

**Quality and Productivity Commission
34th 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: AC/DC's NEW SINGLE "ARE YOU READY?" TOPS CHARTS

DATE OF IMPLEMENTATION/ADOPTION: JANUARY 1 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.

1 On January 26, 2020, Los Angeles County Department of Public Health (DPH) reported
2 its first confirmed case of Novel Coronavirus, later referred to as COVID-19. The DPH
3 Acute Communicable Disease Control (ACDC) Program's Epidemiology and Data Unit
4 (EDU) has worked tirelessly 24/7 to establish and maintain the data systems and
5 reporting to support the County's response to COVID-19. Through partnership across
6 programs in DPH and with other County Departments, innovation and problem solving,
7 the EDU has tackled the unprecedented challenges facing DPH related to data volume
8 and complexity. The EDU provided up-to-date data daily to decision makers in DPH
9 and throughout the county to inform public policy and the COVID-19 response and
10 released vast amounts of data to the public to promote accountability, transparency and
11 enable understanding. These efforts by the ACDC EDU have been implemented with
12 great urgency, deep commitment and in service to the people of Los Angeles County.
13 In furtherance of future preparedness, we have integrated new approaches, systems
14 and technologies that are flexible and scalable and will improve our ability to respond to
15 future threats to public health.

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
\$	\$	\$	\$	<input checked="" type="checkbox"/>

ANNUAL = 12 MONTHS ONLY

SUBMITTING DEPARTMENT NAME AND COMPLETE ADDRESS Department of Public Health 313 N. Figueroa Street 8 th Floor Los Angeles CA 90012		TELEPHONE NUMBER (213) 288-8117
PROGRAM MANAGER'S NAME Rebecca Fisher, MPH, MA EMAIL rfisher@ph.lacounty.gov		TELEPHONE NUMBER 323-715-6848
PRODUCTIVITY MANAGER'S NAME AND SIGNATURE (PLEASE CALL (213) 850-0222 YOU DO NOT KNOW YOUR PRODUCTIVITY MANAGER'S NAME) Catherine Mak, MBA	DATE 6-25-21	TELEPHONE NUMBER (213) 288-7240 EMAIL cmak@ph.lacounty.gov
DEPARTMENT HEAD'S NAME AND SIGNATURE Barbara Ferrer, MPH, MEd, PHD	DATE 6/28/21	TELEPHONE NUMBER (213) 288-8117

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

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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.

Challenges: On January 26, 2020, Los Angeles County Department of Public Health (DPH) reported its first confirmed case of Novel Coronavirus, later referred to as COVID-19. Leading up to this case, the Department's Acute Communicable Disease Control (ACDC) Program's Epidemiology and Data Unit (EDU) had already begun establishing data systems to support the County's response to COVID-19. It began with establishing a process to extract passenger manifest data on flights landing at LAX and feed these data into a database used by a team of DPH to contact, interview, assess risks and provide quarantine instructions to travelers returning from affected areas.

Immediately, new challenges emerged almost daily. The next challenge the ACDC EDU faced was establishing a system for collecting data on Persons Under Investigation (PUIs) and tracking them over time. Given limited testing availability, these were individuals being tested for the new virus who were waiting for test results to be provided by the Centers for Disease Control (CDC) in Atlanta, GA.

Within only a few weeks, local community transmission of the new virus was confirmed, and the emergent challenge was establishing a robust surveillance system to monitor the impact of the virus in the population, tracking all tests being conducted, identifying individual cases, routing cases for isolation orders, interviews and contact tracing, and monitoring outcomes such as hospitalization and death.

The primary challenge faced was related to the volume and complexity of data coupled with DPH and County Leadership's need for real-time actionable data in order to inform the County's response and the public's need for information on a situation that was impacting so many aspects of their lives.

In 2019, DPH received 1,583,736 electronic laboratory reports (ELRs) into its communicable disease surveillance application for all Title 17 and locally reportable diseases. ELR forms the backbone of communicable disease surveillance, with reportable disease test results being automatically generated and transmitted. In 2020, DPH received over 7 times more ELR messages (11,458,800) which demonstrates the large increase in incoming volume. In addition to ELR data, new laboratories testing for the SARS-COV-2 virus were popping up to support the demand for testing, and these laboratories were not set up for ELR so the ACDC EDU

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established a new mechanism for receiving bulk laboratory test data via flat files and converting them so that could feed into the surveillance system. Further, the ACDC EDU has also standardized and improved the efficiency of direct reporting from laboratories, medical providers and hospitals not able to report via standard systems on COVID-19 cases and deaths, by developing web-based data collection forms and standardizing.

Solutions: The volume of data emerged as a critical challenge related to data availability as well. At the beginning of the pandemic, ACDC EDU staff were working throughout the night to compile data tables to support daily reporting. A large-scale effort was undertaken in partnership with Public Health Information Systems (PHIS) to establish a new, faster mechanism to extract data. This project to establish stable data was continuously improved throughout the pandemic and will serve the department well into the future not only in pandemics but in supporting new outbreak detection systems.

