patient-specific risk reduction interventions and measure the health of this expanded group of patients.

  This will be a great improvement over "current state", where there is no electronic support for care gaps, clinical information is limited by geography within one regional "cluster", and the vast majority of care is driven by face-to-face licensed provider visits. Currently, there are 1,200 patients managed by the disease-specific registry at any given point in time. We anticipate this number will grow to over 40,000 in a patient-centric registry during the period covered by the Waiver. This change includes a transition from the current time-limited program where patients "graduate" to a continuity medical home that remains constant for the life of the patient relationship.

  In order to do this, we propose to:

  - Develop and implement a plan to expand the benefits of the disease management registry functionality to primary care clinics;
  - Implement the plan in no less than fourteen medical home sites throughout the LAC DHS system of care; and expand functionality to include electronic structured documentation and broaden clinical decision support at the point of care.

  Our five year approach to enhancing registry functionality begins with the development of enhanced registry functionality that will be implemented in primary care sites. This first requires the transformation from a disease-specific and focused tool to one that is patient-centric and can manage multiple co-morbidities concurrently. Medical home staff at primary care sites will be trained in the use of the registry functionality. Trained primary care staff will begin entering patients with targeted conditions who are seen and assigned to their medical home site. The number of registered

patients in the system will increase as the registry functionality is incorporated in more sites. The functionality will be available at more sites each year; sites will include DHS hospitals, MACCs and CHC sites.

- **Expected Result**: The use of a registry is fundamental to success in the management of a population of patients with ambulatory sensitive conditions. We anticipate a lower rate of reactive rescue care interventions including ED visits and inpatient admissions.
- **Related Projects**: The registry functionality is a supporting link to several Category Two projects: the expansion of the medical home, the chronic care management model, and integrating physical and behavioral health care. The tracking of a patient's clinical activities is critical to the Category 3 domain of improving care coordination.

Implement and Utilize Disease Management Registry Functionality					
DY6	DY7	DY8	DY9	DY10	Related Projects
1. **Milestone:** Review current registry capability and assess future needs • **Metric**: Documentation of review of current registry capability and assessment future registry system needs 2. **Milestone**: Expand the functionality of the Disease Management Registry (DMR) • **Metric:** Develop and implement care team models to support the Patient Centered Medical Home (PCMH) team in the Registry as evidenced by screen capture from the Registry.	6. **Milestone**: Expand registry functionality to Primary Care sites • **Metric**: Disease management registry functionality is available in at least one clinic in each of at least 8 DHS facilities. 7. **Milestone**: At least 55% of patients with diabetes, heart failure or asthma seen in the clinics with registry access are entered into the registry. **Metric**: • **Numerator**: Number of empaneled patients in the registry with diabetes, heart failure or asthma. • **Denominator**: Number of	8. **Milestone**: Expand registry functionality to Primary Care sites **Metric**: Disease management registry functionality is available in at least one clinic in each of at least 10 DHS facilities. 9. **Milestones**: Demonstrate registry automated reporting ability to track and report on patient demographics, diagnoses, patients in need of services or not at goal, and preventive care status. • **Metric**: Presentation of printed reports or demonstration of on-demand reporting capability.	11. **Milestone**: Expand registry functionality to Primary Care sites • **Metric**: Disease management registry functionality is available in at least one clinic in each of at least 12 DHS facilities. 12. **Milestone**: At least 65% of patients with diabetes, heart failure or asthma seen in the clinics with registry access are entered into the registry. **Metric**: • **Numerator**: Number of empaneled patients in the registry with diabetes, heart failure or asthma. • **Denominator**: Number of	13. **Milestone**: Expand registry functionality to Primary Care sites • **Metric**: Disease management registry functionality is available in at least one clinic in each of at least 14 DHS facilities. 14. **Milestone**: At least 75% of patients with diabetes, heart failure or asthma seen in the clinics with registry access are entered into the registry. **Metric**: • **Numerator**: Number of empaneled patients in the registry with diabetes, heart failure or asthma. • **Denominator**: Number of	• Expand Medical Home • Expand Chronic Care Management Model • Integrate Physical and Behavioral Health Care • Category 3: Care Coordination

Implement and Utilize Disease Management Registry Functionality					
DY6	DY7	DY8	DY9	DY10	Related Projects
3. **Milestone**: Introduce registry functionality to Primary Care sites • **Metric**: Disease management registry functionality i**s** available in at least one clinic in each of at least 5 DHS facilities. 4. **Milestone**: Conduct staff training on using the registry. • **Metric**: Documentation of training programs and list of staff members trained. 5. **Milestone**: At least 50% of patients with diabetes, heart failure or asthma seen in the clinics with registry access are entered into the registry. **Metric**: • **Numerator**: Number of empaneled patients in the registry with diabetes, heart failure or asthma. • **Denominator**: Number of empaneled patients with	empaneled patients with diabetes, heart failure or asthma seen in clinics with registry access.	10. **Milestone**: At least 60% of patients with diabetes, heart failure or asthma seen in the clinics with registry access are entered into the registry. **Metric**: • **Numerator**: Number of empaneled patients in the registry with diabetes, heart failure or asthma. • **Denominator**: Number of empaneled patients with diabetes, heart failure or asthma seen in clinics with registry access.	empaneled patients with diabetes, heart failure or asthma seen in clinics with registry access.	empaneled patients with diabetes, heart failure or asthma seen in clinics with registry access.	

Implement and Utilize Disease Management Registry Functionality					
DY6	DY7	DY8	DY9	DY10	Related Projects
diabetes, heart failure or asthma seen in clinics with registry access.					

2. Enhance Urgent Medical Advice

- **Project Goal**: The challenge for LAC DHS is to be available for patients when they have questions and concerns about their health. Urgent medical advice is not presently available to patients, with the exception of a small percentage of patients who have access to a nurse advice line (NAL). This vendor-operated NAL is exclusively available to patients enrolled in the Coverage Initiative (under the previous 1115 Waiver) and Community Health Plan (Medi-Cal managed care) patient population. LAC DHS proposes to expand access to the NAL through a two-prong approach. First, the number of patients who are given access will be increased to include those enrolled into the new Low Income Health Program, and to uninsured patients who are regular users of the LAC DHS system and who are empaneled under the medical home expansion outlined in Category Two of this proposal. Second, a marketing effort will be undertaken to increase awareness of the NAL and explain to patients how to utilize the NAL. Multilingual nurses are available through the NAL and promotional materials will be translated into the most common languages used by LAC DHS patients.

  Preliminary data from the NAL is very promising. Patients who have access are using it and there is preliminary data showing that patients are being redirected to non-ED resources for non-emergent services. The expansion of the NAL promises not only to assist patients with health-related questions and concerns but also to redirect patients to the most appropriate venues of care for their condition. This should result in better outcomes for the patient, and help to reduce ED overcrowding.

  If the nurse determines that a patient needs to see their primary care provider, the nurse is able to connect the patient with a next-day primary care appointment. If the patient's need is more urgent the nurse can direct the patient to an urgent care site or the nearest ED. In order to do this, we propose to:

  - Establish a baseline and metrics in the first year to evaluate the effectiveness of the program
  - Expand access to the nurse advice line
  - Increase the number of patients who access the NAL
  - Increase the number of patients who are redirected to non-ED resources who initially call with intent to go to the ED.

- **Expected Result**: LAC DHS expects an increase in the number of patients who contact the nurse advice line. With expanded access to the nurse advice line, fewer patients will seek ED services for non-emergent conditions. Continuity and quality of care is improved because the patient's questions or concerns are addressed without a gap in service.

- **Related Projects**: The urgent medical advice project is a key supporting component of Category Two and Three projects. The NAL is a coordinating link under Category Two's medical home, chronic care management model and the integration of physical and behavioral health care. Likewise, Category Three's focus on enhancing care delivery for the highest burden conditions will be supported by the NAL. The NAL will be able to assist patients who, for example, may require an urgent medical appointment at their medical home or have questions about either their diabetes or anti-anxiety medications. A patient accessing the NAL will have a medical home and may be a part of a chronic care management model and/or have a need for behavioral health.

