

Quality and Productivity Commission
33rd Annual Productivity and Quality Awards Program
“Empowering Innovative Solutions”

2019 APPLICATION

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

NAME OF PROJECT: RX 4 SUCCESS: Pharmacy & Hospital Team Integration

DATE OF IMPLEMENTATION/ADOPTION: MAY 29, 2018

(Must have been fully implemented for a minimum of at least one year - on or before July 1, 2018)

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.

1 LAC+USC Medical Center developed an innovative model, **Pharmacy + Hospital**
 2 **Team Integration (PHTI)**, to provide comprehensive, targeted, and patient-centered
 3 transitional care for hospitalized patients. The model reconfigures patients’ hospital
 4 teams into highly functional, multidisciplinary units that leverage a clinical pharmacist
 5 and supervised pharmacy students through every step of the patients’ hospital stays to
 6 optimize care. Notably, this program was developed using only existing resources: no
 7 additional financial investment was required. A comparison of 30-day readmission rates
 8 between patients receiving PHTI team care or standard care indicated a significant
 9 reduction in readmission rates for those receiving PHTI care (p<.01). These data
 10 suggest that LAC+USC PHTI will help the Department of Health Services (DHS) earn
 11 \$5.6 million dollars of state funding attached to pay-for-performance on the Public
 12 Hospital Redesign and Incentives in Medi-Cal (PRIME) 30-Day Hospital Readmission
 13 metrics, for the 2018-2019 Demonstration Year 14 (DY14). This model significantly
 14 improved care for our most vulnerable patients, and it has also forged a path towards a
 15 reimagined workforce of the future.

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
\$ 0	\$ 0	\$ 5.6 Million	\$ 5.6 MILLION	<input type="checkbox"/>

ANNUAL = 12 MONTHS ONLY

SUBMITTING DEPARTMENT NAME AND COMPLETE ADDRESS
 LAC+USC Medical Center (Department of Health Services)
 Hospital Administration; Inpatient Tower, Room C2K113
 Los Angeles CA, 90033

TELEPHONE NUMBER
 323-409-1000

PROGRAM MANAGER’S NAME
 Josh Banerjee MD MPH MS; Kathy Ngo Pharm D; Steven Dohi Pharm D.;
 Doug Hutcheon MD; Soodtida Tangraphaphorn MPH; Catherine Canamar
 PhD;
 Beatrisa Bannister Pharm D; Chase Coffey MD; Brad Spellberg MD

TELEPHONE NUMBER
 323-409-6348

EMAIL
 jbanerjee@dhs.lacounty.gov

PRODUCTIVITY MANAGER’S NAME AND SIGNATURE
 (PLEASE CALL (213) 893-0322 IF YOU DO NOT KNOW YOUR PRODUCTIVITY MANAGER’S NAME)

DATE
 6/27/2019

TELEPHONE NUMBER
 323-409-2815

Connie Salgado-Sanchez



EMAIL
 cosanchez@dhs.lacounty.gov

DEPARTMENT HEAD’S NAME AND SIGNATURE

DATE
 6/27/19

TELEPHONE NUMBER
 213-288-8050

Dr. Christina Ghaly



Quality and Productivity Commission
33rd Annual Productivity and Quality Awards Program
“Empowering Innovative Solutions”

2019 APPLICATION

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

NAME OF PROJECT: RX 4 SUCCESS: Pharmacy & Hospital Team Integration

1st FACT SHEET – LIMITED UP TO 3 PAGES ONLY: Describe the **challenge(s), solution(s), and benefit(s)** of the project to the County. What quality and/or productivity-related outcome(s) has the project achieved? Provide measures of success and specify assessment time frame. Use Arial 12 point font.

Hospitalizations are precarious times in patients’ lives, and some of the most critical moments are those transitions between care settings, including entry and exit from the hospital. Accordingly, a hospital’s 30-day readmission rate is a nationally recognized measure of quality (Centers for Medicare & Medicaid Services, 2017), in addition to a major driver of healthcare cost. Close to one in five hospitalized Medicare patients are readmitted within 30 days of discharge, at an annual cost of \$26 billion (Centers for Medicare & Medicaid Services, 2018).

