NativIdad Medical Center (NMC) Delivery System Reform Incentive Pool (DSRIP) Five-Year Plan

Categories 1, 2, and 4

Name of Public Hospital System: ***Natividad Medical Center***

County: ***Monterey County***

Background:

Natividad Medical Center (NMC), a 172 bed public safety net hospital owned and operated by Monterey County, has been providing comprehensive, high quality acute inpatient, outpatient, diagnostic, and specialty medical care, health and wellness services, and community benefits responsive to the diverse cultural needs of a broad geographic area for over 124 years. Monterey County has a population of 410,206 people with a growing Hispanic/Latino population of 53% in 2008 projected to grow to 64% in 2020. The largest industry in the county is agriculture with the 4th highest production in the US. During the current economic downturn, the county is experiencing a growth in the percentage of people below the poverty level reported to be at 17.8% in 2009 compared to a statewide average of 14.2% for the same period. The largest growth is in the under 18 population.

NMC serves more than 33,000 patient days each year and provides more than 42,000 emergency department visits per year. NMC is ranked #1 in newborn deliveries in Monterey County. 82% of NMC's patients are Hispanic/Latino. The hospital operates with a medical staff of over 235 physicians and has specialty clinics and outpatient primary care FQHC "look alike" clinics operated by the Monterey County Health Department. County safety net hospitals like NMC make up only 19 of California's more than 450 hospitals and health care systems and provide 50% of all hospital care for California's uninsured and train nearly half of all new doctors in the state. NMC is the only teaching hospital on the Central Coast, through its affiliation with the University of California, San Francisco (UCSF). Recognized nationally and internationally as a model program, NMC's Family Medicine Residency Program is postgraduate training for physicians specializing in Family Medicine. About one third of the graduates remain on the central coast providing essential primary care services.

Other services which are unique to NMC and not available anywhere else in Monterey County include a California Children's Services-certified Level III Neonatal Intensive Care Unit, an inpatient acute rehabilitation program, a 5150 inpatient psychiatric unit, a multidisciplinary medical-forensic clinic dedicated to child victims of sexual abuse, and a comprehensive primary care clinic for people living with HIV/AIDS in the Salinas Valley.

Following a multiyear period of substantial economic losses, NMC entered into a highly successful public/private partnership in 2006 with a local district hospital and a private nonprofit community hospital to provide direction and resources for the revitalization of NMC as the regional public safety net hospital. The favorable turnaround resulting in three years of net profit allows the hospital to move forward to achieve its goals as a desired resource for health care. One component of the successful turnaround was the development of a strategic plan focusing on high quality healthcare, service excellence, and growth. Included in this plan is a critical five-year capital investment plan to upgrade hospital facilities and equipment. This plan identifies delivery system realignment strategies including partnering with other providers in the provision of integrated, comprehensive, and coordinated health care.

NMC's Mission is to continually improve the health status of the people of Monterey County through access to affordable, high-quality healthcare services. **Our Vision** is that NMC is recognized:

- Nationally and statewide as an evolving model public safety net hospital
- By the community as an accessible and desired resource for primary care, general medical/surgical, emergency, and women's and children's services
- By both consumers and providers as a System associated with best practices, stellar outcomes, and high patient and caregiver satisfaction levels

NMC's Strategic Direction: Based on changing community demographics, increasing chronic diseases reflecting health disparities by income and ethnicity, and the enactment of comprehensive health care reform that stabilizes and strengthens the local health care safety net, NMC will be responsive by partnering with other health care providers in the provision of integrated, comprehensive, coordinated health care that aligns health and delivery system responsibilities for all populations, extends across the continuum of care, and effectively addresses the rapidly changing business rules for the payment of healthcare services. NMC will achieve unprecedented quality and growth targets across key clinical service lines focusing on core clinical strengths and utilizing available hospital capacity.

Executive Summary:

The NMC DSRIP Plan identifies the key challenges, five-year projects and interventions to drive performance improvement, and five-year goals:

- **Key challenges that need to be addressed in order to provide better care for patients and transition successfully to health care reform implementation:**
    - Current patient demand for primary care exceeds available clinic space and provider capacity.
    - All patients are not sufficiently engaged in and satisfied with the care they receive as a result of language barriers.
    - Care is not at all times of sufficient value, that is, the highest quality at the lowest cost.
- **Project and interventions within the following four major categories of delivery system reform:**
    - **Category 1 Infrastructure Development**
        - Increase Training of Primary Care Workforce Through Expansion of the Family Medicine Residency Program and Serving as a Training Site for Medical Students and Physician Assistants.
        - Enhance Interpretation Services and Culturally Competent Care through Investment in Infrastructure to Identify Language Access Needs, Increase Capacity to Provide Qualified Interpreter Services, Train Staff Related to Language Access and Cultural Sensitivity, and Insure Timely Access to Qualified Interpreter Services.
    - **Category 2 Innovation and Redesign**
        - Improve How the Patient Experiences the Care and the Patient's Satisfaction with the Care Provided.

        - Apply Process Improvement Methodology to Improve Quality/Efficiency as Evidenced by Achievement of Milestones in Categories 3 & 4 and Achievement of Performance Goals in our Targeted Improvement Projects.