Enhance Urgent Medical Advice					
DY6	DY7	DY8	DY9	DY10	Related Projects
15. **Milestone**: Establish baseline and metrics to evaluate effectiveness of nurse advice line (NAL) program. • **Metric**: Determine baseline number of patient contacts to the NAL and number of patient contacts with intent to go to the Emergency Department (ED) but were redirected to non-ED resources.	16. **Milestone:** Expand access to NAL by 10% over baseline. • **Metric**: Number of patient contacts made to the NAL as evidenced by NAL call center reports. 17. **Milestones**: Increase by 10% over baseline the number of NAL patient contacts who reported intent to go to the ED for non-emergent conditions but were redirected to non-ED resources. **Metric**: Better utilization of health care resources. • **Numerator:** Number of NAL patient contacts above baseline who reported intent to go to the ED, but were redirected to non-ED resources. • **Denominator:** Total number of NAL patient contacts who reported intent to go to ED.	18. **Milestone:** Expand access to NAL by 20% over baseline. • **Metric**: Number of patient contacts made to the NAL as evidenced by NAL call center reports. 19. **Milestone**: Increase by 20% over baseline the number of NAL patient contacts who reported intent to go to the ED for non-emergent conditions but were redirected to non-ED resources. **Metric**: Better utilization of health care resources. • **Numerator**: Number of NAL patient contacts above baseline who reported intent to go to the ED, but were redirected to non-ED resources. • **Denominator**: Total number of NAL patient contacts who reported intent to go to the ED.	20. **Milestone**: Increase by 30% over baseline the number of NAL patient contacts who reported intent to go to the ED for non-emergent conditions but were redirected to non-ED resources. **Metric**: Better utilization of health care resources. • **Numerator**: Number of NAL patient contacts above baseline who reported intent to go to the ED, but were redirected to non-ED resources. • **Denominator**: Total number of NAL patient contacts who reported intent to go to the ED.		• Expand Medical Home • Expand Chronic Care Management Model • Integrate Physical and Behavioral Health Care • Category 3: At-risk Populations

3. Enhance Coding and Documentation for Quality Data:

- **Project Goal:** To enhance and improve the quality of our clinical data, LAC DHS intends to implement standardized HIPAA 5010 transaction code sets along with the implementation of ICD-10 code sets. Standards for electronic health care transactions will change from Version 4010 to Version 5010 on January 1, 2012. These electronic health care transactions include functions like claims, eligibility inquiries, and remittance advices. The new 5010 code sets accommodate the ICD-10 codes, and must be implemented prior to converting to the ICD-10 format to allow proper testing. Providers must implement electronic health transactions using Version 5010 as of January 1, 2012 or delays in claim reimbursement may result. Preparing for ICD-10 and Version 5010 includes updating our current software installation (QuadraMed), extensive staff re-training, changes to business operations and workflows, internal and external testing, along with reprinting of manuals and other materials. ICD-10 codes must be used on all HIPAA transactions, including outpatient claims with dates of service, and inpatient claims with dates of discharge on and after October 1, 2013. Otherwise, claims and other transactions may be rejected. The upgrade to ICD-10 is needed to expand the current capability of the outdated ICD-9 and to allow greater flexibility in coding sub categories of diagnoses. New more detailed codes of ICD-10-CM will allow for better analysis of disease patterns and treatment outcomes that can advance medical care. These same details will streamline claims submissions, since these details will make the initial claim much easier for payers to understand.
- **Expected Result:**
  - Standardization of HIPAA 5010 healthcare transactions across all LAC DHS facilities
  - Expand specificity of detailed codes (ICD-10) to allow better analysis of disease patterns and treatment outcomes that can advance medical care
  - Streamline claims submissions, since these details will make the initial claim much easier for payers to understand
  - Drive quality of data through nationally standardized code sets
- **Related Projects**: LAC DHS participation in the nationwide implementation of 5010 electronic health care transactions and ICD-10 code sets will help drive quality through standardization. This project will require significant infrastructure development through evaluation of current state software and upgrading to required platforms that support the new regulatory code sets. This will require extensive training of staff to utilize the new expanded diagnostic code sets. LAC DHS will also face an extensive innovation and redesign stage of evaluating current state processes and changing to improve efficiency along with patient care. This project also facilitates Enhanced Performance Improvement and Reporting Capacity, and measures to be reported in Category 3.

Enhance Coding and Documentation for Quality Data:					
DY6	DY7	DY8	DY9	DY10	Related Projects
	21. **Milestone**: Implement HIPAA 5010 transaction sets to be able to communicate with institutions that are able to receive and send such transactions. • **Metric**: Hospitals will convert to the new HIPAA X12 standard that regulates the electronic transmission of specific health care transactions. 22. **Milestones**: Train staff on the changes in work flow. • **Metric**: Number of staff formally trained on clinical workflow redesign.	23. **Milestone**: Train staff on the changes in work flow related to HIPAA 5010. • **Metric**: Number of staff formally trained on clinical workflow redesign.	24. **Milestone**: Implement ICD-10 conversion to be able to communicate with institutions that are able to receive such transactions. • **Metric**: All internal information systems (administrative, financial, and clinical) using ICD-9 codes will either convert to ICD-10 or crosswalk old ICD-9 codes to ICD-10 codes.		• Enhanced Performance Improvement and Reporting Capacity • Category 4 (all projects)

4. Enhance Performance Improvement and Reporting Capacity:

- **Project Goal**: To expand quality improvement capacity through people, processes and technology so that the resources are in place to conduct, report, drive and measure quality improvement. In order to accomplish this goal, we propose to continue participation in a statewide clinical database for standardized data sharing. LAC DHS plans to share results publically using the internet. LAC DHS supports valid, objective, evidence-based hospital quality measurement and reporting. The measurement of healthcare quality and its public disclosure provides knowledge to those that will access the information provided. LAC DHS intends to implement this milestone through continued participation in CHART (California Hospital Assessment and Reporting Taskforce) and to make the findings public through the creation of an accessible internet dashboard. LAC DHS has chosen CHART as its statewide clinical database because of the unique role it plays in the State. Currently the project includes more than 200 California hospitals that represent more than 75 percent of the acute-care average daily census statewide. CHART published its first public report in January 2007 which it continues to update quarterly. The purpose of CHART was to create a single, standardized statewide hospital report card that, among other goals, "…educates and engages the public concerning healthcare choices, and …provides hospitals with clean, benchmarked comparative data to use for quality improvement." LAC DHS intends to publish the state comparative report in dashboard format on its public website. The dashboard will increase transparency, provide an avenue to demonstrate the quality of services we provide, catalyze a culture of quality and patient safety, and facilitate healthcare choice for our population. LAC DHS proposes that the data included on the website be meaningful to lay people as well as professionals using lay persons' language. LAC DHS intends to use patient care advocates to ensure that it understandable to the lay person. LAC DHS intends to begin with a starter set of measures on the dashboard, but to expand the measures over time. The measures will be updated quarterly as state comparative data becomes available. In addition to the state comparative data, LAC DHS will provide links to other public websites for each of our facilities to enhance the site users' experience.

- **Expected Result:**
    - Provide population with needed information to make healthcare choices
    - Provide population with road map of what quality care looks like
    - Drive quality improvement through enhanced completion and information sharing

- **Related Projects**: LAC DHS participation in the statewide database and the creation of an internet dashboard based on the results directly strengthens our ability to serve our population and to drive quality improvement. The information available through internet technology provides our population with fingertip access to our organization's performance. One of the intentions of public reporting was to give care recipients a choice of where to receive care. Although studies have demonstrated that, to date, public reporting minimally influences patients' choices (particularly for vulnerable patients), with the expansion of choice options, the role that accessible quality data will play may significantly increase our populations' ability to choose the best place to receive care. Publishing performance metrics in a way that is easy to understand provides our population with a road map of what a good care looks like and what they should expect from their care provider. For example, if a care recipient was recently discharged from the hospital with congestive heart failure, the public report card instructs them that they should have received counseling on smoking cessation and detailed discharge instructions about what to look for after leaving the hospital.

  In addition to providing information and education to our population, the availability of the state comparable data drives the quality improvement of providers. Although public reporting is only one means to drive and sustain this improvement, providers are anxious to demonstrate to the public that they are providing the care that has been proven to enhance outcomes. LAC DHS experienced this

reporting effect when our performance measure groups began to share data across our facilities and services. The better performers of a particular metric demonstrated what could work within our system constraints and were in turn willing to share how they succeeded. In this manner care quality expands across the entire system. The involvement with a state database such as CHART will spread this improvement across the state.

Enhance Performance Improvement and Reporting Capacity:					
DY6	DY7	DY8	DY9	DY10	Related Projects
25. **Milestone**: Participate in CHART or other statewide, public hospital or national clinical database for standardized data sharing. • **Metric**: Document the participation in this collaborative membership.	26. **Milestone**: Participate in CHART or other statewide, public hospital or national clinical database for standardized data sharing. • **Metric**: Document the participation in this collaborative membership. 27. **Milestones**: Quality dashboard or scorecard to be shared with organizational leadership on a regular basis that includes patient satisfaction measures. • **Metric**: Document the sharing of the quality dashboard as evidenced by posting it on the LAC DHS public website.	28. **Milestone**: Participate in CHART or other statewide, public hospital or national clinical database for standardized data sharing. • **Metric**: Document the participation in this collaborative membership. 29. **Milestones**: Quality dashboard or scorecard to be shared with organizational leadership on a regular basis that includes patient satisfaction measures. • **Metric**: Document the sharing of the quality dashboard as evidenced by posting it on the LAC DHS public website.	30. **Milestone**: Participate in CHART or other statewide, public hospital or national clinical database for standardized data sharing. • **Metric**: Document the participation in this collaborative membership. 31. **Milestones**: Quality dashboard or scorecard to be shared with organizational leadership on a regular basis that includes patient satisfaction measures. • **Metric**: Document the sharing of the quality dashboard as evidenced by posting it on the LAC DHS public website.	32. **Milestone**: Participate in CHART or other statewide, public hospital or national clinical database for standardized data sharing. • **Metric**: Document the participation in this collaborative membership. 33. **Milestones**: Quality dashboard or scorecard to be shared with organizational leadership on a regular basis that includes patient satisfaction measures. • **Metric**: Document the sharing of the quality dashboard as evidenced by posting it on the LAC DHS public website.	• Enhanced Coding and Documentation for Quality Data • Category 3: At-risk Populations

CATEGORY TWO

Innovation and Redesign

The following projects will address our system's key challenges, the delivery system solutions to address these challenges, and the five-year implementation milestones we commit to. LAC DHS has chosen the following three projects as investment in new and innovative models of care delivery that will strengthen our ability to serve our population and improve services.

