

Solano County
Public Health

COVID-19 AFTER ACTION REPORT



SOLANO
PUBLIC
HEALTH



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LETTER FROM SOLANO COUNTY'S HEALTH OFFICER

Solano County's response to the COVID-19 pandemic of 2020-2023 was a demonstration of collaboration, teamwork, and responsiveness. Solano County was impacted early in the pandemic, with Travis Air Force Base receiving repatriated State Department personnel from Wuhan, China, passengers from the Diamond Princess cruise ship, and passengers from the Grand Princess cruise ship beginning in February 2020. As a consequence, Solano County quickly experienced the need for isolation of positive cases, testing and clearance of cases, including those with persistent viral shedding, transport of cases by local Emergency Medical Services, addressing asymptomatic test-positive individuals, and home isolation of local cases. In addition to our early experience in identifying and addressing cases, we identified the first case of community-acquired COVID-19 in the United States.

This seminal event revealed several key considerations regarding COVID-19. First, a large proportion of test-positive and, therefore, presumably infectious individuals were asymptomatic. Second, as a result of this, the U.S. quarantine strategy of checking incoming airline passengers at selected airports for fever was clearly ineffective as a means for preventing entry of cases. And third, perhaps most importantly, containment of the virus was no longer a feasible strategy for COVID-19; mitigation of the harms of the disease remained the only viable strategy. It is noteworthy that this community-acquired case also caused a hospital outbreak resulting in three cases among about 200 exposed healthcare workers. Our investigation of this outbreak, alongside the Centers for Disease Control and Prevention and the California Department of Public Health, resulted in infection control and isolation & quarantine protocols for hospitals that remained effective throughout the pandemic. The investigation also revealed clearly that the virus was spread through droplet-borne transmission, not airborne transmission.

In response to the evidence and these findings, Solano County implemented multiple mitigation approaches beginning in March 2020. A primary emphasis was on protecting the fragile elderly, particularly in congregate settings. We pursued aggressive responses to even single cases of COVID-19 among staff or residents of long-term care facilities and intermediate care facilities, and we implemented infection control requirements, infection prevention training, and provision of personal protective equipment for these facilities. We also developed a tiered prevention plan for businesses based on their respective risks for transmission of disease. We determined, based on the infeasibility of containment as a strategy, that case enumeration (and, therefore, sweeping case investigation & contact tracing) would not be helpful, business closures were not needed, and a health order requiring residents to stay in their homes was unnecessary (and would potentially be misleading). In spite of the absence of any supportive evidence or information and the presence of clearly non-supportive evidence and reasoning, the State, nonetheless, chose to pursue containment of the virus as its strategy. It

implemented a statewide "stay-at-home" order for residents, closed businesses and required universal case investigation & contact tracing, among other approaches.

Over the next several years, we regularly distributed COVID-19 testing kits to our partners in the County, assisted congregate living facilities with COVID-19 testing, and provided testing to County residents through multiple standing and pop-up test clinics. We also distributed the COVID-19 vaccine at a mass vaccination site at the Solano County Fairgrounds in Vallejo, at dozens of pop-up vaccination clinics throughout the County, at multiple farms and other workplaces, at nearly all of the long-term care and intermediate care facilities in Solano County, and directly to our homebound residents. These vaccination clinics were run in collaboration with our healthcare and community partners. We communicated with our partners and with our community through regular calls with healthcare and emergency providers; regular calls with elected officials; our COVID-19 "warmline"; our dashboard, website, and social media; press releases; town halls; worksite meetings and meetings with trade associations; newsletters; employee videos; and hundreds of interviews with the media, among other venues.

In all, we redeployed about 200 staff from Public Health, other divisions of the Department of Health and Social Services, and other County Departments, including Resource Management and Libraries, to over a dozen teams and functions. And in our response to the pandemic, we collaborated closely with our County's healthcare providers, hospitals, clinics, Emergency Medical Services, cities, fire departments, police departments, long-term care and intermediate care facilities, shelters, Sheriff's Office and Office of Emergency Services, schools, churches and other houses of worship, community-based organizations, Touro University of California, California State University Maritime Academy, California Health and Medical Reserve Corps, and professional and trade associations, among others.

I believe that Solano County's response to the COVID-19 pandemic was excellent. Our community and our partners pulled together, our staff and those of our partners stepped up, and collectively, we saved lives, especially in our congregate living facilities.



Bela T. Matyas, MD, MPH

Health Officer, Solano County

August 15, 2023

EXECUTIVE SUMMARY

This After-Action Report (AAR) offers a thorough assessment of Solano County's response to the COVID-19 pandemic from January 2020 to February 2023. Solano County, in collaboration with independent consultants specializing in health security and emergency management, conducted an extensive data collection process and engaged with stakeholders to gather crucial insights into the County's pandemic response efforts.

Since the first confirmed case of COVID-19 in February 2020, Solano County experienced multiple outbreaks, healthcare system strains, and tragic loss of life. The County implemented infection control measures in accordance with State and federal directives, significantly impacting the local economy, education, and daily routines. The pandemic also exacerbated existing health and social inequities, disproportionately affecting communities of color and low-income individuals within the County. Solano County launched several initiatives to mitigate these impacts. Collaborations with local food banks ensured food security, while resources were allocated to expand testing capacities. Vaccination clinics were established across the County, with mobile units deployed to reach underserved populations, aiming to ensure equitable access to vaccines.

This report highlights the significance of the successful inter-agency collaboration in Solano County in addressing complex challenges. Effective cooperation among various agencies resulted in expanded testing availability, increased medical staff and contact tracers, and the successful execution of a mass vaccination campaign. Efforts were also made to address resource challenges, streamline the distribution of personal protective equipment (PPE), stop the spread of COVID-19 in congregate settings, and provide mobile testing and vaccination options.

The report also highlights key areas that require attention for improvement, which include enhancing communication and collaboration between different levels of government, increasing outreach efforts and allocating more resources to assist individuals with access and functional needs (AFN) impacted by disasters, and providing greater support to the dedicated staff who worked tirelessly to serve their community throughout the prolonged emergency. The AAR concludes with recommendations for future all-hazard preparedness and response efforts, such as addressing health inequities, investing in surge capacity planning, and strengthening supply chains for PPE and other critical needs.

The findings and recommendations of this report will serve as a valuable resource to enhance preparedness for future pandemics and other public health events, ensuring that communities are better equipped to protect and support their residents during times of crisis.

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INTRODUCTION

The COVID-19 pandemic, a historic global disaster, has claimed the lives of over 6.8 million people worldwide and has had far-reaching health, social, and economic impacts across the world. In the United States, Solano County experienced some of the earliest outbreaks and most significant impacts. Concurrent disasters such as wildfires and floods further complicated the situation.

All residents of Solano County felt the impact of COVID-19, with many losing their lives, becoming sick, or experiencing long-term complications. The pandemic has had far-reaching economic, social, and mental health consequences. Vulnerable populations, including those susceptible to infection, complications, and economic hardship, were most severely impacted. Moreover, disparities in the healthcare system led to disproportionate outcomes among Black/African American and Hispanic/Latinx communities.

Solano County mobilized one of its largest and longest response operations ever, with County personnel, frontline workers, and community partners coming together in a Whole Community response. Throughout the pandemic, the County was committed to inclusive and evidence-based emergency management. With this in mind, this AAR critically assesses the County's response to empower future operations. Solano County collaborated with a contractor, Constant and Associates, Inc. (CONSTANT), to engage hundreds of State and local response partners to identify strengths and areas for improvement, which lead to actionable recommendations. The need for disaster response has only increased in recent years, particularly in the face of climate change. Thus, the County has a responsibility to continuously improve its response posture to ensure the health and safety of all Solano County residents.

PURPOSE

The purpose of this AAR is to provide an independent evaluation of the County's response to the COVID-19 pandemic from January 2020 to February 2023. The AAR was commissioned by Solano County to identify actionable lessons learned, support Countywide resilience, and develop future pandemic response planning.

DATA COLLECTION METHODOLOGY

The AAR team, comprised of individuals from Solano County Public Health (SPH) and CONSTANT, utilized a comprehensive data collection process to incorporate valuable insights from emergency response partners. The team engaged key individuals and groups through an online survey, 29 interviews, and 11 group debriefings. The team also reviewed relevant documents, including existing County plans, COVID-19 data collected

during the response, Standard Operating Procedures (SOPs), Incident Action Plans (IAPs), situation reports, and open-source data.

Response partners from across Solano County participated in data collection efforts, including State agencies, County and local governments, educational institutions, and the private sector. To ensure the report was inclusive of all relevant perspectives from the response partners, several individuals who held multiple roles participated in multiple debriefings and interviews.

The participating groups included:

- Board of Supervisors
- Case Investigation/Contact Tracing Team
- Federally Qualified Health Centers
- Health Care Coalition
- Healthy Solano
- Human Resources and General Services
- Long-Term Care Facilities
- Medical Providers
- Public Information Officers
- School Nurses
- Solano County Executive Leadership
- Solano County Public Health Leadership
- Solano County Public Health Nurses
- State & Federal Partners

REPORT STRUCTURE

The AAR is structured by sections, covering various thematic subject areas relevant to Solano County's response to the COVID-19 pandemic. Each chapter includes a summary highlighting strengths, areas for improvement, and suggestions for future responses. The subject areas covered in the report are as follows:

- Infection Prevention, Case Investigation, and Contact Tracing
- Testing
- Vaccination
- Infection Prevention/Control
- Operational Coordination
- Workforce Resilience
- Public Messaging and Community Engagement

Strengths identified in the report refer to response actions and decisions that stakeholders deemed successful. Areas for improvement provide constructive feedback on challenges experienced during the response or gaps where stakeholders identified the need for additional support and resources. These strengths and areas for improvement were identified multiple times across data collection efforts.



The recommendations provided in each chapter offer tangible and actionable ways that the County can incorporate lessons learned from the COVID-19 response into plans and processes to improve all-hazard readiness and benefit the people of Solano. The Improvement Plan (IP) will encompass all recommendations outlined in this AAR and will be presented as a separate document to facilitate the sharing and assignment of corrective actions with multidisciplinary partners and stakeholders.

INCIDENT OVERVIEW

In December 2019, health officials in Wuhan, a metropolitan city in the Hubei Province of the People's Republic of China, identified cases of an unknown viral pneumonia that manifested as fever, dry cough, and respiratory issues.¹ As cases began to cluster, the World Health Organization (WHO) launched an investigation and confirmed the existence of a novel coronavirus now known as COVID-19. The virus caused a global pandemic that became known as the "COVID-19 pandemic." COVID-19 spreads easily among people through respiratory droplets and fine aerosols when an infected person coughs, sneezes, or talks, and even asymptomatic carriers can unknowingly spread the virus when in close contact with others.

As evidence of communicable spread of COVID-19 emerged in surrounding countries, China instituted public health measures to contain the virus. On January 30, 2020, WHO declared a Public Health Emergency of International Concern, prompting countries to implement travel restrictions, stay-at-home orders, and screenings for the virus. As of June 7, 2023, the number of confirmed cases of COVID-19 exceeded 767 million worldwide, with the highest numbers of confirmed cases in the U.S., China, and India.²

First responders and healthcare professionals worldwide faced major challenges due to COVID-19. The novel nature and rapid spread of COVID-19 often made it difficult to issue definitive guidance, leading to the evolution of guidelines for mask-wearing, physical distancing, and isolation and quarantine as scientists analyzed more data on the virus' specific attributes. The initial lack of mass-testing capability in the U.S. may have further contributed to the virus's early spread, and public health and healthcare entities were insufficiently prepared for a sustained pandemic response involving a coronavirus. Despite these challenges, public health and safety officials continue to implement multidisciplinary approaches and ongoing collaborative strategies to address the evolving virus.

On February 4, 2020, the Food and Drug Administration (FDA) approved the Emergency Use Authorization (EUA) for the Centers for Disease Control and Prevention's (CDC) development of the COVID-19 diagnostics test kits. On February 5, 2020, the CDC medical officer teams met passengers on incoming planes from Wuhan, China at Travis Air Force Base (AFB) in Solano County to screen them for COVID-19 symptoms. All passengers were placed under mandatory 14-day quarantine orders.

¹ WHO, Timeline of WHO's Response to COVID-19. <https://www.who.int/news-room/detail/29-06-2020-covidtimeline>

² WHO, Coronavirus (COVID-19) Dashboard. <https://covid19.who.int/>

On February 26, 2020, the first U.S. case of community-acquired COVID-19 was confirmed in a patient hospitalized in Solano County.³ Shortly after, several more cases were identified in the County, including some cases with no known source of transmission, indicating community spread. This led the State to mandate implementation of containment measures, including stay-at-home orders, business closures, and social distancing guidelines.

In April 2020, Solano County developed a new program that focused on outbreak prevention and response among the most vulnerable populations living in Long Term Care Facilities (LTCFs). The Integrated COVID Outbreak Response and Infection Prevention Education (LTCF CORE) Program provided on-site testing, vaccination campaigns, and robust technical assistance to all LTCFs in the county. The program was designed to mitigate the severity of COVID-19 cases and death rates among those at highest risk. Pooling expertise from diverse sectors, the program responded to more than 500 outbreaks, successfully fostered communication with LTCFs, refined tailored infection prevention and control guidance, reduced the number of COVID-19 outbreaks, and significantly contributed to lower death rates in the County in comparison to other areas.⁴

Over the following months, the number of cases in Solano County continued to rise, with peaks in July and December 2020. As of March 2, 2023, Solano County reported a total of 118,904 confirmed cases of COVID-19 and 441 deaths.⁵ These numbers highlighted the severity of the pandemic's impact on the County's population. According to the last available update in March 2023, the distribution of COVID-19 cases in Solano County by race/ethnicity was as follows: White accounted for 35%; Hispanic/Latinx accounted for 26%; Black/African American accounted for 14%; Asian accounted for 13% of cases; and Multiracial/Other Races accounted for 13%. These demographics provide insight into the diverse impact of the virus within the County's population.⁶

The County's response efforts were guided by evolving scientific knowledge and public health guidelines as more data on the virus became available. Although initial mass-testing capabilities were lacking, Solano County adapted to the situation and worked

³ Heinzerling A, Stuckey MJ, Scheuer T, et al. Transmission of COVID-19 to Health Care Personnel During Exposures to a Hospitalized Patient — Solano County, California, February 2020. MMWR Morb Mortal Wkly Rep 2020;69:472–476. DOI: <http://dx.doi.org/10.15585/mmwr.mm6915e5>

⁴ Solano County. Solano County Public Health division earns NACo Achievement Award for the Integrated Long-Term Care Facilities (LTCFs) COVID Outbreak Response and Infection Prevention Education Program. June 15, 2022. <https://www.solanocounty.com/news/displaynews.asp?NewsID=2439&TargetID=1>

⁵ DoIT GIS. Solano County COVID-19 Cases by Race/Ethnicity. <https://doitgis.maps.arcgis.com/apps/MapSeries/index.html?appid=055f81e9fe154da5860257e3f2489d67>

⁶ DoIT GIS. Solano County COVID-19 Cases by Race/Ethnicity. <https://doitgis.maps.arcgis.com/apps/MapSeries/index.html?appid=055f81e9fe154da5860257e3f2489d67>



towards enhancing testing capacity over time. Public health and safety officials collaborated with various stakeholders, including healthcare professionals and community-based organizations (CBOs), to implement multidisciplinary approaches to addressing the challenges posed by the virus.

The ongoing commitment of Solano County to proactive measures and collaborative strategies has played a crucial role in managing and mitigating the impact of the COVID-19 pandemic within the community.



TIMELINE

COVID-19 RESPONSE TIMELINE

2020

JANUARY - FEBRUARY
 Travis Air Force Base received repatriated State Dept. personnel and cruise ship passengers. County and its hospitals isolated numerous Travis Air Force Base cases.

MARCH 15
 Additional case found on Travis Air Force Base.

MARCH 19
 The Governor issued Stay at Home Order.

APRIL 2
 First reported COVID-19 death of a Solano County resident.

JUNE 12
 County amended Shelter at Home Health Order to allow for low- and medium-risk activities approved by the state

AUGUST 28
 The Governor released the Blueprint for a Safer Economy plan.

SEPTEMBER 14
 County Board approved \$2 million small business grant program for small businesses and employers impacted by COVID-19.

OCTOBER 29
 Public Health confirmed first case of flu and COVID-19 coinfection.

DECEMBER 14
 The Governor launched Vaccinate All 58 campaign based on Safety and Equity as the first vaccines arrived to California.

FEBRUARY 27
 First confirmed COVID-19 case in the County. County declared a proclamation of local emergency. Public Health activated Department Operations Center.

MARCH 18
 County issued Shelter at Home Health Order.

MARCH 25
 Public Health and Social Services launched safety net support services for residents and those impacted by COVID-19. Public Health ordered laboratories testing for COVID-19 to report more comprehensive testing data.

MAY 4
 County opened two State-operated testing sites in Vacaville and Vallejo.

JULY 13
 Governor ordered immediate shutdown of additional business sector indoor operations.

SEPTEMBER 03
 County Board approved rental assistance program with cash-assistance to qualifying low-income households.

SEPTEMBER 22
 State moved County into red tier (tier 2). Businesses allowed to reopen with additional activities due to low spread rates in the County.

NOVEMBER 16
 State moved County into purple tier (tier 1).

DECEMBER 16
 County implemented the State's regional stay home order.

2021

APRIL 14
 County expanded vaccine eligibility to individuals age 16 and older. County replaced Johnson & Johnson scheduled clinics with Pfizer or Moderna vaccines.

JUNE 16
 Solano County moved beyond the Blueprint.

AUGUST 31
 County and Bay Area Health Officers reaffirmed support for a return to full, in-person learning.

DECEMBER 10
 County Public Health expanded booster eligibility to 16 and older.

JANUARY 7
 County Public Health expanded booster eligibility to 12 and older.

MARCH 31
 County Public Health expanded eligibility for COVID-19 second booster doses for residents aged 50 and older as well as eligible individuals aged 12 and older.

JUNE 20
 County expanded COVID-19 vaccine eligibility to very young children per State guidance.

MARCH 9
 County returned to red tier (tier 2).

MAY 24
 County administered 100,000th dose of COVID-19 vaccine.

JULY 28
 Public Health supported coadministration of COVID-19 vaccination along with routine childhood immunizations.

NOVEMBER 5
 County expanded COVID-19 vaccine eligibility to individuals age 5-11.

DECEMBER 21
 County Public Health reported first pediatric death related to COVID-19.

2022

FEBRUARY 16
 Bay Area Health Officers lifted most indoor mask mandates.

JUNE 20
 County expanded COVID-19 vaccine eligibility to very young children per State guidance.

2023

JANUARY 25
 County ended mandatory workplace outbreak reporting. Public Health demobilized the Department Operations Center.

FEBRUARY 28
 State and County Health Orders and States of Public Health Emergency ended.



INFECTION PREVENTION, CASE INVESTIGATION, AND CONTACT TRACING

SUMMARY

Case Investigation and Contact Tracing (CI/CT) efforts play a vital role in public health responses during disease outbreaks. Investigation efforts focus on understanding the source and spread of the disease, gathering relevant data, and implementing appropriate control measures. CT involves identifying individuals who have come into close contact with infected individuals and providing them with guidance and support to prevent further transmission of the disease. Effective CI/CT efforts in the County contained outbreaks, protected individuals with AFN, and prevented the wider spread of the infectious disease.

The County demonstrated effective working relationships with congregate care facilities during the COVID-19 response by implementing the LTCF CORE Program. This program aimed to save lives by providing guidance, supplies, and support to LTCFs, which primarily serve elderly and disabled residents. The program facilitated strong communication and collaboration between SPH and the care facilities, with designated points of contact ensuring effective coordination. SPH also deployed public health nurses and multilingual staff to educate facility staff and provide necessary support during outbreaks. Furthermore, the County pivoted from a home-grown solution to the State-developed Shared Portal for Outbreak Tracking (SPOT) system to facilitate reporting and tracking of outbreaks by the facilities.⁷ The success of the LTCF CORE Program earned SPH the National Association of Counties (NACo) Achievement Award.

To bolster CT efforts, the County implemented several measures to address staffing needs and training requirements. They reassigned personnel from different County departments to provide support for CT. Additionally, they developed effective training programs for schools and State workers to independently conduct CT. The County sought staffing support from the State through the Medical Health Operational Area Coordinator (MHOAC), resulting in the integration of State staff with local staff and mutual training on CI/CT practices. These efforts strengthened the CI/CT teams and enhanced their ability to manage the spread of the virus.

⁷ SPOT is part of the CalConnect system that the State developed to perform case investigation, contact tracing and outbreak management.

Acknowledging the socioeconomic difficulties arising from the pandemic, including job losses, limited financial assistance, and transportation issues, the County utilized its CI and outbreak teams to tackle these amplified needs. They offered eligible individuals and families practical assistance in the form of gift cards or boxes of non-perishable food items.

The County faced challenges in efficient data management and sharing. Reliance on a physical whiteboard for tracking outbreaks in care facilities limited real-time updates and remote access to information, hindering the timely dissemination of crucial data. The need for advanced systems for data management and sharing became evident in order to enhance the County's response to the COVID-19 pandemic.

STRENGTHS

Strength: The County developed effective working relationships with congregate care facilities during the COVID-19 response.

In alignment with the strategy of targeting populations most at risk for severe illness or death from a COVID-19 infection, SPH developed the Integrated LTCF CORE Program to provide supplies, tools, and guidance to LTCFs for dealing with outbreaks. The program began in April 2020 with the goal of saving lives by reducing severe outcomes and deaths among those most at risk.⁸

The LTCF CORE Program was comprised of Health and Social Services staff from a variety of programs and disciplines. The program was first assembled by redirecting existing staff and engaging community partners. The program provided outbreak prevention and control guidance, technical support, and, eventually, site testing and vaccination to skilled nursing facilities (SNFs), memory care facilities, board & care homes, and other congregate living facilities in the County that serve primarily elderly and disabled residents.⁹

SPH quickly established relationships with LTCFs across the County, many of which were small operations that had never worked with SPH before.¹⁰ The LTCF CORE Program ensured strong communication between SPH and the LTCFs throughout the pandemic.

⁸ Solano County. Solano County Public Health division earns NACo Achievement Award for the Integrated Long-Term Care Facilities (LTCFs) COVID Outbreak Response and Infection Prevention Education Program.

<https://www.solanocounty.com/news/displaynews.asp?NewsID=2439&TargetID=1>.

⁹ Solano County News Details. Solano County Public Health division earns NACo Achievement Award for the Integrated Long-Term Care Facilities (LTCFs) COVID Outbreak Response and Infection Prevention Education Program. June 15, 2022.

<https://www.solanocounty.com/news/displaynews.asp?NewsID=2439&TargetID=1>

¹⁰ Stakeholder Interview

Each care facility had a single point of contact at SPH, which allowed for strong working relationships to develop over time.¹¹

Public Health Nurses from the Older and Disabled Adult Services (ODAS) program at SPH and outbreak investigation teams conducted facility education during outbreaks to keep residents safe. Some staff on these teams spoke languages other than English and could provide education to care facility staff in English, Spanish, and Tagalog.¹² When necessary, SPH reassigned staff to the outbreak and infection prevention unit to ensure available staff could speak the preferred language of LTCF staff.¹³

To facilitate reporting outbreaks to SPH, the County utilized SPOT for facilities to report outbreaks online.¹⁴ Between April 2020 and June 2022, the LTCF CORE program responded to more than 500 outbreaks.¹⁵ SPH earned the NACo Achievement Award for its LTCF CORE Program.¹⁶

Strength: SPH created effective training materials to instruct staff on conducting CT and successfully identified surge support for its CT efforts.

During the COVID-19 Pandemic, collaboration among various public health programs played a pivotal role in responding effectively. Personnel from all County departments joined forces as contact tracers, resulting in improved coordination and strengthened relationships among colleagues from different departments. The once-existing silos were dismantled, fostering stronger connections between County departments and programs.¹⁷

The CI team within the SPH demonstrated exceptional efficiency by swiftly developing comprehensive training for CI. This training initiative encompassed the entire County, extending to departments such as the County Administrator's Office (CAO) office and the Sheriff's department, with an invitation extended to anyone willing to contribute to the collective effort. This inclusive approach ensured a unified and comprehensive approach to CI across the region.¹⁸

¹¹ Stakeholder Interview

¹² Stakeholder Debrief

¹³ Stakeholder Interview

¹⁴ Stakeholder Debrief

¹⁵ Solano County. Solano County Public Health division earns NACo Achievement Award for the Integrated Long-Term Care Facilities (LTCFs) COVID Outbreak Response and Infection Prevention Education Program.

<https://www.solanoCounty.com/news/displaynews.asp?NewsID=2439&TargetID=1>.

¹⁶ Solano County. Solano County Public Health division earns NACo Achievement Award for the Integrated Long-Term Care Facilities (LTCFs) COVID Outbreak Response and Infection Prevention Education Program.

<https://www.solanoCounty.com/news/displaynews.asp?NewsID=2439&TargetID=1>.

¹⁷ Stakeholder Debrief

¹⁸ Stakeholder Debrief

Initially comprising a cohort of seven medical assistants from Family Health Services clinics, the CI/CT team received additional staffing support from the State. This assistance was facilitated through requests made to the MHOAC and the California Department of Public Health (CDPH).¹⁹ As a result, 30 individuals from the State joined the team, contributing to its effectiveness.

To facilitate the training process, SPH implemented a train-the-trainer program for CI/CT practices.²⁰ The State staff integrated with local staff, and the first cohort of 10 State workers participated in a buddy system. This training model allowed for the transfer of knowledge as the first cohort trained the subsequent cohorts. As the training effort expanded, staff members from various County Departments who expressed interest in supervising and supporting the training were reassigned from their usual roles to contribute to the training of all 300 individuals involved.²¹ Small cohorts consisting of 16-20 members were formed to ensure manageable training groups, further enhancing the training process.²²

The training and collaboration efforts exemplified a joint endeavor, with shared responsibility among the public health programs and departments involved. This collective approach recognized the significance of collaboration and the utilization of diverse expertise and resources to effectively respond to the COVID-19 outbreak.²³

Strength: The County empowered schools by providing training and support for internal investigations.

The County displayed strong support for students during their return to in-person schooling in March 2021, following over a year of remote learning. The County worked closely with schools, providing training programs and resources to enable independent investigations of COVID-19 cases.

Regular communication and meetings were established between schools and the County to foster collaboration and streamlined data sharing. Through the implementation of an electronic process, schools effectively shared information with the County, facilitating information exchange and coordination. These comprehensive efforts aimed to enhance the overall response, prioritize student safety, and ensure their well-being in Solano County.

The County received specific funds from the State dedicated to supporting schools. Although the County did not have a dedicated school case investigator, trained staff members were appointed to educate schools on conducting investigations and

¹⁹ Stakeholder Interview

²⁰ Stakeholder Debrief

²¹ Stakeholder Debrief

²² Stakeholder Debrief

²³ Stakeholder Debrief

reporting relevant information to the County. This grant-funded training and support aimed to alleviate the burden on the County and enable efficient cooperation between the local health jurisdiction and public schools.

Strength: The County was able to leverage its CI and outbreak teams to address additional socioeconomic needs that were exacerbated by the pandemic.

The County recognized that the COVID-19 pandemic not only posed health risks but also brought forth socioeconomic challenges, including food insecurity. The County took proactive measures to address this issue by establishing a partnership with local food banks. This collaborative effort aimed to support individuals and families who were facing difficulties in accessing an adequate food supply.²⁴

Through the CI and outbreak teams, individuals experiencing food insecurities were identified and referred to the partnering food banks for assistance. By leveraging the County's CI teams' existing networks and connections within the community, individuals experiencing food insecurities were successfully connected with necessary resources. The County provided 1,422 gift cards to 452 families and 337 boxes of non-perishable food items to eligible individuals.²⁵

Strength: The County's LTCF & Infection Control (IC) Team admirably handled pandemic-related challenges within LTCFs, promoting adaptability, effective communication, and staff recognition.

Throughout the pandemic, the County's LTCF & IC Team showcased an impressive degree of resilience, adaptability, and dedication within the facilities they served. Their tireless commitment to populations with vulnerabilities, including immunocompromised individuals, the elderly, and those with comorbidities, was admirable, managing to maintain essential services within these facilities despite the immense strain.²⁶

A notable achievement was observed in the case fatality rates among the County residential care facility residents from January 1, 2020, to February 2, 2022. Remarkably, the County's case fatality rate was consistently lower than the state's, standing at 7.4% compared to 8.9%. When analyzed further, a much greater difference was evident during the pre-vaccine period (January 1, 2020, to December 31, 2020), with rates at 6.9% for Solano and 10.9% for California. This achievement was attributed, in part, to the proactive efforts of the LTCF & IC Team. They worked closely with facilities, providing crucial assistance during outbreaks, delivering infection prevention training, education, and testing services.

Within the facilities, the LTCF & IC Team fostered a culture of continuous learning, particularly in infection prevention. Despite challenges posed by high staff turnover, the

²⁴ Stakeholder Debrief

²⁵ Stakeholder Debrief

²⁶ Stakeholder Interview

team displayed a remarkable adaptability, taking new guidance in stride and putting it into practice.²⁷ Their efficient organizational strategies led to a balanced workload distribution within the facilities, guaranteeing equitable access to care for all residents. Their resilience and determination, paired with their initiative in seeking assistance from County authorities, kept services within these facilities operational and efficient.²⁸

The team demonstrated flexibility in leveraging various communication platforms—like telephone, Microsoft Teams calls, and on-site education—to deliver essential updates about COVID-19 within these facilities. They committed to ensuring that everyone, regardless of their role or location, was informed.²⁹

In navigating through the crisis, the team's effective partnership with County authorities was instrumental. Their support in the form of infection prevention visits, outbreak mitigation assistance, and vaccine hesitancy outreach provided the LTCF & IC Team with the resources needed to understand the evolving situation better, leading to timely and informed care within the facilities.³⁰

Strength: The LTCF Team's adaptable educational sessions effectively addressed multilingual pandemic concerns in LTCFs.