    - **Category 3 Population-focused improvement**

        - **To be determined**

    - **Category 4 Urgent Improvement in Quality & Safety**

        - Reduce Avoidable Harm or Deaths Due to Severe Sepsis to Patients Receiving Inpatient Service.

        - Prevent Central Line-associated Bloodstream Infections.

        - Prevent Hospital-acquired Pressure Ulcers.

        - Reduce Avoidable Harm or Deaths Due to a Venous Thromboembolus in Patients Receiving Inpatient Services.

- **Goals to be achieved at the end of the five year period:**

    - Expand the successful Family Medicine Residency Program to a class size from 8 to 10 and provide training rotations for Medical Students & Physician Assistants.

    - Expand capacity to provide qualified health care interpreter encounters and an increase in the number of interpreter encounters as evidenced by a 100% increase in our qualified interpreter workforce, the deployment of Health Care Interpreter Network (HCIN) in 100% of departments identified in a language access services gap analysis, and a 60% increase in the number of qualified interpreter encounters per month over baseline.

- Implement at least three organizational strategies to improve the patient experience resulting in a 15% improvement over baseline of Percent Excellent score in patient satisfaction survey's overall quality of care question.

- Adopt a new framework organization wide for performance improvement, The Model for Improvement, as promoted by the Institute for Healthcare Improvement. NMC will Implement this model with emphasis in Human Factors related to reliable design in order to improve the efficiency and safety of our care processes.

- Achieve X% compliance with Sepsis Resuscitation Bundle, where "X" will be determined in Year 2 based on baseline data.

- Achieve X% compliance with Central line insertion Practices, where "X" will be determined in Year 2 based on baseline data.

- Reduce Central Line Bloodstream Infections by X%, where "X" will be determined in Year 2 based on baseline data.

- Achieve hospital-acquired pressure ulcer prevalence of less than 1.1%.

- 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 Year 2 based on baseline data.

- 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 Year 2 based on baseline data.

- 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 Year 2 based on baseline data.

- 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 Year 2 based on baseline data.

- 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 Year 2 based on baseline data.

The DSRIP funds will support NMC's goal to excel in providing safe, reliable, quality care to our patients, improve the patient experience, and expand access to integrated, comprehensive, coordinated health care. The Category 1 & 2 projects and Category 4 interventions included in this five-year plan are based on proven, evidence-based, best practices that have been shown to result in significant improvements. NMC's approaches are aligned with those proposed by the other designated public hospitals in California, and will be implemented in a coordinated fashion, including sharing lessons learned and leveraging each other's successes – particularly through our statewide partnership of the California Association of Public Hospitals and Health Systems, and its affiliate, the California Health Care Safety Net Institute. In this way, the comprehensive reforms proposed will have lasting effects and result in dramatic improvements in the health care for low-income Californians, paving the road for a more successful implementation of health care reform in the state.

<u>Category 1 Project:</u> Increase Training of Primary Care Workforce Through Expansion of the Family Medicine Residency Program and Serving as a Training Site for Medical Students and Physician Assistants

Goal: A successful recruitment **s**trategy has been NMC's operation of the Family Medicine Residency Program, postgraduate training for physicians specializing in Family Medicine. NMC's Family Medicine Residency Program, an affiliate with the University of California, San Francisco (UCSF), is recognized nationally and internationally as a model program. NMC is the only teaching hospital on the Central Coast. About one third of the graduates remain on the Central Coast providing essential primary care services. The expansion of the residency program is vital to help address the primary care workforce shortage. NMC has served as a primary care training site for UCSF Medical Students for nearly 25 years but seeks to expand primary care training opportunities to Osteopathic Medical Students and Physician Assistant students who are more likely to choose primary care careers.

Expected Results: Increased training and primary care capacity through the expansion of the Family Medicine Residency Program, a UCSF affiliation, by two residency slots per year in Years Two, Three, and Four (increasing a class from 8 to 10 Residents for a total of 30 residents in training at NMC). NMC will provide a 12-month clinical experience to at least six Touro University Medical Students. This training will be alongside our Family Medicine Residents and will provide students with an exposure to the full spectrum of Family Medicine. Similarly, PA students will complete inpatient rotations with our Family Medicine Residents.

Relation to Category 3 Population-Focused Improvement: Expanding the successful Family Medicine Residency Program and providing training rotations for Medical Students & Physician Assistants as a proven recruitment strategy will increase access and capacity, strengthen the medical home implementation, and foster team based care with a greater focus on population health.

Year 1	Year 2	Year 3	Year 4	Year 5
Milestone: Expand Family Medicine Training Program by hiring two new Family Medicine faculty	**Milestone:** Expand Family Medicine Training Program by recruiting two additional first year Residents to begin training	**Milestone:** Expand Family Medicine Training Program by recruiting two additional first year Residents to begin training	**Milestone:** Expand Family Medicine Training Program by recruiting two additional first year Residents to begin training	**Milestone:** Increase the number of primary care trainees by providing training to at least six Touro