1. **Expand Medical Home:**

- **Project Goal**: LAC DHS does not have an established system of care in which patients have a medical home where all primary care needs are addressed by a provider team. A patient who visits an LAC DHS facility for care may see the next available provider without provider consistency. The challenge is that LAC DHS has not functioned as a closed system of care with providers responsible for a specific group or number of patients. LAC DHS will not be a closed system. Instead we propose to have closed group or panel of patients for each provider team.

  LAC DHS will build a patient-centered medical home model throughout our healthcare delivery system. LAC DHS will empanel patients to care teams and specific providers based on a risk-adjusted score. Medical home teams will consist of a group of individuals responsible for the coordination of the totality of patient care; for most patients, this will be a team led by a generalist. In special cases an enhanced medical home model may be led by a specialist (such as an Infectious Disease practitioner) who manages the patient in a holistic way. The team's patient panel will be comprised of the enrolled patient population as well as continuity patients who will remain uninsured past 2014. Enrolled patients are those who participate in a managed care model insurance or coverage program (e.g., Medi-Cal managed care or HWLA). The panel for each primary care provider team will be sized appropriately for staff capacity based upon patient demographics and burden of illness. Each team will coordinate care for their empaneled patient population. Patients will be able to communicate with the care team in face to face encounters, by phone, and/or e-mail. The team will be responsible for contacting patients to receive their initial health assessment, ensuring patients receive preventive health services, and managing chronic medical conditions. Care teams will use standardized assessment and screening tools throughout the system.

  In order to do this, we propose to:

  - Implement the medical home model in primary care clinics
  - Reorganize staff into primary care teams responsible for the coordination of patient care
  - Expand and redefine the roles and responsibilities of primary care medical home team members
  - Determine appropriate panel size for primary care medical home teams
  - Establish criteria for primary care medical home assignments and begin assigning patients

  The expansion of medical homes will create primary care medical home panel teams where each team will be responsible for a panel or group of patients. The target goal is for each team to exclusively follow and proactively monitor the team's patient group. The intended result will be to improve patients' quality of care, their experience with the provider team and overall improved health. These

three intended improvements will lead to a patient population that is less likely to seek ED or urgent care services for non-emergent services. If a panel patient requires hospitalization the patient will be seen at their medical home after their discharge, which will improve patient post-discharge care and reduce unnecessary hospital readmission.

- **Expected Result**: The expansion of medical home model will lead to at least 100 primary care providers delivering care using the medical home model, and at least 100,000 patients being empaneled to specific medical home teams. The result will be improved access and coordination of services through a medical home team. The improved access and coordination will improve quality of care, patient experience and overall improved health.
- **Related Projects**: This project will support other category projects. The medical home project will be the central coordinating component to many other projects including; urgent medical advice, the chronic care management model, and integrating physical and behavioral care. The medical home team will coordinate with behavioral health care when the need arises and vice versa. If a patient seeks an urgent medical advice and needs redirection the medical home team will be contacted to coordinate care. Likewise the medical home team will coordinate, link and follow up with specialty care. The patient will return to their medical home team after their specialty care consultation.

Expand Medical Home:					
DY6	DY7	DY8	DY9	DY10	Related Projects
1. **Milestone:** Expand and redefine the roles and responsibilities of primary care team members. • **Metric:** Document the expansion of primary care team member roles and responsibilities. 2. **Milestone:** Determine the appropriate panel size for primary care provider teams, potentially based on staff capacity, demographics, and diseases. • **Metric:** Panel size	4. **Milestone:** Implement the medical home model in primary care clinics. • **Metric:** At least 20 primary care providers will deliver care using the medical home model. 5. **Milestone:** Assign at least 10,000 patients to provider-led medical home teams. • **Metric:** Number of patients assigned to provider-led medical home teams.	6. **Milestone:** Implement the medical home model in primary care clinics. • **Metric:** At least 40 primary care providers will deliver care using the medical home model. 7. **Milestone:** Assign at least 30,000 patients to provider-led medical home teams. • **Metric:** Number of patients assigned to provider-led medical home teams.	8. **Milestone:** Implement the medical home model in primary care clinics. • **Metric:** At least 60 primary care providers will deliver care using the medical home model. 9. **Milestone:** Assign at least 65,000 patients to provider-led medical home teams. • **Metric:** Number of patients assigned to provider-led medical home teams.	10. **Milestone:** Implement the medical home model in primary care clinics. • **Metric:** At least 80 primary care providers will deliver care using the medical home model. 11. **Milestone**: Assign at least 100,000 patients to provider-led medical home teams. • **Metric:** Number of patients assigned to provider-led medical home teams.	• Expand Chronic Care Management Model • Integrate Physical and Behavioral Health Care • Category 3: At-risk Populations

Expand Medical Home:					
DY6	DY7	DY8	DY9	DY10	Related Projects
determined by number of patients assigned to a provider care team, per provider FTE. 3. **Milestone:** Establish criteria for medical home assignment. • **Metric:** Documentation of medical home assignment criteria.					

2. Expand Chronic Care Management Model:

- **Project Goal:** LAC DHS must transform itself from an organization focused on episodic care to one that embodies the chronic care model. Our current, traditional approach for patients with chronic illness is focused on episodic face-to-face visits between a physician and a patient every few weeks or months. There is little, if any, communication outside of these medical encounters, and coordination of care is limited. This approach is expensive and does a poor job of controlling progression of disease.

  The proposed solution transforms our successful chronic care management model from a time-limited, carve-out Disease Management Program to a solution optimized for continuity primary care delivery. The challenge is determining the optimal interventions that are cost-effective, operationally achievable and scalable in a primary care environment. The programmatic infrastructure is based on a design that recognizes the unique environment in which we provide care, including:

  - A patient population with a high degree of turnover across delivery systems
  - A multi-cultural, linguistically diverse patient population
  - A delivery system historically focused on episodic care
  - Low socio-economic status of patients with a high proportion of uninsured
  - Episodic travel to and from the delivery system geographic area
  - Limited access to transportation options

  The chronic care design includes clinical protocol-driven, patient-centric interventions that emphasize care coordination, remote monitoring, and telephonic communication. Our initial efforts will focus on patients with diabetes mellitus, heart failure, and asthma. Select patients will have access to remote monitoring as required for optimal care.

  This proposal represents an enormous expansion of structured care delivery for those with chronic conditions in LAC DHS. It includes both traditional secondary prevention targets, such as diabetes, heart failure and asthma, as well as specific interventions for tertiary prevention, such as reducing the risk of recurrent stroke.

  In order to do this, we propose to:

  - Develop a comprehensive chronic care management program for primary care
  - Apply the Chronic Care Model to prevalent, targeted chronic conditions
  - Improve the percentage of enrolled patients with self-management goals
  - Implement a comprehensive risk-reduction program for patients with diabetes mellitus that includes glycemic, blood pressure and lipid control
  - Develop and implement mechanisms to reduce secondary stroke

The transformation of our carve-out disease management program to support chronic care in our new patient-centered medical homes will both improve care for patients as well as reduce emergency department and inpatient use. Overall the program design will transform reactive rescue-care to proactive preventive care. The intended result will be to improve the care for patients with chronic conditions, the patient's experience with the provider team and overall improved health.

In addition to the comprehensive programs in heart failure, diabetes and asthma, and the global benefits that will accrue from the chronic care model in the medical home, we will develop and implement focused clinical rules for conditions where prevention has proven benefit. This process will begin with an effort to reduce the incidence of secondary stroke; that is, a second stroke in a patient who has already suffered from one stroke. Despite the longstanding availability of guidelines for secondary risk-reduction including blood pressure control and anti-thrombotic medication (medication that makes platelets less "sticky", so blood clots that cause stroke are less likely), most patients with a first stroke do not have active risk-reduction strategies in place. We will apply specific intervention strategies via the registry to ensure that patients who have suffered a stroke have interventions designed to reduce the risk of a second stroke.