The volume of data and the need for daily reporting on cases, deaths, testing, and outbreaks has posed a consistent challenge for data processing and reporting. Since the beginning of the pandemic and to this day, a team of ACDC EDU staff begin their working days between 4am and 5am and others late into the evening, to process the surveillance data and produce both standardized data products and respond to internal and external data requests. This team produces data describing the state of and the impact of COVID-19 within Los Angeles County to support reporting on the DPH media data sites

(<http://publichealth.lacounty.gov/media/coronavirus/data/index.htm>), and designed and maintains the Los Angeles County Covid-19 Surveillance Dashboard which was launched in April 2020

(http://dashboard.publichealth.lacounty.gov/covid19_surveillance_dashboard/). This dashboard provides data which community members and researchers can download and use. It is also a prototype for ways we will be able to share data with the community in the future. Lastly, the complexity of data related to COVID-19 surveillance has been a challenge met by an ACDC EDU team that handles data integration, which includes the identification of new data sources that should feed into or supplement existing data, including death certificate data, interview data, testing appointment questionnaire data, and vaccination data. The team specializes in the implementation of matching and linkage between data sources and in establishing new approaches to high-volume integrations of data into the surveillance data system. Innovative approaches to data integrations have led to new technologies as well, such as bots, to process data into the surveillance data system.

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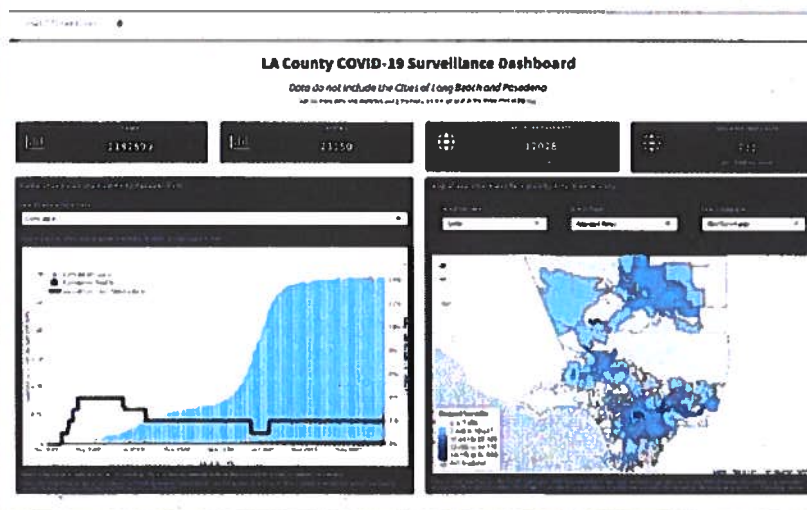
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to data integrations have led to new technologies as well, such as bots, to process data into the surveillance data system.

Benefits: These efforts have led to the daily release of quality data describing the overall and current state of the COVID-19 pandemic in Los Angeles County, to the public and to County and DPH leadership. Not only has daily data been provided, the various streams of data, reports, and web-based and interactive tools for data visualization has enabled the use of data by County and DPH leadership, partners, and the public. We have developed maps, interactive web-based dashboards, static reports and more. As a measure of success, the daily processing and release of data at an unprecedented level of volume and complexity, demonstrates an outcome of high quality and productivity by the ACDC EDU. The benefits to the County are unmeasurable, given these data were used to support the entire response to the COVID-19 throughout the pandemic period.

Overall, through December 31, 2020, the EDU processed, integrated, managed, and reported data daily for a cumulative 11,092,517 COVID lab results for 4,703,783 individuals leading to the confirmation of 819,656 cases and 11,817 deaths. While distilled into single descriptive numbers, there are complex systems, many staff, and many hours (often throughout the night and early hours of mornings) that have gone into producing them. The ACDC EDU has gone above and beyond in service to the people of Los Angeles County by passionately and tirelessly doing what it takes and bringing creativity and innovation to handling the data for the one of the largest public health crises facing our world.



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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.

The County Strategic Plan goal that the ACDC EDU COVID-19 surveillance data project most closely aligns with is Goal III: Realize Tomorrow's Government Today. Given this response required the establishment of data systems and processes that were “innovative, flexible, effective and transparent” in response to the “dynamic and complex” challenges, we believe that this project exemplifies achievement of the County's goal. The strategies that the ACDC EDU COVID-19 surveillance data project most closely address include:

III.1.1 Develop Staff Through High Quality Multi-Disciplinary Approaches to Training:

III.2.1 Enhance Information Technology Platforms to Securely Share and Exchange Data:

III.2.3 Prioritize and Implement Technology Initiatives That Enhance Service Delivery and Increase Efficiency:

III.3.3 Measure Impact and Effectiveness of our Collective Efforts:

III.3.8 Develop an Early Warning Tool:

III.4.2 Share and Publish More Data:

Epidemiologist and data analysts from throughout DPH were engaged to directly support this effort which led to an incredible workforce development opportunity, and staff from throughout DPH came together to problem solve, learn, and teach, and ultimately creatively and innovatively respond to the challenges. New tools and technologies were brought in to support the response, leading to skills development with new applications and programming languages such as SAS, R, ArcGIS, Alteryx, REDCap, Power BI, Python, Airflow, SQL, and NINTEX. Beyond the pandemic, County staff will have greater skills which will enhance all of our work.

The ACDC EDU worked closely with Public Health Information Systems (PHIS) to leverage new technologies, innovate data pipelines, integrations and establish interoperable data exchanges between internal and external data systems and partners including the California Department of Public Health (CDPH). We have built lasting systems that will enable efficiency within our data systems from now into the future, and will ensure we are more prepared in the future.

Lastly, the ACDC EDU has produced data that measures the impact of COVID-19 as well as the effectiveness of policies implemented to address it. Further, these data have been made available to decision makers leading to evidence-based policies. Extensive data sharing to the public has also increased trust and enabled the public to understand risks, be informed, and take actions to protect their communities.

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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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