members **Metric:** Hire new faculty members • # of additional faculty members • **Data Source:** HR documents **Milestone:** Increase the number of primary care trainees by providing training to at least six Touro University Medical Students each academic year. **Metric:** Increased number of trainees • Number of trainees • **Data Source:** Documentation of training schedules and	July 1 2012 thus expanding residency program to 26 total Residents **Metric:** Expand the primary care residency • Documentation of agreements and applications to expand training program • **Data Source**: Training program documentation **Milestone:** Increase the number of primary care trainees by providing training to at least six Touro University Medical Students each academic year. **Metric:** Increased number of trainees • Number of trainees • **Data Source:** Documentation of	July 1 2013 thus expanding residency program to 28 total Residents **Metric:** Expand the primary care residency • Documentation of agreements and applications to expand training program • **Data Source**: Training program documentation **Milestone:** Increase the number of primary care trainees by providing training to at least six Touro University Medical Students each academic year **Metric:** Increased number of trainees • Number of trainees • **Data Source:** Documentation of	July 1 2014 thus expanding residency program to 30 total Residents **Metric:** Expand the primary care residency • Documentation of agreements and applications to expand training program • **Data Source**: Training program documentation **Milestone:** Increase the number of primary care trainees by providing training to at least six Touro University Medical Students each academic year **Metric:** Increased number of trainees • Number of trainees • **Data Source:** Documentation of	University Medical Students each academic year. **Metric:** Increased number of trainees • Number of trainees • **Data Source:** Documentation of training schedules and HR records **Milestone:** Increase the number of primary care trainees by providing training to Stanford University Physician Assistants as defined in the MOU **Metric:** Increased number of trainees • Number of trainees • **Data Source:**

HR records	training schedules and HR records **Milestone:** Increase the number of primary care trainees by completing new MOU with Stanford University Physician Assistant Program and serve as training site for PA students **Metric:** Increased number of trainees • Number of trainees • **Data Source:** Completed MOU & documentation of training schedules and HR records	training schedules and HR records **Milestone:** Increase the number of primary care trainees by providing training to Stanford University Physician Assistants as defined in the MOU **Metric:** Increased number of trainees • Number of trainees • **Data Source:** Documentation of training schedules and HR records	training schedules and HR records **Milestone:** Increase the number of primary care trainees by providing training to Stanford University Physician Assistants as defined in the MOU **Metric:** Increased number of trainees • Number of trainees • **Data Source:** Documentation of training schedules and HR records	Documentation of training schedules and HR records

<u>Category 1 Project:</u> Enhanced Interpretation Services and Culturally Competent Care through Investment in Infrastructure to Identify Language Access Needs, Increase Capacity to Provide Qualified Interpreter Services, Train Staff Related to Language Access and Cultural Sensitivity, and Insure Timely Access to Qualified Interpreter Services

Goal: At Natividad Medical Center, over 40% of the patients have Limited English Proficiency (LEP) because they speak a language other than English as their primary language. Effective communication is crucial to effective health care because patients need to understand their medications, interventions and ongoing care. This is a strategic priority for NMC. To accomplish this, NMC staff are working to:

- Identify all patients with language access needs
- Increase our capacity to provide qualified interpreter services
- Train hospital staff and providers related to language access and cultural sensitivity
- Insure that all LEP patients have access to qualified interpreter services in a timely manner or have access to a bilingual provider assessed for linguistic proficiency

NMC has identified the need to invest in infrastructure to accomplish our goal. This includes the development and hiring into a full-time Medical Interpreter Coordinator position, plans to increase interpreter capacity, and participation in the Health Care Interpreter Network (HCIN). HCIN is a system of shared interpreter services operated by California Public Hospitals. The system utilizes Video/Voice-Over IP Call Centers in various member hospitals to provide the interpreter services.

Expected Results: Expanded capacity to provide qualified health care interpreter encounters and an increase in the number of interpreter encounters as evidenced by a 100% increase in our qualified interpreter workforce, the deployment of HCIN in 100% of departments identified in a language access services gap analysis, and a 60% increase in the number of qualified interpreter encounters per month over baseline.

Relation to Category 3 Population-Focused Improvement: Because effective communication is crucial for a patient's ability to understand their medications, interventions and ongoing care, LEP patients will have the ability to better manage their health resulting in

fewer readmissions and reduce the possibility of complications associated with medication management and treatment compliance. This project is also a core initiative in our efforts to improve the patient experience at NMC.

Year 1	Year 2	Year 3	Year 4	Year 5
Milestone: Action plan development based on gap analysis which identified gaps in language access services and baseline data **Metric:** Action plan completion • Report of action plan based on gap analysis • **Data Source:** action plan based on gap analysis **Milestone:** Redesign Medical Interpreter Services Program through integration with the	**Milestone:** Establish baseline data for number of encounters facilitated by qualified interpreters and number of departments utilizing video or audio conference terminals **Metric:** Baseline data collected • Report baseline data • **Data Source:** baseline data audit **Milestone:** Implement language access policies	**Milestone:** Expand qualified health care interpretation technology to 30% of departments identified in gap analysis **Metric:** Number of hospital departments utilizing video or audio conferencing terminals over baseline • Audit number of departments utilizing technology • **Data Source:** audit **Milestone:** Increase number of encounters	**Milestone:** Expand qualified health care interpretation technology to 75% of departments identified in gap analysis **Metric:** Number of hospital departments utilizing video or audio conferencing terminals over baseline • Audit number of departments utilizing technology • **Data Source:** audit **Milestone:** Increase	**Milestone:** Expand qualified health care interpretation technology to 100% of departments identified in gap analysis **Metric:** Number of hospital departments utilizing video or audio conferencing terminals over baseline • Audit number of departments utilizing technology • **Data Source:** audit **Milestone:** Increase