- **Expected Result**: The implementation of a chronic care management program will lead to a reduction in reactive rescue care including ED and inpatient care and improve disease specific metrics including HgA^{1}_{c} and LDL, and reduce the likelihood of a secondary stroke in patients who have had a first stroke.
- **Related Projects:** The expansion of our chronic care management program is an important link to other category projects. The chronic care model supports the medical home team with planned criteria and objectives for patients with chronic conditions. The urgent medical advice and disease management registry functionality projects are supporting mechanisms for the implementation of the chronic care model by medical home teams because the projects enable teams to provide proper care. This chronic care management program is an important component of our system of care as improved care for patients with chronic conditions will reduce their need for rescue care including ED and inpatient care.

Expand Chronic Care Management Models					
DY6	DY7	DY8	DY9	DY10	Related Projects
12. **Milestone:** Expand the chronic care management program for heart failure, diabetes or asthma. • **Metric**: Increase the number of patients who benefit from the chronic care management program by 300 from baseline as evidenced by new active	13. **Milestone:** Improve the percentage of patients with self-management goals. • **Metric:** Determine baseline percentage of patients with diabetes, heart failure or asthma with at least one recorded self-management goal.	17. **Milestone:** Improve the percentage of patients with self-management goals by 10% over baseline. • **Metric:** Patients with self management goals compared to baseline. • **Numerator:** The number of patients in primary care with diabetes, heart failure,	20. **Milestone:** Improve the percentage of patients with self-management goals by 20% over baseline. • **Metric:** Patients with self management goals compared to baseline. • **Numerator:** The number of patients in primary care with diabetes, heart failure,	23. **Milestone:** Improve the percentage of patients with self-management goals by 30% over baseline. **Metric:** Patients with self management goals compared to baseline. **Numerator:** The number of patients in primary care with diabetes, heart failure,	• Expand Medical Home • Integrate Physical and Behavioral Health Care • Category 3: At-risk Populations

Expand Chronic Care Management Models					
DY6	DY7	DY8	DY9	DY10	Related Projects
patients enrolled in the registry.	14. **Milestone**: Implement a comprehensive risk-reduction program for patients with diabetes mellitus that includes glycemic, blood pressure and lipid control in primary care. Target patients include those with Diabetes related inpatient admissions and those with high risk score (HgA_1c + LDL + BP). • **Metric:** Implementation of diabetes risk-reduction program in primary care. 15. **Milestone**: Expand and document interaction types between patient and health care team beyond one-to-one visits to include group visits, telephone visits, and other interaction types. • **Metric**: Documentation of interaction types and expansion of use. 16. **Milestone**: Implement Stroke Medical Home	or asthma in the registry with at least one recorded self-management goal. • **Denominator:** Total number of patients in primary care with diabetes, heart failure, or asthma in the registry. 18. **Milestone**: Expand a comprehensive risk-reduction program for patients with diabetes mellitus that includes glycemic, blood pressure and lipid control in primary care. Target patients include those with diabetes related inpatient admissions and those with high risk score (HgA_1^C + LDL + BP). • **Metric:** Expansion of diabetes risk-reduction program in primary care by 1,000 patients. 19. **Milestone**: Maintain Stroke Medical Home • **Metric**: Improve blood	or asthma in the registry with at least one recorded self-management goal. • **Denominator:** Total number of patients in primary care with diabetes, heart failure, or asthma in the registry. 21. **Milestone**: Expand a comprehensive risk-reduction program for patients with diabetes mellitus that includes glycemic, blood pressure and lipid control in primary care. Target patients include those with diabetes related inpatient admissions and those with high risk score (HgA_1^C + LDL + BP). • **Metric:** Expansion of diabetes risk-reduction program in primary care by 2,000 patients. 22. **Milestone**: Maintain Stroke Medical Home • **Metric**: Improve blood	or asthma in the registry with at least one recorded self-management goal. **Denominator:** Total number of patients in primary care with diabetes, heart failure, or asthma in the registry. 24. **Milestone**: Expand a comprehensive risk-reduction program for patients with diabetes mellitus that includes glycemic, blood pressure and lipid control in primary care. Target patients include those with diabetes related inpatient admissions and those with high risk score (HgA_1^C + LDL + BP). • **Metric:** Expansion of diabetes risk-reduction program in primary care by 3,000 patients.	

Expand Chronic Care Management Models					
DY6	DY7	DY8	DY9	DY10	Related Projects
	• **Metric**: Blood pressure control among patients with completed stroke who are empaneled at any primary care medical home with registry access – determine baseline. • **Numerator**: Number of patients with completed stroke in past year who are empaneled at any primary care medical home with registry access and who have BP< 120/80 • **Denominator**: Number of patients with completed stroke in past year who are empaneled at any primary care medical home with registry access	pressure control by 5% from baseline among patients with completed stroke who are empaneled at any primary care medical home with registry access. • **Numerator:** Number of patients with completed stroke in past year who are empaneled at any primary care medical home with registry access and who have BP< 120/80 • **Denominator**: Number of patients with completed stroke in past year who are empaneled at any primary care medical home with registry access	pressure control by 10% over baseline among patients with completed stroke who are empaneled at any primary care medical home with registry access. • **Numerator:** Number of patients with completed stroke in past year who are empaneled at any primary care medical home with registry access and who have BP< 120/80 **Denominator:** Number of patients with completed stroke in past year who are empaneled at any primary care medical home with registry access		

3. Integrate Physical and Behavioral Health Care:

- **Project Goal:** Integrate the inter-related components of physical and behavioral health care so that care can be better coordinated and the patient can be treated as a whole person, potentially leading to better outcomes and experience of care.

The Los Angeles County Department of Mental Health (LAC DMH) is responsible for providing a broad array of specialty mental health services to individuals throughout Los Angeles County. LAC DHS and LAC DMH operate as two systems of care. LAC DHS providers typically do not know when or if their patients receive services from LAC DMH. There are no standardized procedures for coordinating care for patients who receive services from both departments. In addition, there is not a standard procedure for referring patients to DMH for mental health services.

Many individuals who suffer from mental illness face challenges in accessing care. These challenges include the need to seek care from multiple locations, wait times for accessing care, and potential discomfort seeking services from traditional mental health clinics due to stigma. These challenges are particularly problematic for those individuals dealing with both physical illness and mental illness. One successful model for individuals who may not otherwise access mental health services is to deliver mental health services as part of an integrated model of care.

Fourteen percent (14%) of LAC DHS patients have depression. Diabetes is associated with a twofold higher risk of depression compared with the general population. Moreover, among diabetic patients, depression is often persistent and severe. Co-morbid depression and diabetes may significantly worsen the course of both disorders, leading to higher complication and mortality rates. The prevalence of undiagnosed or untreated depression among diabetic patients is high. LAC DHS does not have a standardized process or tool to screen diabetes patients for depression and to refer these patients to mental health services.

LAC DHS will collaborate with LAC DMH to improve LAC DHS patient access to mental health services and to integrate mental health services into the primary care setting.

In order to do this, we propose to:

- Co-locate mental health services and primary care
- Develop a tracking mechanism for referrals from primary care providers to on-site mental health professionals to be used at the co-location sites
- Track the number of referrals from primary care providers to on-site mental health professionals at the co-location sites
- Use joint consultations and treatment planning at co-location sites, and coordinate resources to improve patient education, support, and compliance with the medication regimen
- Implement a structured care algorithm for selection of pharmacologic therapy for depression
- Integrate depression screening of diabetics assigned to a medical home in co-location sites
- Provide timely initial behavioral health visit wait times

- **Expected Result:** The co-location of physical health and mental health services is expected to result in improved diagnosis of mental health conditions in primary care settings, improvements in patient health outcomes, reductions in medication errors, and reduction in avoidable emergency department and hospital services.

  The integrated care model is intended to overcome barriers to seeking and/or accessing mental health services through co-location of physical and mental health services, improve health care outcomes through coordination of care, and enhance effectiveness of coordination through real time collaboration between physical and mental health providers. The co-located mental health staff will link patients with more serious and persistent mental illness to the appropriate level of mental health services. Referrals from primary care providers to mental health services will be tracked and coordinated which will lead to joint consultation and treatment plans to improve patient education, support, and compliance with their medication regimen.
- **Related Projects:** The integration of physical and mental health services is related to projects in Categories One, Two and Three. The integration of physical and mental health services is a component of the medical home expansion and the expansion of chronic care management models. The NAL will be able to refer patients with questions about mental health medications or patients seeking mental health services to their medical home for integrated mental health services.