The educational sessions implemented by the LTCF & IC Team across various facilities were noted by stakeholders as impactful, adapting to the unique needs of each audience. The team provided supportive materials, not limited to English and Spanish handouts, emphasizing infection prevention, especially during positive cases within their environment. The fact that these resources were intended for staff and administrators alike underlined the commitment to widespread information dissemination.³¹

The structure of these sessions was not rigid but adapted according to the technological resources and dynamics of each facility. Leveraging open group discussions, the facilitator nurtured an atmosphere of inclusivity, allowing individuals to express their concerns through anonymous questions on index cards, which were addressed openly, often encouraging further queries. The evolution of these sessions mirrored the timeline of the pandemic. Starting slowly in 2020, focusing on introductions and initial outreach, it transitioned into a period of high demand in 2021 and 2022, driven by the vaccine rollout, increasing questions, and the growth of relationships with various LTCFs.³²

Sessions offered opportunities for participants to voice concerns during a time of widespread fear, providing a sense of security and knowledge to better navigate their personal and professional lives. The empathy and expertise displayed by the team

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members instilled a sense of reassurance and empowerment among those attending these educational sessions.³³ The ability of the team to pivot the program to meet the unique needs of different language speakers, in particular Tagalog and Spanish, is another notable strength. Despite only having monolingual trainers initially, the team made strides to accommodate multiple languages by recruiting bi- and tri-lingual trainers, which resulted in a more inclusive educational program.³⁴

AREAS FOR IMPROVEMENT AND RECOMMENDATIONS

Area for Improvement: Pandemic-induced pressures in LTCF underscored severe staff burnout, turnover, and inadequacies in training and communication systems.

The extreme pressures exerted by the pandemic brought about substantial issues regarding staff burnout, turnover, and inadequate onboarding processes. Staffing shortages experienced by members of the LTCF & IC Team led to overworked employees, worsening burnout and diminishing the overall effectiveness of the facilities' operations. This was exacerbated by a lack of systematic organization, particularly noticeable in instances of key staff absence. While attempts were made to organize staff equitably, under such intense stress, there were missed opportunities for more efficient outreach and better staff management and support systems.³⁵

Moreover, a considerable reliance on contingent staff resulted in a fragmented and chaotic work environment. Despite efforts to ramp up the supply of trained healthcare professionals, there remained a significant shortfall.³⁶

Inconsistencies in communication, both within LTCFs and between managing entities, further hindered operations. Some facilities engaged in constructive and regular communication, while others primarily requested resources without adequately implementing the provided guidance. The constant evolution of guidance protocols added another layer of complexity, with many updates poorly communicated and untimely, adding to the staff's workload.³⁷

Finally, training programs at these facilities were insufficient, focusing mainly on preventing infection spread, rather than providing comprehensive patient care. There was a clear need for regular, updated training, especially regarding the use of PPE and understanding airborne vs. droplet precautions. While on-site visits by health educators were appreciated, these issues highlight the need for improvement in communication strategies and comprehensive staff training and support mechanisms.³⁸

³³ Stakeholder Interview

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Recommendation: Implement strategies to address staff burnout, such as ensuring adequate rest periods, promoting work-life balance, and providing mental health support.

Recommendation: Revamp the onboarding process to adequately prepare new staff members for their roles, which can improve their efficiency and integration into the team. Ensure training includes technical literacy among all participants, enabling them to effectively utilize online platforms even when outside of a traditional office setting.

Area for Improvement: Despite fostering open discussions, the LTCF & IC Team's educational sessions on infection prevention faced inconsistencies, a lack of robust framework, ineffective feedback collection, and operational inefficiencies.

The LTCF & IC Team's educational sessions on infection prevention at various LTCFs were tailored to each facility's needs, evolving with the pandemic's timeline. The team promoted open discussions and accommodated anonymous queries, providing a platform for attendees to express concerns, fostering reassurance and empowerment. An admirable effort was the inclusion of multi-lingual trainers to enhance inclusivity.³⁹

However, the sessions exhibited inconsistencies and structural lapses, with delivery methods varying due to resource constraints. Stakeholders suggested that reliance on group discussions may have marginalized some participants, and the use of index cards for anonymous questions did not completely rectify the issue. The sessions' frequency was irregular, reflecting a more reactive than proactive approach, and their effectiveness was often tied to the facilitator's charisma, indicating the need for a robust educational framework.⁴⁰

The sessions may not have addressed all significant concerns during the challenging pandemic period, and the informal feedback collection process raises questions about the success rate. The promotional strategy, primarily word-of-mouth, may have resulted in service provision gaps, and operational inefficiencies were likely due to the lack of a segmented team for data entry, vaccination, and appointment coordination.⁴¹

Recommendation: Establish a standardized structure for the sessions that is flexible to accommodate the unique needs of each facility, but robust enough to ensure that key topics are consistently covered.

Recommendation: Implement a more formal feedback collection process to accurately gauge the success and impact of the sessions. This might involve standardized surveys or facilitated feedback sessions.

³⁹ Stakeholder Interview

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Area for Improvement: The County lacked advanced systems for efficient data management and sharing.

During the COVID-19 response, the County faced challenges with its data management and sharing systems. The Epidemiology Unit relied on a physical whiteboard located in the office to track outbreaks in care facilities. This whiteboard provided essential information, including case numbers, fatalities, ongoing outbreaks, and designated staff members responsible for each outbreak. However, the physical nature of the whiteboard posed limitations as it could not be updated in real-time, and access was restricted to staff physically present in the office. These constraints hindered the effectiveness and reach of the tool, impeding timely information dissemination and accessibility for remote and off-site personnel, thus slowing the response time.⁴²

Recommendation: Invest in advanced data management systems that allow for real-time updates and remote accessibility to improve the efficiency of outbreak monitoring and data sharing during public health emergencies.

Recommendation: Seek opportunities to engage with other counties and the state to learn about and stay up to date with the technologies they are using, ensuring alignment with recent technological advancements.

Area for Improvement: The County's struggles to provide updated guidance in an ever-changing environment and the prioritization of high-risk groups for CT led to confusion for businesses and city partners.

During the pandemic, rapidly changing guidance from various governmental levels placed a heavy reliance on the County to communicate current federal and State regulations. Unfortunately, the County did not provide adequate guidance to city partners and private sector businesses regarding the management of employees exposed to the virus. The limitation in resources directed the County's CT efforts specifically towards those at the highest risk for severe COVID-19 complications, deprioritizing regular CT among relatively healthy, working individuals. This approach left employers to navigate IC and CT on their own, creating substantial challenges for businesses in implementing effective IC protocols and managing potential exposures within their organizations.⁴³

Recommendation: Enhance communication strategies on new guidance to ensure comprehensive and timely information is provided to private sector businesses and other stakeholders. Consider:

- Maintaining regular updates, clear explanations of the rationale behind the County's CI/CT approach

⁴² Stakeholder Interview

⁴³ Stakeholder Debrief



- Ensuring proactive engagement with stakeholders to address their questions and concerns.



TESTING

SUMMARY

At the outset of the response, the County promptly initiated a community drive-through testing program at the County Fair Grounds. This program was targeted towards individuals displaying symptoms or having known exposure to COVID-19. Subsequently, the County collaborated closely with local LTCFs, SNFs, and other healthcare partners. As part of this collaboration, the County efficiently distributed vital testing supplies to these facilities, ensuring their timely arrival. Furthermore, recognizing the importance of proper implementation, the County provided in-service education sessions for the staff within these facilities. This approach exemplified the County's dedication to facilitating testing accessibility and optimizing healthcare preparedness within the community.

The County also collaborated with public school districts to establish on-site testing clinics, providing training, education, and materials for mass testing capabilities in all public schools. The optimization of technology and dynamic scheduling ensured efficient testing operations. Strategically positioned testing sites in high-traffic areas improved accessibility and streamlined the testing experience for a broader population.

However, turnaround time for test results from private vendors was often lengthy, impacting isolation and quarantine guidelines. The prolonged wait for results led to challenges in effectively managing isolation and quarantine periods. The County also lacked a comprehensive testing plan for group homes and institutions, including correctional facilities and mental health institutions. While testing efforts were commendable in LTCFs, SNFs, and schools, testing in these settings presented unique challenges that hindered widespread availability.

STRENGTHS

Strength: The County worked with healthcare partners to provide testing supplies and other needed resources early in the pandemic.

The County took proactive measures to provide testing supplies to the residents and employees of the 11 LTCFs, SNFs, and other healthcare partners within their jurisdiction. On March 25, 2020, the County initiated the first delivery of PPE. Through coordination with the LTCFs and SNFs, the County ensured that supplies were efficiently delivered to their facilities, thereby reducing the risk of COVID-19 exposure. These essential supplies included antigen testing supplies and facemasks.⁴⁴

In subsequent efforts, the County maintained a commitment to prioritizing the healthcare needs of its residents. On May 15, 2020, the first allocation of Remdesivir, a promising

⁴⁴ Stakeholder Interview

antiviral treatment, was delivered. Additionally, on October 16, 2020, the County facilitated the delivery of Binax test kits, contributing to expanded testing capabilities within the community.⁴⁵

As the pandemic progressed and vaccine mandates began, polymerase chain reaction (PCR) testing became a requirement for those who chose to remain unvaccinated. The County stepped up to support the different facilities that required the PCR tests by setting up dedicated PCR testing sites, allocating additional staff and resources for testing operations, coordinating schedules, and communicating guidelines, ensuring timely reporting of test results, and offering guidance to the facilities in implementing effective testing strategies.⁴⁶

Strength: The County worked with its public school districts to provide training and supplies in support of on-site testing clinics.

When schools returned to in-person learning in 2021, the Public Health Officer, Dr. Matyas, worked with the schools to create standing orders allowing them to successfully obtain Clinical Laboratory Improvement Amendment (CLIA) waivers and conduct testing. The County provided the training, education, and materials to set up mass testing capability within all 106 public schools. Liaisons were established between the schools and the County as a strategic move to increase education and information sharing. This liaison not only encouraged open communication but also facilitated onsite testing for students, eliminating the need for off-campus travel. The convenience of having testing services within school grounds significantly amplified the likelihood of early detection and isolation of COVID-19 cases, thereby curtailing further transmission within the school community. Additionally, this collaborative approach proved invaluable in swiftly identifying cases in numerous schools, precluding more extensive outbreaks. The quick response system allowed immediate identification and management of cases, thereby ensuring the safety of the broader school community and preventing major disruptions to the learning process.⁴⁷

Strength: The County efficiently managed resources during the pandemic by streamlining nurse scheduling while expanding testing locations.

In order to optimize resource utilization and reduce manual paperwork, the County implemented an opt-in scheduling system through a digital platform for nurses working at testing sites. This technological solution streamlined the scheduling process, enabling nurses to review and select shifts that corresponded with their availability and skill sets rapidly and efficiently.⁴⁸

⁴⁵ Stakeholder Interview

⁴⁶ Stakeholder Debrief

⁴⁷ Stakeholder Interview

⁴⁸ Stakeholder Interview

The nursing teams, comprised of four nurses and a support staff member, were meticulously scheduled for each day. They were required to remain flexible, always ready to be dispatched to various locations as necessary. In addition, nurses had access to these digital calendars well in advance for them to sign up for specific shifts. The responsibilities included adhering to rigorous testing and vaccination schedules.⁴⁹ The digital platform was especially crucial as testing operations expanded to multiple locations. These included SNFs, the Vacaville Prison, and food processing plants experiencing outbreaks. Each location required a distinct strategy and adaptability.⁵⁰

The digital platform not only simplified administrative tasks but also significantly improved communication within the healthcare team responsible for testing. Real-time updates, notifications, and critical information related to assigned shifts or changes in the testing schedule were instantly accessible to nurses. This ensured they remained well-informed and closely connected with the broader healthcare team involved in testing operations.⁵¹



Figure 1. 2020 April Solano County Fairgrounds COVID-19 Drive-through Testing

As the initiative progressed, operations expanded to include the Solano Town Center and various OptumServe sites in collaboration with CDPH. These locations required additional staffing, especially during surge periods, calling for volunteers willing to work overtime and on weekends. The digital platform facilitated this process, making communication about availability and supervisor approval seamless.⁵²

By leveraging technology, Solano County achieved greater efficiency and coordination. This resulted in a smoother, more effective testing process, and was instrumental in the County's efforts to combat the pandemic and serve its community.

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Strength: The County strategically positioned accessible testing sites in high-traffic areas, ensuring a streamlined testing experience that effectively reached a broader population.

Solano County set up testing sites in easily accessible locations such as the fairgrounds, malls, local community centers, schools, and neighborhood parks to make testing services readily available to the public. This strategic positioning aimed to increase the likelihood of individuals seeking testing. The choice of high-traffic areas like malls maximized visibility and increased awareness about the availability of testing services.⁵³

The County testing locations were well-organized, providing a streamlined experience for individuals seeking testing. Clear signage, designated testing areas, and efficient registration and sample collection processes contributed to a smooth testing operation.⁵⁴

AREAS FOR IMPROVEMENT AND RECOMMENDATIONS

Area for Improvement: Testing protocols and limited local lab capability hindered timely result delivery and impacted quarantine/isolation guidance.

As testing availability evolved, SPH lab continually adjusted its testing, results, and reporting policies and procedures. The SPH lab aimed for a turnaround time of 5 days, while a private vendor had a significantly longer turnaround time of several weeks early in the pandemic- both options creating challenges regarding isolation protocols. Despite PCR testing being more accurate than antigen testing, slower results did not align with the necessary isolation and quarantine guidelines. This became a frustrating challenge in ensuring the safety and well-being of individuals.⁵⁵

Specifically, a PCR test processed through the SPH lab would typically take 4-5 days to receive results, while the private vendor's test could take up to 3 weeks.⁵⁶ By the time results from the private vendor arrived, either additional tests had been conducted, leaving individuals waiting for results, or the previously positive test would no longer be relevant as it fell outside the 10-14 day isolation and quarantine window, depending on the prevailing guidance at the time. As a result, it sometimes became more practical to advise people under investigation to isolate themselves for the entire 14-day window and then resume their daily activities. Similarly, partner organizations faced challenges in

⁵³ Stakeholder Interview

⁵⁴ Stakeholder Interview

⁵⁵ UMass Chan Medical School. What's the difference between a PCR and antigen COVID-19 test? November 9, 2021. <https://www.umassmed.edu/news/news-archives/2021/11/whats-the-difference-between-a-pcr-and-antigen-covid-19-test/#:~:text=Antigen%20tests,-Rapid%2C%20accurate%20tests&text=PCR%20tests%20are%20accurate%20but,trigger%20the%20generation%20of%20antibodies>

⁵⁶ Paramount Home Senior Living AAR

adapting their policies and procedures due to the constantly changing guidance, often resulting in implementing updates that quickly became outdated once again.⁵⁷

As the response efforts progressed, the increased availability of reagents played a pivotal role in significantly enhancing the efficiency of SPH lab's in-house COVID-19 testing procedures. This improvement in reagent supply led to a reduction in the testing timeline to approximately 1-2 days. Furthermore, as reagents became even more accessible, SPH lab successfully shortened the testing process to just 24 hours or even less.

Recommendation: Explore opportunities to expand laboratory capacity for the area. Consider:

- Creating vendor agreements or Memorandums of Understanding (MOUs) with multiple laboratory contractors for backup options during future testing surges.
- Prioritizing laboratory contractors to engage in the event a surge has inundated the respective labs' capacity.

Areas for Improvement: The County lacked a testing plan for group homes and institutions.

Despite the County's commendable efforts in ensuring access to testing for specific groups such as LTCFs, SNFs, schools, and County staff, testing in group homes and institutions, such as correctional facilities and mental health institutions, was not as widely provided.⁵⁸ Testing in correctional facilities and mental health institutions presented unique challenges that hindered the availability of testing services in these settings. The nature of these facilities, with strict security protocols and dense populations, required tailored approaches to ensure the safety and effectiveness of testing. The County faced difficulties in providing testing services to these institutions due to the need for specialized logistical arrangements, coordination with facility administrators, and addressing potential barriers related to security and privacy concerns.⁵⁹

Lack of widespread testing in correctional facilities and mental health institutions heightened the vulnerability of residents to COVID-19. This vulnerability was exacerbated by factors such as underlying health conditions and limited access to healthcare resources.⁶⁰

Recommendation: Develop tailored testing protocols in correctional facilities and mental health institutions. Consider:

- Developing specific testing protocols that address the security, privacy, and logistical considerations of these facilities to protect the public health of the County.

⁵⁷ Stakeholder Interview

⁵⁸ Stakeholder Interviews

⁵⁹ Stakeholder Interview

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- Collaborating closely with facility administrators, healthcare providers, and relevant stakeholders to ensure that testing strategies are designed to meet the specific needs of the population in those settings.
- Address and rectify the existing issues related to policies and systems within correctional facilities and mental health institutions to ensure coherent and effective operations.

VACCINATION

SUMMARY

The County demonstrated a commitment to equitable vaccine access by establishing vaccination clinics in a variety of location types, including pop-up clinics at job sites, religious institutions, and community centers. The County also deployed mobile vaccination units to reach underserved populations, such as those in assisted living facilities (ALFs) and agricultural centers. Leveraging technology, The County effectively communicated vaccination clinic information through text messaging systems and utilized online platforms like Eventbrite for appointments and tracking attendance. The County's use of pre-existing volunteers, with groups like California Health, Medical Reserve Corps (MRC), and Touro University, to staff vaccination sites showcased their resource management and community mobilization capabilities. Volunteers played a crucial role in supporting the operational flow and maintaining safety protocols at the vaccination sites.

However, the vaccination distribution plan was not entirely successful in providing access to geographically underserved regions and marginalized communities, resulting in disparities in vaccination rates. Additionally, the systems used for appointment coordination were not equipped to handle the volume of requests, leading to difficulties in notifying applicants and updating medical records. Transportation hurdles also emerged as a significant barrier to vaccination access, particularly for individuals without personal vehicles

STRENGTHS

Strength: The County implemented various strategies to ensure equitable vaccine access and accommodate different populations, ultimately increasing vaccination accessibility and addressing logistical challenges.

With the arrival of the COVID-19 vaccine, there was a high demand that necessitated careful logistical coordination to ensure the distribution of the initially limited quantities. Solano County responded by implementing vaccination clinics and distribution efforts across various locations, aiming to ensure equitable access to the vaccine. These efforts included establishing permanent vaccination sites as well as organizing pop-up clinics at job sites, churches, synagogues, and temples. By setting up these accessible and safe spaces within the community, the County aimed to cater to the diverse needs of its population.

Additionally, Solano County established a large-scale vaccination site at the County Fairgrounds, which had the capacity to serve 5,000 individuals daily.⁶¹ This site became a crucial hub for administering vaccinations to a significant number of community members. To address the challenge of reaching individuals who had difficulty accessing vaccination sites, the County launched an at-home vaccination program. Strike teams were deployed to provide vaccinations to those who were unable to visit established sites.⁶²

Recognizing the unique needs of certain groups, the County deployed mobile vaccination units throughout the region. One unit specifically focused on visiting agricultural centers and farms, offering vaccinations to individuals who had limited time to travel to vaccination sites.⁶³ Other mobile units were dedicated to underserved populations, such as ALFs and LTCFs, ensuring that residents in these communities received the vaccine without facing barriers to access.⁶⁴

In response to the specific needs of the agricultural worker community, SPH launched Farm Clinics. These clinics primarily operate on weekends, a decision informed by the community's availability, but which also presented logistical challenges, notably limited staffing. To address this, it became crucial to implement an efficient vaccination process. The Moderna vaccine proved advantageous for this setting. Unlike the Pfizer vaccine, which demanded ultra-cold storage and an intricate reconstitution process, Moderna's vaccine was compatible with standard refrigeration. This not only reduced the need for specialized equipment but also streamlined the entire vaccination procedure, a significant factor considering the limited staff on weekends. Furthermore, the 4-week interval between Moderna's doses aligned well with the weekend-based operations, allowing for flexibility in scheduling and ensuring consistent second-dose appointments. When the Johnson & Johnson vaccine received authorization, its single-dose efficacy presented another viable option, especially for individuals who were facing difficulties in returning for a second dose. Recognizing this, Farm Clinics expanded their vaccine options to include both Moderna and Johnson & Johnson vaccines. This addition reaffirmed the County's commitment to ensuring vaccine accessibility and accommodating the preferences of all community members.

Strength: The County leveraged digital tools and systems to improve the accessibility and convenience of the vaccination process.

In early 2021, as vaccine availability increased, Solano County introduced a text messaging system to notify individuals about their eligibility for vaccination, which proved to be an effective communication method. Additionally, in recognition of the fact that

⁶¹ Stakeholder Interview

⁶² Stakeholder Debrief

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not everyone had access to online sign-ups, particularly the elderly population, the County repurposed its existing hotline, initially established for COVID-19 inquiries, to receive calls from individuals seeking to schedule their vaccination appointments. This proactive approach ensured that individuals without computer or internet access could still easily schedule their appointments through a dedicated phone line, promoting equitable access to vaccinations for all members of the community.⁶⁵



Figure 2. 2021-2022 SPH Website – Reporting page

campaign. It excelled as a tool for managing vaccination appointments by providing an easy-to-use interface for both organizers and attendees. Its real-time updates ensured that everyone who booked an appointment received their scheduled vaccinations, significantly reducing missed opportunities. Eventbrite's robust attendance tracking feature facilitated the monitoring of who showed up for their vaccination appointments, contributing to accurate record-keeping. These features of the platform were instrumental in enhancing the effectiveness and efficiency of the vaccination process.⁶⁶

To streamline the appointment scheduling process and track attendance at vaccination sites, Solano County leveraged the use of Eventbrite. Eventbrite, a widely recognized event management and ticketing website, played a vital role in the vaccination

Strength: The County enlisted volunteers to bolster and manage vaccination sites.

The County adeptly leveraged its community resources by actively recruiting and coordinating MRC volunteers to fulfill diverse roles at the vaccination sites. Volunteers' duties ranged from assisting with registration processes to handling logistical aspects of the sites, contributing to the overall efficiency and smooth functioning of these sites. The County's management of these volunteers resulted in a seamless operational flow, minimizing delays, and enhancing the overall vaccination experience for community members.⁶⁷

Solano County made safety its top priority at these vaccination sites. With efficient management and dedicated volunteers, the County ensured that the sites remained

⁶⁵ Stakeholder Interview

⁶⁶ Stakeholder Debrief

⁶⁷ Stakeholder Debrief

secure and strictly followed safety guidelines. As a result, community members could comfortably receive their vaccines in a safe environment.⁶⁸

Strength: The County's collaborations with the Department of Agriculture and healthcare professionals effectively addressed vaccination accessibility issues for farmworkers and individuals with special needs.

Working closely with the Department of Agriculture, the County was able to engage with and address the unique needs of farmworkers, a demographic that faced difficulties in accessing vaccinations due to barriers such as transportation, work schedules, and language. By delivering vaccines directly to these individuals, the County ensured that these critical workers were protected, thereby promoting the continuity of the agriculture sector amid the pandemic.

The partnership with doctors, hospitals, and healthcare providers was also essential in this effort. Their professional expertise, knowledge of patient needs, and logistical capabilities greatly facilitated the planning and execution of vaccine distribution strategies. This collaboration enabled the County to reach populations with AFN, including individuals with disabilities or chronic conditions, older adults, and those without reliable transportation or internet access for booking appointments.

Strength: The County, in collaboration with Touro University, led a successful vaccination initiative at the port of Benicia by delivering efficient and safe vaccination services to incoming vessel crews.



Figure 3. Touro University Team at the port

Solano County and Touro University effectively collaborated to establish a vaccine initiative at the port, showcasing professional cooperation and applied medical knowledge. The vaccine initiative was conceived in response to the County's request form for all incoming vessels in the Bay area, which requested information on the number of people on board and those desiring vaccination. This innovative response demanded extensive research, especially in circumstances where the County could not dispatch personnel directly.

Before the implementation of this initiative, only Emergency Medical Service (EMS) personnel were permitted on board, given the physically demanding nature of the work.

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However, this initiative brought a new approach. A compact team of 4-5 members, led by Dr. Fatima Hernandez from Touro University California, was assembled to undertake the task at the port. The team, comprising pharmacy and medical students and at least one licensed professional, was carefully selected to handle the challenging environment. Their primary duty was to board the vessels and administer vaccines to those in need. The complexity of this endeavor necessitated significant planning and coordination. The Touro team always had a first aid kit at their disposal, an essential safety measure in this exceptional circumstance. Although the undertaking was adventurous, safety was paramount, and the absence of any accidents or injuries underscored the team's preparedness and professionalism. The enriching experience fostered a sense of achievement and solidarity among the team members.⁶⁹

This initiative commenced in November 2021, servicing eight ships including auto delivery vessels and oil tankers. The team administered a minimum of 25 vaccines per ship. Due to uncertainties around their return for the second dose, there was a high demand for the Johnson & Johnson vaccine, which requires only a single administration. The team encountered no significant issues, and the onboard crews appreciated the convenience of being vaccinated before disembarking. The Touro team continued this initiative until December 2022, and despite not being in a traditional medical setting, they accomplished their goal efficiently and safely.⁷⁰



Figure 4. Touro University Team Vaccination at the Port. Source: Solano County

Strength: The County effectively responded to COVID-19 through successful resource management, partnerships, healthcare collaboration, and active involvement from the Board of Supervisors.

Solano County exhibited notable strengths and accomplishments in its response to the COVID-19 pandemic, particularly in the areas of resource management, partnership building, and coordinated response efforts.⁷¹ Key to these successes was proactive planning by the MHOAC who ensured that the County consistently had the resources it needed during a time when many hospitals and suppliers faced shortages. This planning was complemented by the remarkable management of vaccine distribution, delivering

⁶⁹ Stakeholder Interview

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them to various locations, including some that were previously unknown to the County logistics staff. This effective distribution met immediate needs and fostered new partnerships with community outreach groups and other service providers.⁷²

The Healthcare Coalition (HCC) played a pivotal role in orchestrating pandemic response efforts across Solano County. Through regular meetings involving a diverse array of stakeholders, the HCC cultivated a culture of open communication and collective problem-solving. This concerted approach improved the County's immediate response and contributed to the development of a clearer protocol for future emergencies.⁷³

The crisis also precipitated a shift in the attitudes of some organizations, particularly Skilled Nursing and Intermediate Care Facilities (SNIFS). These facilities, initially preferring to operate independently, came to recognize the benefits of County support during the crisis, thus enhancing their willingness for collaborative work.

The HCC's role was also pivotal in fostering a spirit of unity among different healthcare providers. This was exemplified in the organization of a large-scale County clinic at the Valejo fairgrounds, which required unprecedented cooperation among different hospitals and even brought in assistance from SNIFS. This level of collaboration underscored the strengthened relationships and mutual reliance born from the crisis.

Additionally, the County's Board of Supervisors demonstrated an impressive level of involvement and interest in pandemic response procedures. Their active participation, which included visits to clinics and operational sites, allowed them to gain firsthand perspective on the day-to-day efforts of the County's response team. This high level of engagement from the board provided moral support and led to more informed decisions at the supervisory level, positively impacting the overall implementation of response measures.

AREAS FOR IMPROVEMENT AND RECOMMENDATIONS

Area for Improvement: The County grappled with staffing constraints, decentralized storage, unique vaccine storage needs, and physically taxing tasks leading to injuries and hindering response efficiency.

The increased demand for hard goods and specialized supplies during COVID-19 necessitated a more organized, centralized, and efficient logistics management system. The County faced staffing limitations, with existing staff members taking on a multitude of responsibilities including attending strategic meetings, planning vaccine distributions, and managing the receipt and delivery of PPE and vaccines. Despite the pressing need,

⁷² Stakeholder Interview

⁷³ Stakeholder Interview

the ability to expand the workforce was hampered due to restrictions on state funding usage.⁷⁴

Storage and inventory management presented another complex challenge. The absence of a centralized storage system led to vital resources being distributed across multiple locations, such as the Administrative Support Bureau (ASB) storage area, additional spaces in a nearby building, a site in Vallejo, and the repurposed Kaiser Building. This scenario necessitated intricate inventory tracking and frequent commuting between these locations, creating a challenging logistical maze and leading to inefficiencies in the distribution process.⁷⁵

Further complicating the logistics process, the County initially did not have the required deep freezers to store the vaccines at the necessary temperatures, resulting in reliance on Kaiser's freezers and dry ice. Over time, state mandates required the use of specific coolers and thermometers for vaccine transport, necessitating procedural updates and additional equipment purchases. The logistics of vaccine delivery were further complicated by preferences from most facilities for thawed vaccines. This marked a significant change from the H1N1 pandemic, during which recipients came to the County facilities for vaccines. Due to a shortage of coolers and financial constraints at many private clinics and LTCFs the County team had to deliver the vaccines themselves, adding to their logistical responsibilities.⁷⁶

The County confronted physical challenges related to the reception, storage, and distribution of crucial PPE and testing supplies. The lack of ample storage space and the distance between the receiving and storage facilities strained the physical capacities of the staff. A notable example of this is the repurposing of an unused section of the Kaiser Mental Health building for storage, accessible only through a standard-sized door rather than a loading dock, further exacerbating the laborious process of unloading, transporting, and storing supplies.⁷⁷

As the pandemic progressed, the County found itself shouldering the responsibility of delivering dwindling supplies of state-provided PPE and vaccines to a variety of locations, including, in-home SNFs, LTCFs, hospitals, and clinics throughout the County. Many of these locations were previously unknown, thereby adding layers of complexity to the task.⁷⁸ The repetitive, physically taxing tasks took a significant toll on the team's well-being, resulting in a range of injuries, including back injuries and a torn rotator cuff. These issues

⁷⁴ Stakeholder Interview

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not only affected the staff's physical health but also hindered the overall efficiency of the County's pandemic response operations.⁷⁹

Recommendation: Enhance and centralize storage facilities. Consider:

- Investing in expanding and enhancing their storage facilities. The new storage areas should be centrally located to minimize transport time and effort and designed to easily accommodate large shipments. This might involve larger doors and loading docks, and space that allows for efficient organization of supplies.