Quality Management Department, under supervision of the Quality Director. **Metric:** Medical Interpreter Program integration into Quality Management Department • Report Medical Interpreter Program redesign • **Data Source:** HR workforce data and organization chart	and procedures **Metric:** Policies and procedures • Submission of policies and procedures based on *Straight Talk: Model hospital Policies & Procedures on Language Access* • **Data Source:** policies and procedures **Milestone:** Expand the number of qualified healthcare interpreters by 100% **Metric:** Number of qualified interpreters over baseline identified in gap analysis • Report number of qualified interpreters • **Data Source:** HR	facilitated by qualified healthcare interpreters to 20% over baseline **Metric:** Number of visits facilitated by qualified healthcare interpreters over baseline • Audit number of visits facilitated by qualified interpreters • **Date Source:** audit	number of encounters facilitated by qualified healthcare interpreters to 30% over baseline **Metric:** Number of visits facilitated by qualified healthcare interpreters over baseline • Audit number of visits facilitated by qualified interpreters • **Data Source:** audit	number of encounters facilitated by qualified healthcare interpreters to 60% over baseline **Metric:** Number of visits facilitated by qualified healthcare interpreters over baseline • Audit number of visits facilitated by qualified interpreters • **Data Source:** audit

	workforce data **Milestone:** Expand qualified health care interpretation technology to 10% of departments identified in gap analysis **Metric:** Number of hospital departments utilizing video or audio conferencing terminals over baseline • Audit number of departments utilizing technology • **Data Source:** audit **Milestone:** Increase number of encounters facilitated by qualified healthcare interpreters to 10% over baseline **Metric:** Number of visits facilitated by qualified			

	healthcare interpreters over baseline • Audit number of visits facilitated by qualified interpreters • **Date Source:** audit			

Category 2 Project: Improve How the Patient Experiences the Care and the Patient's Satisfaction with the Care Provided

Goal: The patient defines the quality of their health care experience through their perceptions, which subsequently become their reality. Every patient has individual needs that are influenced by how well each health care provider interfaces with the patient and with each other. By developing processes to respond to patient needs, we help our patients to trust in their caregivers as patient advocates. As a result, patient and family expectations and requirements will be more proactively and systematically addressed. The greatest opportunity for improvement rests with improving processes that inform and involve the patients and families in their treatment decisions.

Improvement efforts will address translating data into performance improvement results. This requires firsthand knowledge of what the patient customer defines as an Excellent experience. We will use focus groups and patient satisfaction survey results to develop organizational improvement strategies that will help us improve how the patient experiences care and satisfaction with the care provided.

Expected Results: Implementation of at least three organizational strategies to improve the patient experience resulting in a 15% improvement over baseline of Percent Excellent score in patient satisfaction survey's overall quality of care question.

Relation to Category 3 Population-Focused Improvement: The successful deployment of this project in both the inpatient and ambulatory settings will directly link to the Category 3 goals to improve the Patient/Care Giver Experience.

Year 1	Year 2	Year 3	Year 4	Year 5
Milestone: Develop regular organizational display of patient experience data and provide quarterly updates to employees	**Milestone:** Conduct Focus groups in one targeted clinical area to establish the baseline patient experience and report	**Milestone:** Conduct Focus groups in one targeted clinical area to establish the baseline patient experience and	**Milestone:** Implement at least one organizational strategy that includes the patient in shared decision making aimed at improving patient and	**Milestone:** Implement at least one organizational strategy that includes the patient in shared decision making aimed at improving patient and

on the efforts the organization is undertaking to improve the experience of its patients and their families. **Metric:** Demonstrated organizational display • Results posted on Boards in all staff lounges. Regular Huddle Reports • **Data Source:** Display **Milestone:** Conduct Focus groups in one targeted clinical area to establish the baseline patient experience and report findings **Metric:** Documentation of focus group findings • Focus group findings	findings **Metric:** Documentation of focus group findings • Focus group findings • **Data Source:** Meeting minutes and Summary report **Milestone:** Develop regular organizational display of patient experience data and provide quarterly updates to employees on the efforts the organization is undertaking to improve the experience of its patients and their families. **Metric:** Demonstrated organizational display • Results posted on Boards in all staff lounges. Regular Huddle Reports • **Data Source:**	report findings **Metric:** Documentation of focus group findings • Focus group findings • **Data Source:** Meeting minutes and Summary report **Milestone:** Implement at least one organizational strategy that includes the patient in shared decision making aimed at improving patient and family centeredness. **Metric:** Number of patient experience improvement initiatives conducted • Number of initiatives • **Data Source:** Documentation of strategy (ies)	family centeredness. **Metric:** Number of patient experience improvement initiatives conducted • Number of initiatives • **Data Source:** Documentation of strategy (ies) implemented. **Milestone:** Develop regular organizational display of patient experience data and provide quarterly updates to employees on the efforts the organization is undertaking to improve the experience of its patients and their families. **Metric:** Demonstrated organizational display • Results posted	family centeredness. **Metric:** Number of patient experience improvement initiatives conducted • Number of initiatives • **Data Source:** Documentation of strategy (ies) implemented. **Milestone:** Improve the overall quality of care Percent Excellent patient satisfaction score in at least one targeted clinical area **Metric:** Achieve a 15% improvement over baseline of Excellent score in patient satisfaction survey's overall quality of care question • Improve patient satisfaction