Integrate Physical and Behavioral Health Care:					
DY6	DY7	DY8	DY9	DY10	Related Projects
25. **Milestone:** Co-locate mental health services with primary care in two LAC DHS directly operated or contract facilities. • **Metric:** Number of co-located clinics 26. **Milestone:** Develop a tracking mechanism for referrals from primary care providers to on-site mental health professionals to be used at the co-location sites. • **Metric:** A process or	28. **Milestone:** Co-locate mental health services with primary care in two additional LAC DHS directly operated or contract facilities for a total of four co-location sites. • **Metric:** Number of co-located clinics 29. **Milestone:** Track the number of referrals from primary care providers to on-site mental health professionals at the co-location sites.	33. **Milestone:** Co-locate mental health services with primary care in two additional LAC DHS directly operated or contract facilities for a total of six co-location sites. • **Metric:** Number of co-located clinics 34. **Milestone**: Track the number of referrals from primary care providers to on-site mental health professionals at the co-location sites.	38. **Milestone:** Co-locate mental health services with primary care in two additional LAC DHS directly operated or contract facilities for a total of eight co-location sites. • **Metric:** Number of co-located clinics 39. **Milestone**: Track the number of referrals from primary care providers to on-site mental health professionals at the co-location sites.	44. **Milestone:** Maintain co-location of mental health services with primary care in eight LAC DHS directly operated or contract facilities. • **Metric:** Number of co-located clinics 45. **Milestone:** Integrate depression screening to 60% of enrolled patients with diabetes assigned to co-location sites. • **Metric:** Use of PHQ-9 and/or another depression	• Expand Medical Home • Expand Chronic Care Management Model • Category 3: At-risk Populations

Integrate Physical and Behavioral Health Care:					
DY6	DY7	DY8	DY9	DY10	Related Projects
mechanism for tracking referrals from primary care providers to on-site mental health professionals. 27. **Milestone**: Convene a clinical content team for development of a structured algorithm to determine selection of pharmacologic therapy for depression. • **Metric**: Select members of the County clinic content team.	• **Metric:** Number of referrals from primary care providers to on-site mental health professionals. 30. **Milestone:** Use joint consultations and treatment planning at co-location sites, and coordinate resources to improve patient education, support, and compliance with the medication regimen. • **Metric:** Number of joint consultations**.** 31. **Milestone:** Integrate depression screening to 15% of enrolled patients with diabetes assigned to co-location sites. • **Metric:** Use of a depression screening tool with diabetics assigned to a medical home in co-location sites. • **Numerator:** Number of diabetics assigned to a medical home in co-	• **Metric:** Number of referrals from primary care providers to on-site mental health professionals. 35. **Milestone:** Use joint consultations and treatment planning at co-location sites, and coordinate resources to improve patient education, support, and compliance with the medication regimen. • **Metric:** Number of joint consultations**.** 36. **Milestone:** Integrate depression screening to 30% of enrolled patients with diabetes assigned to co-location sites. • **Metric:** Use of PHQ-9 a depression screening tool with diabetics assigned to a medical home in co-location sites. • **Numerator:** Number of diabetics assigned to a medical home in co-	• **Metric:** Number of referrals from primary care providers to on-site mental health professionals. 40. **Milestone:** Use joint consultations and treatment planning at co-location sites, and coordinate resources to improve patient education, support, and compliance with the medication regimen. • **Metric:** Number of joint consultations**.** 41. **Milestone:** Integrate depression screening to 45% of enrolled patients with diabetes assigned to co-location sites. • **Metric:** Use of PHQ-9 a depression screening tool with diabetics assigned to a medical home in co-location sites. • **Numerator:** Number of diabetics assigned to a medical home in co-	screening tool with diabetics assigned to a medical home in co-location sites. • **Numerator:** Number of diabetics assigned to a medical home in co-location sites who are screened for depression. • **Denominator:** Total number of diabetics assigned to a medical home in co-location sites.	

Integrate Physical and Behavioral Health Care:					
DY6	DY7	DY8	DY9	DY10	Related Projects
	location sites who are screened for depression. • **Denominator:** Total number of diabetics assigned to a medical home in co-location sites. 32. **Milestone**: Provide timely initial behavioral health visit wait times. • **Metric**: At least 70% of initial behavioral health visit appointment waiting times among patients enrolled in DHS medical homes who meet medical necessity criteria will be less than 30 business days.	location sites who are screened for depression. • **Denominator:** Total number of diabetics assigned to a medical home in co-location sites. 37. **Milestone**: Provide timely initial behavioral health visit wait times. • **Metric**: At least 80% of initial behavioral health visit appointment waiting times among patients enrolled in DHS medical homes who meet medical necessity criteria will be less than 30 business days.	location sites who are screened for depression. • **Denominator:** Total number of diabetics assigned to a medical home in co-location sites. 42. **Milestone:** Implement a structured care algorithm for selection of pharmacologic therapy for depression in primary care medical homes. • **Metric:** Implementation of care algorithm for selection of pharmacologic therapy for depression in primary care medical homes. 43. **Milestone**: Provide timely initial behavioral health visit wait times. • **Metric**: At least 90% of initial behavioral health visit waiting times among patients enrolled in DHS medical homes who meet medical necessity criteria will be less than 30 business days.		

CATEGORY THREE

TO BE COMPLETED

CATEGORY FOUR

Urgent Improvement in Care

In support of our commitment to urgently improve the quality and safety of the care delivered, LAC DHS will expand evidence based care practices to address four key challenge areas: death from severe sepsis and septic shock, central line associated blood stream infections, complications of surgical procedures, and prevention of venous thrombolytic events. Any institutional change requires leadership support and a vital team of key stakeholders that have an understanding of their environment and are committed to driving improvement. Each of the four LAC DHS care quality and patient safety initiatives has early milestones that include the essential steps of identifying initiative champions, building initiative teams and participating in external collaboratives to share best practices. Care quality barriers and patient safety events can often be traced to communication breakdown and lack of effective teamwork. Over this last year LAC DHS facilities commissioned patient safety teams to approach risks and foster process change by using formalized team training methodology. It is the plan of LAC DHS to build on these early efforts and through effective teamwork, data measurement and the establishment of reliable clinical processes to drive improvement in a practical and actionable manner.

1. **Improve Severe Sepsis Detection and Management:**

- **Project Goal**: Key challenge is to reduce harm or death to patients needing care due to severe sepsis and septic shock. Sepsis, severe sepsis, and septic shock are inflammatory states resulting from the systemic response to bacterial infection. In severe sepsis and septic shock, there is critical reduction in tissue perfusion (the amount of blood that flows to the capillaries and delivers nutrients and oxygen). Severe sepsis and septic shock can harm and kill patients if not treated quickly. Severe sepsis and septic shock increases intensive care unit (ICU) length of stay and its associated costs. Currently, approximately a quarter of the patients with severe sepsis and septic shock die in public hospitals. LAC DHS hospitals had 57,591 adult admissions with a 1.66% mortality or 961 deaths during fiscal year 2009-2010. There were 1,164 patients admitted with sepsis; 344 of those patients died with a sepsis mortality rate of 29%. Sepsis was a diagnostic code on 344 of our 961 deaths, meaning 36% of our total hospital deaths are related to sepsis. If we could decrease our sepsis mortality from 29% to 28%, we could save 19 lives a year. By getting our sepsis mortality to 20%, we could save 112 lives a year. The variables contributing to the challenge to reduce harm and death due to severe sepsis and septic shock include:
  - Patients with the subtle signs of severe sepsis and septic shock are not readily recognized in LAC DHS heavily trafficked Emergency Departments.
  - Lack of consistent process to identify and treat patients at highest risk of mortality.
  - Lack of rapid, resource intensive response required to be effective for the care of the severe sepsis and septic shock patient.

- **Major Delivery System Solutions:** In support of LAC DHS' commitment for urgent improvement in care quality and patient safety, we propose to improve severe sepsis and septic shock detection and management, and to reduce unnecessary death and harm attributed to severe sepsis and septic shock. Our interventions and improved processes are based upon the Institute for Healthcare Improvement (IHI) recommended Surviving Sepsis Campaign that was designed to establish reliable detection methodologies and treatments for severe sepsis and septic shock. Interventions include implementation of the Sepsis Resuscitation Bundle, measuring compliance with the bundle, and tracking mortality for patients with severe sepsis and septic shock.

The milestones for assessing LAC DHS success in addressing this care quality and safety issue are designed to increase compliance with implementing the Sepsis Resuscitation Bundle. The Sepsis Resuscitation Bundle is made up of four elements which include 1) measuring serum lactate to further identify septic patients, 2) obtaining blood cultures prior to antibiotic administration, 3) administering broad-spectrum antibiotics within 3 hours of ED admission and within 1 hour of non-ED admission, and 4) delivering a minimum of 20 ml/kg of fluids and administering vasopressors if the patient does not respond to the fluid. A key step to implementing the Sepsis Resuscitation Bundle is the early recognition of the patient that is at risk for septic shock. Unlike the heart attack patient that usually comes into the emergency with the complaint of "chest pain", the early septic shock patient may have subtle complaints such as an increased heart rate or an increased respiratory rate and decreased urine output._These symptoms have historically not raised the same red flags which mobilize the quick response that the symptom of chest pain receives. The first steps of the LAC DHS improvement process is to educate the staff who make the early encounter with the patient to recognize the significance of the sepsis symptoms and mobilize treatment with the same urgency as staff have been conditioned to do for chest pain patients. This education will initially target the emergency room care givers and will later expand to in-house care givers as patients may develop symptoms after admission or when transferred in from outside facilities. Along with educating staff in the early recognition of septic shock, LAC DHS plans to implement processes to provide quick systematic treatment which, includes all four measures of the Sepsis Resuscitation Bundle.

