

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

**2021 APPLICATION – PLEASE CONSIDER FOR COVID-19 IMPACT AWARD, TOO**

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

**NAME OF PROJECT:** LA County Remdesivir Allocation

**DATE OF IMPLEMENTATION/ADOPTION:** MAY 2020-JULY2020

(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

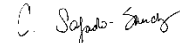
**EXECUTIVE SUMMARY:** Describe the project in 15 lines or less using Arial 12 point font. State clearly and concisely what difference the project has made.

1 Challenges: Health and Human Services donated a supply of remdesivir to states and  
 2 then to Medical Health Operational Area Coordinators for distribution. The Los Angeles  
 3 County Emergency Medical Services Agency (LAC-EMS) was tasked with the allocation  
 4 of remdesivir to 80 LAC public and private hospitals across 4,058 square miles.  
 5 Solution: LAC-EMS developed a strategic plan to physically distribute 34,290 vials of  
 6 donated remdesivir in 7 weekly allocations to LAC hospital pharmacists based on the  
 7 proportion of each hospital’s admitted patients with confirmed COVID-19. Data and  
 8 outcomes of all patients were collected. LAC-EMS developed distribution routes for the  
 9 weekly distribution of remdesivir from May to July 2020. In order to expedite delivery  
 10 and contain costs, disaster operations staff, driving in EMS or private vehicles and  
 11 carrying the remdesivir in portable refrigeration, were able to distribute all doses within  
 12 24 hours of receipt of medication at the LAC-EMS warehouse. Benefits: Because of the  
 13 rapid distribution of this scarce resource, hospital pharmacists treated a total of 5,376  
 14 COVID-19 patients. Prior to remdesivir, 96% required respiratory support. Overall, 4,218  
 15 patients (74%) survived to discharge and 81% of survivors discharged home.

**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
\$ 106,856,880	\$	\$	\$ 106,856,880	<input type="checkbox"/>

ANNUAL = 12 MONTHS ONLY

<b>SUBMITTING DEPARTMENT NAME AND COMPLETE ADDRESS</b> LA County EMS Agency 10100 Pioneer Blvd, Santa Fe Springs, CA 90670	<b>TELEPHONE NUMBER</b> 562-378-1600
<b>PROGRAM MANAGER’S NAME</b> Cathy Chidester cchidester@dhs.lacounty.gov	<b>TELEPHONE NUMBER</b>  <b>EMAIL</b>
<b>PRODUCTIVITY MANAGER’S NAME AND SIGNATURE</b> <small>(PLEASE CALL (213) 893-0322 YOU DO NOT KNOW YOUR PRODUCTIVITY MANAGER’S NAME)</small>  Connie Salgado-Sanchez	<b>DATE</b> 6/13/21 <b>TELEPHONE NUMBER</b> (213) 288-8483 <b>EMAIL</b> cosanchez@dhs.lacounty.gov
<b>DEPARTMENT HEAD’S NAME AND SIGNATURE</b> Christina R. Ghaly, M.D. – signature on file	<b>DATE</b> 6/13/21 <b>TELEPHONE NUMBER</b> (213) 288-8101

**\*\*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.

*Challenges:* COVID-19, caused by the SARS-CoV-2 virus, has resulted in a global pandemic with currently over 3 million deaths worldwide. With no known treatment at the onset of the crisis, researchers worked rapidly to identify potential effective therapies. Remdesivir, an antiviral drug that inhibits RNA synthesis, emerged early on as a promising treatment, which reduced the length of illness in patients hospitalized with COVID-19. On May 1, 2020, the Food and Drug Administration (FDA) issued an Emergency Use Authorization (EUA) for remdesivir for the treatment of hospitalized patients with COVID-19. Gilead Sciences donated 949,000 vials of remdesivir to the United States (U.S.) Department of Health and Human Services (HHS) in order to distribute it to US hospitals for immediate use. In LA County, the LAC-EMS Agency was the local governmental body tasked with allocating the remdesivir received from HHS through the state of California to the local hospitals with suspected and confirmed COVID-19 patients. Based on a need for storage and rapid distribution of the needed therapy for COVID-19 patients Los Angeles LAC-EMS had to develop an equitable process by which to allocate and distribute remdesivir to hospitals, a scarce resource, in the early phase of the COVID-19 pandemic; and devised a plan to collect data from the hospitals in order to describe the patients treated with remdesivir during this period, including the age, gender and racial/ethnic distribution relative to the LA County population affected and their level of disease severity and outcomes.