• **Data Source:** Meeting minutes and Summary report	Display **Milestone:** Develop a staff education plan to integrate the patient experience into employee orientation and training. **Metric:** Include patient experience content into new employee orientation and other trainings • Documentation of training materials • **Data Source:** Patient Experience staff education plan **Milestone:** Implement at least one organizational strategy that includes the patient in shared decision making aimed at improving patient and family centeredness. **Metric:** Number of patient experience improvement initiatives conducted	implemented. **Milestone:** Develop & implement a patient experience survey tool in the ambulatory setting **Metric:** Patient experience survey tool • Submission of survey tool • **Data Source:** Survey tool **Milestone:** Develop regular organizational display of patient experience data and provide quarterly updates to employees on the efforts the organization is undertaking to improve the experience of its patients and their families. **Metric:** Demonstrated organizational display • Results posted on	on Boards in all staff lounges. Regular Huddle Reports • **Data Source:** Display **Milestone:** Improve the overall quality of care Percent Excellent patient satisfaction score in at least one targeted clinical area **Metric:** Achieve a 10% improvement over baseline of Percent Excellent score in patient satisfaction survey's overall quality of care question • Improve patient satisfaction scores • Data Source: Patient satisfaction survey	scores • Data Source: Patient satisfaction survey **Milestone:** Demonstrate at least one external communication per year aimed at the general public's understanding of the organization's results and improvement efforts in the area of patient and family experience. **Metric:** External communication aimed at our public provides a level of awareness that NMC values the patient experience • External communication on patient experience • **Data Source:**

	• Number of initiatives • **Data Source:** Documentation of strategy (ies) implemented.	Boards in all staff lounges. Regular Huddle Reports • **Data Source:** Display **Milestone:** Integrate patient experience criteria into employee performance measures **Metric:** Include specific patient experience objectives into employee job descriptions and work plans • Defined patient experience performance measures • **Data Source:** Job descriptions and employee performance Reviews **Milestone:** Improve the		Public Report or article on the status of our improvement efforts

		overall quality of care Percent Excellent patient satisfaction score in at least one targeted clinical area **Metric:** Achieve a 5% improvement over baseline of Percent Excellent score in patient satisfaction survey's overall quality of care question • Improve patient satisfaction scores • Data Source: Patient satisfaction survey		

<u>Category 2 Project:</u> Apply Process Improvement Methodology to Improve Quality/Efficiency as Evidenced by Achievement of Milestones in Categories 3 & 4 and Achievement of Performance Goals in our Targeted Improvement Projects

Goal: The ultimate goal of NMC is to excel in providing safe, reliable, quality care to our patients. The current level of performance is not acceptable. There are gaps in knowledge and performance, patients have experienced preventable harm, patients don't always receive the care they deserve, and there is inefficiency and waste in our care processes. NMC must be able to implement change in an efficient and effective manner that results in improvement. To accomplish this goal, NMC has identified the need to adopt a new framework for performance improvement, The Model for Improvement, as promoted by the Institute for Healthcare Improvement. This model consists of 3 key questions that are fundamental to all improvement activities, followed by testing using the Plan-Do-Study-Act (PDSA-Cycle). NMC plans to implement this model with emphasis in Human Factors related to reliable design in order to improve the efficiency and safety of our care processes.

Expected Results: Improved quality of care as evidenced by achievement of milestones in DSRIP Category 4, improved patient satisfaction reflected in patient satisfaction scores, and achievement of performance goals in our targeted improvement projects.

Relation to Category 3 Population-Focused Improvement: Our performance improvement capacity is fundamental to our ability to provide safe, reliable, high quality care. Improving our capacity to improve key processes will allow us to apply this knowledge in our efforts to reduce readmissions for targeted clinical conditions such as diabetes and heart failure, our work to improve a patient's experience of care, and our work to implement evidence-based clinical practices throughout the organization.

Year 1	Year 2	Year 3	Year 4	Year 5
Milestone: Train management staff and physician leaders in the Model for Improvement methodology Metric: Number of management staff and	Milestone: Train process improvement advisors/champions Metric: Number of trained process improvement advisors/champions	Milestone: Train process improvement advisors/champions Metric: Number of trained process improvement advisors/champions	Milestone: Convene training events conducted by designated process improvement trainers Metric: Number of training events	Milestone: Convene training events conducted by designated process improvement trainers Metric: Number of training events

physician leaders trained • Number of management staff and physician leaders trained • Data Source: HR training records and course curriculum Milestone: Convene training events conducted by designated process improvement trainers Metric: Number of training events conducted by designated process improvement trainers • Number of process improvement training events • Data Source: HR	• Number of trained process improvement advisors/ champions over baseline in Year 1 • Data Source: HR training records and course curriculum Milestone: Convene training events conducted by designated process improvement trainers Metric: Number of training events conducted by designated process improvement trainers • Number of process improvement training events • Data Source: HR training records and course	• Number of trained process improvement advisors/ champions over Year 2 • Data Source: HR training records and course curriculum Milestone: Convene training events conducted by designated process improvement trainers Metric: Number of training events conducted by designated process improvement trainers • Number of process improvement training events • Data Source: HR training records and course	conducted by designated process improvement trainers • Number of process improvement training events • Data Source: HR training records and course curriculum Milestone: Target 1 specific inpatient and 1 specific ambulatory workflow, process or clinical area to improve utilizing the Model for Improvement framework Metric: Final/summary report of project with a clear aim statement, key metrics, PDSA cycle documentation, implementation and spread plans, and current performance compared	conducted by designated process improvement trainers • Number of process improvement training events • Data Source: HR training records and course curriculum Milestone: Target 1 specific inpatient and 1 specific ambulatory workflow, process or clinical area to improve utilizing the Model for Improvement framework Metric: Final/summary report of project with a clear aim statement, key metrics, PDSA cycle documentation, implementation and spread plans, and current performance compared