The IHI Surviving Sepsis Campaign suggests that the bundle elements be incorporated in order sets and protocols so that treatment is not chaotic and piecemeal. Each LAC DHS facility is differently configured and has a variety of patient flow processes. LAC DHS plans to facilitate order set or protocol creation that can adapt to each LAC DHS patient flow environment. In addition to providing a consistent treatment protocol for the sepsis patients, LAC DHS plans to mobilize ready access to the resources needed to treat the septic patient. These resources include, but are not limited to, timely blood test results, accessible antibiotics and fluids, and competent staff to place central lines and monitor patients in the treatment protocol for desired goals. It is hoped that with the expansion of our electronic health record, the protocols would be embedded to alert physicians and support decision making.

Measuring compliance with the Sepsis Resuscitation Bundle will necessitate a standardized method of data collection. To be effective, compliance data must be timely and available for rapid care giver feedback. LAC DHS facilities do not currently have Electronic Medical Records. The process for and the ability to capture and communicate compliance results will therefore require significant personnel and information technology resources. Early milestones for this care quality challenge will require allocation of these resources either through additional hiring or re-assignment of existing staff. Once baseline compliance data is available, LAC DHS will employ improvement strategies to achieve increased compliance with Sepsis Bundle Implementation. LAC DHS leaders are experienced in Rapid Cycle PDSA (Plan Do Study Act) methodology and will utilize this method to continuously test, retest, implement and spread change throughout LAC DHS.

LAC DHS embraces the opportunity to collaborate and benchmark against the other members of the California Association of Public Hospitals. As the 1115 Waiver recognizes, safety net hospitals are an integral part of healthcare delivery in the State and fill this responsibility with a unique set of challenges. Partnering with this body will broaden the horizons of each individual organization to meet the needs of our vulnerable populations.

Improve Severe Sepsis Detection and Management					
DY6	DY7	DY8	DY9	DY10	
1. Implement the Sepsis Resuscitation Bundle, as evidenced by: a) Identify Sepsis champion at each DHS ED location as evidenced by DHS Performance Measures Committee minutes. b) Commission a Sepsis team as evidenced by DHS Performance Measure Committee minutes. c) Participate in outside Sepsis Collaborative/s as evidenced by DHS Performance Measure Committee minutes.	2. Implement the Sepsis Resuscitation Bundle, as evidenced by: a) Form DHS wide Sepsis Collaborative as evidenced by DHS Performance Measure Committee minutes. b) Revise CME approved curriculum used to train ED nurses and physicians in the detection and treatment of severe sepsis and septic shock patients as evidenced by curriculum sample. c) Train 30% of ED nurses and physicians on severe sepsis and septic shock detection and treatment as evidenced by course logs and CME records. d) Create Sepsis Resuscitation Order Set	3. Develop methodology to measure compliance with each of the elements within the Sepsis Resuscitation Bundle as evidenced by DHS Performance Measure Committee minutes. 4. Continue improvement strategies to achieve compliance with all elements of Sepsis Resuscitation Bundle as evidenced by DHS Performance Measure Committee minutes. 5. Provide education to ICU nurses and physicians on severe sepsis and septic shock resuscitation bundle as evidenced by course logs and CME records. 6. Develop ICU Sepsis Order Set as evidenced by Sepsis Order Set sample.	10. Continue improvement strategies to achieve compliance with all elements of Sepsis Resuscitation Bundle as evidenced by DHS Performance Measure Committee minutes. 11. Develop dashboard to compare compliance with order set bundle elements and sepsis mortality evidenced by UHC database. 12. Continue to share best practices with DHS Sepsis Collaborative as evidenced by Performance Measure Committee minutes. 13. Achieve X% compliance with Sepsis Resuscitation Bundle, where “X” will be determined in DY7 based on baseline data.	16. Continue improvement strategies to achieve compliance with all elements of Sepsis Resuscitation Bundle DHS as evidenced by Performance Measure Committee minutes. 17. Achieve X% compliance with Sepsis Resuscitation Bundle, where “X” will be determined in DY7 based on baseline data. 18. Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals. 19. Report results to the State.	

Improve Severe Sepsis Detection and Management					
DY6	DY7	DY8	DY9	DY10	
	that includes the resuscitation bundle elements as evidenced by order set sample. e) Allocate resources for expert support as evidenced by DHS Performance Measure Committee minutes. f) Allocate resources for data collection methodology development as evidenced by DHS Performance Measure Committee minutes. g) Allocate resources for data collection as evidenced by DHS Performance Measure Committee minutes. 1. Report at least 6 months of data collection on Sepsis Resuscitation Bundle to Safety Net Institute (SNI) for purposes of establishing the baseline and setting benchmarks.	7. Achieve X% compliance with Sepsis Resuscitation Bundle, where "X" will be determined in Year 2 based on baseline data. 8. Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals. 9. Report Sepsis Resuscitation Bundle and Sepsis Mortality results to the State.	14. Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals. 15. Report results to the State.		

Improve Severe Sepsis Detection and Management					
DY6	DY7	DY8	DY9	DY10	
	2. Report the Sepsis Resuscitation Bundle results to the State.				

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

- **Project Goal**: The key challenge is to reduce Central Line Associated Bloodstream Infections. Central line catheters have a number of different uses. They provide central circulation access and provide an avenue for fluid resuscitation when other routes are not easily available. Central lines allow the administration of blood products, fluids and medications and, if desired, at more rapid rates and in higher concentrations than peripheral lines. Central line catheters permit monitoring of central venous pressures, and, with some unique lines, permit the estimation of a patient's hemodynamic status (cardiac output and vascular resistance). Central lines also save patients from painful frequent injections and/or blood draws. Because of their many uses, thousands of central line catheters are placed in our LAC DHS patients each year; more than 50% of the Central line catheters are placed in patients that required an Intensive Care stay. Because central line catheters are placed through the skin directly into the bloodstream, frequently in very ill patients, they pose an increased risk of infection with associated risk of morbidity and/or mortality, and increased healthcare costs.

  During a recent six month period in 2010 LAC DHS hospitals reported at total of 18 events of CLABSI. This data/number is within the acceptable levels, or even less, compared to other similar hospitals in California. LAC DHS facilities implemented Central Line Insertion Practices (CLIP) which overlaps with the IHI central line bundle (CLB) and have established "Project: CLABSI Prevention" as a slogan in its campaign to decrease CLABSIs in the organization. However, DHS process and outcome data still demonstrate that significantly more work needs to be done. The challenges faced by LAC DHS providers to reducing CLABSIs include:

  - Lack of inter-facility processes to collect required data, resulting in incomplete calculation or unreported CLABSI rates
  - Inconsistent use of evidence-based central line insertion practices
  - Inconsistent monitoring of some implemented CLB components
  - Weak accountability of CLABSIs or inconsistent provider feedback on infection rates.

- **Major Delivery System Solutions**: In support of LAC DHS commitment for urgent improvement in care quality and safety we propose to make improvements in care provided to our patients with central lines. We propose to improve adherence to evidence-based CLIP and/or CLB practices, thereby reducing patient harm and/or death and associated healthcare costs attributed to central lines. CLIP and/or CLB practices are proven interventions to decrease or even eliminate CLABSIs. The CLIP and/or CLB (both overlap) address the elements of 1) Hand Hygiene, 2) Maximal barrier precautions upon insertion, and 3) Skin preparation/antisepsis. Adherence to CLIP is even advocated and monitored by the State.

  An essential step to increasing compliance with CLIP is providing ongoing training for all practitioners that insert central lines. LAC DHS teaching facilities experience a continual process of training new practitioners. LAC DHS plans to develop educational materials for practitioners on hospital acquired infections, including CLABSIs. One will be an integration of CLABSI's in the Patient Safety Curriculum, which is distributed to employees annually. Another method is to develop a specific infection prevention module, which may be used for mandatory training of staff. All educational curricula will be offered to coordinate with residency/staff rotations where feasible. In addition to insertion training, LAC DHS will develop ongoing education to staff on the care of central lines. When applicable, patients will be educated on the care of central lines as well.

  Effective April 2011 LAC DHS will report CLIP compliance data to the California Department of Public Health for all areas of our acute care facilities as required by statute. Following state law, a CLIP form is to be completed when each central line is placed. CLIP form completion is currently a manual process at LAC DHS facilities and each facility has different plant configurations. Although central

lines are commonly inserted in the intensive care setting or the emergency room, the lines are frequently placed in other areas of our facilities. Systematic completion of the CLIP forms, the collection of the forms and timely data entry will be required to meet this milestone. Although the CLIP document can work as a provider reminder system, additional measures will be implemented to facilitate good practice such as proper selection of central line insertion sites and/or assessment of the continued necessity of central lines. The ability to capture and communicate compliance results will require personnel and information technology resources. Early milestones for this care quality challenge will require allocation of these resources either through additional hiring or re-assignment of existing staff. LAC DHS plans to implement physician specific feedback of the compliance results to foster accountability.

