

Quality and Productivity Commission
30th Annual Productivity and Quality Awards Program
“Heritage of Excellence”

2016 APPLICATION

Title of Project (Limited to 50 characters, including spaces, using Arial 12 point font):

NAME OF PROJECT: LAC+USC Emergency Department Lean Project

DATE OF IMPLEMENTATION/ADOPTION: OCTOBER 1, 2014
 (Must have been implemented at least one year - on or before July 1, 2015)

PROJECT STATUS: Ongoing One-time only

HAS YOUR DEPARTMENT PREVIOUSLY SUBMITTED THIS PROJECT? Yes No

EXECUTIVE SUMMARY: Describe the project in 15 lines or less using Arial 12 point font. State clearly and concisely what difference the project has made.

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An interdisciplinary team of physicians, nurses, advanced practice providers, medical students, and financial service workers voluntarily met twice monthly and used innovative ideas derived from Lean methodology to reduce the emergency department length of stay at LAC+USC Medical Center. Prolonged length of stay poses a major patient safety risk. It previously took several hours before patients got to see a definitive provider often with worsening of their clinical condition during this time. We created several initiatives to reduce this time and reduce the number of patients who left without being seen by a provider at all. We did this with no additional cost or staffing in our limited resource safety-net hospital, thus increasing access to care for many under-represented minority patients we serve daily. We also empowered our staff to get involved and created a culture of improving the patient experience and watching out for ways to be more efficient on each shift.

BENEFITS TO THE COUNTY

(1) ACTUAL/ESTIMATED ANNUAL COST AVOIDANCE	(2) ACTUAL/ESTIMATED ANNUAL COST SAVINGS	(3) ACTUAL/ESTIMATED ANNUAL REVENUE	(1) + (2) + (3) = TOTAL ANNUAL ACTUAL/ESTIMATED BENEFIT	SERVICE ENHANCEMENT PROJECT
\$	\$	\$	\$	X

ANNUAL = 12 MONTHS ONLY

SUBMITTING DEPARTMENT NAME AND COMPLETE ADDRESS LAC+USC Medical Center, Department of Quality, Safety, and Risk		TELEPHONE NUMBER 323-409-2815
PROGRAM MANAGER'S NAME Eric Wei, M.D.		TELEPHONE NUMBER 323-409-6535 EMAIL ewe@dhslacounty.gov
PRODUCTIVITY MANAGER'S NAME AND SIGNATURE (PLEASE CALL (213) 893-0322 IF YOU DO NOT KNOW YOUR PRODUCTIVITY MANAGER'S NAME) Gerardo Pinedo SIGNATURE ON FILE	DATE 7/5/2016	TELEPHONE NUMBER 213-240-8104 EMAIL gpinedo@dhslacounty.gov
DEPARTMENT HEAD'S NAME AND SIGNATURE Mitchell H. Katz, M.D. SIGNATURE ON FILE	DATE 7/5/2016	TELEPHONE NUMBER 213-240-8101

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1st FACT SHEET – LIMITED TO 3 PAGES ONLY: Describe the **Challenge, Solution, and Benefits** of the project. State clearly and concisely what difference the project has made. Use Arial 12 point font

Challenge:

The emergency department (ED) at LAC+USC Medical Center sees over 150,000 patients per year and is constantly faced with issues of overcrowding and long wait times. One of the four 2015 Quality Improvement goals for LAC+USC Medical Center was to improve patient flow through the Emergency Department and hospital. This project is the cornerstone to that goal as ED length of stay (LOS) for admitted patients was 11:30 hours and ED LOS for discharged patients was 8:30 hours in the calendar year of 2014. These are well above the community ED benchmark of 4 and 2 hours for admitted and discharged patients, respectively. They are also above the Accreditation Council for Graduate Medical Education (ACGME) benchmarks for academic ED's of 8 and 4 hours for admitted and discharged patients, respectively. One in six patients left the ED through a non-traditional disposition (left without being seen, left before treatment complete, and against medical advice). The long wait times, overcrowding, and patients leaving without finishing their ED visit are large patient satisfaction, patient safety, quality, and financial issues for LAC+USC Medical Center. The data is also publicly reported, which drives reimbursement, patient choices, and thus puts our hospital at risk of losing important government funding. The problem was a historically broken ED patient flow process, particularly for our sickest patients. Long wait times meant that workups were delayed, patients requiring monitoring were off monitors in the waiting room, and overcrowding led to overburden of workers causing increased chance of medical errors.