training records and course curriculum	curriculum Milestone: Target 1 specific workflows, processes or clinical areas to improve utilizing the Model for Improvement framework Metric: Final/summary report of project with a clear aim statement, key metrics, PDSA cycle documentation, implementation, and spread plans and current performance compared to target/goal • Submission of report • Data Source: All data sources used for process improvement event	curriculum Milestone: Target 1 specific workflow, process or clinical area to improve utilizing the Model for Improvement framework Metric: Final/summary report of project with a clear aim statement, key metrics, PDSA cycle documentation, implementation and spread plans, and current performance compared to target/goal • Submission of report • Data Source: All data sources used for process improvement event	to target/goal • Submission of report • Data Source: All data sources used for process improvement event	to target/goal • Submission of report • Data Source: All data sources used for process improvement event

<u>Category 4 Intervention #1:</u> Improve Severe Sepsis Detection and Management

Key Challenge: Reducing harm or death to patients seeking care due to sepsis

Sepsis can harm and kill patients if not treated quickly and increases ICU length of stay and its associated costs. While and after receiving hospital services, challenges remain regarding the provision of safe, high-quality health care. Furthermore, it is critical to avoid causing harm or death to patients seeking care. Currently, approximately a quarter of patients with severe sepsis or septic shock die in public hospitals. NMC has not implemented the Sepsis Management Bundle/Resuscitation bundle or collected data related to sepsis. It will be necessary for NMC to establish a baseline for process or outcome measures. Implementation of the Severe Sepsis/Resuscitation Bundle has been an area of concern for our organization. Currently physicians in the Emergency Department and the ICU have initiated work on developing a coordinated protocol for patients with severe sepsis who present to NMC.

Major Delivery System Solution: Reduce avoidable harm or deaths due to severe sepsis to patients receiving inpatient services

In support of NMC's commitment to continuous quality improvement so that patients receive the safest and highest quality health care possible, NMC proposes to make improvements in care provided to patients. NMC proposes to improve severe sepsis detection and management to reduce unnecessary death and harm attributable to sepsis. NMC's interventions and improved processes are based upon the IHI recommended Surviving Sepsis Campaign to establish reliable detection and treatment for severe sepsis. This includes implementing both the Sepsis Management and Resuscitation Bundle. NMC intends to establish a multidisciplinary performance improvement team to develop a sepsis management and resuscitation protocol following the IHI guidelines that will provide a standardized approach to the management of sepsis patients and a smooth transition from Emergency Department to ICU care. NMC plans to utilize IHI's Model for Improvement methodology to make the processes for delivering all bundle elements more reliable. Additional resources are needed for staff education, monitoring of sepsis patients concurrently, and data collection and analysis. NMC will join a collaborative related to sepsis for assistance and guidance in this process.

Improve Severe Sepsis Detection and Management				
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Milestone: Establish baseline data for Sepsis Mortality **Milestone:** Form a multidisciplinary Performance Improvement Team to coordinate and oversee the implementation of the Sepsis Resuscitation Bundle	**Milestone:** Implement the Sepsis Resuscitation Bundle, as evidenced by: • Implementation of a measurement/data management system • Establishment of baseline data for Sepsis Bundle Process Measures • Participate in a collaborative to learn and share best practices related to improving severe sepsis and septic shock detection and management **Milestone**: Report at least 6 months of data collection on Sepsis Resuscitation Bundle to SNI for purposes of establishing the baseline and setting benchmarks **Milestone:** Report the Sepsis	**Milestone:** Achieve X% compliance with Sepsis Resuscitation Bundle, where "X" will be determined in Year 2 based on baseline data **Milestone:** Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals **Milestone:** Report Sepsis Resuscitation Bundle and Sepsis Mortality results to the State	**Milestone:** Achieve X% compliance with Sepsis Resuscitation Bundle, where "X" will be determined in Year 2 based on baseline data **Milestone:** Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals **Milestone:** Report results to the State	**Milestone:** Achieve X% compliance with Sepsis Resuscitation Bundle, where "X" will be determined in Year 2 based on baseline data **Milestone:** Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals **Milestone:** Report results to the State

Improve Severe Sepsis Detection and Management				
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
	Resuscitation Bundle results to the State			

<u>Category 4 Intervention #2:</u> Central Line-Associated Bloodstream Infection Prevention

Key Challenge: Preventing central line-associated bloodstream infections

The use of central venous catheters (CVC) in the inpatient and outpatient setting to provide long-term venous access is increasing. The presence of a CVC disrupts the skin integrity, making a bacterial or fungal infection possible. An infection associated with a CVC may spread to the bloodstream causing hemodynamic changes and organ dysfunction (severe sepsis) and may lead to death. Approximately 90 percent of all catheter-related bloodstream infections are associated with CVCs. Nearly 50 percent of all ICU patients in the United States have CVCs, which puts them at risk for an infection. Central line-associated bloodstream infections prolong hospitalization by a mean of 7 days and the attributable cost per bloodstream infection is between $3,700 and $29,000. NMC logged 649 adult and NICU central venous catheter days in FY 2009-2010.