Recommendation: Explore ways to streamline the supply chain management process by introducing inventory management software that can automate aspects of the process, reducing the time spent on manual tasks and minimizing errors.

Recommendation: Expand the Logistics Team to help distribute the workload more evenly, reduce the physical toll on individual team members and increase the overall efficiency of the process.

Area for Improvement: The vaccine initiative highlighted the need for sensitivity training in effectively reaching and serving historically underserved communities.

In the midst of the demanding vaccine initiative between Solano County and Touro University California, the Touro team recognized their gaps in effectively communicating with and reaching certain underserved populations, such as undocumented individuals and those experiencing homelessness. This realization served as an opportunity for growth, learning, and refining their approach.⁸⁰

With a commitment to enhancing their skills, the team undertook sensitivity training, enabling them to forge deeper connections with the diverse communities they aimed to serve. The training focused not only on empathetic communication but also on cultural nuances, respect, and building trust that may not be included as part of a traditional healthcare career training. It significantly influenced the team's interactions and their messaging.⁸¹

The team realized the importance of trusted messengers within these communities. They found that, particularly in the Latinx community, social networks are often considered more trustworthy than medical professionals. Consequently, they engaged with community influencers to disseminate reliable information, enhancing their outreach.⁸²

Sensitivity training also brought about operational changes that were both practical and symbolic. The team abandoned traditional medical uniforms, instead opting for plain clothes to bridge the gap between them and those they were serving. This decision,

⁷⁹ Stakeholder Interview

⁸⁰ Stakeholder Interview

⁸¹ Stakeholder Interview

⁸² Stakeholder Interview

grounded in cultural understanding, helped them present themselves as helpers rather than authority figures.⁸³

Learning and growth were iterative processes for the Touro team. Any inappropriate interactions observed were taken as signals to deepen sensitivity training, ensuring their approach always resonated with the community. Safety protocols and preparedness for worst-case scenarios remained central to their operations, reflecting their commitment to the people they served.⁸⁴

This valuable sensitivity training helped align medical initiatives with cultural understanding and empathy. Shifting from a sole focus on vaccination to community education demonstrated Touro University's adaptability to evolving community needs. This invaluable learning experience has further underlined the critical role of sensitivity and cultural understanding in public health interventions.⁸⁵

Recommendation: Implement sensitivity training as a standard practice for all staff engaged in community outreach across diverse and underserved populations. Consider:

- Including cultural competency components in the training that help staff understand the cultural dynamics (i.e., cultural norms, beliefs, and values) of the communities they serve.
- Incorporating language skills, non-verbal cues, and a people-centered approach to communication.

Area for Improvement: The County's lack of understanding and connections within underserved communities hindered vaccine distribution, resulting in lower vaccination rates among Hispanic/Latinx and Black/African American populations.

While concerted efforts were made to offer vaccination opportunities at various locations, accessibility to vaccines still proved to be a challenge in some underserved regions.⁸⁶ A significant factor contributing to this was the County's limited knowledge about existing points of contact within these communities, as well as a lack of established relationships with their leaders. This incomplete understanding of the distinct characteristics, needs, and structures of these underserved communities significantly hampered the effectiveness of the vaccine distribution strategies. Without established points of contact and strong relationships with community leaders, the County found it challenging to navigate these areas' unique logistical and social dynamics.⁸⁷ Such connections are often essential for understanding community-specific barriers to vaccination, such as transportation issues, language barriers, or distrust in healthcare

⁸³ Stakeholder Interview

⁸⁴ Stakeholder Interview

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⁸⁶ Stakeholder Interview

⁸⁷ Stakeholder Interview

systems. Additionally, without such insights, the County could not effectively tailor its communication strategies to address potential vaccine hesitancy or misinformation prevalent within these communities. Consequently, these gaps in understanding and connectivity resulted in less efficient vaccine distribution, leaving these underserved communities grappling with accessibility issues. The County dashboard provides a good representation of the vaccine distribution inefficiencies. For instance, as of September 2021, the vaccination rate among White residents was 71.3% compared to 58.6% in the Hispanic/Latinx and 60% in the Black/African American communities.⁸⁸

Recommendation: Initiate partnerships with trusted community providers in underserved areas ahead of emergencies. Consider:

- Emphasizing the importance of building trust with communities over time. This groundwork will ensure that when it's time to spread messaging, provide supplies, or administer services like vaccines, established trust within the community will facilitate these efforts.

Area for Improvement: The County encountered transportation challenges that widened gaps in vaccination access.

The County encountered transportation challenges that created significant gaps in vaccination access for certain communities. Following the shelter-in-place orders issued by Governor Gavin Newsom and the Solano County Office of Public Health, essential routes via Fairfield and Suisun Transit (FAST) were temporarily eliminated. With many residents lacking access to personal vehicles, reliable travel to vaccine clinics or testing sites became a challenge, leading to increased reliance on public transportation. Public transportation services were often insufficient, posing logistical challenges and creating additional financial burdens for individuals who needed to rely on taxis or rideshare services such as Lyft/Uber to access healthcare facilities.⁸⁹

On March 24, 2020, to address these challenges, the Solano Transportation Authority (STA) introduced an expansion to the Lyft First/Last Mile Program. This aimed to cover the eliminated FAST routes and provided an 80 percent discount on Lyft rides up to \$25 to and from local Solano County transportation centers, making vaccine clinics more accessible.⁹⁰ Despite its potential benefits, the program experienced limited uptake. Many residents lacked the necessary mobile devices or technological proficiency to use

⁸⁸ Solano County. Plan for Equitable Vaccine Distribution.

<https://www.solanoCounty.com/civicax/filebank/blobdload.aspx?BlobID=35895>

⁸⁹ Stakeholder Interview

⁹⁰ Solano Transportation Authority. STA Announces Expansion of Lyft First/Last Mile Program in Response to COVID-19. March 24, 2020. <https://sta.ca.gov/sta-announces-expansion-of-lyft-first-last-mile-program-in-response-to-covid-19/#:~:text=In%20order%20to%20support%20the,medial%20prescriptions%2C%20purchasing%20groceries%2C%20or>

the Lyft mobile application. Further, limited advertising efforts impacted the program's visibility, limiting its outreach and overall effectiveness.⁹¹

Additionally, some clinics offered transportation services for their patients, facilitating travel to and from their residences to vaccination clinics. However, this created a significant burden on clinic employees, who had to dedicate considerable time to sanitizing the vehicles after each use. This sanitization process not only introduced potential delays in the transport of patients to and from vaccine clinics but also required resource allocation that could have been utilized in core vaccine administration activities.⁹² Consequently, these transportation challenges further exacerbated geographical and socio-economic disparities in vaccination access.⁹³

Recommendation: Explore partnerships with local transportation providers to develop innovative solutions. Consider:

- Arranging free or subsidized transportation services specifically for individuals seeking vaccinations.
- Collaborating with rideshare companies or taxi services to alleviate the financial burden of transportation for those in need.
- Ensure that targeted efforts are made to keep the community well-informed and engaged with these programs, enhancing accessibility and participation.

Recommendation: Advocate for the expansion of public transportation options to ensure greater accessibility for individuals seeking vaccinations. Consider:

- Increasing the frequency and coverage of routes, especially in areas with high populations of low-income residents.
- Invest efforts in making public transportation more affordable and cost-effective.

Recommendation: Leverage existing community resources and organizations to help address transportation challenges. Consider:

- Collaborating with CBOs, non-profits, and volunteer groups to provide additional support in arranging transportation for individuals to vaccination sites.

⁹¹ Stakeholder Interview

⁹² Stakeholder Interview

⁹³ Stakeholder Interview



OPERATIONAL COORDINATION

SUMMARY

Throughout the response to the pandemic, the County effectively leveraged its pre-existing relationships to streamline communication and response actions. Key partnerships included those with LTCFs, SNFs, Travis AFB, and Touro University. The partnership with Medic Ambulance helped the County expand the scope of practice of its Paramedics, Emergency Medical Technicians (EMT), and Advanced Life Support-Registered Nurse (ALS-RN) units which alleviated pressure on local hospitals. Effective communication strategies were established with schools, including regular meetings with key stakeholders, weekly updates, and collaboration, ensuring a harmonious exchange of information, and creating a safe learning environment.

The County also adopted a proactive approach in securing PPE. They put in efforts to ensure a consistent supply, mitigating potential shortages and diversifying procurement sources. However, the response wasn't without its challenges. Contracting and procurement delays sometimes hindered resource acquisition, and issues such as staffing shortages, staff burnout, and a lack of succession planning affected the overall efficiency and staff's well-being. Stakeholders further indicated that the delayed integration of HCC organizations limited their understanding of the response status and resource needs, consequently affecting collaborative planning efforts.

STRENGTHS

Strength: The County proactively acquired PPE to stay ahead of the shortages that plagued the Country.

The General Services Department in Solano County demonstrated foresight and proactivity during the COVID-19 pandemic by anticipating potential shortages of critical supplies, such as disinfectants and sanitation supplies. Recognizing the importance of maintaining operations and ensuring a steady supply of necessary items, they took early action to order these supplies in advance.⁹⁴

Through early and proactive ordering, the General Services Department effectively secured and maintained an ample stock of essential supplies, such as PPE, disinfectants, and testing supplies, anticipating potential shortages and mitigating the risk of disruptions to operations. They demonstrated resourcefulness by actively seeking non-traditional vendors, like GoFundMe and Etsy, increasing their chances of obtaining required supplies even during high-demand periods and potential shortages. This adaptable procurement approach ensured a reliable supply of critical items for various departments and facilities

⁹⁴ Stakeholder Debrief

across the County. Additionally, the County engaged with vendors and partners to identify trends and stay informed about their directions, facilitating timely purchases before price increases occurred.⁹⁵

In their efforts to secure supplies, the department also demonstrated a willingness to think outside the box. They explored alternative options and ordered from non-traditional vendors, expanding the avenues and availability to procure necessary PPE and other supplies. This innovative approach allowed them to tap into different supply chains, reducing reliance on a limited number of vendors and diversifying their sources.⁹⁶

Strength: The County fostered situational awareness by engaging in active communication on multiple platforms with a range of partner groups, guaranteeing timely and pertinent response correspondence.

During the peak of the COVID-19 pandemic, the County conducted standing weekly meetings to address the emerging challenges and maintain situational awareness of the evolving situation. Recognizing the urgency and need for frequent communication, the County ensured that key stakeholders such as hospitals, clinics SNFs, board and care facilities, elected officials, school district representatives, and LTCFs came together regularly to discuss strategies, share information, and coordinate their response efforts.⁹⁷ These meetings served as essential platforms for decision-making, resource allocation, and collaboration among various departments and agencies.

As the emergency situation improved and the urgency subsided, the County adapted its meeting frequency to bi-weekly, enabling regular communication that aligned with the evolving circumstances.⁹⁸ During these bi-weekly calls, the Public Health Officer actively participated, ensuring accessibility for answering questions and providing timely updates to stakeholders.⁹⁹ Additionally, internal newsletters containing details about the meetings were distributed to relevant partners, facilitating the dissemination of accurate and current information. The proactive involvement of the Public Health Officer strengthened communication channels and fostered effective coordination with stakeholders. The County Epidemiology Unit was always available to answer questions and was able to provide guidance within two business days. Partners re-iterated that they were easy and knowledgeable to work with, which was critical for the success of Solano County's COVID-19 response.¹⁰⁰ Solano County also communicated regularly with its own internal staff. Daily CI/CT huddles were crucial in providing contact tracers and case

⁹⁵ Stakeholder Interview

⁹⁶ Stakeholder Interview

⁹⁷ Stakeholder Debrief

⁹⁸ Stakeholder Debrief

⁹⁹ Vista Prado AAR

¹⁰⁰ Stakeholder Interviews and Debriefs

investigators with up-to-date guidance, information, and resources for the individuals they would be talking to that day.¹⁰¹

Strength: The County's LTCF CORE Program provided congregate living facilities with crucial resources and guidance to mitigate the spread of COVID-19.

The County developed the Integrated LTCF CORE Program as a direct result of COVID-19 operational coordination. This award-winning program was specifically designed to address the needs of various congregate living facilities, including SNFs, memory care facilities, board and care homes, and similar establishments that primarily cater to elderly or disabled residents.¹⁰²

The LTCF CORE Program provided comprehensive support and resources to these facilities. It included on-site testing and vaccination services, ensuring that residents and staff could access these crucial healthcare measures conveniently. The program also offered guidance and assistance in infection and outbreak prevention and control. By providing valuable expertise and technical support, the program aimed to equip these congregate living facilities with the knowledge and tools necessary to effectively manage and mitigate the spread of COVID-19 within their settings.¹⁰³

Strength: Strong relationships between SPH Nurses and County schools ensured safety, provided education, traced contacts, and supported vaccinations.

During the COVID-19 pandemic, the collaboration between SPH Nurses and schools was essential in ensuring the safety and well-being of students, teachers, and staff. Public health nurses worked closely with school administrators and education officials to develop comprehensive guidelines and protocols for managing COVID-19 within schools. Dr. Matyas provided weekly COVID-19 updates to the schools on multiple platforms via phone and online, to implement any recommended adjustments to their specific response strategies.¹⁰⁴

SPH Nurses conducted health education sessions, both virtually and in-person, to promote healthy behaviors and prevent the spread of the virus.¹⁰⁵ Additionally, SPH nurses played a crucial role in testing and CT, identifying close contacts of confirmed cases, and implementing appropriate quarantine measures for those who tested positive.¹⁰⁶

As COVID-19 vaccines became available, SPH Nurses also assisted in organizing and providing support for the vaccination clinics. Through their collaboration, SPH Nurses and

¹⁰¹ Stakeholder Interview

¹⁰² Stakeholder Interview

¹⁰³ Ethical Issues Notes

¹⁰⁴ Stakeholder Interview

¹⁰⁵ Stakeholder Debrief

¹⁰⁶ Stakeholder Interview

schools worked diligently to monitor COVID-19 cases, adapt protocols, and ensure a safe learning environment for all.¹⁰⁷

Strength: Travis AFB, Solano County, and local healthcare institutions collaboratively managed the repatriate influx, ensuring safe transport, quarantine, and equitable patient distribution.

On January 31, 2020, Solano County was informed of two flights due to land at Travis AFB between February 5 and 6.¹⁰⁸ The AFB and County swiftly initiated a cooperative response to handle the expected repatriated individuals, effectively mobilizing local healthcare providers, the Department of Defense (DoD), and local authorities amidst limited knowledge about the novel virus.¹⁰⁹ The DoD, while facilitating housing for the repatriates, asserted that no medical treatment would be provided on the base, making interagency and governmental coordination crucial. These individuals needed safe transport from Travis AFB to local healthcare facilities, all while rigorously following isolation orders.¹¹⁰

The first flight, carrying 210 American evacuees from Wuhan, China, touched down on February 5.¹¹¹ The arrival marked the onset of a 14-day quarantine and signaled the base's significant role in managing the escalating COVID-19 situation. On February 6, another plane from China arrived for refueling before heading to Lackland AFB in Texas and then Omaha, Nebraska.¹¹² By February 7, additional American evacuees from China had reached Travis AFB.¹¹³



Figure 5. Travis AFB. Source: Solano County

Concurrently, the Diamond Princess cruise ship, anchored off Yokohama, Japan, grappled with a growing onboard health crisis with over 700 later testing positive for the

¹⁰⁷ Stakeholder Debrief

¹⁰⁸ EMS Interview

¹⁰⁹ EMS Interview

¹¹⁰ Stakeholder Interview

¹¹¹ EMS Interview

¹¹² ABC 7 News. Coronavirus Timeline: Tracking major moments of COVID-19 pandemic in San Francisco Bay Area. <https://abc7news.com/timeline-of-coronavirus-us-covid-19-bay-area-sf/6047519/>

¹¹³ ABC 7 News. Coronavirus Timeline: Tracking major moments of COVID-19 pandemic in San Francisco Bay Area. <https://abc7news.com/timeline-of-coronavirus-us-covid-19-bay-area-sf/6047519/>

virus.¹¹⁴ On February 16, a State Department flight carrying 300 U.S. passengers from the Diamond Princess cruise ship landed at Travis AFB for another round of 14-day quarantines. On March 2nd, the Diamond Princess cruise ship passengers were released from quarantine at Travis AFB.¹¹⁵ They were taken by bus to San Francisco International Airport as well as Sacramento International Airport to fly home.¹¹⁶

On March 9, the Grand Princess Cruise ship, with 21 confirmed COVID-19 cases among its approximately 3,500 passengers and crew, docked at the Port of Oakland.¹¹⁷ Disembarkation commenced, and local passengers were transported to Travis AFB for quarantine. During this period, they underwent daily COVID-19 screenings, received basic medical care, and were provided meals, appropriate quarantine activities, and eventual transportation to their final destination by the U.S. Department of Health and Human Services. Out-of-state passengers were flown to other quarantine locations, while foreign passengers were returned to their home countries.¹¹⁸

Despite formidable logistical challenges, the collaborative response from Travis AFB, Solano County, and local healthcare facilities like Kaiser, Sutter, and North Bay was crucial in handling the crisis. They efficiently dispersed the repatriates across various institutions, avoiding overburdening any single facility. Their collective endeavors maintained an effective patient care system during a time of limited understanding and resources, exemplifying the importance of interagency and governmental coordination in public health emergencies.¹¹⁹

¹¹⁴ California State University San Marcos. Diamond Princess crew and passengers to Travis Air Force Base. <https://together-apart.csusm.edu/omeka-classic/items/show/68>

¹¹⁵ ABC 7 News. Coronavirus Timeline: Tracking major moments of COVID-19 pandemic in San Francisco Bay Area. <https://abc7news.com/timeline-of-coronavirus-us-covid-19-bay-area-sf/6047519/>

¹¹⁶ ABC 7 News. Coronavirus Timeline: Tracking major moments of COVID-19 pandemic in San Francisco Bay Area. <https://abc7news.com/timeline-of-coronavirus-us-covid-19-bay-area-sf/6047519/>

¹¹⁷ Travis Air Force Base. HHS completes federal quarantine efforts for Grand Princess passengers at Travis AFB. <https://www.travis.af.mil/News/Article/2134053/hhs-completes-federal-quarantine-efforts-for-grand-princess-passengers-at-travi/>

¹¹⁸ Travis Air Force Base. HHS completes federal quarantine efforts for Grand Princess passengers at Travis AFB. <https://www.travis.af.mil/News/Article/2134053/hhs-completes-federal-quarantine-efforts-for-grand-princess-passengers-at-travi/>

¹¹⁹ EMS Interview

Strength: The County, through State-granted waivers, expanded Medic Ambulance services with ALS-RN units, improving patient care and reducing hospital burden.



Figure 6. Medic Ambulance. Source: Solano County

The County has a longstanding partnership with Medic Ambulance, the exclusive 911 ambulance provider in all the County.¹²⁰ Medic Ambulance in Solano County provides a range of services, including EMT/Basic Life Support (BLS) and Paramedic/Advance Life Support (ALS) care.¹²¹

During COVID-19, the County worked with the State to obtain waivers that expanded the scope of practice for EMTs and paramedics, allowing for greater flexibility in care provision. This included options for homebound care and transportation of COVID-19 patients.¹²² The

staffing of ambulance units with ALS-RN played an instrumental role to Solano County's COVID-19 response. These ambulance units provided optimal care and interventions during transportation of COVID-19 patients, making Solano County one of the first and only counties in California to have such resources.¹²³ This presence of ALS-RN units relieved pressure on local hospitals, enabling them to focus on more critical cases requiring specialized care.¹²⁴

Strength: Medic Ambulance and Solano County efficiently delivered COVID-19 vaccines to homebound individuals and nursing home residents through a strategic partnership.

Medic Ambulance in Solano County demonstrated impressive proficiency and adaptability in their COVID-19 vaccination efforts, specifically targeting homebound individuals and nursing home residents. Filling a significant gap in the healthcare sector, Medic Ambulance initially delivered between 500 to 800 vaccines per week, a number that was dynamic, fluctuating in response to the community's needs. They achieved this by providing a unique service, effectively reaching individuals unable to leave their homes due to health or physical restrictions. A warm line and a state website served as portals for individuals to express interest in receiving a home vaccination, a need which Medic Ambulance promptly addressed.¹²⁵

¹²⁰ Medic Ambulance. <https://www.medicambulance.net/>

¹²¹ Stakeholder Interview

¹²² Stakeholder Interview

¹²³ Stakeholder Interview

¹²⁴ Stakeholder Interview

¹²⁵ Stakeholder Interview

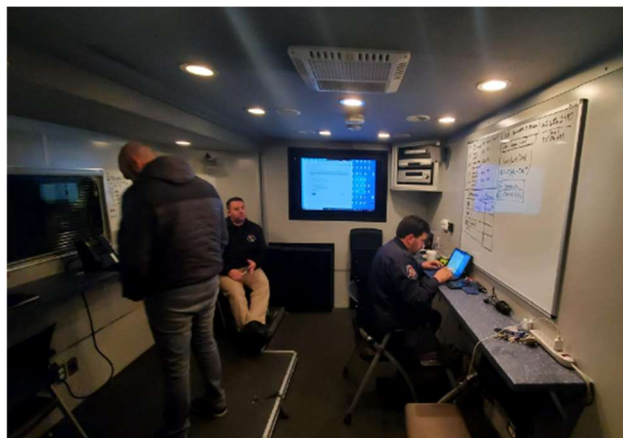


Figure 7. Medic Ambulance. Source: Solano County

This efficient delivery process was greatly aided by Medic Ambulance's strong partnership with the Solano County authorities. The County was quick to respond to equipment and vaccine requests, ensuring the vaccination program faced minimal to no delays. They handled vaccine storage with remarkable efficiency, using ultra-low temperature freezers and refrigerators to maintain vaccine efficacy, before handing them over to Medic Ambulance for distribution.¹²⁶

To ensure vaccines stayed within the recommended temperature range during transport, temperature monitoring was executed with diligence. Additional storage was facilitated at a refrigerator at Medic Ambulance's location, where temperature control was strictly adhered to.¹²⁷

The successful partnership between Medic Ambulance and the County authorities extended beyond the distribution of vaccines. The procurement of PPE, an essential requirement for safe vaccination, was handled efficiently. Medic Ambulance maintained its own stock of PPE and received supplementary supplies from the county. Significantly, the county's needle packages often included PPE gear and training materials, further strengthening Medic Ambulance's vaccination efforts.¹²⁸

AREAS FOR IMPROVEMENT AND RECOMMENDATIONS

Area For Improvement: Medic Ambulance experienced logistical and administrative challenges, including a lack of promotion for the homebound program, coordination for appointments, frequent changes in consent forms, data discrepancies, and complexities in vaccinating diverse populations with various vaccine protocols.

With high demand for in-home vaccines, confirming appointments required multiple calls and extensive coordination, an issue compounded by a shortfall in communication and public awareness. Requests from individuals who weren't genuinely homebound but sought the service for convenience added to the burden of an already strained system. Frequent changes to consent forms, accompanying the introduction of the bivalent vaccine and other alterations to vaccination protocols, added complexity. The lack of standardized guidelines for form filling and managing consent forms lacking signatures

¹²⁶ Stakeholder Interview

¹²⁷ Stakeholder Interview

¹²⁸ Stakeholder Interview

lines compounded the administrative load. Furthermore, each introduction of a new vaccine necessitated a new form, further complicating the process.¹²⁹

Data input into the California immunization registry was a significant task. Digitizing paper records and sending originals to the county added an extra layer of work, pointing towards the need for a more structured operations system, possibly involving segmented teams specifically for data entry, vaccination, and appointment coordination. However, the prospect of a fully digital system was welcomed, with the potential benefits of real-time access to updated forms and the inclusion of a digital signature feature, which could save time and reduce errors. There were also discrepancies between a patient's physical vaccine card and their data in the system, leading to confusion and misinformation among individuals seeking additional doses of vaccines.¹³⁰

The Medic Ambulance team demonstrated remarkable adaptability and efficiency in vaccinating diverse populations, including residents of SNFs and family members who showed up unexpectedly, as well as port crews. The team was committed to not wasting resources and ensuring all vaccine doses were used once a vial was open. Vaccinating port crews posed a unique challenge due to the diverse range of vaccines administered globally, requiring the team to rely on external public health authorities for guidance. Despite these challenges and the increased workload, their commitment to reaching their primary target audience remained uninterrupted.¹³¹

However, the lack of a reliable and consistent information source, such as a weekly newsletter from public health, CDC, or WHO, made staying updated with the rapidly changing situation difficult. Similarly, healthcare professionals faced complexities when determining whether individuals who had received vaccines not typically available in the United States should receive a second shot of vaccines like Pfizer, Moderna, or Johnson & Johnson. Despite these complexities, the team was able to lean on County resources to make informed judgment calls and ensure proper vaccination strategies were implemented.¹³²

Recommendation: Invest in surge staffing to support administrative needs such as outreach, appointment coordination, and data entry.

Area for Improvement: Contracting and procurement delays hindered the County's COVID-19 response by impeding resource acquisition.

The County encountered notable challenges in its response efforts due to the sluggish adaptation of processes, including contracting and procurement procedures. The pre-pandemic procedures were ill-equipped to handle the distinctive demands posed by a

¹²⁹ Stakeholder Interview

¹³⁰ Stakeholder Interview

¹³¹ Stakeholder Interview

¹³² Stakeholder Interview

crisis of the magnitude of the COVID-19 pandemic. As a result, the County faced delays in acquiring the necessary resources, supplies, and services needed to mount an effective response.¹³³

Lengthy approval processes, bureaucratic requirements, and lack of flexibility in the system hindered the timely acquisition of critical items such as testing supplies and medical equipment. The delays in procurement created bottlenecks and increased the strain on resources, impacting the County's ability to respond promptly and efficiently to emerging needs.¹³⁴

The procurement processes lacked established channels or frameworks for engaging with new vendors or suppliers, causing additional delays in sourcing essential items. The absence of pre-established contracts or agreements with trusted suppliers specific to emergency situations limited the County's ability to quickly procure necessary resources.

The slow adaptation of contracting and procurement procedures also affected the County's ability to secure cost-effective options and leverage bulk purchasing. The urgency of the situation necessitated the need for mass ordering of resources, but the lack of streamlined processes made it difficult to quickly access and distribute these supplies. This resulted in missed opportunities to procure resources in a timely manner and potentially increased costs.¹³⁵

Recommendation: Ensure staff are trained in appropriate ICS roles and able to support the response within the Finance and Administration Section, including procurement unit leader

Recommendation: Develop emergency-specific contracting and procurement guidelines. Consider:

- Creating guidelines and procedures specifically tailored to crisis situations like infectious outbreaks. These guidelines should prioritize agility, flexibility, and expedited processes to ensure the timely acquisition of essential resources.

Recommendation: Simplify and streamline approval processes. Consider:

- Establishing clear criteria, reducing bureaucratic requirements, and implementing expedited decision-making mechanisms.

¹³³ Stakeholder Interview

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Area for Improvement: The County's COVID-19 response was marked by burnout, staffing issues, and a lack of succession planning which impacted efficiency and staff well-being.

The County experienced significant burnout and staffing issues throughout its response to the COVID-19 pandemic. The demanding and prolonged nature of the crisis, coupled with rapidly changing circumstances, placed a heavy burden on healthcare workers and support staff. The absence of a well-defined succession plan resulted in confusion and delays in assigning responsibilities when personnel needed to move up in the organization or assume new roles. This lack of clarity gave rise to potential gaps in critical positions, adding strain to an already overwhelmed workforce and impeding the efficiency of the response efforts. The absence of a streamlined transition process and the necessity for ad hoc adjustments further intensified the stress and burden on individuals and teams.¹³⁶

The increased workload and prolonged crisis took a toll on the morale and well-being of healthcare workers. The continuous demands, long hours, and emotionally draining situations contributed to burnout, fatigue, and decreased job satisfaction. The lack of adequate support systems and resources to address the well-being of staff further compounded these issues.¹³⁷

Recommendation: Implement clear succession planning and ensure adequate support systems for emergency response workers. Consider:

- Creating well-defined protocols for assigning responsibilities in critical positions and preparing employees for potential role transitions.
- Developing just-in-time training to effectively prepare personnel to fill key roles within a response.

Recommendation: Expand the implementation of an incident command system for additional support/response functions to improve succession planning and enhance coordination for future endeavors.

Recommendation: Prioritize the well-being of emergency response workers through initiatives that help manage workload, provide emotional support, and foster job satisfaction. Consider:

- Implementing employee wellness programs, stress management training, flexible scheduling, and additional resources for personal and professional support.

¹³⁶ Stakeholder Interview

¹³⁷ Stakeholder Debrief

Area for Improvement: The County's delayed integration of HCC organizations limited its understanding of the response status and resource needs and hindered collaborative planning.

While the County had a valuable relationship with the MHOAC during the COVID-19 response, the initial stages of the pandemic saw notable shortcomings in integrating the organizations represented by HCCs into the County's response.