Solution:

A team of physicians, nurses, patient financial services, advanced practice providers, and medical students who work in the ED voluntarily met twice per month to identify the barriers our patients face in getting to their provider. We called this group the “Lean team” and used lean methodology such as value stream mapping, patient walk through (gemba walks), spaghetti diagrams, and Plan-Do-Study-Act (PDSA) cycles to identify and fix our waste. After walking through the ED like a patient does, we recognized several redundancies in our registration process as well as prolonged discharge times, underutilization of resources, and understaffed areas of our department. While we couldn't change the staffing issues for budgetary reasons, we came up with innovative ways to see patients quickly using the resources we already had.

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Specifically we removed beds in certain areas of the ED and replaced them with chairs so we had more treatment spaces to see patients in (vertical patients) without increasing our actual space. We triaged the patients together as a team rather than in piecemeal. This allowed for the undifferentiated sickest patients to be brought back quickly into a bed while the patients who had already been seen and treated by a provider were placed into chairs awaiting their final result or consultation. We were also able to see more patients in chairs when the ED beds were oversaturated with patients waiting for a bed in the psych ED or inpatient facility.

We feel our solutions were quite innovative as Lean principals are still very new in healthcare. In addition, as far as we know there is no such interdisciplinary team that meets voluntarily twice per month at other Los Angeles county hospitals to tackle emergency department throughput issues.

Benefits:

In 9 months since the project changes were implemented in the department, we have reduced the number of patients who left before being seen by a provider by 4%. The total ED length of stay for a patient went from around 724 minutes (12 hours), down to 376 minutes (6 hours). We reduced the time a patient spent waiting to see their provider from 273 minutes to 69 minutes. In addition, we reduced the number of patients who left before their workup was done or against medical advice by 9.7%. This was all done while handling a patient volume that increased by 5% over the same time period. We have thus increased access to medical care for many underrepresented patients and our hospital is able to remain the safety net for our often health-deprived population.

We also empowered the front line staff to come up with their own innovations to improve patient satisfaction, safety, and throughput. This project is ongoing and continues to have improved results. The project ideas and results have been shared with affiliate hospitals (Harbor-UCLA, Olive View, Martin Luther King) through the LA County Department of Health Services (DHS) Quality Committees. There are plans to incorporate the concepts of vertical patients and split flow through all DHS Emergency Departments.

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LINKAGE TO THE COUNTY STRATEGIC PLAN (DETAIL IS REQUIRED FOR COUNTY DEPARTMENTS): Use Arial 12 point font

This program aligns with the Los Angeles County Strategic Plan Goal 1: Operational Effectiveness/Fiscal Sustainability: Maximize the effectiveness of processes, structure, operations, and strong fiscal management to support timely delivery of customer-oriented and efficient public services; and Strategic Initiative 1: Sound Fiscal Management/Capital Investments-Strengthening County's capacity to sustain essential services through proactive and prudent fiscal policies and stewardship while investing in the future by studying, prioritizing, and pursuing the highest need capital projects.

The Lean ED program exemplifies the County's strategic goals and initiatives. Without using any additional resources, the Lean ED team redesigned the care delivery processes provided to the ED patients through the use of Lean concepts, eliminating waste and maximizing efficiency. The 50% reduction in length of stay improves patient outcomes, liberates precious ED space for additional patients, and resulted in the ability to handle 5% more patients without adding any additional staffing resource. In addition, the team building necessary to achieve these goals included cross functional departments (ED Physicians, Nurses, registration staff, housekeeping) working together to achieve the overall goal of improving throughput. Although we cannot identify specific cost savings associated with this project the improved efficiency and ability to see patients quickly upon arrival to the Emergency Department is priceless.

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COST AVOIDANCE, COST SAVINGS, AND REVENUE GENERATED (ESTIMATED BENEFITS TO THE COUNTY): If you are claiming cost benefits, include a calculation on this page. You must include an explanation of the County cost savings, cost avoidance or new revenue that matches the numbers in the box. Remember to keep your supporting documentation. Use Arial 12 point font

Cost Avoidance: Costs that are eliminated or not incurred as a result of program outcomes.

Cost Savings: A reduction or lessening of expenditures as a result of program outcomes.

Revenue: Increases in existing revenue streams or new revenue sources to the County as a result of program outcomes.

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