Safety-net hospitals are more likely than non-safety net to have 30-day readmission rates higher than the national average (Berensen and Shih, 2012). And yet performance on 30-day readmissions remains a key determinant of funding for these hospitals (California Department of Healthcare services, 2015). For DHS, specifically, \$5.6 million of funding are attached to whether the system meets its 30-day readmission target for DY14, the reporting year ending June 2019. Regrettably, DHS did not meet its target for DY13, the previous year, so the challenge is to identify programs effective in reducing 30-day readmissions.

Fortunately, PHTI appears to be an economically viable solution. The program works by integrating a pharmacist and supervised pharmacy students within the hospital medicine service team. In this model, patients receive pharmacy expertise (in addition to that of traditional team members), throughout their hospitalizations. Specific interventions include: participation in daily rounds, where medication safety and efficacy are reviewed as a multi-disciplinary team; performance of patient medication admission histories; formulary and authorization review for all orders; and ongoing patient education.

Doctors and nurses are skilled in obtaining medication histories, order management, and patient medication education. But pharmacists are the experts, knowing best how to verify medication orders and dispensing with outside pharmacies. They know best how to navigate difficult insurance, formulary, and prior-authorization challenges. They are the most adept at educating patients on medication risks, benefits, and dosing instructions. With respect to the latter, with PHTI pharmacy performs bedside consultation and telephones the patient, up to four attempts, once the patient leaves the hospital.

Quality and Productivity Commission
33rd Annual Productivity and Quality Awards Program
“Empowering Innovative Solutions”

2019 APPLICATION

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

NAME OF PROJECT: RX 4 SUCCESS: Pharmacy & Hospital Team Integration

Use Arial 12 point font.

The PHTI program was initiated with one hospital medicine team at the end of May 2018, and it was expanded to 3 of the hospital medicine service teams in September 2018. The remaining 8 non-PHTI teams were otherwise equivalent to, or appropriate controls for, the PHTI teams. Data were collected during the intervention period from 9/4/2018 through 11/8/2018. Analysis of the differences in PRIME readmission rate between PHTI and non-PHTI teams are described in the table below.

	PRIME Readmission Cases	PRIME Index Admissions	PRIME Readmission Rate
Control Teams	74	389	0.19
PHTI Intervention Teams	11	121	0.09

Pearson Chi-Square test p-value = 0.01

Comparison of 30-day readmission rates between PRIME patients receiving PHTI team care or standard care indicated a significant reduction in readmission rates for those receiving PHTI care ($p < .01$). These results are clinically and statistically significant. To emphasize the importance of these findings, we discuss them in the context of the impact on PRIME patients, those especially vulnerable patients for whom DHS is responsible and whose health influences millions of dollars in funding.

- In DY13, the DHS-wide PRIME 30-day readmission goal was 12.9%, but we exceeded the target and concluded the year at 13.5%.
- For a system that sees tens of thousands of admissions annually, the margin was even more heart-wrenching in terms of absolute admissions: DHS missed DY13 goal by less than 60 PRIME readmission cases over twelve months.
- During our implementation and evaluation period, the PHTI appears to have prevented 12 PRIME readmission cases in two months.
- Whereas the rolling DHS 30-day readmission rate had been increasing since the end of DY13, after the PHTI was spread to three teams, the DHS rolling rate has declined to 13.44%, just shy of the DY14 target of 13.37%.
- It is therefore plausible, not only did PHTI continue to this downtrend, but by the end of DY14 PHTI may well have helped DHS reach its goal, earning the DHS system \$5.6 million.

Quality and Productivity Commission
33rd Annual Productivity and Quality Awards Program
“Empowering Innovative Solutions”

2019 APPLICATION

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

NAME OF PROJECT: RX 4 SUCCESS: Pharmacy & Hospital Team Integration

Linkage to the County Strategic Plan – 1 page only. Which County Strategic Plan goal(s) does this project address? Explain how. Use Arial 12 point font.

The PHTI program aligns with the following strategic goals:

Strategy I.2 “Enhance Our Delivery of Comprehensive Interventions.” Patients admitted to LAC+USC Medical Center are among the sickest and most vulnerable in the County of Los Angeles. Beyond the acute problems that lead to their hospitalizations, these patients experience a higher burden of chronic disease and social determinants of health than the general population. This is especially true for those hospitalized patients for whom DHS provides primary care after discharge as part of its integrated system. PHTI is comprehensive: it is designed to touch every patient cared for by medicine service teams; it is informed by all care team members; and most importantly, it considers the whole patient at all times. The PHTI program is also targeted: the particular focus is the management of medications that critically determines safety and quality in patient transitions to, throughout, and from the hospital.