The County's delayed involvement with HCC organizations limited its understanding of the status of the response and the resource needs of different organizations in several ways. The HCC organizations possess valuable knowledge and experience in their respective areas of expertise, such as healthcare delivery, emergency preparedness, and resource management. By not tapping into this expertise during the early stages of the pandemic, the County missed intel and perspectives that could have provided a more comprehensive understanding of response activities.¹³⁸

Moreover, HCC organizations have developed extensive networks and connections within the healthcare community, granting them valuable insights into the resource requirements of various organizations. They possess valuable information regarding the availability of medical supplies, staffing needs, and specialized services. However, due to the delayed integration of HCC organizations, the County was deprived of this crucial information, rendering it difficult to accurately assess resource needs and allocate resources effectively.¹³⁹

The delayed involvement also limited the County's ability to engage in collaborative discussions and planning with HCC organizations. By not including them from the outset, the County missed opportunities for coordinated efforts, joint decision-making, and streamlined communication. This hindered the County's ability to have a comprehensive and real-time understanding of the response, including the evolving resource needs of different organizations.¹⁴⁰

Recommendation: Establish a proactive approach to engage and collaborate with HCC organizations. Consider:

- Involving HCC organizations in discussions, decision-making processes, and coordination efforts to leverage their expertise and networks.

Recommendation: Establish regular communication channels between the County and HCC organizations to facilitate timely information sharing, updates on response status, and resource needs. Consider:

¹³⁸ Stakeholder Debrief

¹³⁹ Stakeholder Debrief

¹⁴⁰ Stakeholder Debrief

- Conducting regular meetings, email updates, and designated points of contact for streamlined communication.

Area for Improvement: A lack of coordination in contracting between federal authorities and the County led to preventable patient transfer challenges.

During the early stages of the COVID-19 pandemic, the federal government selected NorCal Ambulance to transport repatriated individuals quarantining at Travis AFB in case they needed medical care. However, at the time, NorCal was not a permitted provider in the County. While the federal government has jurisdiction over Travis AFB, patients fell under the County's jurisdiction as soon as they left the base. This implied that any healthcare provider involved must meet the County's requirements, one of which was having the necessary permits to operate as an ambulance provider. In the County, Medic Ambulance held the exclusive rights for ALS transport, which was non-transferrable.¹⁴¹

Therefore, the federal contract with NorCal raised a significant issue. Despite working to expedite NorCal's permitting process to be a reliable partner to ASPR and serve the needs of the community, NorCal was categorically barred from providing ALS services. The situation was further complicated due to communication barriers. ASPR's contracting unit, responsible for the agreement, did not initially involve the County Operations Team or local authorities. This resulted in key jurisdictional and operational details being overlooked during the contracting process.¹⁴²

In light of these complexities, local authorities, federal agencies, and healthcare providers had to rapidly strategize to ensure patient care wasn't compromised. Medic Ambulance eventually took care of all ALS requirements, while NorCal was permitted to operate on a limited basis. After NorCal's short-term contract expired (approximately 30 days), ASPR contracted directly with the Department of Health and Human Services (HHS) contracted directly with Medic Ambulance.¹⁴³

Recommendation: Strengthen coordination and cooperation between federal agencies and local authorities. Consider:

- Explore opportunities to incorporate Solano County's processes and input into Federal agencies' practices, with an emphasis on enhancing efficiency.

¹⁴¹ Stakeholder Interview

¹⁴² Stakeholder Interview

¹⁴³ Stakeholder Interview

WORKFORCE RESILIENCE

SUMMARY

The County's response to the COVID-19 pandemic was characterized by the flexibility, adaptability, and resilience of its staff, who took on various roles and quickly transitioned to telework ensured the continuity of critical functions. The County made efforts to protect staff health and safety through policies such as telework, installation of physical barriers, and online service provision, although challenges and stress were present during the transition process. The level of recognition and support for staff that responded to the COVID-19 Pandemic did not meet industry-standards nor staff expectations, and there were limited incentives when compared to neighboring counties. For example, a Challenge Coin was given out to all those who worked the response. Traditionally, a Challenge Coin is used by the military to show affiliation to one's unit, to recognize going above and beyond, or to build morale and has special significance. Many staff members alluded to the token falling short of meaningful recognition for their multi-year sacrifice and dedication to the County and its response, with some noting that it had been used for a recent fire response and was not specific to the COVID-19 work. This sense was heightened when staff recognized that nearby counties and private organizations were recognizing staff with cash bonuses, standby pay, and the ability to purchase telework equipment such as computer monitors and ergonomic chairs.

Inadequate staffing levels and insufficient pre-pandemic training impeded the response efforts, resulting in backlogs, challenges in reallocating staff, and limitations in specialized positions. Behavioral health support for staff was not given adequate priority in the initial stages, necessitating improvements in self-care opportunities, stress management, and peer support.

Like many public health departments and healthcare systems across the world since 2020, the County experienced a large degree of staff turnover. Prior to the COVID-19 response, a few County staff had received training that prepared them for responding to a long-term health emergency. As staff left County employment, the workforce lost some individuals who were among the first to adapt and experience the COVID-19 response, highlighting the importance of building workforce resiliency to maintain preparedness for future responses.¹⁴⁴

¹⁴⁴ Stakeholder Interview

STRENGTHS

Strength: Staff across County Departments exhibited flexibility, adaptability, and resilience throughout the response.

As the COVID-19 response began, County staff willingly took on many roles under the emergency conditions to ensure critical response functions continued. Staff also worked to maintain “normal” County operations on top of their response roles, and many of these functions shifted to virtual platforms over time.¹⁴⁵ Staff across County Departments quickly transitioned to telework, which the County had not previously offered. This involved learning new technology platforms and navigating initial equipment shortages.¹⁴⁶ In addition, the County provided training to familiarize staff with the new telework technologies and better orient staff in the remote work environment.¹⁴⁷

County staff demonstrated a commendable culture of flexibility and adaptability, being willing to acquire new skills and take on roles beyond their regular job responsibilities to assist in various areas as needed during the response.¹⁴⁸ This culture proved essential not only in the County's successful response to the COVID-19 pandemic but also in effectively managing simultaneous emergencies such as historic wildfires.¹⁴⁹

Strength: The County rapidly implemented and updated policies to protect staff health and improve staff safety.

Throughout the pandemic, the County implemented many policies to keep staff safe, and staff adhered to those policies even in the later phases of the response that were characterized by COVID fatigue.¹⁵⁰ This included transitioning many public services to online or self-serve processes in County buildings, installing physical barriers and distancing markers in public spaces to limit opportunities for disease transmission, and pivoting many staff to telework.¹⁵¹

When the pandemic began, the County recognized the need to protect employee health and quickly pivoted to telework. However, the transition to teleworking involved a complicated approval process that introduced barriers and stress, such as the amount of paperwork involved and the review process for all of the telework agreements prior to telework being approved. Consequently, the County developed an updated, standardized telework agreement form that streamlined the approval process. The ability for employees to telework during the COVID-19 response improved work-life balance

¹⁴⁵ Stakeholder Interview

¹⁴⁶ Stakeholder Debrief

¹⁴⁷ Stakeholder Interview

¹⁴⁸ Stakeholder Interview

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¹⁵⁰ Stakeholder Interview

¹⁵¹ Stakeholder Debrief

and provided employees with the space and opportunity to prioritize their well-being and care for their families.¹⁵²

Strength: County HR and other administrative units supported staff needs to the extent they were able to within higher-level County policy.

Living through and responding to a novel disease pandemic caused fear and stress among County staff. The national context of negative political discourse and intense societal conversations about race also impacted County staff. As a result, HR increased efforts to serve a nuanced set of staff needs and expanded its offerings of trauma-informed training during the pandemic.¹⁵³

While County policy did not always enable HR to meet employee needs, HR and Payroll responded to staff inquiries in a timely manner and assisted staff in understanding new policies and guidelines.¹⁵⁴ HR also supported employees who needed to address childcare considerations such as remote schooling and worked with these employees to ensure they were able to meet both their work and home obligations under the unique circumstances imposed by the pandemic. HR sent frequent reminders to employees about the services offered by the County's Employee Assistant Program (EAP) to inform staff about tools and strategies for caring for their mental health.

AREAS FOR IMPROVEMENT AND RECOMMENDATIONS

Area for Improvement: The incentives and practices the County used to recognize staff who worked on the COVID-19 response did not align with staff expectations, given the amount of time and sacrifices they put into the response.

Some County staff members involved in the COVID-19 response expressed a sense of underappreciation for the significant time and effort they dedicated to the response effort. At the administrative level, the County made certain adjustments to leave and pay policies to acknowledge the impact of the response on employees. Prior to the enforcement of State and federal requirements for COVID Sick Leave, the CAO's Office decided to provide employees with "frontloaded" paid time off (PTO) and sick leave, which employees would later repay if utilized.¹⁵⁵ This policy affected staff leave accruals, and there was no option to decline participation, leading to frustration among many employees.¹⁵⁶

Staff reported receiving a challenge coin as a token commemorating their service to the community on the response but noted that the coin had been repurposed from a recent

¹⁵² Stakeholder Interview

¹⁵³ Stakeholder Debrief

¹⁵⁴ Stakeholder Debrief

¹⁵⁵ Stakeholder Debriefs

¹⁵⁶ Stakeholder Interview

fire response.^{157,158} As a result, the challenge coin was not a meaningful form of recognition to County staff, underscoring a feeling of underappreciation.¹⁵⁹

Recommendation: Identify potential strategies for recognizing all County staff who contributed to the COVID-19 response or other emergency responses.

Recommendation: Establish a workgroup to explore the feasibility of additional pay to staff working on future County emergency responses.

Area for Improvement: The County did not have sufficient staff to meet all the response needs, and many existing staff had not received sufficient training prior to the onset of the response to equip them for a substantial and prolonged effort.

The County's existing staffing levels were severely strained by the unprecedented demands of the COVID-19 response. This strain was particularly noticeable in areas such as CT , responding to media inquiries, and addressing public inquiries. To facilitate communication, the County implemented a "Warm Line" and the covid19@solanoCounty.com email account for the public to seek clarifications regarding the response efforts. Despite these measures, County staff often encountered significant backlogs of voicemails and emails due to the constraints imposed by limited staffing levels.

County staff were also affected by COVID-19 exposures and infections. This pulled staff away from the response as they had to quarantine or isolate.¹⁶⁰ In addition, supervisors and administrative staff found it challenging to re-assign County staff from normal roles to response roles. Paired with a hiring freeze during March through September 2020 and an HR Department with limited bandwidth, it was difficult for the County to find internal or external surge support for the response effort.¹⁶¹

Many existing staff did not have sufficient training prior to the pandemic to prepare them for a role as a disaster service worker (DSW).¹⁶² In an effort to spread the workload and minimize staff burnout, SPH rotated staff in and out of positions requiring less specialization. Still, because few staff had sufficient training to fill the more specialized positions, this practice could not be widely used.¹⁶³

In 2021, SPH took a proactive step by creating and distributing a comprehensive COVID-19 training guide, which aimed to equip staff with knowledge and tools for self-care and

¹⁵⁷ Stakeholder Debrief

¹⁵⁸ U.S. Department of Defense. The Challenge Coin Tradition: Do You Know How It Started? October 8, 2017. <https://www.defense.gov/News/Inside-DOD/Blog/Article/2567302/the-challenge-coin-tradition-do-you-know-how-it-started/>

¹⁵⁹ Stakeholder Interview

¹⁶⁰ Stakeholder Interview

¹⁶¹ Stakeholder Debrief

¹⁶² Stakeholder Debrief

¹⁶³ Stakeholder Interviews

stress management. However, despite this effort, feedback from the County staff indicated that the timing of the document's release was not optimal, as they felt it arrived too late to offer substantial help.¹⁶⁴ As a result, many County staff had little to no emergency response training prior to the COVID-19 pandemic, highlighting an opportunity for the County to prioritize regular training for all staff.

Recommendation: Develop a comprehensive emergency staffing plan that identifies potential roles and responsibilities during a health crisis.

Recommendation: Implement regular training updates for staff reminding them of the roles and responsibilities as County employees and DSWs, outside their standard job duties.

Recommendation: Review and implement telework strategies to enhance remote working capabilities and streamline approval processes. Ensure that individuals receive proper training on the telework process to facilitate smooth remote work experiences and create an electronic approval process to efficiently manage and authorize the ability to telework.

Area for Improvement: The County lacked a plan to expand its offerings and emphasize the prioritization of staff's mental health earlier in the pandemic.

As County staff resumed their usual roles, burnout and post-traumatic stress disorder (PTSD) symptoms experienced among the workforce became a long-term concern for workforce resilience.¹⁶⁵ Many employees involved in various aspects of the COVID-19 response endured prolonged periods of stress, and those with especially visible roles during the response encountered additional pressures. For example, staff who interacted with the public, such as those employees who staffed the "Warm Line" frequently faced strong emotions from the public. This often negatively impacted staff mental health.¹⁶⁶

The County had an EAP in place at the start of the pandemic, and HR worked to remind staff that this was a tool available to them throughout the response.¹⁶⁷ The Behavioral Health division also emailed about counseling and other behavioral health support services available to staff.¹⁶⁸ Towards the end of the pandemic, the County hosted some behavioral health workshops and sessions for staff through the EAP.

Staff did not have designated space or time to care for their mental health throughout the response, which made it difficult for them to take advantage of these resources.¹⁶⁹ Staff also did not receive adequate training on self-care and stress management prior to

¹⁶⁴ Stakeholder Interview

¹⁶⁵ Stakeholder Interview

¹⁶⁶ Stakeholder Debrief

¹⁶⁷ Stakeholder Debrief

¹⁶⁸ Stakeholder Debrief

¹⁶⁹ Stakeholder Debrief

or during the response. County staff also reported limited opportunities to share their experiences, highlighting an opportunity for the County to encourage and facilitate increased peer-to-peer support.¹⁷⁰

Recommendation: Leverage existing partners and the HCC to improve planning for supporting staff behavioral health during emergency responses.

Recommendation: Conduct regular staff debriefings during long-term responses in County emergency plans. This will allow space for staff to process events related to the response and help build camaraderie and resilience.

Recommendation: Invest in comprehensive training programs for staff to ensure they are well-prepared to address questions from the public regarding ongoing emergencies. This will foster transparency, accuracy, and confidence in public communications. Consider:

- Incorporating psychological first aid and de-escalation techniques into staff training. This enables staff to effectively respond to emotional and sensitive queries, ensuring a more empathetic and effective approach to public interaction while protecting staff.
- Offering trauma and mental health training to staff, especially those who are on the front lines dealing with distressed individuals. This training should encompass self-care strategies, allowing staff to maintain their own well-being while providing vital support to others.

¹⁷⁰ Stakeholder Debrief

PUBLIC MESSAGING AND COMMUNITY ENGAGEMENT

SUMMARY

The County demonstrated a strategic approach to public messaging and communication throughout the COVID-19 pandemic, utilizing a wide array of communication methods, including traditional methods like newsletters, as well as social media and social media messengers. To bolster its communication strategy, the County set up a dedicated call center referred to as the "Warm Line," a direct phone line that played a crucial role in providing reassurance and support to the community during the challenging times of the pandemic.

The County demonstrated a proactive approach to inclusivity and equity in its response to COVID-19. They established strong relationships and trust within diverse communities through collaboration with community organizations, religious institutions, and universities. In addition, recognizing the linguistic diversity within the community, the County created health education materials and press releases in three threshold languages, English, Spanish, and Tagalog, ensuring that critical information reached all community members.

However, limited staff and funding resources posed difficulties in disseminating timely and consistent messages, occasionally resulting in delayed information dissemination or overlooking certain communities. Additionally, reaching communities without access to traditional communication channels presented disparities in information distribution.

Technology challenges also affected the County's communication and engagement with the public. The County's Information Technology (IT) infrastructure demonstrated a lack of resilience and robustness when faced with the high traffic volume during the pandemic, leading to system crashes and service interruptions.

STRENGTHS

Strength: The County implemented a comprehensive and diverse communication strategy to ensure timely and accurate information dissemination to the public during the COVID-19 pandemic.

To address the various communication needs of its community, the County implemented multiple strategies for efficient and effective information dissemination throughout the COVID-19 response. Traditional methods, such as regular newsletters, were maintained for those who preferred them or lacked access to online resources, offering a reliable source of pandemic updates, recent changes to guidelines, and other vital news. The County successfully employed social media platforms like Facebook and Instagram to

provide daily updates, share resources, and combat misinformation. These social media posts reached a broad audience and facilitated the rapid distribution of crucial health advisories. The County capitalized on the immediacy of social media messengers, facilitating real-time public interaction and promptly addressing concerns, fostering a more robust engagement and ensuring access to the latest information. By harnessing multimedia content such as informational graphics and videos, the County simplified complex health data and pandemic-related information, making it more accessible and understandable to the public while fostering public compliance with health guidelines.¹⁷¹

In addition to these communication channels, the County established a dedicated call center referred to as the "Warm Line" for non-urgent COVID-19 related questions. This direct phone line provided the public with a means to seek guidance and clarification while allowing the County to monitor common concerns and misconceptions. The "Warm Line" played a crucial role in providing reassurance and support to the community during the challenging times of the pandemic.¹⁷²

Through these multifaceted communication strategies, the County actively disseminated timely and accurate information, equipping the public with the necessary knowledge to navigate the evolving pandemic landscape. These strategies included effective communication channels, town hall meetings, webinars, and calls with the Public Health Officer and experts, providing an open platform for dialogue and information sharing. Regular updates kept County staff, community partners, and the public well-informed, ensuring everyone had access to accurate and current information. By actively engaging stakeholders and maintaining constant communication, the County fostered a unified response to the pandemic, ensuring everyone remained informed and coordinated.¹⁷³

Strength: Members of the County Board of Supervisors collaborated with Black/African American leaders to address health disparities, counter vaccine hesitancy, and promote well-being through various initiatives including informative videos and discussions on chronic disease prevention.

In 2020, Erin Hannigan, then Chairwoman of the Board of Supervisors (BOS), and Wanda Williams, then Suisun City Council member (elected to the Solano County BOS in November 2022), collaborated to establish the Solano Health Equity Committee, known as the Hannigan-Williams Challenge. This initiative was driven by the aim to address health disparities prevalent within the Black/African American community, particularly in the wake of the COVID-19 pandemic. The committee was also dedicated to countering vaccine hesitancy. Comprising a dedicated team of Black/African American leaders from various domains such as churches, NAACP, National Coalition for Negro Women,

¹⁷¹ Stakeholder Interview

¹⁷² Stakeholder Interview

¹⁷³ Stakeholder Debrief

Black/African American sororities, community organizations, service clubs, and local neighborhood leaders, the committee united to identify obstacles in their community and take practical actions to enhance individual and community health. Notably, the focus extended to addressing vaccine hesitancy as well as the underlying chronic conditions contributing to unfavorable outcomes among COVID-positive patients, including heart disease and diabetes.

The efforts of SPH staff proved instrumental in supporting the projects. They facilitated a compelling video series featuring prominent figures from leading traditionally Black/African American medical schools, including Black/African American doctors, pharmacists, and a female Black/African American pharmaceutical executive, discussing strategies to combat vaccine hesitancy. Moreover, SPH staff spearheaded discussions with community leaders on topics encompassing vaccine safety, efficacy, prevention of chronic diseases like diabetes, nutrition, physical activity, lifestyle modifications, healthcare navigation, and effective communication with healthcare providers. These local leaders were encouraged to serve as community ambassadors, disseminating information across their respective spheres of influence.

Participation in the Hannigan-Williams Challenge yielded various activities. Some members initiated a walking challenge at the Solano Mall, gathering twice a week for physical activity and camaraderie. Others joined the local Diabetes Prevention Program, a collaborative effort by Touro University California and SPH. In January 2022, the Solano Health Equity Committee orchestrated a virtual screening of the documentary "Resilience: The Biology of Stress and the Science of Hope." This thought-provoking film spotlights innovators in pediatrics, education, and social welfare who employ advanced science and field-tested therapies to shield children from the pervasive effects of toxic stress. The virtual community screening underscored the significance of addressing adverse childhood experiences, highlighting the enduring impact of childhood trauma and its connection to chronic adult health conditions.

This collaborative endeavor serves as a testament to the dedication of community leaders and the SPH staff, working in unison to drive positive change, foster awareness, and cultivate health equity within the community.

Strength: The County prioritized inclusivity and equity through its outreach effort in responding to COVID-19.

The County actively prioritized inclusivity and equity by proactively reaching out to diverse communities, including farmworkers, ethnic and minority groups, and individuals with AFN. In addition, they established strong relationships and trust within these communities through collaboration with community organizations, religious institutions, and partnerships with Touro University.¹⁷⁴

¹⁷⁴ Stakeholder Interview

During the COVID-19 pandemic, the County forged a significant partnership with Aliados Health (formerly Redwood Community Health Coalition) to implement a Promotora Program, known for its grassroots approach to healthcare education and support.¹⁷⁵ This collaboration was instrumental in the County's pandemic response, bolstering the delivery of critical information and resources to marginalized and hard-to-reach communities. Promotoras' trusted community health workers, often from the same communities they served, played a crucial role in providing culturally appropriate health education, helping to bridge language barriers, and mitigating fear and mistrust about the pandemic and its countermeasures. This partnership not only strengthened the County's inclusive and comprehensive response but also underscored the vital importance of CBOs in public health crises, enhancing the overall resilience and health equity within the County's diverse population.¹⁷⁶

To ensure inclusive communication, the County developed health education materials and press releases in languages like Spanish and Tagalog, effectively reaching diverse community members. The distribution of translated advertisements on popular cultural TV stations, such as Telemundo and Filipino channels, along with engagement on Univision and Comcast platforms, local radio stations, podcasts, and physical distribution of informational papers, expanded the reach of critical COVID-19 messaging to residents who may not have accessed information through traditional channels. This comprehensive outreach approach aimed to promote public health measures and provide vital information to a diverse audience, acknowledging the linguistic diversity within the community.¹⁷⁷

Strength: The County maintained regular updates and information sharing with the community throughout the pandemic.

The County demonstrated a strong commitment to maintaining regular updates and sharing crucial information throughout the COVID-19 response. This proactive approach ensured that the community remained well-informed and had access to the most up-to-date guidance and resources.¹⁷⁸

The County Public Health Director and Officer, Dr. Matyas, played a central role in delivering regular updates to the general public. In addition, Dr. Matyas made himself accessible on calls where community partners could ask questions and receive accurate information. These updates were particularly valuable for community partners such as healthcare providers, enabling them to stay informed about evolving guidance and adapt their practices accordingly.¹⁷⁹ Town hall meetings and regular calls with

¹⁷⁵ Centers for Disease Control and Prevention. Promotores de Salud/Community Health Workers. <https://www.cdc.gov/minorityhealth/promotores/index.html>

¹⁷⁶ Stakeholder Interview

¹⁷⁷ Stakeholder Interview

¹⁷⁸ Stakeholder Interview

¹⁷⁹ Stakeholder Interview

community partners, such as hospitals and other organizations, were conducted to ensure information sharing and alignment. This perspective facilitated effective collaboration and coordination among various stakeholders involved in the COVID-19 response.¹⁸⁰

The emphasis on regular updates and information sharing not only kept the community informed but also fostered transparency and trust. The County reduced confusion and addressed concerns by delivering accurate and consistent messaging. The County's communication and information sharing played a crucial role in empowering individuals with the knowledge they needed to make informed decisions and take appropriate actions to protect their health and the community's well-being.¹⁸¹

AREAS FOR IMPROVEMENT AND RECOMMENDATIONS

Area for Improvement: While the County saw success in many facets of its engagement strategy, it was unable to reach all communities with timely and accessible messages.

The County faced limitations in terms of staff and funding, making it challenging to effectively disseminate a large volume of messages in a timely manner. Consequently, some communities were inadvertently overlooked or received information with delays. In addition, the insufficient staff capacity to handle the demands of pandemic communication posed a significant challenge in maintaining consistent messaging.¹⁸²

Reaching communities and individuals without access to traditional communication channels also posed a hurdle in community engagement. The County struggled to distribute clear and consistent information to populations that lacked access to television, radio, or the internet. This limited the County's ability to reach certain communities, especially those in rural areas or with limited connectivity. The lack of access to these traditional communication channels created disparities in information dissemination and hindered effective community engagement.¹⁸³

Another notable challenge was the dynamic nature of COVID-19 rules and information. Evolving guidelines from State, national, and global sources presented challenges for the Public Information Officers (PIOs) at the Joint Information Center (JIC). The PIOs had to navigate these rapidly changing rules and swiftly respond with appropriate messages, often without sufficient time for thorough preparation and planning. This time constraint made it difficult to maintain consistent messaging across all communication channels.

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¹⁸¹ Stakeholder Interview

¹⁸² Stakeholder Interview

¹⁸³ Stakeholder Interview

Recommendation: Allocate additional staff and resources to improve messaging consistency and ensure timely dissemination of vital information to target populations. Consider:

- Utilizing staff with public health emergency experience or health educators to review messages for consistency and understanding.

Recommendation: Explore alternative communication channels and develop strategies to reach communities without access to traditional media channels, such as rural areas or populations with limited connectivity.

Area for Improvement: Technology, infrastructure, and systems challenges impacted the County's ability to effectively communicate and engage with the public during the pandemic.

The County's IT infrastructure showed a lack of resilience and robustness when faced with the high traffic volume during the pandemic. For example, the website and phone systems struggled to keep up with high demand, causing system crashes and service interruptions that left residents frustrated as they sought crucial information and help. The County lacked a robust and reliable technological infrastructure required to handle the County's need for efficient pandemic response coordination, including handling appointment requests, distributing essential updates, and ensuring resource accessibility.

The County's website lacked compatibility with mobile devices and intuitive, user-friendly navigation features. This digital disconnect created a considerable hurdle in reaching individuals who primarily access information on the go through their smartphones. The outdated website also negatively impacted the user experience, making it difficult for website visitors to find and understand crucial information. As a result, this deficiency in the County's digital infrastructure not only limited access to essential information but also risked exacerbating disparities among those who were less able to navigate the complex or outdated website layout.¹⁸⁴

Recommendation: Enhance website usability and mobile friendliness to ensure that all community members can access important updates and resources. Leverage modern website designs and technologies to enhance user experience, facilitate information access, and align with current digital trends.

Recommendation: Seek ongoing technical support for website design to ensure support staff responsible for website updates have resources and training. This includes improving how information is presented, ensuring that it is received and understood, and promoting accessibility for all potential users' intended audience.

Recommendation: Address the incompatibility between the old and new systems by simplifying the process that the County must go through with IT. A comprehensive

¹⁸⁴ Stakeholder Interview

upgrade to the IT infrastructure is recommended to resolve existing inconsistencies and streamline functionalities.

Recommendation: Establish a system for emergency IT waivers that can be provided to employees. This will facilitate quicker approvals and decision-making during critical times, allowing for a more flexible and responsive operation.

Area for Improvement: Underdeveloped partnerships and internet connectivity issues in the County limited COVID-19 service delivery and access to crucial online resources in underserved communities.

The County's collaborations with CBOs and Federally Qualified Health Centers (FQHCs) were not fully developed. These organizations have established trust within their local communities and are well positioned to facilitate effective communication and service delivery. However, the County's incomplete partnerships with these organizations have resulted in limited outreach and accessibility to underserved communities, including those with low socioeconomic status, ethnic minorities, and rural populations.¹⁸⁵

The underdevelopment of these collaborations restricted the effective delivery of COVID-19 services, such as testing and vaccination, to marginalized communities. Without fully developed partnerships, the County was unable to utilize the resources and local knowledge these organizations provide effectively.¹⁸⁶

The County experienced difficulties with internet connectivity and device availability, notably in underserved areas. These issues restricted access to vital online resources, such as telehealth services, which had become even more crucial during the pandemic.¹⁸⁷

Recommendation: Build and maintain partnerships with trusted community organizations to improve community outreach. Consider:

- Increasing the capacity and resources of community health workers to effectively reach all target populations.
- Enhancing partnerships with CBOs and FQHCs to extend reach to isolated or marginalized communities.

Recommendation: Strategize initiatives to resolve issues related to internet connectivity and access to devices in underserved areas.

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CONCLUSION

Our community and our partners pulled together, our staff and those of our partners stepped up, and collectively, we saved lives.

- Dr. Bela Matyas

The COVID-19 pandemic was an unprecedented global crisis that posed immense challenges and demanded immediate, coordinated responses from countries, states, and localities. Solano County was not spared from this disaster but rose to the occasion, showcasing resilience, adaptability, and collaboration. This spirit, and this resilience, is what defines Solano County and its response to the pandemic. As this report concludes, it provides an opportunity to highlight strengths, acknowledge weaknesses, and draw from the experiences to better prepare for any future emergency.

One of Solano County's major strengths during the pandemic was its swift prioritization of the most vulnerable groups, especially those in congregate and long-term care facilities. The County recognized early on the profound risks the virus posed to these populations. As of July 2023, Solano County achieved a lower death per reported cases rate of 0.4% compared to California's rate of 0.9% and the San Francisco Bay Area's 0.5%.¹⁸⁸ This statistic alone is a testament to the efficiency of Solano County's strategy, which placed the well-being of its most susceptible residents at the forefront.

Furthermore, the operational successes of the County are manifold. Effective training for CT, adaptability within LTCFs, and a robust collaboration with healthcare partners ensured that the needs of the community were met promptly and effectively. The County's ability to maintain open communication with partners, leveraging technology for better accessibility, and its proactive stance on acquiring resources like PPE underscore its commitment to safeguarding its residents.

However, it is essential to identify and address the areas where challenges arose. While strengths were numerous, challenges such as data management inefficiencies, occasional inconsistencies in educational sessions, and an underestimation of staff burnout and turnover, among others, offer invaluable lessons. It is clear that the pandemic exposed gaps and deficiencies within Solano County's systems, some of which hindered the efficiency of the response.