Major Delivery System Solution: Prevent central line-associated bloodstream infections

In support of NMC's commitment to continuous quality improvement so that patients receive the safest and highest quality health care possible, NMC proposes to make improvements in the management of our patients with central lines. NMC will prevent catheter-related bloodstream infections by improving our performance of the five components of care in the IHI Central Line Bundle as outlined in IHI's Improvement Map. Although NMC has initiated the implementation of the components of the Central Line Bundle, the level of reliability for performing all bundle elements is less than 10^{-2}. NMC plans to utilize IHI's Model for Improvement methodology to make the processes for delivering all bundle elements more reliable. An area of focus will be empowering nursing to stop insertion if element(s) of the bundle are not being executed. In addition to the Central Line Bundle, which focuses on the insertion phase, we will implement interventions recommended by the Society for Healthcare Epidemiology of America (SHEA) compendium that target the care and maintenance phase.

Central Line-Associated Bloodstream Infection (CLABSI) Infection Prevention				
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Milestone: Establish baseline data for Central	**Milestone**: Implement the Central Line Insertion	**Milestone:** Achieve X% compliance with CLIP,	**Milestone:** Achieve X% compliance with CLIP,	**Milestone:** Achieve X% compliance with CLIP,

Central Line-Associated Bloodstream Infection (CLABSI) Infection Prevention				
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Line Bundle Practices **Milestone:** Form a multidisciplinary Performance Improvement Team to coordinate and oversee the implementation of the Central Line Bundle practices	Practices (CLIP), as evidenced by: • Implementation of a Central Line Cart for supplies • Implementation of Multi-disciplinary Rounds in the ICU. • Performance Improvement Team meeting regularly • Participation in a collaborative • Implementation of the SHEA Compendium practices **Milestone:** Report at least 6 months of data collection on CLIP to SNI for purposes of establishing the baseline and setting benchmarks **Milestone:** Report at least 6 months of data collection on CLABSI to SNI for purposes of establishing the baseline and	where "X" will be determined in Year 2 based on baseline data **Milestone:** Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals **Milestone**: Report CLIP and CLABSI results to the State	where "X" will be determined in Year 2 based on baseline data **Milestone:** Reduce Central Line Bloodstream Infections by X%, where "X" will be determined in Year 2 based on baseline data **Milestone:** Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals **Milestone:** Report CLIP and CLABSI results to the State	where "X" will be determined in Year 2 based on baseline data **Milestone:** Reduce Central Line Bloodstream Infections by X%, where "X" will be determined in Year 2 based on baseline data **Milestone:** Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals **Milestone:** Report CLIP and CLABSI results to the State

Central Line-Associated Bloodstream Infection (CLABSI) Infection Prevention				
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
	setting benchmarks **Milestone:** Report CLIP results to the State			

<u>Category 4 Intervention #3:</u> Hospital-Acquired Pressure Ulcer Prevention

Key Challenge: Preventing pressure ulcers

Pressure ulcer prevalence in health care facilities is increasing and in most cases preventable. Pressure ulcer incidence rates in the acute care setting range from 0.4% to 38% and prevalence rates are estimated to be about 15%. As many as 2.5 million patients are treated for pressure ulcers in the United States acute care facilities each year. Pressure ulcers cause a great deal of pain and put patients at risk for developing serious infections. They are associated with an extended length of stay, sepsis and mortality. The cost of managing a pressure ulcer is estimated to be as high as $70,000. In the United States, the cost of treating pressure ulcers is estimated to be $11 billion per year. Natividad Medical Center has a pressure ulcer prevalence rate above the state average.

Major Delivery System Solution: Prevent pressure ulcers

In support of NMC's commitment to continuous quality improvement, so that patients receive the safest and highest quality health care possible, NMC proposes to make improvements in the management of our patients in order to prevent pressure ulcers. NMC will prevent pressure ulcers by establishing and implementing standard processes of care as outlined in IHI's Improvement Map. Although NMC has initiated the implementation of the standard processes, the level of reliability for performing them is less than 10^{-2}. NMC plans to utilize IHI's Model for Improvement methodology to make the processes for delivering all care elements more reliable. Nursing education, standardized documentation tools, and daily skin assessment will be key areas of focus.

