

**Quality and Productivity Commission**  
**34<sup>th</sup> Annual Productivity and Quality Awards Program**  
**“Leading with Excellence”**

**2021 APPLICATION**

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

**NAME OF PROJECT: SAFER AT HOME OXYGEN PROGRAM**

**DATE OF IMPLEMENTATION/ADOPTION: APRIL 3<sup>RD</sup> 2020**

(Must have been fully implemented for a minimum of at least one year - on or before July 1, 2020)

CHECK HERE IF THIS PROJECT IS BEING SUBMITTED FOR THE COVID-19 IMPACT AWARD ONLY. (Projects must be implemented on or before December 31, 2020. **Note:** Projects implemented less than one year ago will not be eligible for any other PQA awards. In addition, once a project is submitted, you cannot submit the same project for awards consideration in subsequent years).

**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. The Covid pandemic threatened hospitals’ capacity to deliver acute care services to patients who need them, and it made delivery of acute care services more isolating for patients. In early recognition of this threat, LAC+USC developed the Safer at Home Oxygen Program, which earned recognition as an expected practice for all DHS hospitals. Supportive care for Covid pneumonia can require oxygen support, and at most places patients stay in the hospital to receive this care. But with the LAC+USC program, patients receive low level oxygen support at home, under the care of a phone support team of nurses and doctors. This team ensures patients’ safety by calling them within 12-18 hours of leaving the medical center, and by continuing regular phone calls until no longer necessary. If a patient’s condition happens to worsen, the team expeditiously directs the patient to the emergency room, where acute care specialists take over care. In over a year of operation, the program has recorded impressive outcomes—these were published in JAMA—and served over 1600 patients at LAC+USC Medical Center alone. This program helped LAC+USC survive the winter surge and enabled uncompromised delivery of acute care services throughout the pandemic.

**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
\$	\$	\$	\$	<b>X</b>

ANNUAL = 12 MONTHS ONLY

<b>SUBMITTING DEPARTMENT NAME AND COMPLETE ADDRESS</b> LAC+USC Medical Center (Department of Health Services) Hospital Administration; Inpatient Tower, Room C2K113; Los Angeles CA		<b>TELEPHONE NUMBER</b>
<b>PROGRAM MANAGER’S NAME</b> Josh Banerjee MD MPH MS, Anabel Lemus RN, Chase Coffey MD MS, Brad Spellberg MD <b>EMAIL JBANERJEE@DHS.LACONTY.GOV</b>		<b>TELEPHONE NUMBER</b> 323-409-6348
<b>PRODUCTIVITY MANAGER’S NAME AND SIGNATURE</b> (PLEASE CALL (213) 893-0322 YOU DO NOT KNOW YOUR PRODUCTIVITY MANAGER’S NAME) Laura Sarff DNP RN MBA CPHQ NEA-BC <i>Signature on file</i>	<b>DATE</b>	<b>TELEPHONE NUMBER</b>  <b>EMAIL</b>
<b>DEPARTMENT HEAD’S NAME AND SIGNATURE</b> Christina R. Ghaly, M.D. <i>signature on file</i>	<b>DATE</b>	<b>TELEPHONE NUMBER</b>

**\*\*ELECTRONIC, WET, OR SCANNED SIGNATURES ARE ACCEPTABLE\*\***

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**1<sup>st</sup> 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.

**Challenge.** As a 600-bed, level one trauma center located in one of the hardest hit regions in the County, LAC+USC faced the enormous challenge of providing acute care services to all patients who needed them during the Covid pandemic.

**Solution.** LAC+USC developed the Safer at Home Oxygen Program, whereby patients with Covid needing low levels of oxygen support received it at home. This program was innovative, and bold: at almost anywhere else in the country, patients would have to stay in the hospital to receive supportive oxygen. Key program components included:

- Hospital and infectious disease experts developed simple and clear clinical criteria for providers, nurses, and patients to identify when patients are safer at home and when they need to be in the emergency department or hospital.
- Clinical support team of emergency room and primary care trained nurses and doctors provided care to patients on home oxygen by phone.
- Hospital leadership worked with DHS finance and oxygen equipment vendors to streamline consignment process by which oxygen equipment could be stored in the emergency department and hospital for rapid dispensing to patients, allowing them to leave medical center as soon as possible.
- Patient-friendly supplemental education materials, including both printed and video resources, were developed to reinforce education provided by clinical support team.
- Program was formalized as a DHS Expected Practice, making it the standard of care for treatment of Covid pneumonia in the DHS System.

**Impact.** Program outcomes were impressive, including:

- Formal evaluation revealed low all-cause mortality and return admission rates for patients discharged on home oxygen.
- No patients died at home or in return transit to the emergency room; the few observed deaths occurred after safe return to the hospital and natural progression of disease despite appropriate supportive care.
- Analysis was published in JAMA Network Open, a high-impact peer-reviewed journal.
- From March 2020 through March 2021, over 1600 patients with Covid were discharged on home oxygen, over one in four of them directly from the emergency department.

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**Reference Materials**

<https://vimeo.com/444725266/fff50b538c> (LAC+USC Administrative Briefing)

<https://vimeo.com/447976252/75aaaf1fbc> (Patient Education Video)

[Mortality and Readmission Rates Among Patients With COVID-19 After Discharge From Acute Care Setting With Supplemental Oxygen | Critical Care Medicine | JAMA Network Open | JAMA Network](#) (JAMA Network Open Article)

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**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.

**I.1.6 Increase Home Visitation Capacity.** LAC+USC Safer at Home Oxygen program provided supportive home oxygen care to over 1600 patients with Covid pneumonia.

**II.2.3. Prioritize Environmental Health Oversight and Monitoring.** LAC+USC program increased County’s capacity to respond to Covid pandemic conditions, reducing impact to surrounding, disproportionately affected communities.

**III.1.1. Develop Staff Through High Quality Multi-Disciplinary Approaches to Training.** As information on Covid was continually evolving, Safer at Home team engaged in ongoing, collaborative, and multi-disciplinary learning to ensure patients were receiving the best care possible.

**III.2.1. Enhance Information Technology Platforms to Securely Share and Exchange Data.** For patient safety, several reporting tools were developed within the electronic health record platform to ensure close and failsafe follow up.

**III.2.2 Leverage Technology to Increase Visibility of and Access to Services.** Program developed patient education video and youtube link for patients and families to access during their home oxygen care.

**III.2.3 Prioritize and Implement Technology Initiatives that Enhance Service Delivery and Increase Efficiency.** Safer at Home Oxygen Program leveraged clinical insights, home oxygen equipment, and remote monitoring capabilities to maximize access to acute care for patients, allowing them to receive care from home whenever safe.

**III.3.2 Manage and Maximize County Assets.** During the Covid pandemic, LAC+USC Safer at Home Oxygen Program maximized capacity to deliver acute care services for all patients, by enabling home treatment of over 1600 patients with Covid pneumonia.

**III.3.3 Measure Impact and Effectiveness of our Collective Efforts.** Process and outcome measures were recorded continually and accurately—analysis based on these measurements was published in peer-reviewed journal JAMA Network Open.

**III.3.6 Implement a Workplace of the Future.** Program provided powerful proof of concept of tele-medicine model, not just for pandemic conditions, but for the future.

**III.4.1 Solicit Ongoing Customer Feedback.** Program was refined iteratively through feedback from patients and clinical partners.

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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. 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.

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