*Solutions:*

1. LA County EMS received an allocation of remdesivir from the State Department of Public Health after California had received its allotment from HHS. The medication was received by LA County EMS warehouse staff and placed in refrigerated storage per EUA recommendations.
2. EMS Agency Disaster Operations Center (DOC) staff were alerted to the shipment and to prepare for distribution to over 80 hospitals in 9 Disaster Resource Center Regions.
3. To address the resource limitation, the LAC-EMS used a straightforward but rather innovative methodology to allocate the drug to each of the acute care hospitals in the county. Since March 26, 2020, LAC-EMS collected daily information on all patients admitted to LA County hospitals, including medical surgical, telemetry, stepdown, and intensive care (ICU) locations, with suspected and confirmed COVID-19.

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4. In an attempt to maximize benefit and reduce disparities as much as possible, the COVID-19 burden of each hospital was determined based on the average daily hospital admissions from the prior 7 days of laboratory confirmed cases and suspected cases with pending laboratory confirmation test. Each confirmed case was given one point and each suspected case was given ¼ point (based on the conversion rate at that time which was 25%). This methodology provided an equitable and transparent allocation based on the respective COVID burden of each hospital.
5. DOC teams who had established contacts and relationships with hospital pharmacists through the Hospital Preparedness program, then distributed 34,290 vials of donated remdesivir to the 80 hospital pharmacies over 4,058 square miles using private cars and EMS vehicles with small coolers for refrigerated transport.
6. Hospital pharmacists and staff were responsible for following the EUA guidelines with regards to patient selection and were required to track and report use of the remdesivir to the LA County EMS Agency. LAC-EMS collected daily information on patients admitted to LA County hospitals, including medical surgical, telemetry, stepdown, and intensive care (ICU) locations.
7. There were 7 weekly allocations of donated remdesivir which were processed, allocated and delivered to hospital pharmacies within 24 hours of receipt to allow for rapid use of this scarce resource at a time when no other treatment for COVID-19 was approved and available.
8. There were 19 total allocations of remdesivir to Los Angeles County Hospitals totaling 205,494 vials. The cost to purchase these vials was \$520 per vial for total cost of medication allocated at \$106,856,880.

*Benefits:* A total of 5,376 patients were treated with remdesivir. The median age was 60 (IQR 48-70); 62% were male, 59% Hispanic, 17% White, 6% Asian, 5% Black, 12% other/unknown race. Prior to remdesivir, 96% of patients required respiratory support including 49% supplemental oxygen, 35% high-flow nasal cannula, 3% continuous or bilevel positive airway pressure and 9% mechanical ventilation, with one quarter of patients in the ICU. Overall, 26% of patients were ventilated during the hospitalization, median 11 ventilators days (IQR 8-23), while 41% required ICU care, median 10 ICU days (IQR 5-19). Median length of stay for all patients was 10 days (IQR 7-18) with 4218 patients (74%) surviving to discharge and 81% of survivors discharged home. Overall remdesivir allocation continued beyond the allocation delivered directly to hospital pharmacists described above. LA County EMS continued to work with Health and Human Services and California Department of Public Health to allocate a total of 205,494 vials of remdesivir over 19 weeks.

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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.

This project addressed the strategic goal (Strategy 1.2) “Enhance Our Delivery of Comprehensive Interventions”. Through strategic partnerships with hospitals, and EMS, the LA County EMS agency was able to operationalize a county-wide health service to support the COVID-19 therapeutic effort and save lives.

In addition, this project supported the strategic goal (Strategy 111.3) of “leveraging information technology and analytics to enhance operation and improve service delivery”. The collection of data through the Reddinet System sponsored by the Hospital Association of Southern California and implemented by the Emergency Operations Managers at each of the LA County hospitals, allowed for the collection and analysis of the data by LAC-EMS that made rapid allocation of this important therapeutic possible.

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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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<b>\$ 106,856,880</b>		<b>\$ NA</b>	<b>\$ \$106,856,880</b>	<input type="checkbox"/>

**ANNUAL= 12 MONTHS ONLY**

Please note estimated costs are for the allocated remdesivir based on LA County EMS Agency algorithm– at \$520 per vial potential cost savings \$106,856,880 based on all allocated remdesivir for LA County.