Hospital-Acquired Pressure Ulcer Prevention				
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Milestone: Form a multidisciplinary Performance Improvement Team to coordinate and oversee the implementation of the Pressure Ulcer Prevention strategies	**Milestone:** Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals **Milestone:** Report hospital-	**Milestone:** Achieve hospital-acquired pressure ulcer prevalence of less than 2.5 % **Milestone:** Share data, promising practices, and findings with SNI to foster	**Milestone:** Achieve hospital-acquired pressure ulcer prevalence of less than 1.5 % **Milestone:** Share data, promising practices, and findings with SNI to foster	**Milestone:** Achieve hospital-acquired pressure ulcer prevalence of less than 1.1% **Milestone:** Share data, promising practices, and findings with SNI to foster

Hospital-Acquired Pressure Ulcer Prevention				
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Milestone: Train Nurse to champion Pressure Ulcer Prevention work	acquired pressure ulcer prevalence results to the State	shared learning and benchmarking across the California public hospitals **Milestone:** Report hospital-acquired pressure ulcer prevalence results to the State	shared learning and benchmarking across the California public hospitals **Milestone:** Report hospital-acquired pressure ulcer prevalence results to the State	shared learning and benchmarking across the California public hospitals **Milestone:** Report hospital-acquired pressure ulcer prevalence results to the State

<u>Category 4 Intervention #4:</u> Improve Venous Thromboembolus (VTE) Prevention & Treatment

Key Challenge: Reducing harm or death to patients by assessing all hospitalized patients for VTE risk on admission in order to start needed prophylaxis

Venous thromboembolism (VTE), which includes deep vein thrombosis (DVT) and pulmonary embolism (PE), is an important cause of avoidable morbidity and mortality in hospitalized patients, yet routine prophylaxis for at-risk patients is underutilized. For hospitalized patients dying of a PE, a diagnosis of PE has not been considered in 70-80% of patients prior to death. Hospitalized patients are at greater risk of VTE due to surgery, prolonged immobilization, use of certain medications, and presence of other conditions such as obesity, congestive heart failure, and cancer. Additionally, the treatment of non-fatal symptomatic VTE and long-term associated morbidities are connected to considerable health care costs. Assessing risk and initiating prophylaxis have the potential to save lives, reduce harm, and reduce the cost of care. NMC has not implemented an admission risk assessment for VTE of all hospitalized patients. It will be necessary for NMC to establish a baseline for process or outcome measures. Implementation of an admission risk assessment has been an area of concern for our organization. Currently physicians in the ICU and Medical/Surgical Units have initiated work on developing a coordinated protocol for a VTE risk assessment of all patients admitted to Natividad Medical Center. NMC admits over 7800 patients annually and therefore is likely causing preventable harm to patients given the national statistics, though we do not currently measure VTE harm.

Major Delivery System Solution: Reduce avoidable harm or deaths due to a venous thromboembolus in patients receiving inpatient services

In support of NMC's commitment to continuous quality improvement so that patients receive the safest and highest quality health care possible, NMC proposes to make improvements in care provided to patients. NMC proposes to reduce avoidable harm or deaths due to a venous thromboembolus in patients receiving inpatient services. NMC's interventions and improved processes will be based upon the IHI recommendations and ACCP guidelines to establish a reliable process for risk assessment, prevention and treatment for this complication of hospital care. NMC intends to establish a multidisciplinary performance improvement team to develop a standardized approach to VTE risk assessment, prevention and treatment. NMC plans to utilize IHI's Model for Improvement methodology to make the processes related to VTE risk assessment, prevention and treatment more reliable. Additional resources are needed for staff education, monitoring of patients concurrently, and data collection and analysis.

Intervention #4: Venous Thromboembolism (VTE) Prevention and Treatment

Venous Thromboembolism (VTE) Prevention and Treatment				
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
Milestone: Form a multidisciplinary Performance Improvement Team to coordinate and oversee the implementation of the Venous Thromboembolism (VTE) Prevention and Treatment strategies **Milestone:** Establish baseline for VTE mortality	**Milestone:** Put in place measurement/data management systems **Milestone:** Establish baseline for VTE risk assessment process measures **Milestone:** Report at least 6 months of data collection on the VTE process measures to SNI for purposes of establishing the baseline and setting benchmarks **Milestone:** Report the 5 VTE process measures data to the State	**Milestone:** 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 Year 2 based on baseline data **Milestone:** 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 Year 2 based on baseline data	**Milestone:** 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 Year 2 based on baseline data **Milestone:** 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 Year 2 based on baseline data	**Milestone:** 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 Year 2 based on baseline data **Milestone:** 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 Year 2 based on baseline data

Venous Thromboembolism (VTE) Prevention and Treatment				
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
		Milestone: 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 Year 2 based on baseline data **Milestone:** 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 Year 2 based on baseline data **Milestone:** Increase the rate of patients diagnosed with confirmed VTE that are discharged to home, home care, court/law enforcement	**Milestone:** 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 Year 2 based on baseline data. **Milestone:** 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 Year 2 based on baseline data. **Milestone:** Increase the rate of patients diagnosed with confirmed VTE that are discharged to home, home care, court/law enforcement	**Milestone:** 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 Year 2 based on baseline data. **Milestone:** 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 Year 2 based on baseline data. **Milestone:** Increase the rate of patients diagnosed with confirmed VTE that are discharged to home, home care, court/law enforcement

Venous Thromboembolism (VTE) Prevention and Treatment				
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**
		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 Year 2 based on baseline data **Milestone:** Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals **Milestone:** Report the 5 VTE process measures results to the State	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 Year 2 based on baseline data. **Milestone:** Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals **Milestone:** Report the 5 VTE process measures and incidence of potentially-preventable VTE data to the State	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 Year 2 based on baseline data **Milestone:** Share data, promising practices, and findings with SNI to foster shared learning and benchmarking across the California public hospitals **Milestone:** Report the 5 VTE process measures and incidence of potentially-preventable VTE data to the State