LAC DHS embraces the opportunity to collaborate and benchmark against the other members of the healthcare community and with California Association of Public Hospital for this measure. As the 1115 Waiver recognizes safety net hospitals are an integral part of healthcare delivery in the State and fill this responsibility with a unique set of challenges. Partnering with this body will broaden the horizons of each individual organization to meet the needs of our vulnerable populations.

Central Line-Associated Bloodstream Infection Prevention					
DY6	DY7	DY8	DY9	DY10	
1. Implement the Central Line Insertion Practices (CLIP), as evidenced by: a) Identify champion at each DHS facility as evidenced by DHS Performance Measure Committee minutes. b) Commission a CLABSI team as evidenced by DHS Performance Measure Committee minutes. c) Participate in outside CLABSI Collaborative/s to share best practices	2. Continue Implementation of the CLIP, as evidenced by: a) Develop a mandatory curriculum/ used to train and orient physicians in the insertion of central lines as evidenced by sample curriculum. b) Provide ongoing education to ICU staff on care of central lines as evidenced DHS Performance Measure Committee minutes. c) Allocate resources to provide expert support as evidenced by DHS	6. Continue improvement strategies to achieve compliance with all elements of CLIP Bundle as evidenced by DHS Performance Measure Committee minutes. 7. Achieve X% compliance with CLIP, where "X" will be determined in DY7 based on baseline data. 8. Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public	10. Continue improvement strategies to achieve compliance with all elements of CLIP Bundle as evidenced by DHS Performance Measure Committee minute 11. Achieve X% compliance with CLIP, where "X" will be determined in DY7 based on baseline data. 12. Reduce Central Line Bloodstream Infections by X%, where "X" will be determined in DY7 based on baseline data.	15. Achieve X% compliance with CLIP, where "X" will be determined in DY7 based on baseline data. 16. Reduce Central Line Bloodstream Infections by X%, where "X" will be determined in DY7 based on baseline data. 17. Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals.	

Central Line-Associated Bloodstream Infection Prevention					
DY6	DY7	DY8	DY9	DY10	
on central line bundle compliance as evidenced by DHS Performance Measure Committee minutes.	Performance Measure Committee minutes. d) Allocate resources to develop data collection methodology as evidenced by DHS Performance Measure Committee minutes. e) Allocate resources to collect data on implementation of central line bundle as evidenced by DHS Performance Measure Committee minutes. 3. Report at least 6 months of data collection on CLIP to SNI for purposes of establishing the baseline and setting benchmarks. 4. Report at least 6 months of data collection on CLABSI to SNI for purposes of establishing the baseline and setting benchmarks.	hospitals. 9. Report CLIP and CLABSI results to the State.	13. Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals. 14. Report CLIP and CLABSI results to the State.	18. Report CLIP and CLABSI results to the State.	

Central Line-Associated Bloodstream Infection Prevention					
DY6	DY7	DY8	DY9	DY10	
	5. Report CLIP results to the State.				

3. Reduce Complications of Surgical Procedures

- **Project Goal**: The key challenge is to reduce complications of high risk surgical procedures. Historical and current literature remains consistent in finding that surgical site infections (SSI) contribute to surgical patients' mortality and morbidity. Beginning in 1999 various organizations including the Centers for Disease Control and Prevention and the Center for Medicare and Medicaid Services (CMS) took notice of these findings and worked together in the Surgical Care Improvement Projects (SCIP) to address this problem. In January 2003, representatives from 11 national medical organizations that write guidelines related to surgical infection prevention met to explore consensus building for surgical site infection prevention guidelines. By 2006 CMS and The Joint Commission adopted three SCIP measures related to antibiotic prophylaxis for certain surgical procedures. The SCIP measure set has evolved to the current total of eight measures. LAC DHS providers were early adopters of the national surgical prophylaxis guidelines. As early as 2007 several LAC DHS best practice groups, including DHS Anesthesia Best Practices and DHS Healthcare Infection Prevention Best Practices, drafted a set of LAC DHS guidelines to foster compliance with SCIP measures. Although LAC DHS facilities have demonstrated high compliance with all of the eight SCIP measures, LAC DHS remains in the lower 50% of our benchmark cohort. For this reason LAC DHS has chosen to focus improvement activities on preventing complications for identified surgical procedures. The challenges faced by LAC DHS providers for reducing Surgical Site Infections are:
  - Provider confusion regarding the effectiveness of prevention measures due to competing published research findings
  - Knowledge gaps regarding significance of application of SCIP bundle
  - Inconsistent application of SCIP practices across all services
  - Lack of multi-discipline collaboration to facilitate implementation for all measures
- **Major Delivery System Solutions**: In support of LAC DHS commitment to urgent improvement in care quality and safety we propose to make improvement in care provided to our surgical patients focusing on California Department of Public Health (DCPH) targeted procedures. LAC DHS interventions and improved processes are based on the Surgical Care Improvement Projects (SCIP) recommended guidelines that are designed to reduce harm or death attributed to surgical complications and the associated costs. LAC DHS interventions will include consistent application of SCIP measures, ongoing monitoring of measure compliance with an emphasis on identified surgical procedures, correlation between process and outcome measures, and monitoring surgical complication rates for identified procedures.

  The milestones for assessing LAC DHS success are designed to decrease surgical site infection rates for the procedures. One identified barrier to decreasing infection rates is LAC DHS provider practice. In recent years some published research questioned the effectiveness of SCIP guidelines. Generally, this research has measured the effectiveness of individual SCIP measures; some of the research demonstrated little effectiveness in reducing surgical effectiveness. However, reliable research demonstrates significant effectiveness at reducing surgical infections when all measures in the SCIP bundle are implemented. In order to affect provider practice re-education may be required. Depending on the results of the knowledge gap analysis a variety of approaches will be implemented to address the educational needs of our providers.

  Additionally, early activities will be directed at the consistent application of SCIP practices across all services. Review of LAC DHS SCIP process measures demonstrates significant variability across different surgical services within our organization. The variability presents an opportunity to identify and spread processes that have proven to work. Reducing surgical site infections presents the

opportunity for team activities. Consistent implementation will require coordination between specialized surgeons, anesthesiologists, pharmacists, nurses and information technologists. As with other key challenges LAC DHS embraces the opportunity to collaborate and benchmark against the other members of the California Association of Public Hospitals.

As with all improvement strategies data collection and dissemination are important. LAC DHS plans to develop a dashboard that communicates findings. Allocation of personnel and information technology resources will be required. Once baseline compliance data is available, LAC DHS will employ improvement strategies to achieve increased compliance with all. As with the other key challenges LAC DHS team leaders are experienced in Rapid Cycle PDSA (Plan Do Study Act) methodology and will utilize this method to continuously test, retest, implement and spread change throughout LAC DHS.

Surgical Complications Core Processes					
DY6	DY7	DY8	DY9	DY10	
1. Identify champion for SSI for CDPH targeted procedures at each DHS facility as evidenced by DHS Performance Measure Committee minutes. 2. Commission a SSI prevention team as evidenced by DHS Performance Measure Committee minutes. 3. Participate in outside SCIP Collaborative/s to share best practices on as evidenced by DHS Performance Measure Committee minutes.	4. Assess understanding of and compliance with 6 SCIP Core measures for identified procedures using UHC Core Measure Data set as evidenced by DHS Performance Measure Committee minutes. 5. Address provider knowledge deficits using a variety of strategies e.g., team training as manifested by DHS Performance Measure Committee minutes. 6. Develop dashboard to compare compliance with SCIP Core measures using UHC Core Measure Data for CDPH targeted procedures	9. Based on baseline findings continue improvement strategies to increase compliance with SCIP measures as evidenced by Performance Measure Committee. 10. Reduce the rate of surgical site infection for Class 1 and 2 wounds by X, where “X” will be determined in DY7 based on baseline data. 11. Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals.	13. Based on baseline findings continue improvement strategies to increase compliance with SCIP measures. 14. Reduce the rate of surgical site infection for Class 1 and 2 wounds by X%, where “X” will be determined in DY7 based on baseline data. 15. Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals. 16. Report results to the State.	17. Reduce the rate of surgical site infection for Class 1 and 2 wounds by X%, where “X” will be determined in DY7 based on baseline data. 18. Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals. 19. Report results to the State.	

Surgical Complications Core Processes					
DY6	DY7	DY8	DY9	DY10	
	as evidenced by DHS Performance Measure Committee minutes. 7. Report at least 6 months of data collection on SSI to SNI for purposes of establishing the baseline and setting benchmarks. 8. Report results to the State.	12. Report results to the State.			

4. **Venous Thromboembolism (VTE) Prevention and Treatment**

- **Project Goal**: Deep vein thrombosis and pulmonary embolism are known together as venous thromboemolism (VTE). In hospitalized patients, VTE occurs with relatively high frequency. Common risk factors attributed to VTE incidence include patient factors such as age, weight, smoking and medical history. VTE risks increase with hospital procedures, surgeries and certain medical conditions. Pulmonary thromboembolism is a leading cause of preventable in-hospital mortality in the United States.