¹⁸⁸ USA Facts. *California coronavirus cases and deaths*. July 2023.
<https://usafacts.org/visualizations/coronavirus-covid-19-spread-map/state/california/>



These challenges present opportunity for growth. As Solano County reflects on its experience, it must continuously seek to strengthen partnerships, enhance data sharing capabilities, improve training frameworks, and address infrastructure and logistical shortcomings. In addition, the County should invest in bolstering mental health resources and reevaluating staff recognition and incentive mechanisms. Such introspection and subsequent action will be crucial in ensuring that the County is better equipped for any future emergencies.

In conclusion, while Solano County demonstrated remarkable tenacity, teamwork, and effectiveness during the pandemic, it must embrace the lessons from both its successes and challenges. By doing so, the County will be best positioned to face any future crises head-on, with the confidence of having learned, evolved, and emerged stronger from its past experiences.

AAR Survey Results

As part of the multi-prolonged data collection approach for the Solano County COVID-19 AAR, the County, in partnership with CONSTANT, created and distributed three surveys.

- Internal Survey
- External Survey
- Community Survey

Approximately 269 stakeholders participated in these surveys (139 Health and Social Services Staff, 67 County Partners, 63 Community Members), identifying key strengths, areas for improvement, innovations, and recommendations that form the writing of the AAR and its recommendations.

In addition, all three surveys provided an opportunity for the County and community to provide valuable insights and feedback regarding the County of Solano's response to the pandemic.

All three surveys were created, approved by the County, and distributed to the intended audiences by April 11, 2023. The surveys remained open through June 21, 2023. The Internal Survey was distributed to Health and Social Services County employees who played significant roles in the COVID-19 response including members of the Office of Emergency Services, Public Health Department, and other EOC personnel. The External Survey was distributed to County partners including Emergency Management, CBOs, first responders, and LTCF who coordinated with the County during the COVID-19 response. The Community Survey was distributed at community events, libraries, via social media platforms, and other locations throughout the County.

Each survey asked a series of questions aimed at evaluating the County's response to COVID-19 using identified incident objects from County IAP's, alongside open-ended questions regarding strengths, areas for improvement, and space for open feedback. Throughout the data collection process, the County emphasized its desire for honest feedback regarding response activities and its sincere appreciation for the time and commitment given to the data collection process.

INTERNAL SURVEY

Overview

The County distributed this survey to 1,200 staff in Health and Social Services. The survey consisted of 38 total questions: one short answer question, 22 multiple choice questions, two rating questions, eight qualitative questions, and five additional questions directed at individuals who worked in the Department Operations Center (DOC). 139 individuals responded to the survey.

Summary

The survey results present a nuanced picture of the experiences and perceptions of Solano County employees during the COVID-19 response. Many respondents (48%) indicated that emergency response is not part of their usual role, and 33.09% confirmed they had not participated in emergency response training. This may explain why 59% of the respondents had not taken part in an emergency response exercise, drill, or workshop within the last five years, which in turn might have contributed to mixed feelings about the effectiveness of communication and situational awareness during the COVID-19 response operation.

Views regarding disruption of normal duties and responsibilities varied, but overall, 37% agreed and 8% strongly agreed that they had the necessary tools and resources to meet their role expectations during the pandemic. However, burnout was a significant issue, with 48% of respondents reporting feeling burned out from their participation in the COVID-19 response. This may be connected to the perception that mental and behavioral health resources were lacking, as only 23% agreed or strongly agreed that these were made available.

Support from immediate supervisors and Solano County leadership was perceived differently across respondents. A combined 42% agreed or strongly agreed to feeling supported by their immediate COVID-19 Response supervisor(s) during the pandemic response. In contrast, only 28% felt supported by Solano County leadership. This divergence in views may have influenced perceptions of the clarity of the policy decision-making process within the COVID-19 response, with only 21% agreeing or strongly agreeing that there was a clear process.

Regarding resource procurement and coordination, 37% of respondents agreed or strongly agreed that there was difficulty procuring the necessary resources to effectively respond to the incident. A combined 24% of respondents agreed or strongly agreed that Solano County effectively coordinated with other County departments, key stakeholders, and response partners throughout the duration of the incident. The roles and responsibilities during the COVID-19 response were not well understood by many respondents, indicating potential areas for improvement.

The County's ability to provide adequate support for people with disabilities and AFN was perceived negatively by a considerable number of respondents. For instance, only 25% agreed or strongly agreed that Solano County's response effectively addressed the needs of AFN individuals. Moreover, only 30% of respondents agreed or strongly agreed that they had adequate tools, resources, and training to support people with disabilities and AFN.

The most significant gaps identified in the survey included a perceived lack of prioritization of employee health, inadequate resources for non-English speaking communities, insufficient physical barriers to prevent spread, and conflicting messages from leadership. To address these gaps, respondents suggested hiring more full-time employees, investing in technologies for emergency response, providing emotional support, and improving communication.

Despite these challenges, there were also areas of strength. The strengths of Solano County's response included the implementation of teleworking, efficient mass vaccination, maintaining a supply of masks, and the response to outbreaks in long-term care facilities. For future preparedness, respondents suggested prioritizing disaster training and drills, training on new technologies, and training on how to handle Personal Health Information (PHI) and Personally Identifiable Information (PII) securely.

To maintain and strengthen relationships with other agencies, respondents suggested regular communication, resource sharing, conducting disaster drills together, and inviting them to County meetings. Additional thoughts shared by respondents highlighted the need for better support for employees, both in terms of County resources and emotional support.

Results

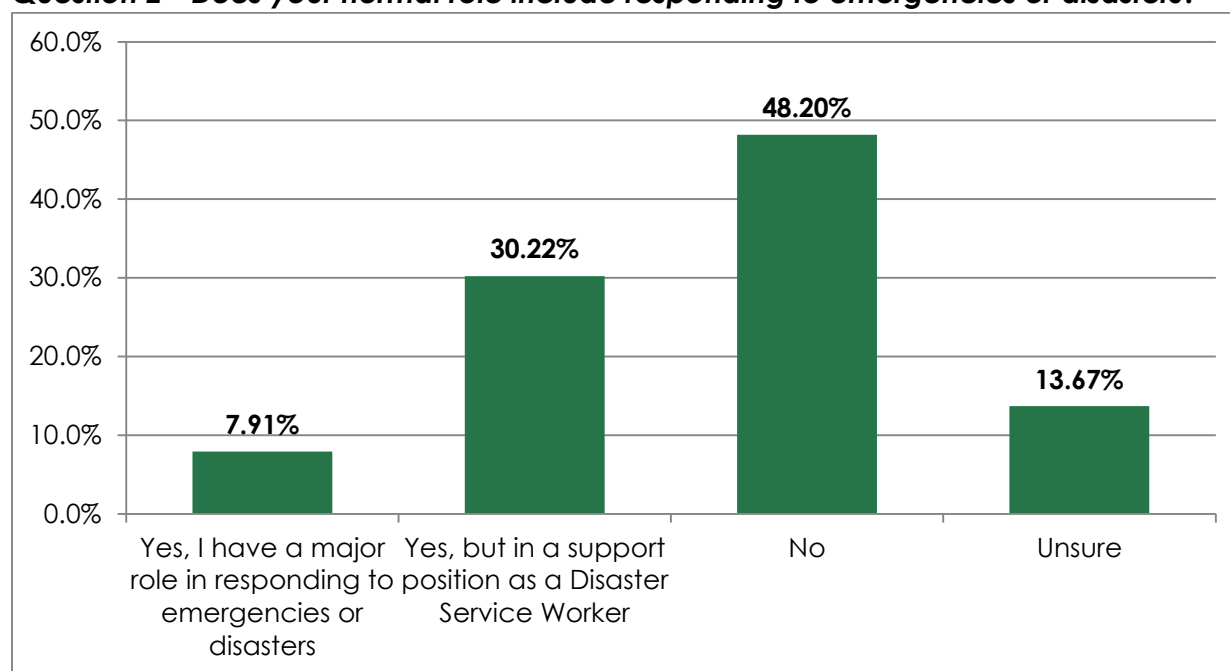
Question 1 - Please let us know which Solano County Department you work in.

Department	# of Responses
Administration	2
Behavioral Health	7
California Childrens Services	1
CalWORKs Intake and Continuing/E&ES	1
Child Welfare Services	12
Dental Dept	1
Employment and Eligibility	13
EPIC Bureau	1
Health and Social Services	73
Healthcare Coalition	1
Medical Services /Family Health Clinic	2



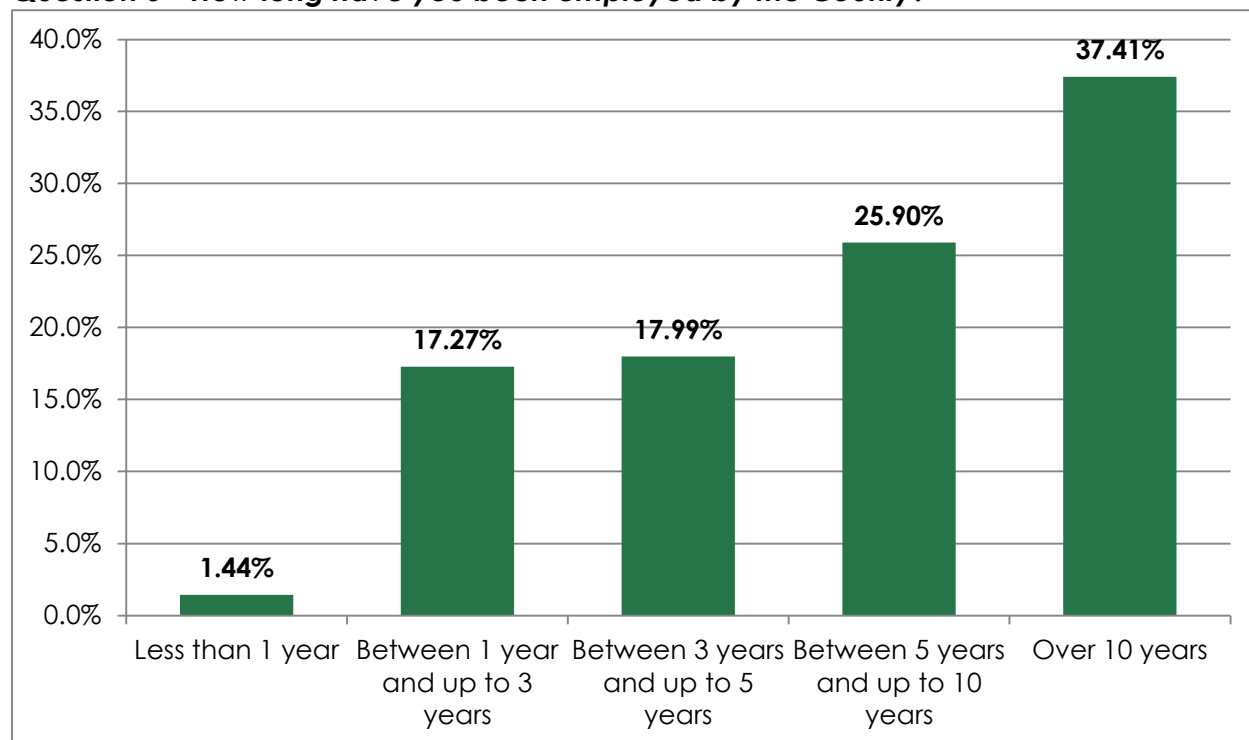
Mental Health	3
Nutrition Services	1
Older and Disabled Adults	9
Public Health	10
Special Investigations Bureau	2
Total	139

Question 2 - Does your normal role include responding to emergencies or disasters?

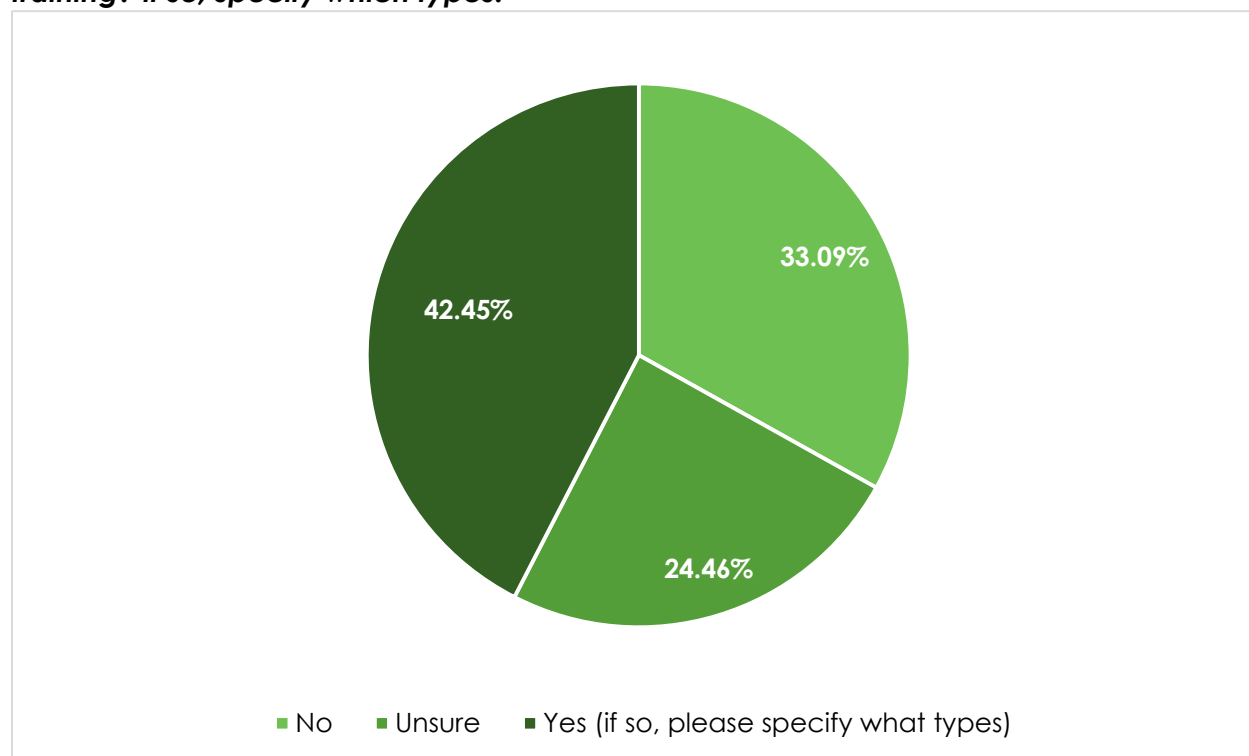




Question 3 - How long have you been employed by the County?



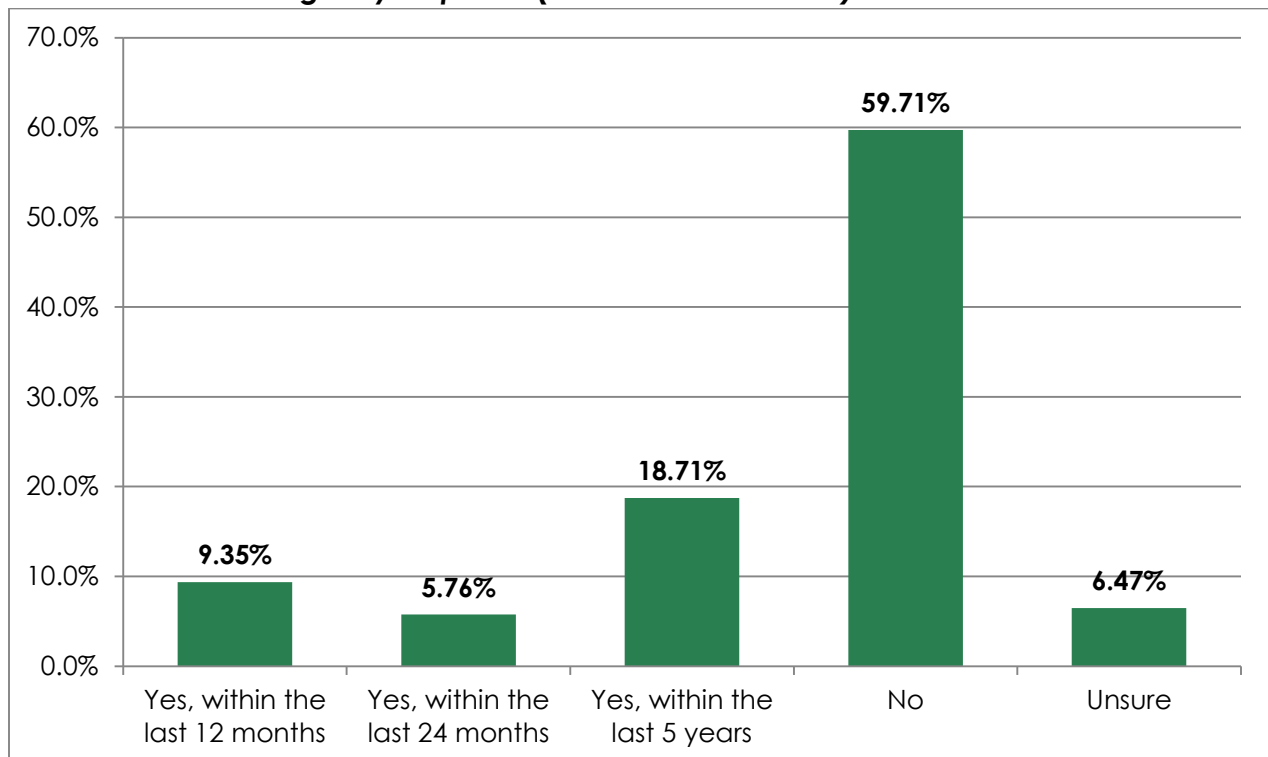
Question 4 - Have you participated in/been required to complete emergency response training? If so, specify which types.





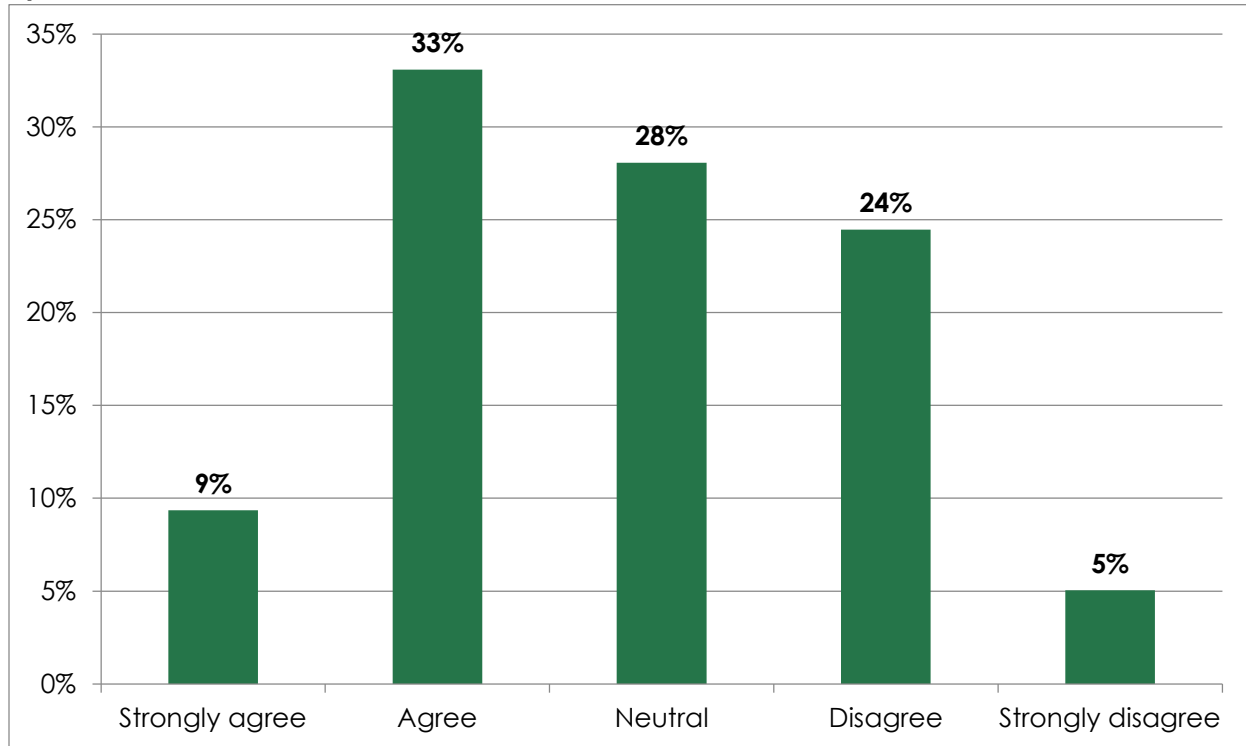
Training	# of Responses
5150 Training	2
Active Shooter	1
Child Welfare Services specific	1
COVID Response	2
CPR	4
Disaster Training	3
FEMA	6
ICS Training	5
NIMS	24
OES Training	1
Red Cross	1
Required Employment Trainings	7
SEMS	1
Yes, but don't recall	4

Question 5 - Have you participated in an emergency response exercise, drill, or workshop or a real-world emergency response (other than COVID-19)?

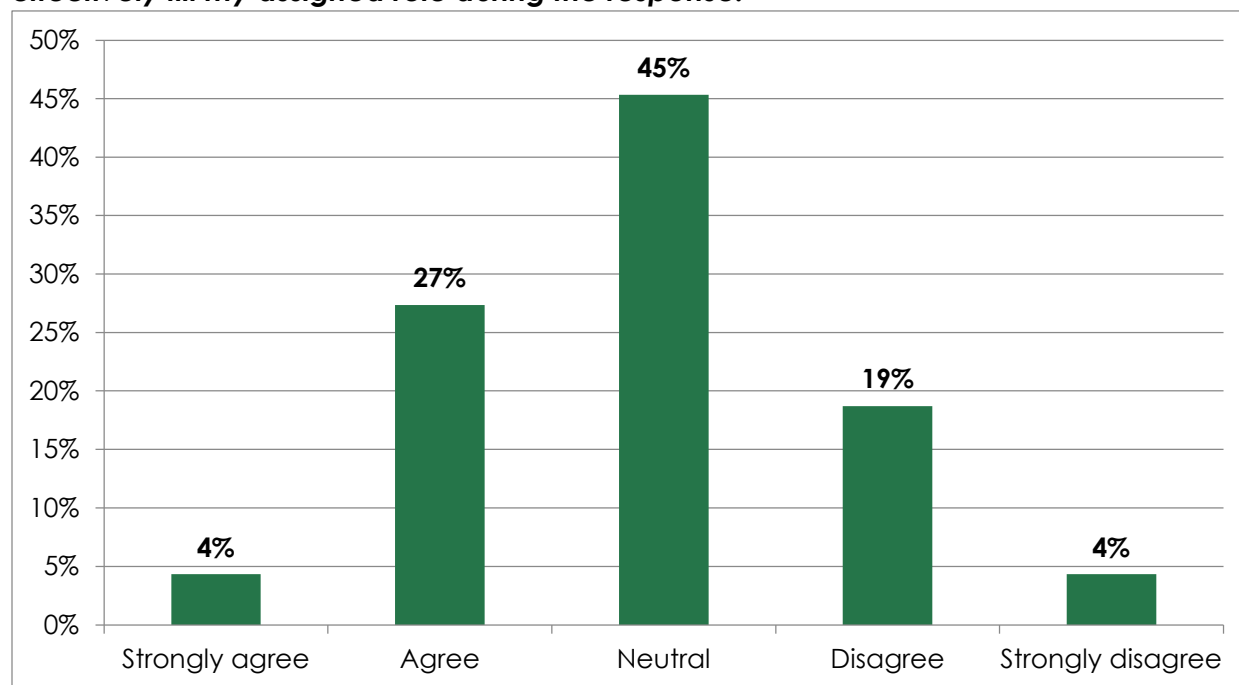




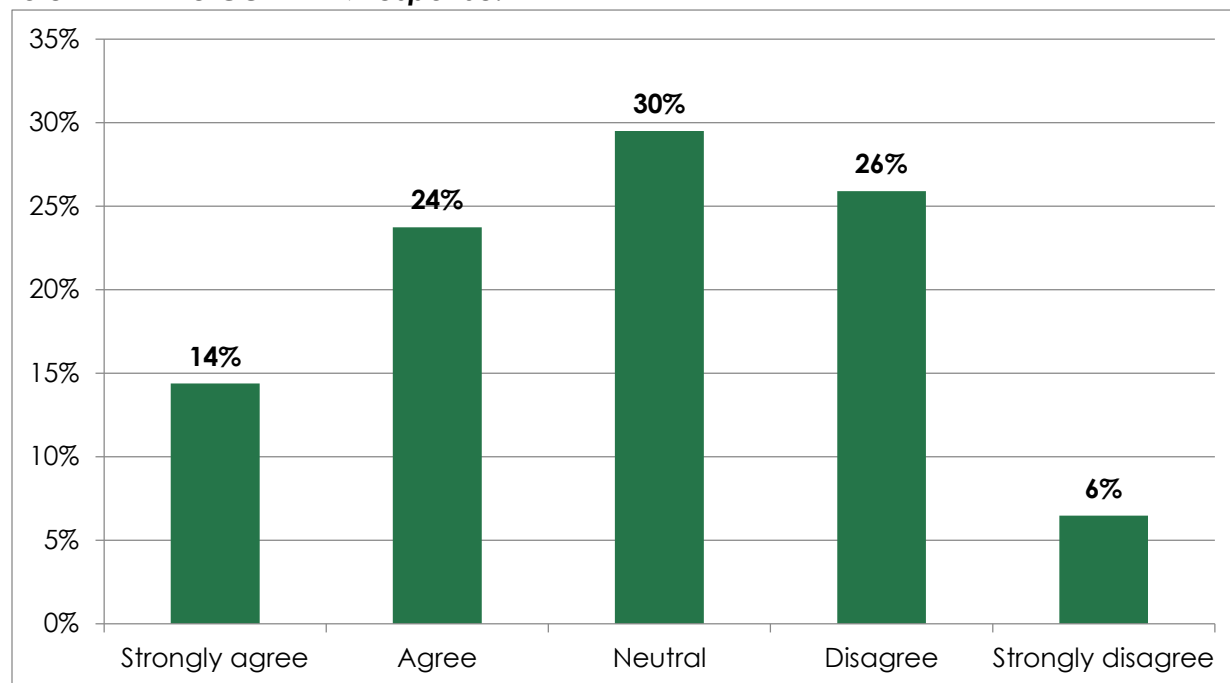
Question 6 - Communication effectively flowed throughout the COVID-19 Response organization, and I maintained situational awareness throughout the COVID-19 response operation.



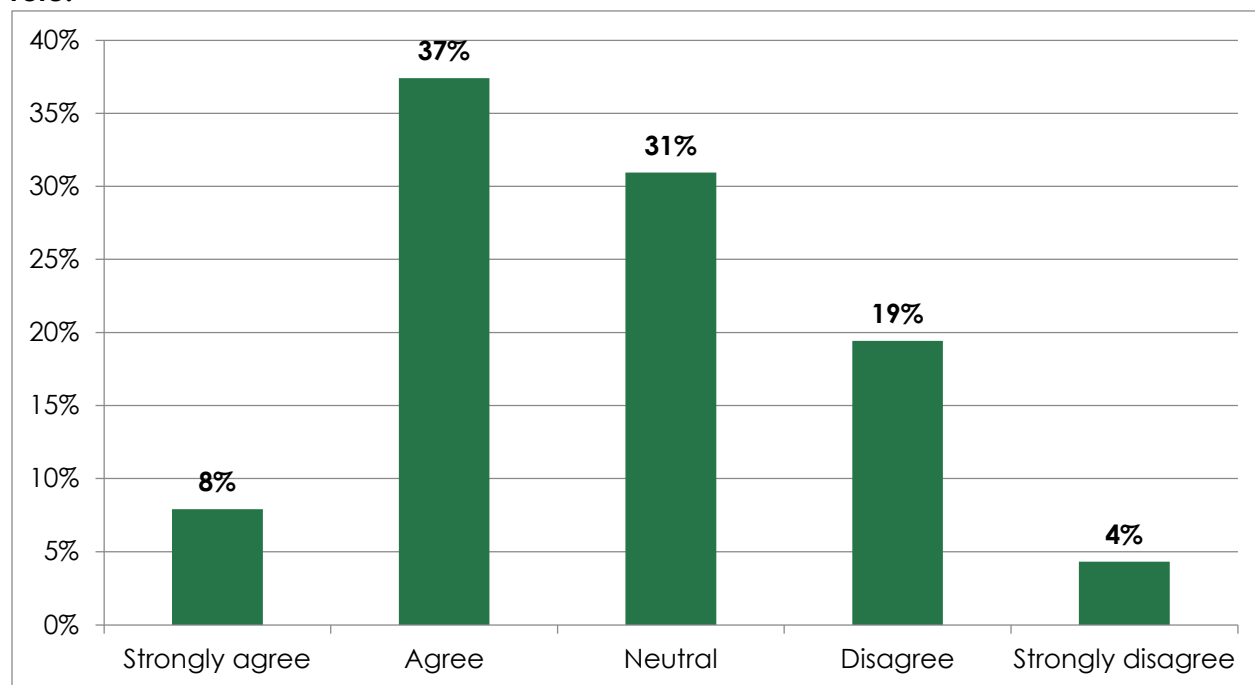
Question 7 - I received the necessary training (before the incident and/or just-in-time) to effectively fill my assigned role during the response.