Strategy II.1.3 “Coordinate workforce development.” Pharmacy schools have partnered with academic medical centers for decades, but the novel LAC+USC PHTI program is uniquely aligned with one of the County’s high-growth industry sectors. The County is actively considering investments in supportive housing, recuperative care, mental health facilities, and California Department of Health Services (DHCS) Health Homes: the work of shepherding patients across these settings requires clinical expertise in care transitions. The PHTI program is positioned to provide a pipeline of workers—provide pharmacists trained extensively in transitional management—to meet this anticipated demand.

Strategy III.1 “Continually Pursue Development of Our Workforce.” The PHTI helps the County attract and retain a talented workforce, one that is committed to public service and to its residents, in two ways. First, the PHTI provides a highly effective and rewarding training experience (see Strategy III.1.1). Second, the PHTI partners only with schools in Los Angeles County, in the hopes of drawing a maximum number of students who are from, and want to remain, within the County of Los Angeles. The PHTI program is so popular with students and their schools, the program receives more requests for student participation than it can currently accommodate.

Strategy III.1.1: “Develop Staff Through High Quality Multi-Disciplinary Approaches to Training.” The PHTI integrates pharmacists and their supervised students into a highly effective multidisciplinary team that also includes nurses, resident and attending physicians, care coordinators, and social workers. It was created with critical input from these professionals, and more, from across the care continuum (emergency department, hospital, and clinic). Since its creation, it has only strengthened institutional bonds with academic partners in medicine and pharmacy.

Quality and Productivity Commission
33rd Annual Productivity and Quality Awards Program
“Empowering Innovative Solutions”

2019 APPLICATION

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

NAME OF PROJECT: RX 4 SUCCESS: Pharmacy & Hospital Team Integration

COST AVOIDANCE, COST SAVINGS, AND REVENUE GENERATED (ESTIMATED BENEFITS TO THE COUNTY): If you are claiming cost benefits, include a calculation on this page. Please indicate whether these benefits apply in total or on a per unit basis, e.g., per capita, per transaction, per case, etc. 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. Please indicate whether these are costs to the County or to other entities.

Cost Savings: A reduction or lessening of expenditures as a result of program outcomes. Please indicate whether these were expenditures by the County or by other entities.

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

(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
\$	\$	\$ 5.6 Million	\$ 5.6 Million	<input type="checkbox"/>

ANNUAL= 12 MONTHS ONLY

PHTI program is on track to earn DHS \$5.6 million in DY14, with \$0 new costs to system.

PHTI did not generate any new costs to system.

- PHTI pharmacist was already on staff, already supervising pharmacy students.
- Instead of reviewing transitional medication management and communicating with teams remotely, PHTI simply reconfigured workflow by integrating pharmacist and students as part of hospital teams.

PHTI should help DHS earn \$5.6 million attached to PRIME funding.

- \$6M of PRIME-waiver state funding were attached to the DY13 30-day readmission target, which DHS failed to reach.
 - The DY13 target for DHS was 12.9%, but DHS landed at 13.5%.
 - The margin in terms of absolute cases was razor thin: DHS missed its target by just 60 PRIME patient cases over the 12 reporting months, or on average 5 patient cases per month.
- \$5.6M of PRIME-waiver state funding are at stake this year, ending June 2019.
 - The DY 14 target for DHS is 13.37%.
 - The rolling DHS DY14 30-d readmission rate goal had been trending up through fall 2019.
 - However, once PHTI was implemented across 3 LAC+USC hospital teams, the DHS DY14 30-d readmission rate trended down—it is now at 13.44% per the most recent data, which are through February 2019.

Quality and Productivity Commission
33rd Annual Productivity and Quality Awards Program
“Empowering Innovative Solutions”

2019 APPLICATION

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

NAME OF PROJECT: RX 4 SUCCESS: Pharmacy & Hospital Team Integration

- In the 2 evaluation months, PHTI prevented 12 PRIME 30-day readmissions, or on average 6 patient cases per month.
- While DY14 rolling 30-d readmission rate for had been trending up through fall 2018, after PHTI was spread to 3 teams at LAC+USC, the DHS-rate began to trend down: through February 2019 the rolling rate is 13.44%, just shy of the 13.37% target, with 4 more months of PHTI impact left before the end of the reporting year.
- No other intervention across DHS, to date, has demonstrated ability to reduce 30-day readmission rate in PRIME patients.