  Much study has been conducted to identify interventions that would assess patient risk and prevent VTE in hospitalized patients. The National Quality Forum (NQF) recognized six process guidelines for VTE prophylaxis during patient hospitalization and after discharge. LAC DHS hospitals have implemented two of the recognized VTE prophylaxis guidelines for surgery patients as part of the SCIP measures and have tracked their compliance on these measures for several years. Although compliance with these two measures is improving, there is significant opportunity for improvement. LAC DHS has data on how LAC DHS hospitals are doing toward implementing the VTE prevention measure set. Additionally, recent risk data demonstrates that VTE can and has caused harm to our populations. The harm to patients has resulted in pain and suffering, increased healthcare cost, and increased costs for the resultant claims. For these reasons LAC DHS has chosen to focus care on this milestone. The following variables are contributing factors to the LAC DHS' challenge on reducing VTE incidents:

  - Lack of knowledge regarding the extent of the problem; while the problem is readily acknowledged in surgery patients, fewer providers recognize the issue for non-surgical patients
  - Lack of knowledge regarding complete set of guidelines for VTE prophylaxis
  - Lack of coordinated care processes among staff to implement additional VTE prophylaxis measures
  - Lack of provider feedback regarding compliance with currently practiced VTE prophylaxis interventions

- **Major Delivery System Solutions**: In support of LAC DHS commitment for urgent improvement in care quality and safety we propose to make improvements in care provided to patients at risk for VTE. LAC DHS proposed improvement processes will adopt the strategies utilized by The Society of Hospital Medicine's Venous Thromboembolism Resource Room team. The strategies are designed to reduce harm or death attributed to VTE complications and the associated costs. LAC DHS interventions will include identification of VTE measure champions and the formation of a VTE team, the development and integration of VTE protocol, measurement of protocol compliance and its application, and tracking incidence of hospital acquired VTE.

  The initial efforts for this challenge will focus on bringing together disparate efforts across our system. Three of four LAC DHS facilities currently have anticoagulation programs; several groups have designed order sets to address VTE prevention that are area specific. Our first milestone will be to survey facilities and programs for existing efforts. Once the survey findings are collated, the LAC DHS team will identify process gaps and identify processes that work.

  The Society of Hospital Medicine's Venous Thromboembolism Resource Room team recommends the development of protocols to assist providers in doing the right thing at the right time. Success at implementing VTE protocols will provide an ongoing opportunity to utilize information systems to support provider decision making, whether it is to identify patients at risk or to alert the care giver of contraindications of prophylaxis. LAC DHS plans to allocate information technology resources either through additional hiring or re-assignment of existing staff.

As with our other challenges, tracking performance metrics is essential. Data capture and communication of the results will require personnel and information technology resources. Early milestones for this care quality challenge will require allocation of these resources either through additional hiring or re-assignment of existing staff. Once baseline compliance data is available, LAC DHS will employ improvement strategies to achieve increased performance with all metrics. LAC DHS team leaders are experienced in Rapid Cycle PDSA (Plan Do Study Act) methodology and will utilize this method to continuously test, retest, implement and spread change throughout LAC DHS. By implementing and monitoring compliance on the VTE process measures, LAC DHS will improve overall patient quality of care.

Venous Thromboembolism (VTE) Prevention and Treatment					
DY6	DY7	DY8	DY9	DY10	
1. Identify Key stakeholders to address VTE prevention and treatment as evidenced by DHS Performance Measure Committee minutes. 2. Survey facilities for current efforts and resources to address VTE prevention and treatment as evidenced by DHS Performance Measure Committee minutes. 3. Assemble team of key VTE stakeholders as evidenced by DHS Performance Measure Committee minutes.	4. Form DHS VTE prevention collaborative as evidenced by DHS Performance Measure Committee minutes. 5. VTE team will set general goals and a timeline for construction of and implementation of VTE protocol as evidenced by DHS Performance Measure Committee minutes. 6. Allocate resources to provide expert support as evidenced by DHS Performance Measure Committee minutes. 7. Allocate resources to develop VTE data collection methodology as evidenced	11. Construct protocols/order sets that address the following measures: a) All eligible admitted patients receiving recommended VTE Prophylaxis b) All eligible ICU patients receiving VTE prophylaxis c) Patients receiving overlap VTE therapy d) Patients who have IV unfractionated heparin (UFH) therapy dosages and platelet counts monitored e) VTE patients with documented discharge instructions 12. Pilot protocols/order sets at 4 strategically identified	23. Continue improvement strategies implemented in DY8 to achieve compliance with protocol/order set 24. Develop methodology to measure compliance with each element within the protocol/order set. 25. Increase the rate of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission by X, where “X” will be determined in DY7 based on baseline data.	32. Increase the rate of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission by X, where “X” will be determined in DY7 based on baseline data. 33. Increase the rate of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after the initial admission (or transfer) to the Intensive Care Unit (ICU) or surgery	

Venous Thromboembolism (VTE) Prevention and Treatment					
DY6	DY7	DY8	DY9	DY10	
	by DHS Performance Measure Committee minutes. 8. Allocate resources to collect data on VTE measures as evidenced by DHS Performance Measure Committee minutes. 9. Report at least 6 months of data collection on the VTE management process measures to SNI for purposes of establishing the baseline and setting benchmarks. 10. Report the 5 VTE process measures data to the State.	locations. 13. Identify IT solutions to assist providers with protocol/order set use compliance. 14. Collect data on compliance with protocol/order set as evidenced by DHS Performance Measure Committee minutes. 15. Identify a process improvement methodology to plan, develop and implement improvement strategies to increase compliance with protocol/order set as evidenced by DHS Performance Measure Committee minutes. 16. Increase the rate of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after	26. Increase the rate of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after the initial admission (or transfer) to the Intensive Care Unit (ICU) or surgery end date for surgeries that start the day of or the day after ICU admission (or transfer) by X, where "X" will be determined in DY7 based on baseline data. 27. Increase the rate of patients diagnosed with confirmed VTE who received an overlap of parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation and warfarin therapy by X, where "X" will be determined in DY7 based on baseline data. 28. Increase the rate of patients	end date for surgeries that start the day of or the day after ICU admission (or transfer) by X, where "X" will be determined in DY7 based on baseline data. 34. Increase the rate of patients diagnosed with confirmed VTE who received an overlap of parenteral (intravenous [IV] or subcutaneous [subcu]) anticoagulation and warfarin therapy by X, where "X" will be determined in DY7 based on baseline data. 35. Increase the rate of patients diagnosed with confirmed VTE who received intravenous (IV) UFH therapy dosages AND had their platelet counts monitored using defined parameters such as a nomogram or protocol by X, where "X" will be determined in DY7 based on	

Venous Thromboembolism (VTE) Prevention and Treatment					
DY6	DY7	DY8	DY9	DY10	
		hospital admission or surgery end date for surgeries that start the day of or the day after hospital admission by X, where "X" will be determined in DY7 based on baseline data. 17. Increase the rate of patients who received VTE prophylaxis or have documentation why no VTE prophylaxis was given the day of or the day after the initial admission (or transfer) to the Intensive Care Unit (ICU) or surgery end date for surgeries that start the day of or the day after ICU admission (or transfer) by X, where "X" will be determined in DY7 based on baseline data. 18. Increase the rate of patients diagnosed with confirmed VTE who received an overlap of parenteral (intravenous [IV] or subcutaneous [subcu])	diagnosed with confirmed VTE who received intravenous (IV) UFH therapy dosages AND had their platelet counts monitored using defined parameters such as a nomogram or protocol by X, where "X" will be determined in DY7 based on baseline data. 29. Increase the rate 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 discharge instructions that address all four criteria: compliance issues, dietary advice, follow-up monitoring, and information about the potential for adverse drug reactions/interactions by X, where "X" will be determined in DY7 based on baseline data.	baseline data. 36. Increase the rate 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 discharge instructions that address all four criteria: compliance issues, dietary advice, follow-up monitoring, and information about the potential for adverse drug reactions/interactions by X, where "X" will be determined in DY7 based on baseline data. 37. Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals. 38. Report the 5 VTE process measures and incidence of potentially-preventable VTE	

Venous Thromboembolism (VTE) Prevention and Treatment					
DY6	DY7	DY8	DY9	DY10	
		anticoagulation and warfarin therapy by X, where "X" will be determined in DY7 based on baseline data. 19. Increase the rate of patients diagnosed with confirmed VTE who received intravenous (IV) UFH therapy dosages AND had their platelet counts monitored using defined parameters such as a nomogram or protocol by X, where "X" will be determined in DY7 based on baseline data. 20. Increase the rate 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 discharge instructions that address all four criteria: compliance issues, dietary advice, follow-up monitoring, and	30. Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals. 31. Report the 5 VTE process measures and incidence of potentially-preventable VTE data to the State.	data to the State.	

Venous Thromboembolism (VTE) Prevention and Treatment					
DY6	DY7	DY8	DY9	DY10	
		information about the potential for adverse drug reactions/interactions by X, where "X" will be determined in DY7 based on baseline data. 21. Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals. 22. Report the 5 VTE process measures results to the State.			