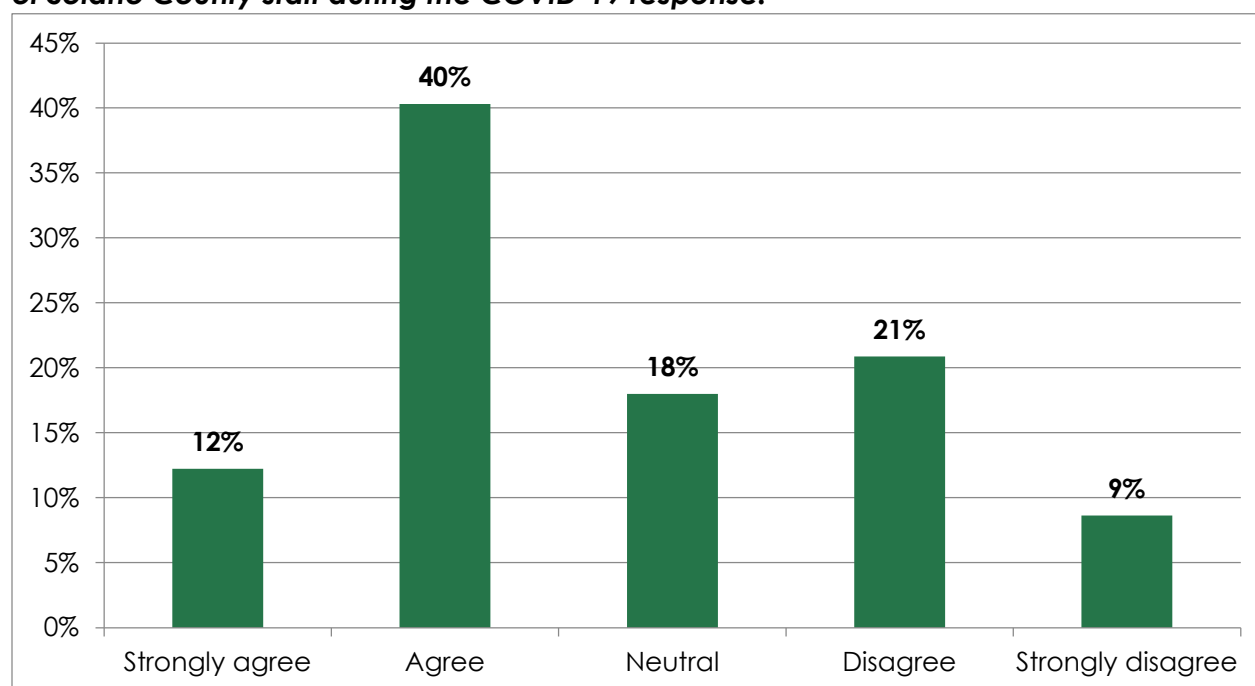
Question 8 - My normal duties and responsibilities were disrupted as a result of filling my role within the COVID-19 response.



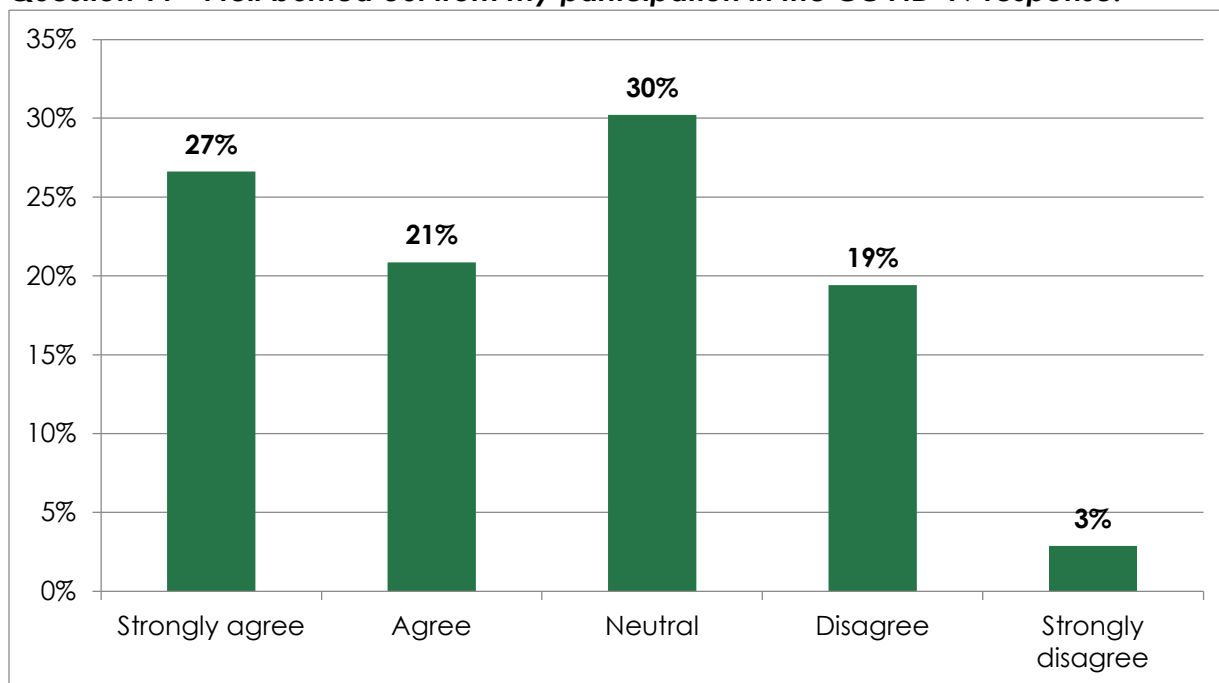
Question 9 - I had all the tools and resources I needed to meet the expectations of my role.



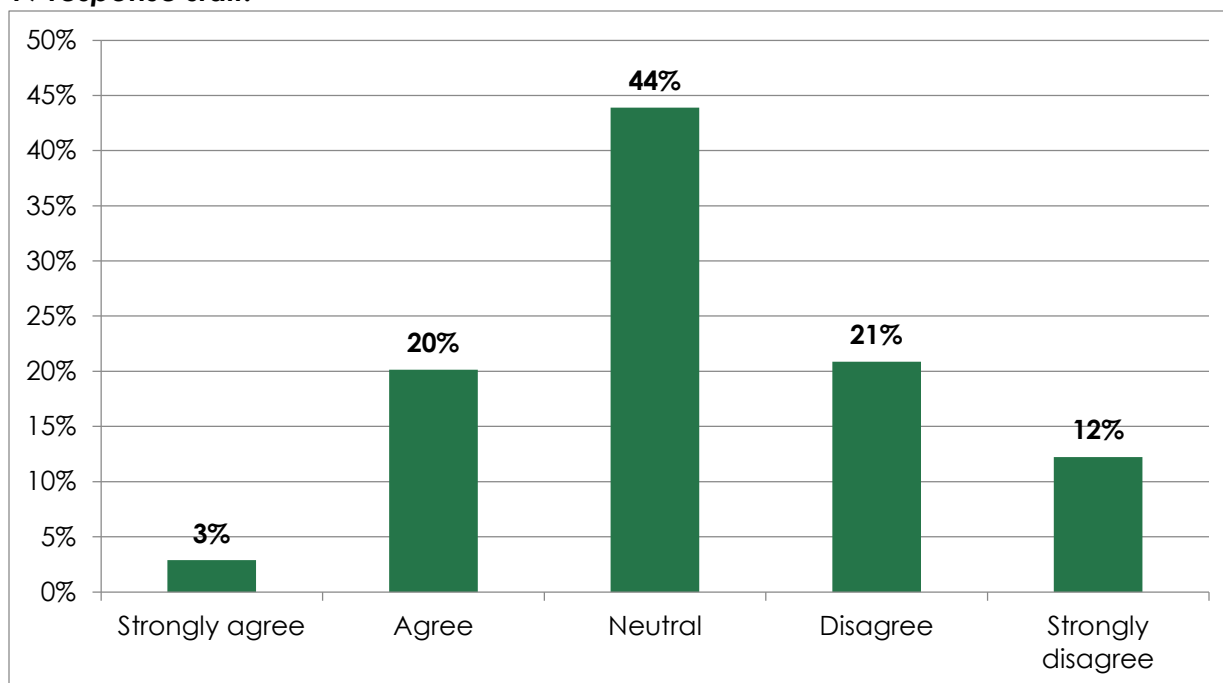
Question 10 - Solano County effectively implemented public health measures (virtual operations, social distancing, masking, testing protocol) to protect the health and safety of Solano County staff during the COVID-19 response.



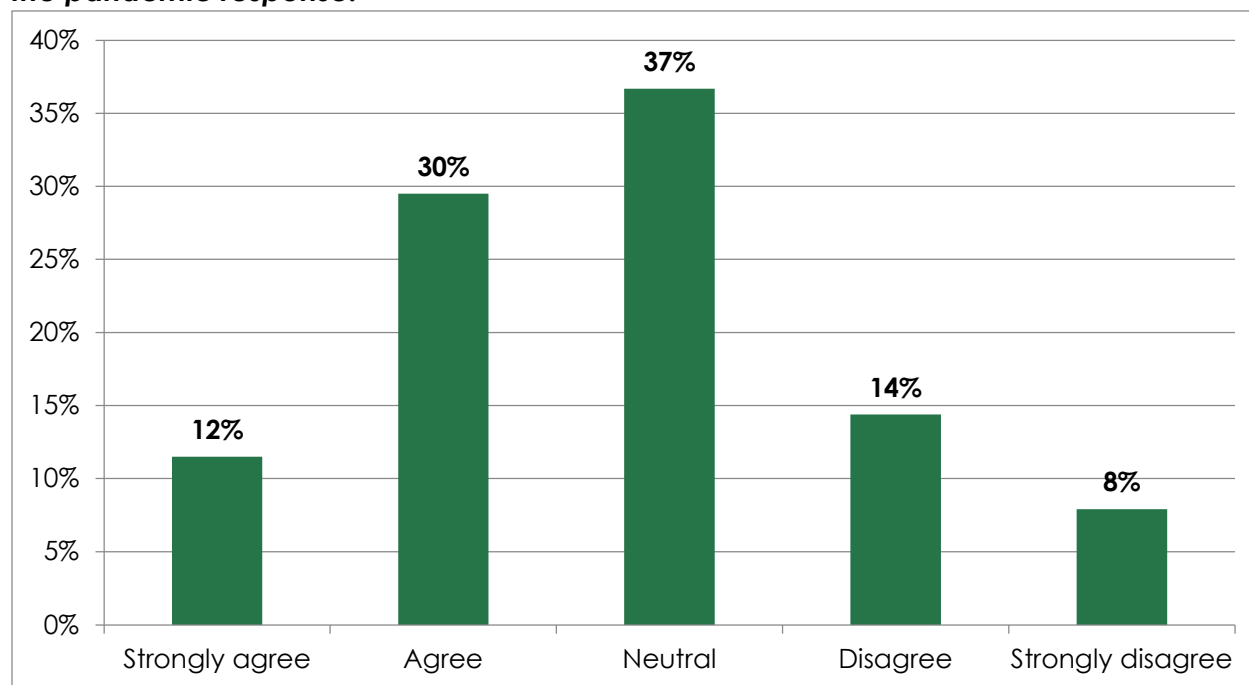
Question 11 - I felt burned out from my participation in the COVID-19 response.



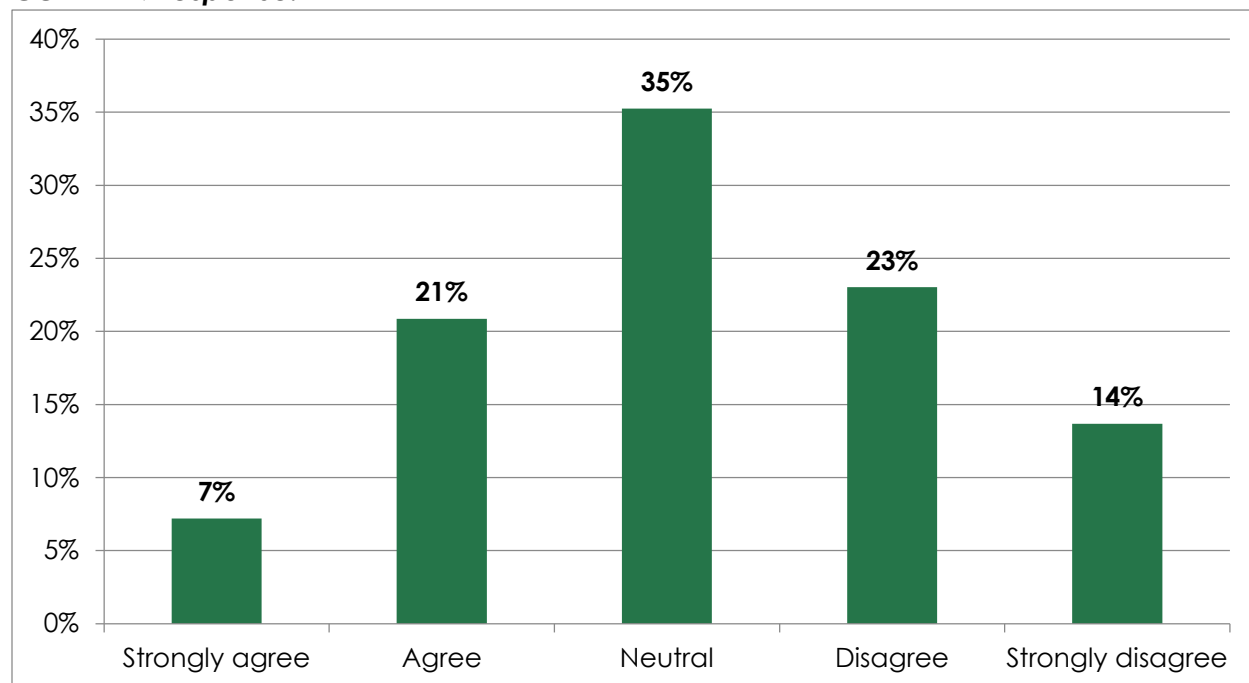
Question 12 - Mental and behavioral health resources were made available to COVID-19 response staff.



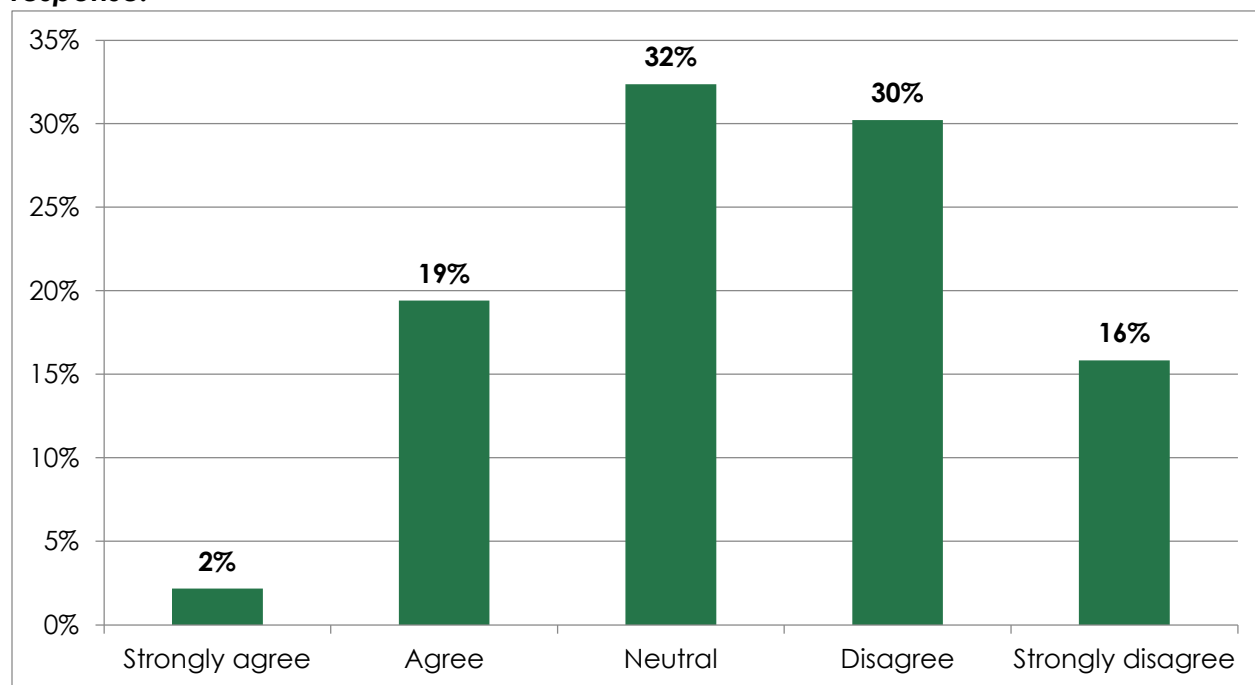
Question 13 - I felt supported by my immediate COVID-19 Response supervisor(s) during the pandemic response.



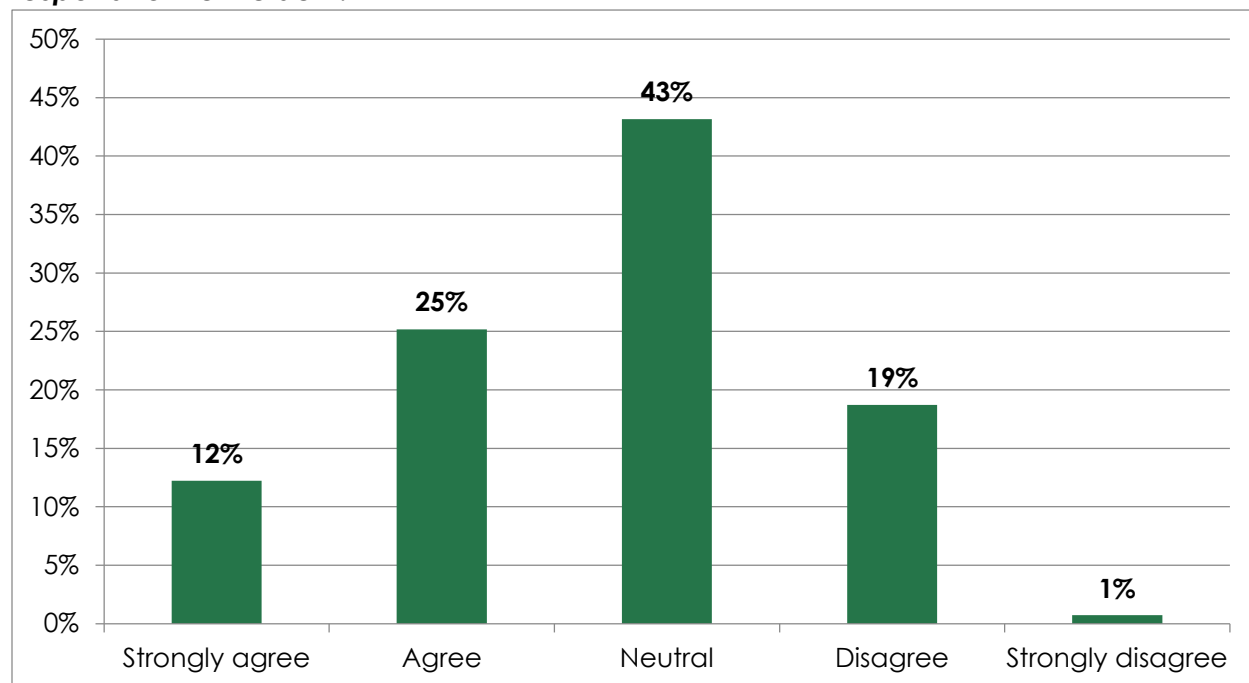
Question 14 - I felt supported by Solano County leadership during the time I worked COVID-19 response.



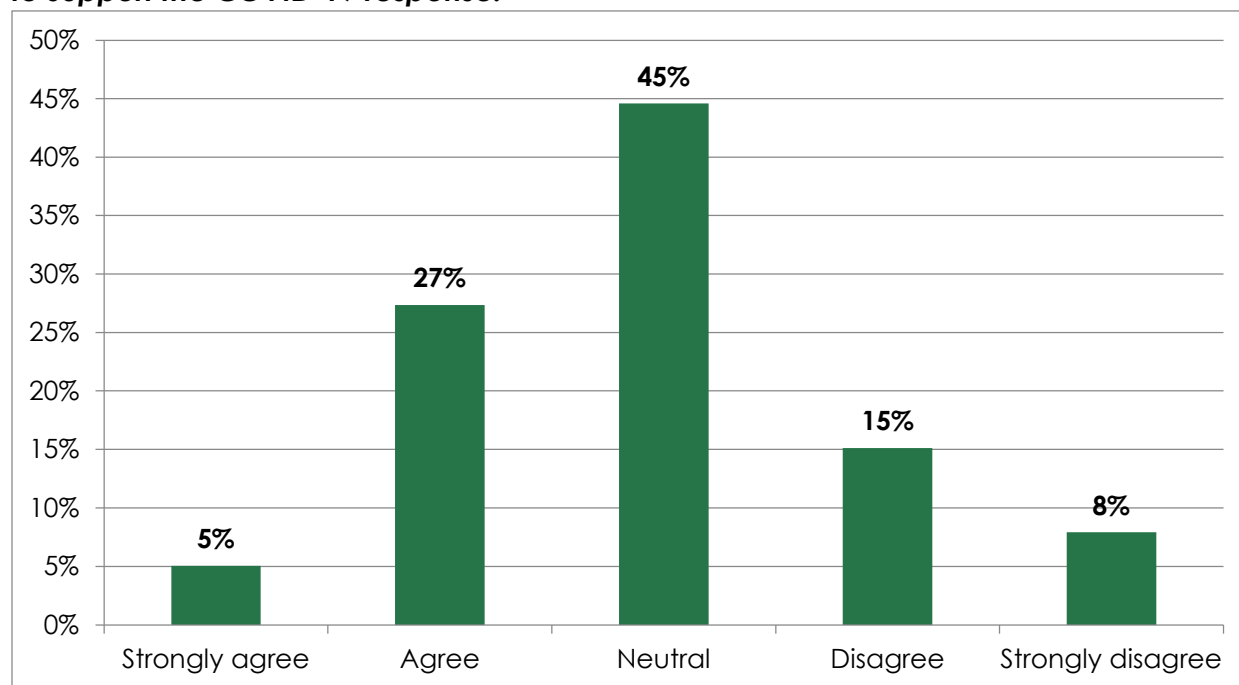
Question 15 - There was a clear process for making policy decisions within the COVID-19 response.



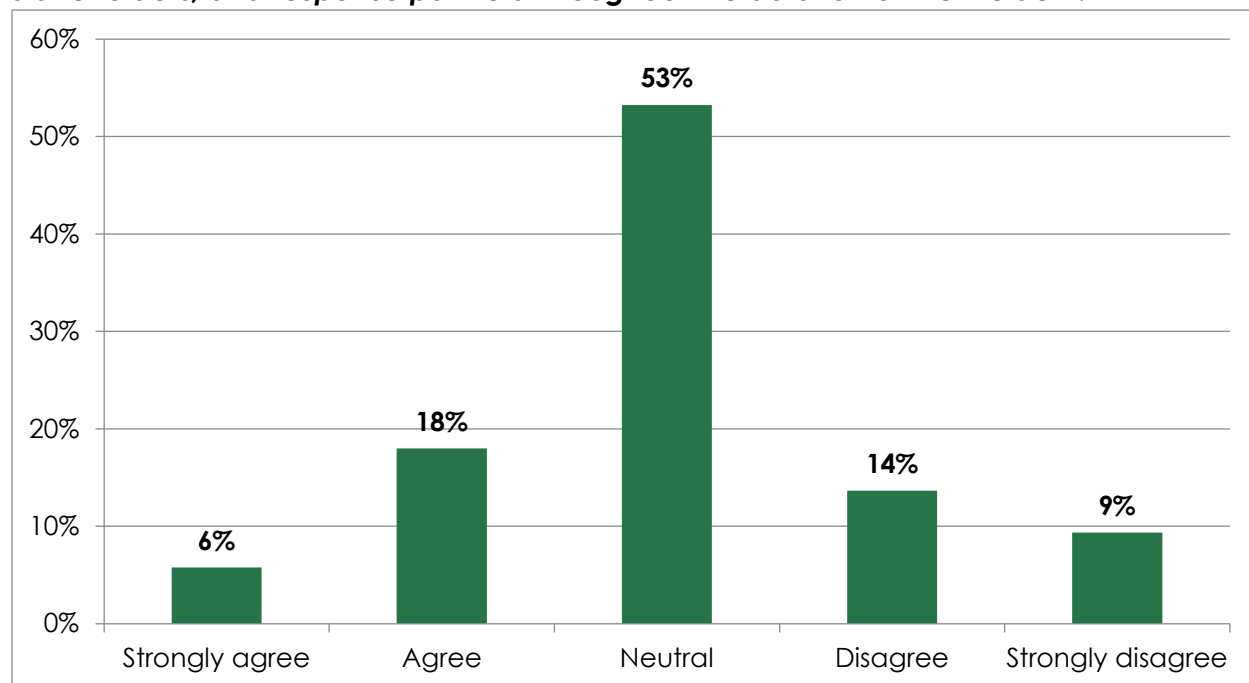
Question 16 - There was difficulty procuring the resources necessary to effectively respond to the incident.



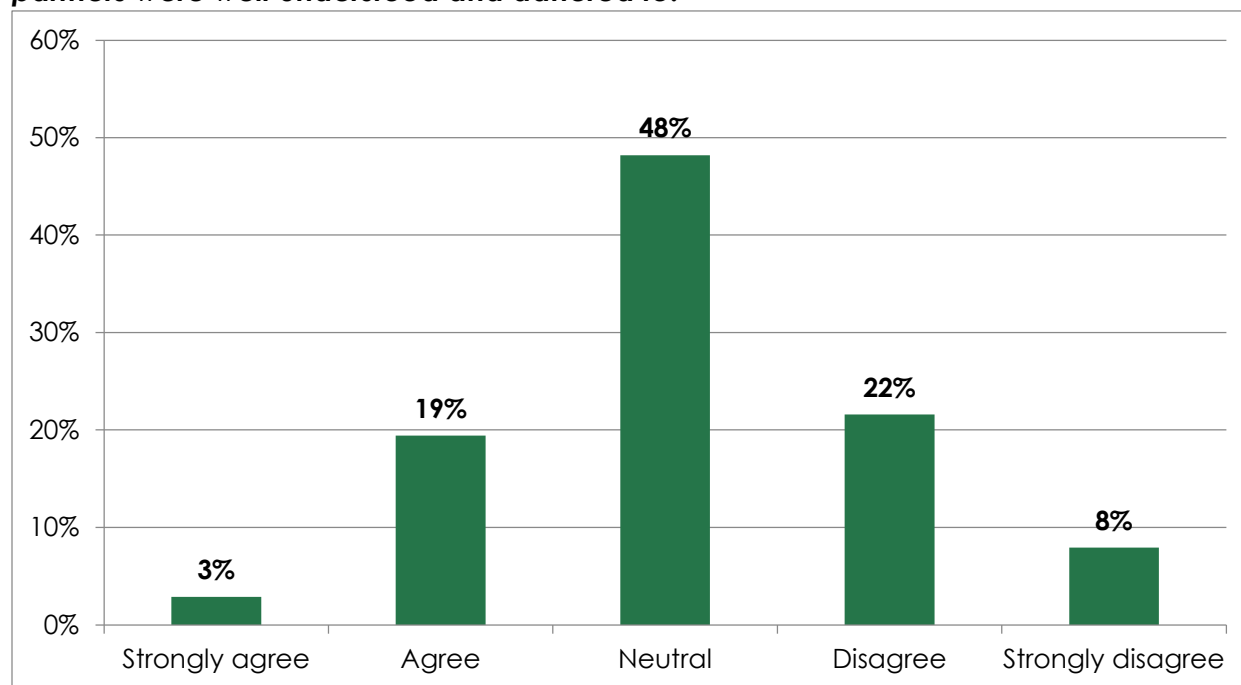
Question 17 - Solano County used creative measures to procure the necessary resources to support the COVID-19 response.



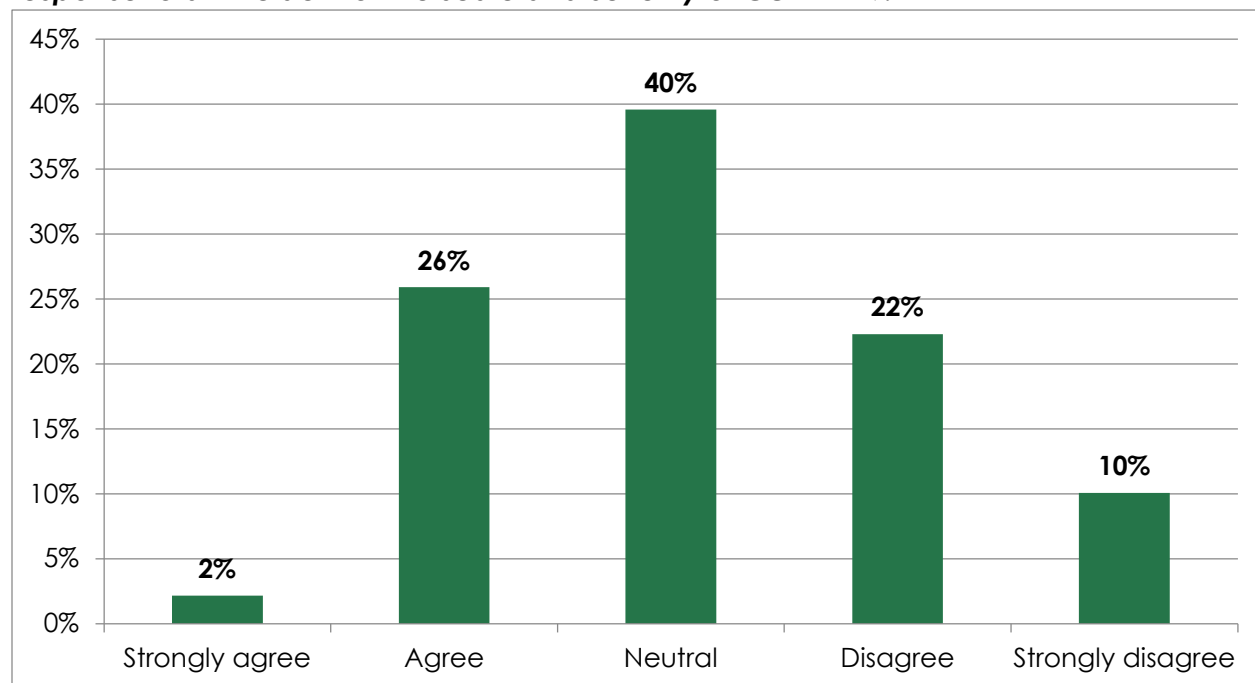
Question 18 - Solano County effectively coordinated with other County departments, key stakeholders, and response partners throughout the duration of the incident.



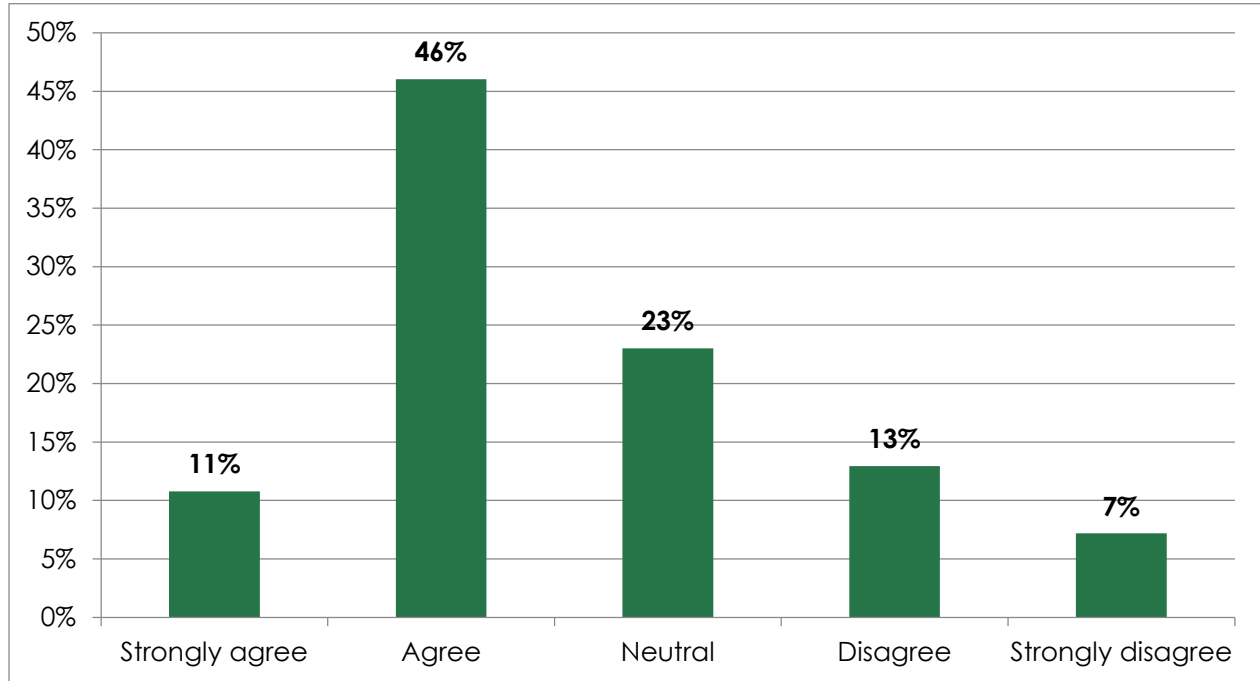
Question 19 - Roles and responsibilities of the COVID-19 response and other response partners were well understood and adhered to.



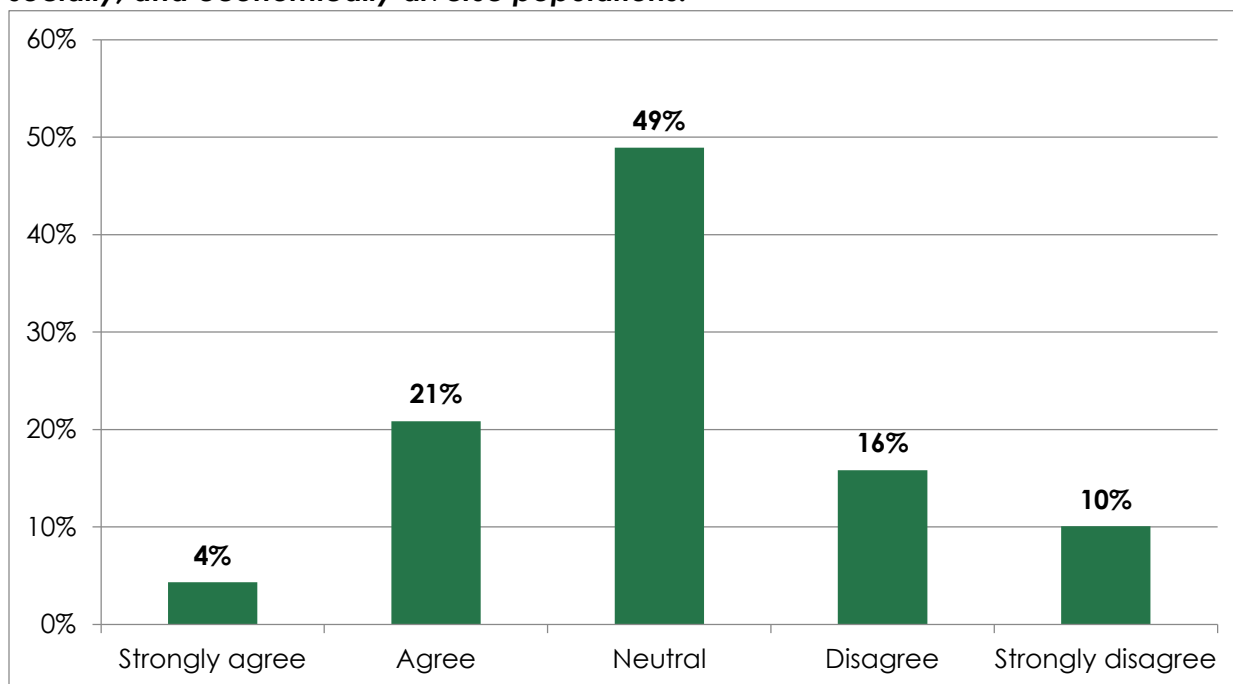
Question 20 - Solano County emergency plans effectively supported the COVID-19 response to an incident of the scale and severity of COVID-19.



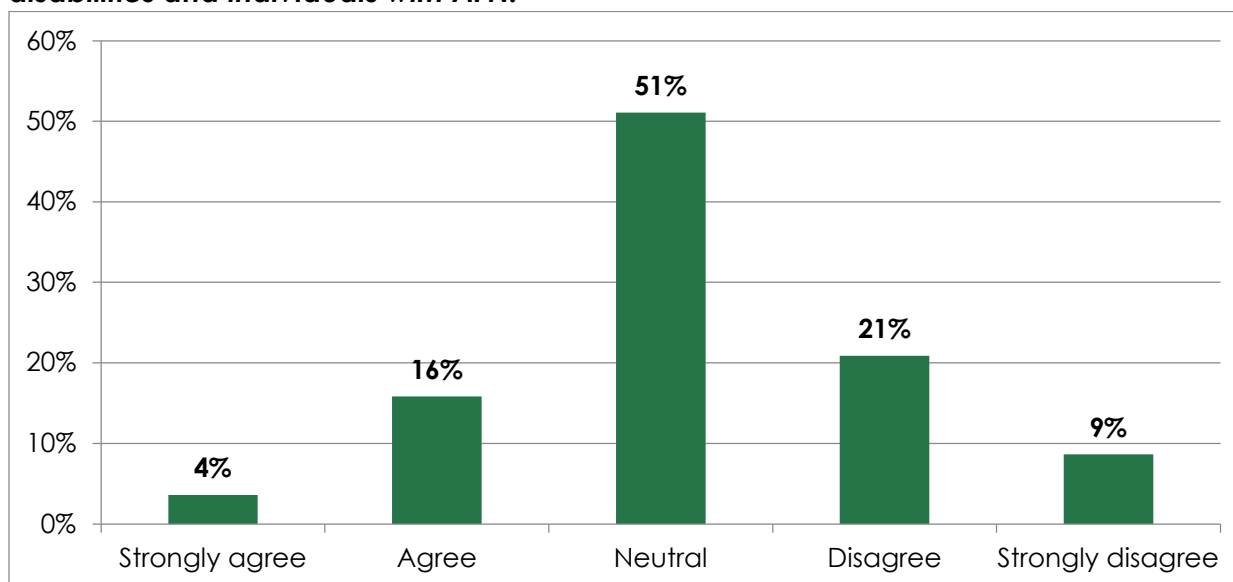
Question 21 - Additional resources were made available to me (e.g., sick leave policies, employee assistance program) which provided me the confidence and security necessary to continue to carry out my emergency roles and responsibilities throughout the pandemic.



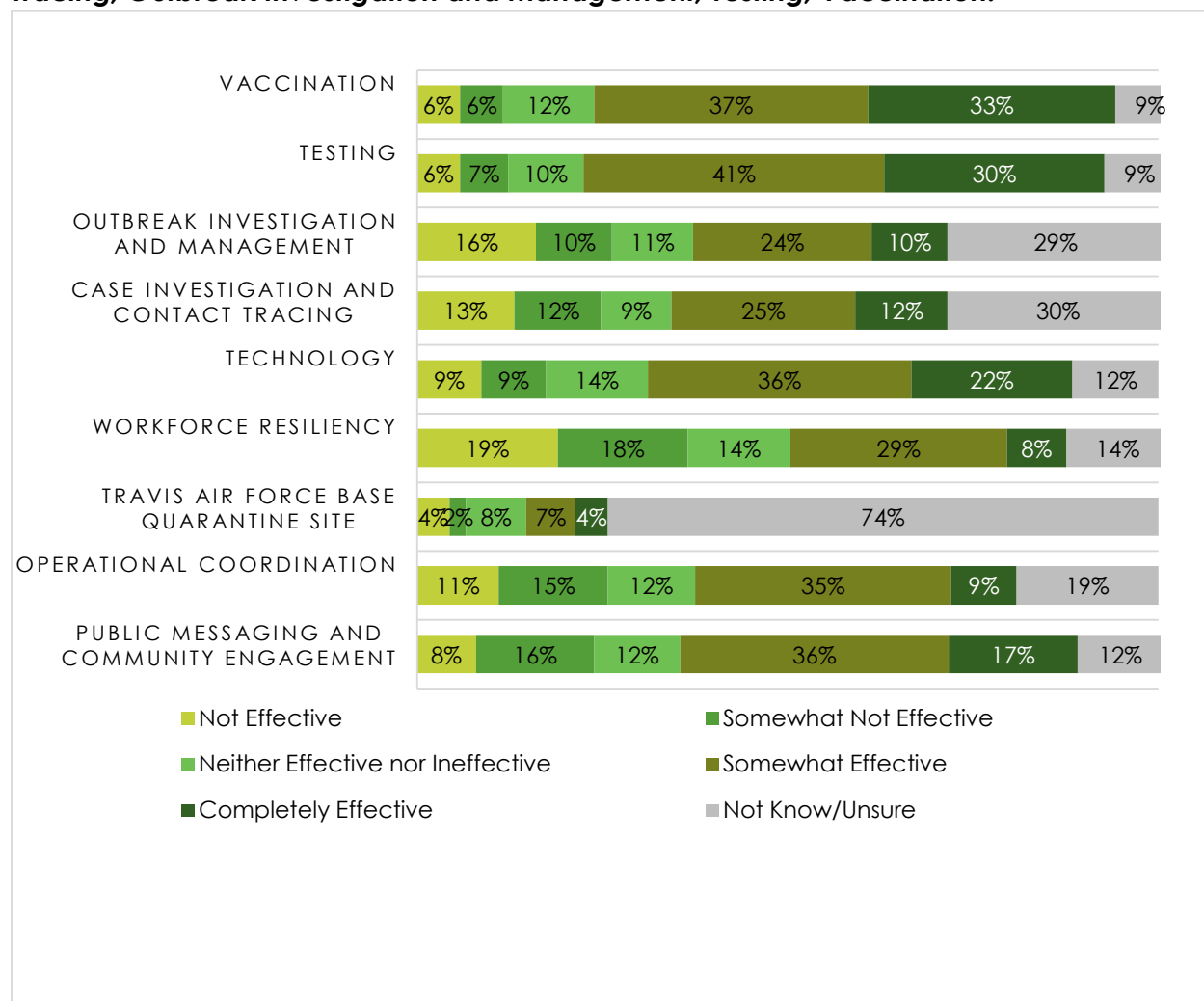
Question 22 - Solano County's response effectively addressed the needs populations with vulnerabilities, including those with Limited English Proficiency (LEP); persons with disabilities and others with Access and Functional Needs (AFN); and other culturally, socially, and economically diverse populations.



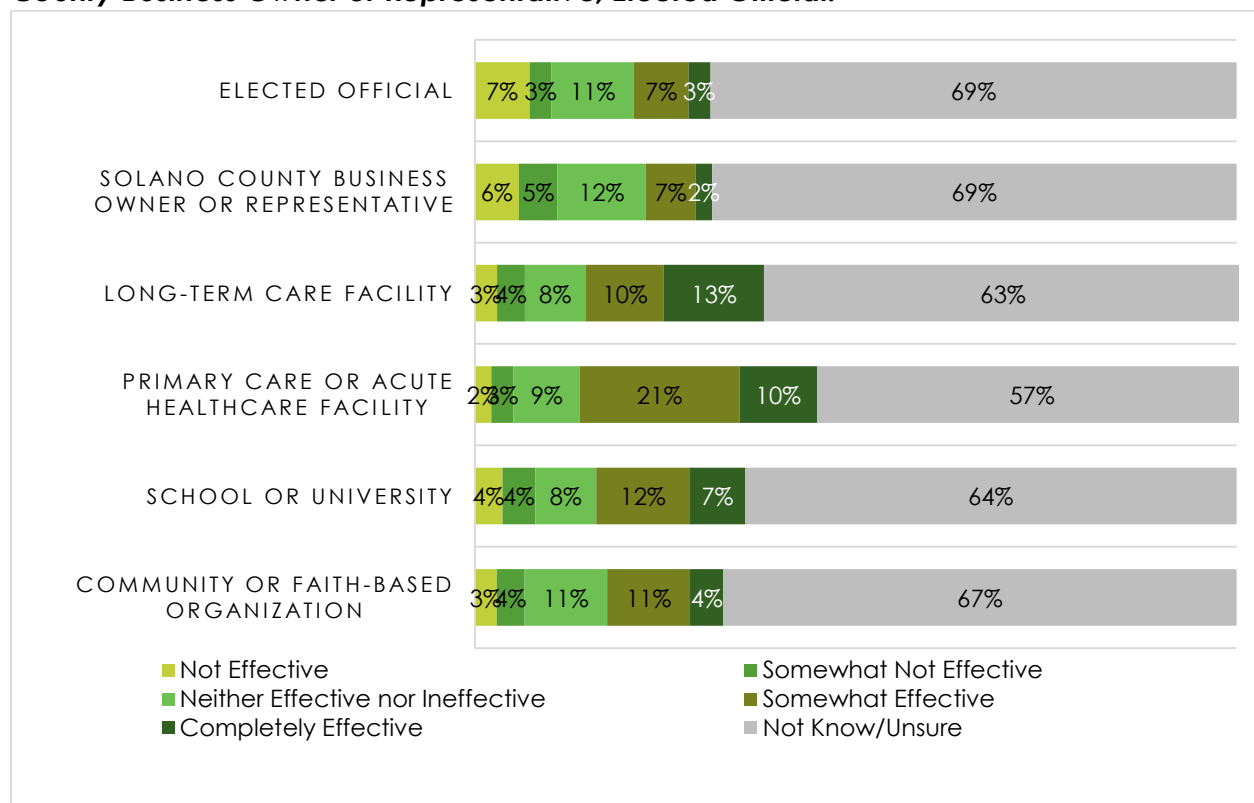
Question 23 - I had adequate tools, resources, and training to support people with disabilities and individuals with AFN.



Question 24 - Please rate the effectiveness of the following County response areas: Public Messaging and Community Engagement, Operational Coordination, Travis Air Force Base Quarantine Site, Workforce Resiliency, Technology, Case Investigation and Contact Tracing, Outbreak Investigation and Management, Testing, Vaccination.



Question 25 - How effective was Solano County's engagement and coordination with the following agencies/organizations: Community or Faith-Based Organization, School or University, Primary Care or Acute Healthcare Facility, Long-Term Care Facility, Solano County Business Owner or Representative, Elected Official.



Additionally, when prompted to enter any other agencies/organizations that the County coordinated with during the COVID-19 response, one respondent mentioned that coordination and engagement with the local school districts was not effective, and another said that "The County should not be involved with any faith-based organizations."

Question 26 - What were the three most significant gaps or areas for improvement you observed during the Solano County COVID-19 pandemic response that were/should be addressed?

Highlighted Participant Responses
"Solano County did not prioritize health of employees, was unwilling to allow for long-term regular telework accommodations, did not consider mental health impact of covid on employees and didn't change office requirements with sensitivity to this"
"not enough resources for the underserve[sic] non English speaking [sic] community. Sick time for employees was not available for everyone."

"1)The physical barriers in place were not enough to prevent spread from clients to employees 2)Upper management does not spend enough time on the ground dealing with clients and that is reflected in their decision making."
"1) Conflicting messages between CDC and our own Public Health leader. 2) Difficulty getting approval to telework. 3) No appreciation for workers - challenge coin was a joke."
"- lack of communication from higher ups to those of us on the front line - lack of free and accessible testing - lack of reasonable safety for those of us on the front line"
"1) Inadequate support from IT to update automation for outreach 2) Mixed messaging about remote work (employees made [us] feel bad for requesting remote work); and 3) A better coordinated response for elderly and disabled populations (and their caregivers)"
"Limited Communication Clear roles designation"
"Diversity and serving limited or non- English language speakers. Language translation."
"Lack of technology equipped to handle the needs, lack of staffing willing to assist, and resources for staff that were feeling burn[sic] out."

Question 27 - What improvement actions were/should be taken and by whom (County department, division, etc.) to address these gaps or areas for improvement?

Highlighted Participant Responses
"The County needs to hire more FT employees to work with PT/volunteer employees to ensure consistent deliveries and provide relief to PT workers who have capped hours but may be given unrealistic workloads or assigned projects that they cannot oversee."
"Invest in technologies that help Solano respond during an emergency, including web site development, phone system and etc."
"Emotional support - All we had were each other. There was no support for us. We were told to continue to do our job and help was coming. It never showed up."
"Provide support - listen to your employees and ask how they're doing."
"Managers and administrators should be the ones working to close those gaps and make improvements but again they do not spend enough time on the ground with line staff to understand our perspective, we just look like complainers to them it feels like"
"Advancing telework options and allowing emergency telework policies."
"Changes to approval of IT related needs especially in emergent situations like this[sic], we didn't even have phones equipped to handle to[sic] volume of calls that we were receiving. Leadership could have done a better job at motivating and encouraging staff to support the needs while being sensitive to fears of staff."
"Streamline the telework process, make forms available in one location (impossible to find). Create an online reporting system for COVID exposure, so it doesn't depend on your supervisor doing what they are supposed to do."
"Emergency Operations plan need to be updated to cover these areas."

Question 28 - Were there any planning documents, tools (checklists, flow charts, templates, etc.), policies, or procedures that would have been useful to the Solano County Public Health's COVID-19 response but which the department does not have/are not updated?

Highlighted Participant Responses
"Yes simple things like call trees and lists of classifications that are disaster workers."
"We need a list of emergency teams in case this happens again. It needs to be updated when there is staff turn around. We[sic] need these teams to be trained on who to report to and what their general jobs will be. There needs to be a dedicated staff member to upkeeping this protocol."
"Flowcharts of how to report issues would be useful. My supervisor had to search for the form used to report positive cases."
"There are too many to name. Eliminating redundancy and automation of internal/external processes would have had a very positive impact on Solano County's COVID-19 response."
"A flow chart is definitely needed and sent to everyone so that all the supervisors do/say the same when any situation arises."
"Templates for COVID-19 projects would be helpful to ensure consistent delivery and minimize time wasted to draft similar emails/documents/etc. for every correspondence. Standardized protocols for procedures that are easily accessible and given to the appropriate employees."
"I think now there are P&Ps in place but it was very messy in the beginning. A lot of things were not done or not done right in the beginning but I think its [sic] better now."

Question 29 - What were the three most notable strengths or best practices observed during Solano County's COVID-19 pandemic response that should be documented and built upon?

Highlighted Participant Responses
"teleworking (should have been more widespread and available earlier)"
"Everyone in E&E were given laptops and allowed to telework."
"The mass vaccination done at the Solano County Fairgrounds was very well coordinated and very efficient."
"Maintained supply of masks throughout pandemic, most other supplies were usually available."
"The response to outbreaks in long term care facilities, the vaccine distribution equity plan, home bound [sic] vaccinations."
"The Public Health Nurses were out in force to get people tested and vaccinated."
"Excellent testing capacity, esp. the mall site Great website with information."

Question 30 - What innovations (policies, practices, technologies, resources, partnerships, systems, etc.) were developed or acquired during the Solano Public Health's COVID-19 pandemic response that contributed positively to the response?

Highlighted Participant Responses
"Remote working seem to be one of the best practices from this pandemic. The use of Teams and Zoom are highly effective ways to communicate and save time."
"Using Adobe Sign to electronically send and receive required forms."
"Everyone in E&E were given laptops and allowed to telework."
"On-site vaccinations, workplace notifications of suspected cases."
"The development of the LTCF teams and email communications. "

Question 31 - What trainings should be prioritized to prepare for future public health and all-hazards emergencies or disasters?

Highlighted Participant Responses
"County employees and their supervisors should be trained in[sic] how to operate Microsoft suite, communicate effectively and consistently, how to maintain proper documentation, and how to securely handle PHI/PII. "
"Point of contact trainings, first aid and CPR trainings, what to do during an earthquake, fire or other natural disaster trainings. "
"Disaster Worker Training"
"How to use PPE, How to swab patients, practice and run drills often"
"Conflict resolution and positive customer relations skill building."
"All Emergency Preparedness and including counseling and mental health services."
"I think we need to practice earthquake and fire drills more."
"More disaster drills need to be completed. More emergency meetings. I haven't been to an emergency meeting since Covid"
"General emergency training should be required for all staff that are listed as disaster workers."

Question 32 - How should Solano County maintain and strengthen relationships that were built with other agencies during the pandemic moving forward?

Highlighted Participant Responses
"Communicate regularly."
"Information sharing, Resource sharing"
"Maybe do disaster drills with other agencies."
"Quarterly or semi annual [sic] meetings"
"Continue PH updates and/or townhall meetings (quarterly or annually) a place where programs are highlighted and concerns can be heard"
"Involve them in the development of the Disaster Policy and training"
"consistent loop closures and consistent invitations to County meetings"

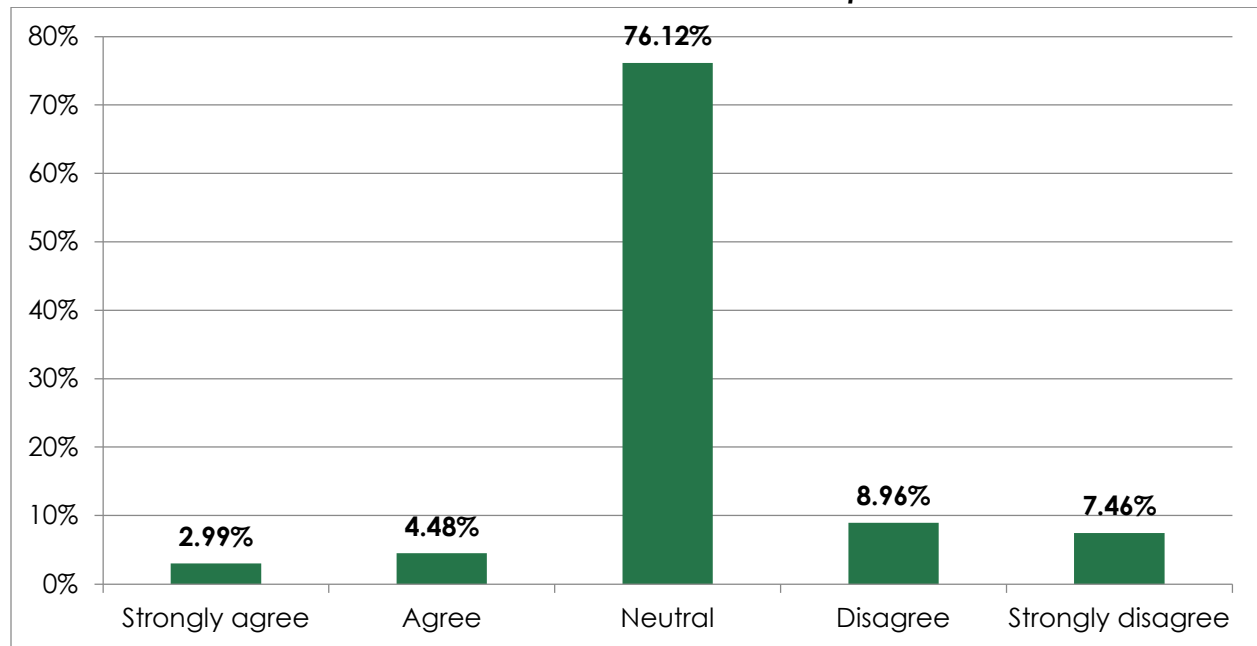
Question 33 - Do you have any additional thoughts about the pandemic response you wish to share?

Highlighted Participant Responses
"Don't forget about the people that are boots on the ground when you are making decisions."
"Human Resources should be prepared to provide/coordinate EAP services to Solano County employees involved with emergency response, especially a PH emergency that results in hundreds of deaths. HR and DoIT need to create emergency response plans--how to respond during an emergency and the roles of the departments during an emergency."
"When compared to workers from other counties, I felt like Solano County workers weren't treated with much care and respect. We had to fight for telework options. We had to pay back sick leave. We received challenge coins as an appreciation for all the work done during the pandemic. When asked why other counties provided quick telework options, hazard pay, immediate leave - we were told something along the lines of Solano County is conservative compared to its surrounding liberal counties. It wasn't a time for politics, but more a time to see how workers can be supported so they can continue to provide services for the public while they put themselves and their own families at risk."
"County continues to implement virtual meetings, but not other progressive measures such as telework. This [sic] increases workload on staff without offering reduced stress practices such as allowing to work from home. coming [sic] to the office to do virtual meetings in a cubicle all day is not an effective work practice"
"Hazard pay would have been a nice way to show appreciation for putting ourselves at risk during these times. They gave us a commemorative Coin that wasn't even intended for us originally that mentioned "fire hazard workers". All that did was cause anger within the workplace."
"I cannot stress enough how important it is to hear the voices of the employees that do the work and incorporate some of their ideas into processes and procedures."
"Overall I think we survived well. The masks HSS'[sic] ASB handed out were hand made by someone thus most people tossed, afraid to use. After one washing [sic] they shrank. Stockpiling masks would be useful. They don't expire and can be used for other types of emergencies, like fires and issued to clinics for ill patients or clients being treated."
"It was haphazardly handled from the top, down."
"It felt like the workers felt the brunt of the anxiety during the pandemic as we continued to see clients (especially the clerical team, who should be celebrated daily for what they did). I would love to see extra acknowledgement for their hard work (but not a coin or a certificate). The coin felt like a slap in the face, honestly, considering what we heard other counties received for their efforts."
"as a covid-19 response person, i[sic] again think we did the best we could under the circumstances however, things like resources for staff making sure we weren't burnt out and also able to take care of ourselves, mental health and families was not made a priority. Some of us worked WHILE having OCIVD-19 [sic] because there was no back up to help fill the gaps"

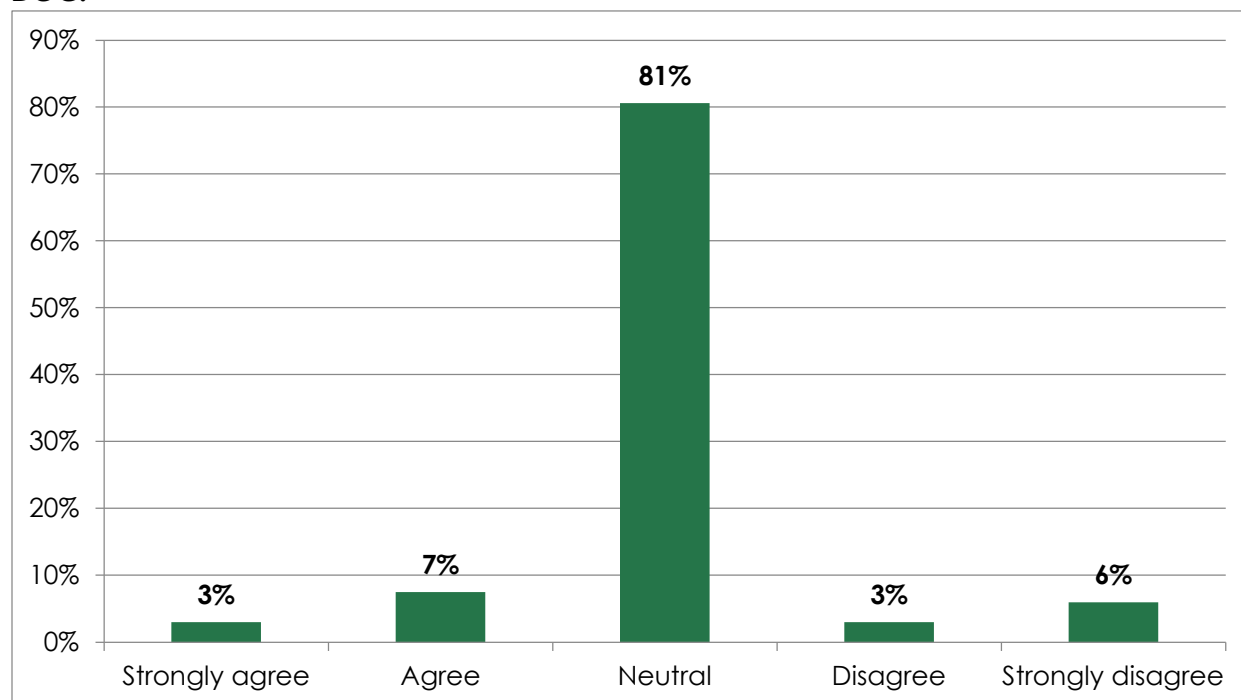
Question 34 - If you were an active member of The Solano County Staff Department Operations Center (DOC) Activation and Operations, which of the following best describes the COVID-19 response and recovery activities you were involved in from January 2020 to February 2023? Check all that apply. If you were not an active member of the DOC, please select "None of the above". (Command/Leadership Staff, Finance & Fiscal, Planning & Intelligence, Public Information, Operations, Logistics, Other).

Eight of the 139 survey respondents indicated that they were an active member of the DOC. Of those eight, one indicated they were part of the Command/Leadership staff, two indicated they worked in Finance & Fiscal, two indicated they worked in Public Information, one indicated they worked in Operations, and two selected "Other." The two respondents that selected "Other" indicated that they worked in "Command/leadership and PIO" and as a "Frontliner."

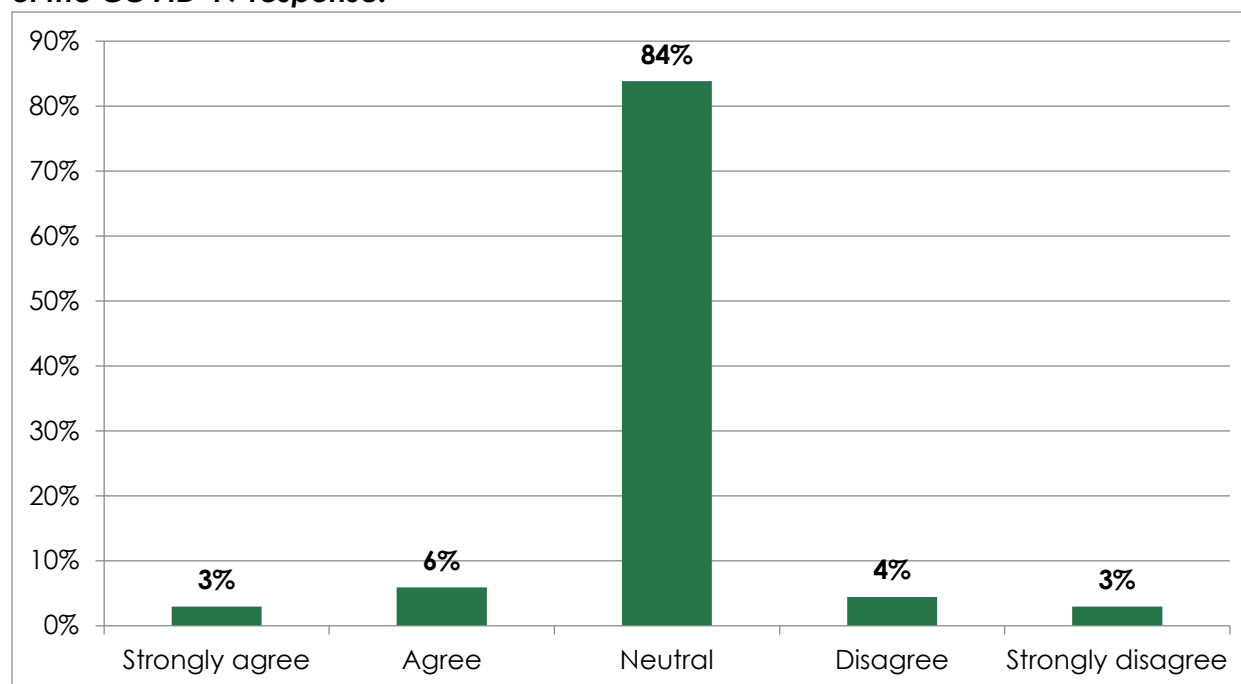
Question 35 - There was a clear delineation of roles and responsibilities in the DOC.



Question 36 - There was a clear chain of command and organizational structure in the DOC.

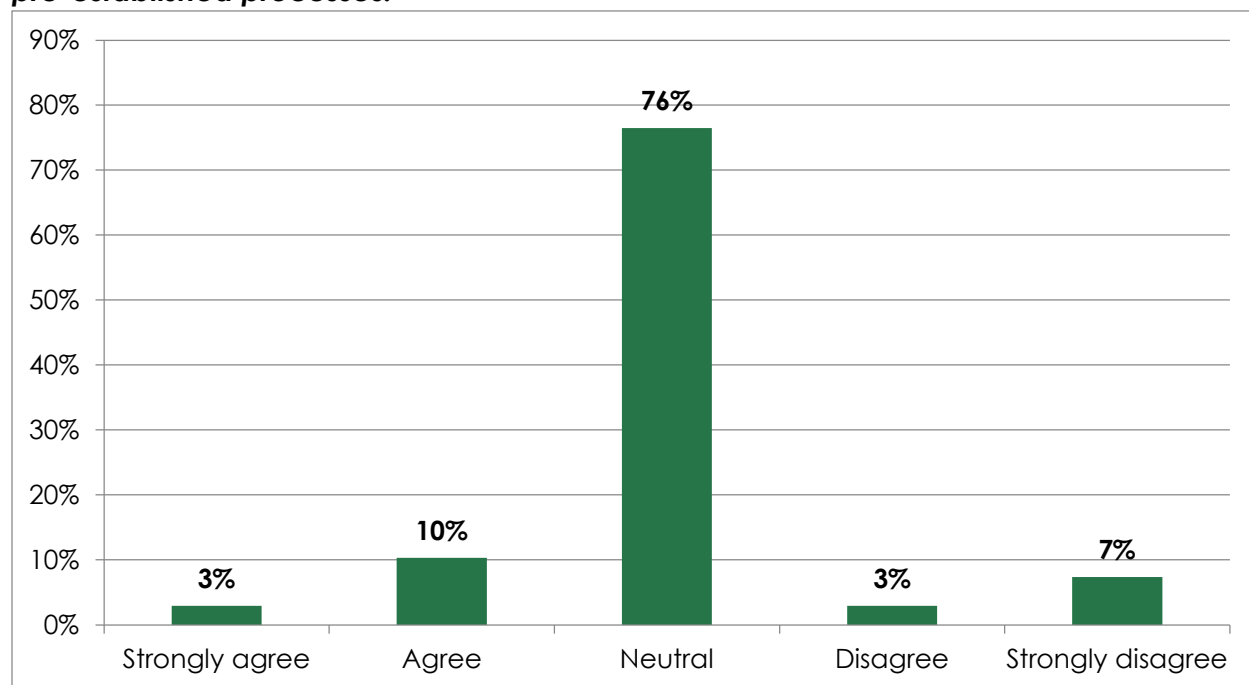


Question 37 - The DOC effectively followed ICS/SEMS principles throughout the duration of the COVID-19 response.





Question 38 - The DOC was activated effectively, and I was notified of activation through pre-established processes.



EXTERNAL SURVEY

Overview

The County distributed this survey to 272 County Partners. The survey consisted of 13 total questions: five multiple-choice questions, two rating questions, and six qualitative questions. 67 individuals responded to the survey.

Summary

An absolute majority, 80% of respondents, felt that SPH provided adequate information for their organizations to carry out COVID-19 response and recovery activities. However, when it came to SPH's effectiveness in addressing the needs of diverse populations, including those with Limited English Proficiency (LEP), persons with disabilities, and others with AFN, the responses were more varied with 59% agreeing or strongly agreeing and a significant 27% remaining neutral.

An encouraging 73.14% of respondents expressed confidence in the Solano County Response, and similarly, 73% of respondents agreed with the actions Solano County took during the COVID-19 response. Nevertheless, there were some areas of concern. When asked about the most significant gaps or areas for improvement, respondents highlighted issues such as language proficiency, delayed decision-making, ineffective coordination between adjacent counties, lack of customer service support, and a heavy reliance on technology.

To address these gaps, respondents provided a variety of suggestions. They advocated for closely following state public health guidelines, adopting sewage testing for health monitoring, involving fire departments in mass casualty incidents, improving the user experience of online reporting sites, and fostering a better interaction and understanding with businesses.

Despite the identified gaps, respondents acknowledged several strengths in Solano County's pandemic response. They appreciated the organized vaccination clinics, guidance during outbreaks, and the provision of rapid antigen test kits. Communication, information, resources, and support were also highly praised, with 73% of respondents strongly agreeing or agreeing on these points. The transition from Google Docs to an online reporting portal was seen as a significant step forward and a positive innovation.

In terms of maintaining and strengthening relationships with other agencies, respondents stressed the importance of continuous communication and being readily available for questions. Additional thoughts shared by respondents ranged widely, from deep appreciation for Solano County's work to some criticism regarding the County's approach to non-County organizations.



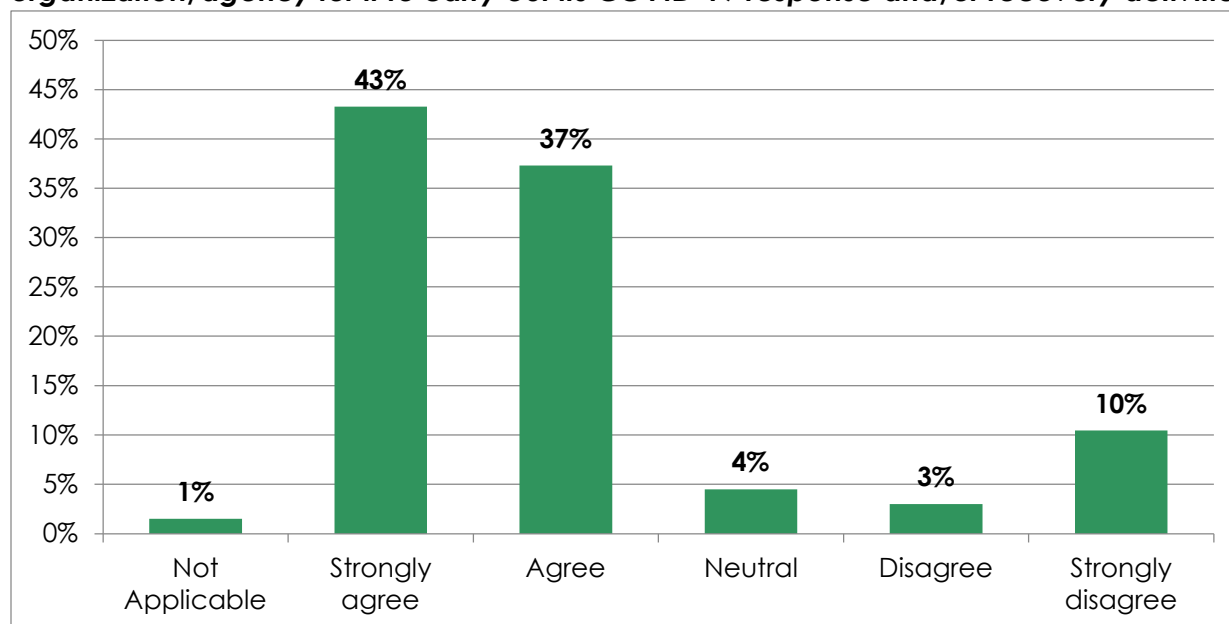
Results

Question 1: Which of the following best describes your organization/role?

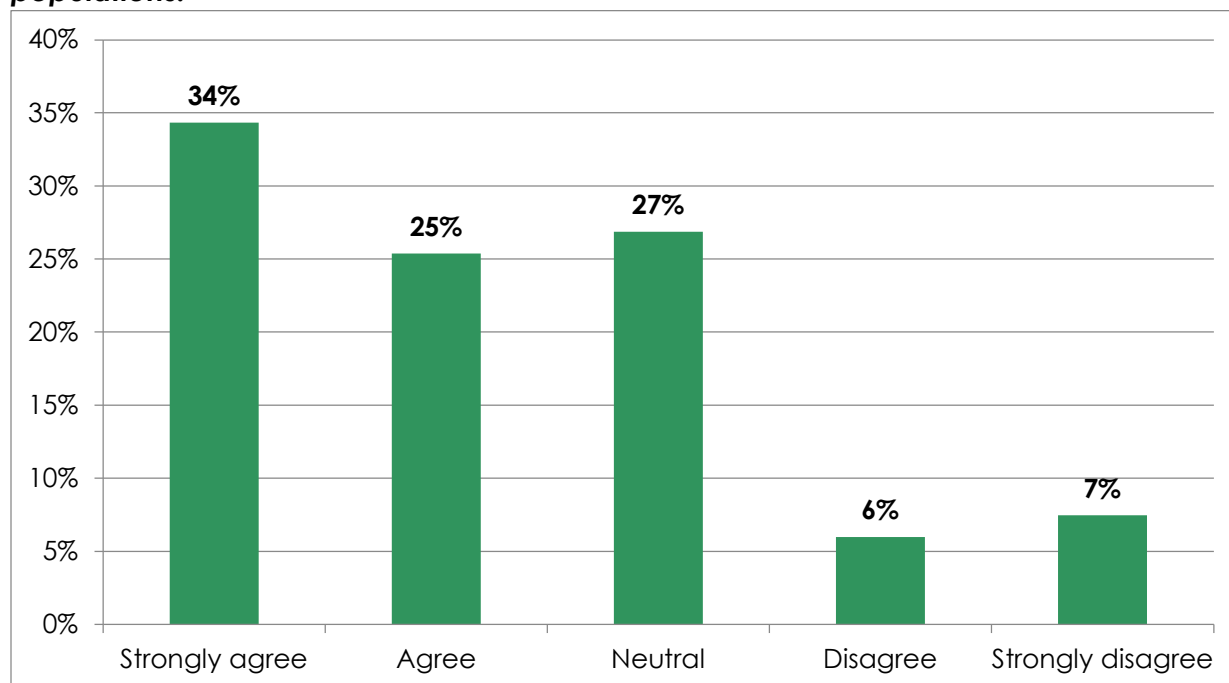
Department	# of Responses
Adult Day Program	2
Adult Residential Facility	2
Assisted Living	3
Community or Faith-Based Organization	3
Community Crisis Home	1
Contractor Working in Solano County	2
County of Solano Health and Social Services Dept	1
Elected Official	1
Employee	1
Fire Department/EMS	2
Frontline Care Provider	1
Judicial Branch	1
Local City Government	1
Local Government Entity, Joint Power Authority	1
Long-Term Care Facility	10
Mental Health Rehabilitation	1
Non-profit Day Program	1
pandemic plan coordinator for Genentech	1
Primary Care or Acute Healthcare Facility	5
Resident	5
Residential Care for Elderly	2
School or University	4
Skilled Nursing Facility	1
Solano County Business Owner or Representative	12
State Agency	1
State of CA	1
Thrift Store	1
Total	67



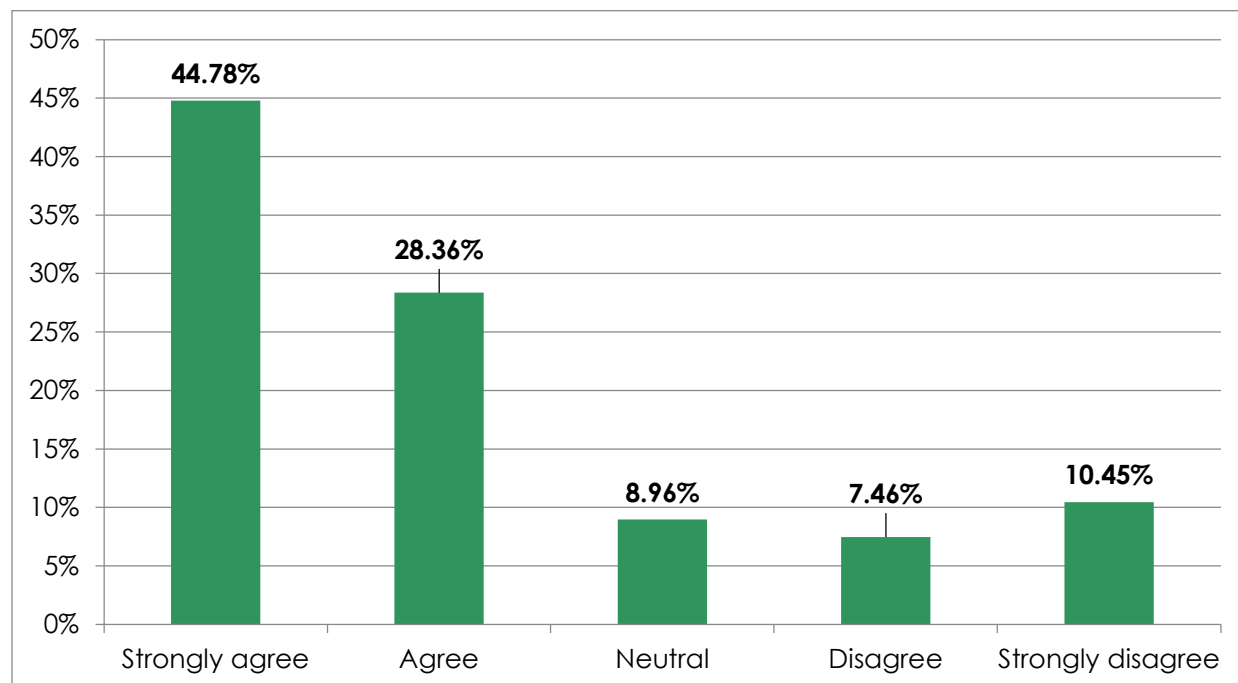
Question 2: Solano Public Health provided adequate information to my organization/agency for it to carry out its COVID-19 response and/or recovery activities.



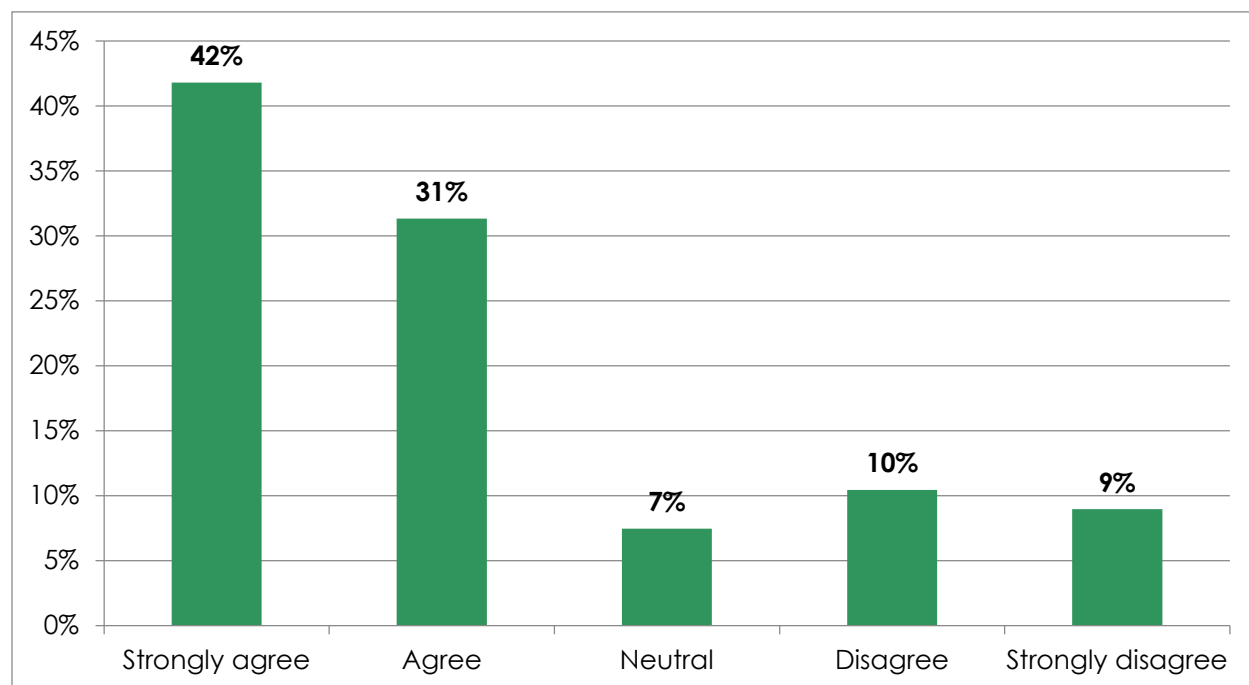
Question 3: Solano County Public Health effectively addressed the needs of those with Limited English Proficiency (LEP); persons with disabilities and others with Access and Functional Needs (AFN); and other culturally, socially, and economically diverse populations.



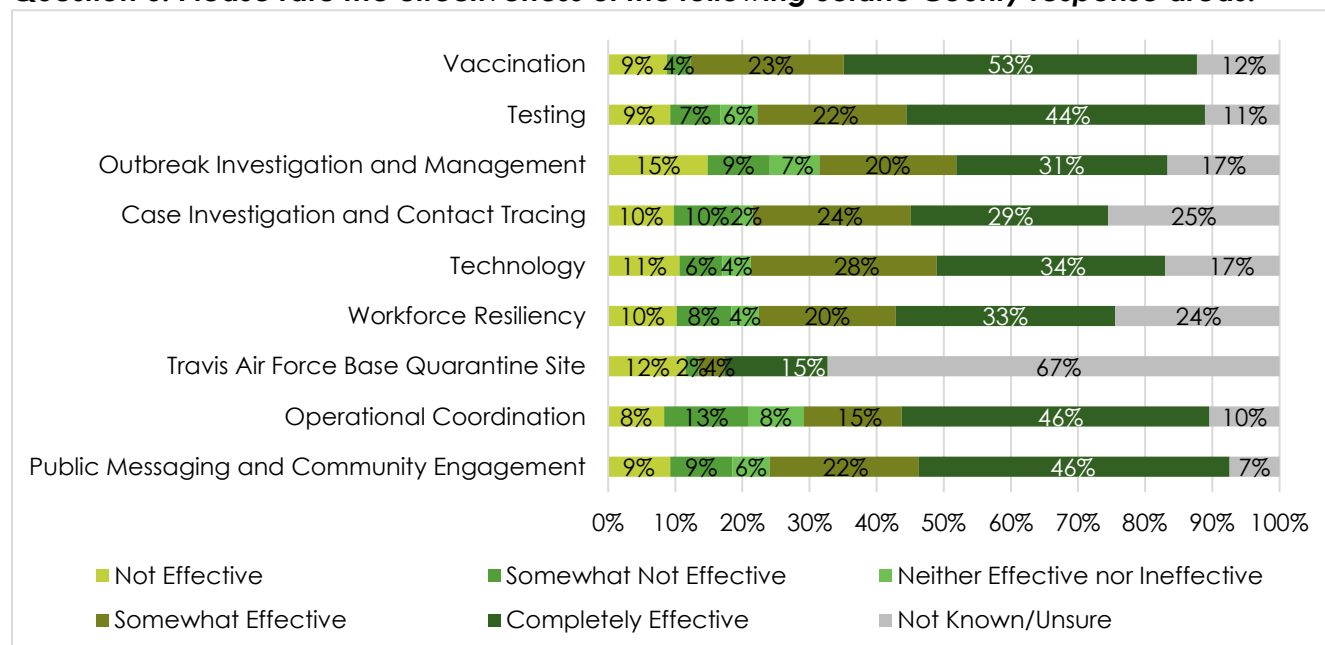
Question 4: I felt confident in the Solano County Response.



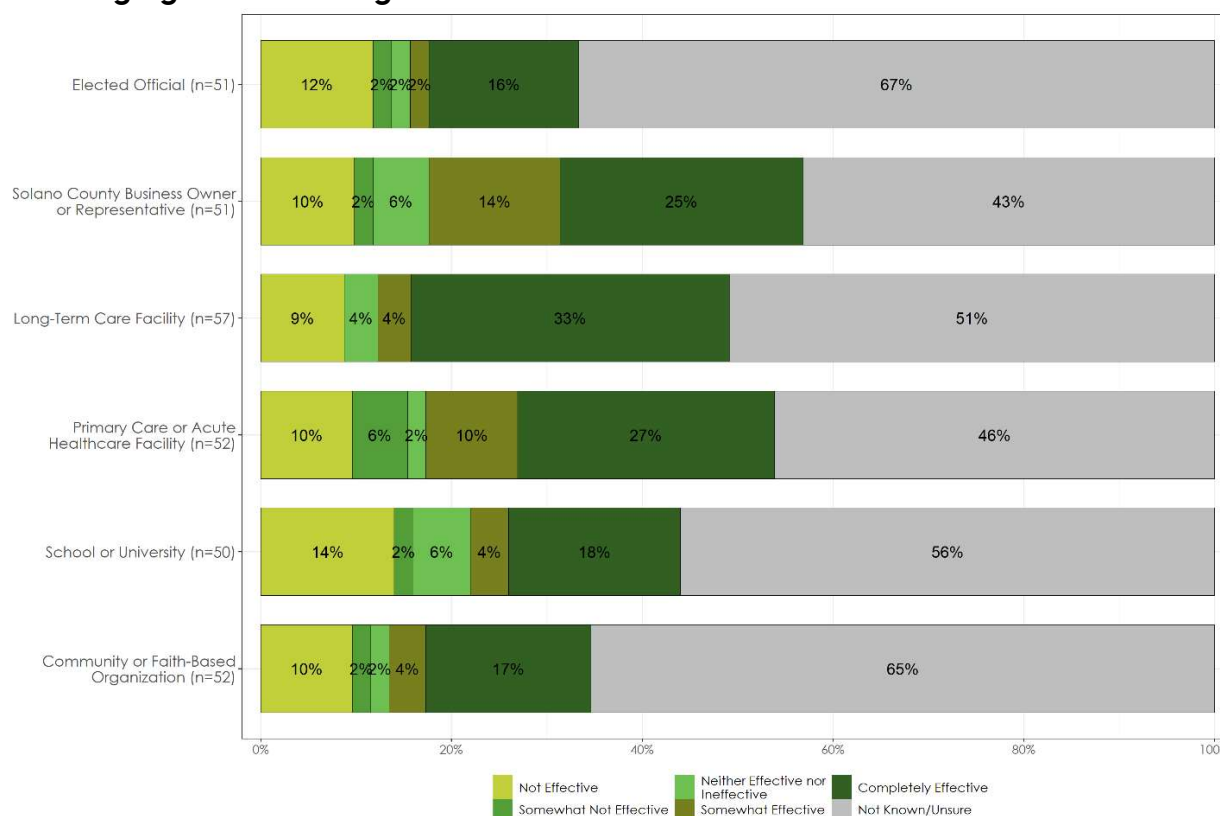
Question 5: I supported and agreed with the actions Solano County took in the response to the COVID-19 response.



Question 6: Please rate the effectiveness of the following Solano County response areas:



Question 7: How effective was Solano County engagement and coordination with the following agencies and organizations:



Additionally, when prompted to enter any other agencies/organizations that the County coordinated with during the COVID-19 response, one respondent mentioned that coordination and engagement with the local city governments was effective. Two other respondents mentioned that the County's coordination with the Adult Day programs was effective as well.

Question 8: What do you believe were the three most significant gaps or areas for improvement in the Solano County pandemic response that should be addressed?

A large portion of respondents stated that the slow reaction time to the pandemic was a significant gap and should be improved. Other responses included the response being too technology heavy limiting accessibility to those who do not use technology, excessive delays on receiving calls back, and limited language proficiency.

Highlighted Participant Responses
"Language proficiency."
"Waited last minute [sic] for all decisions, such as masking - solano County was not proactive but reactive"
"Primary County health officer not effective. Lack of coordination between adjacent counties. Delayed action, dismissed concerns of residents."
"Dedicated Customer Service Support. Sometimes it would be days to get a response and usually multiple individuals."
"It was heavily technologically dependent and not everyone utilizes the internet."
"When an Out break [sic] was reported at my facility, we performed all testing and tracing with out [sic] any assistance from the County and when attempting to report the outbreak we were dismissed due to the shear [sic] number of outbreaks at the time throughout the County."

Question 9: What improvement actions should be taken and by whom (County department, division, etc.) to address these gaps or areas for improvement?

Many respondents stated that they were unsure what actions should be taken while a few others felt the County did the best job they could. A small amount stated that trust in the County government was lost and needs to be rebuilt.

Highlighted Participant Responses
"I think the County did the best they could with the information they were given. As a business owner, we appreciate that Solano County was easier on businesses than other counties in California."
"Follow the state public health guidelines and understand that a public health emergency is serious."
"Include the fire departments early and often; we are well-trained for mass casualty incidents. The fire departments have incident managements that could have helped manage mass vaccination clinics and treatment centers."
"Better online reporting site, eliminate phone calls, increase interaction with businesses to ensure the most current information is available."
"1. Be more reasonable, 2. Increase frequency of communications, 3. Learn that punishing businesses that were trying to react to the pandemic and apply resources available all while the County did not fully understand the problem, caused business to avoid contact with the County and to see the County as an adversary."

Question 10: What do you believe were the three most notable strengths or best practices in the Solano County pandemic response that should be documented and built upon?

Many felt the availability of vaccinations and how the mass vaccination clinics were operated was a notable strength. Communication was also a highlighted strength of many respondents.

Highlighted Participant Responses
"1. Provided vaccination clinics. 2.Provided guidance during outbreak. 3. Supplied rapid antigen test kits upon request."
"Communication, information, resources, and support were all excellent!"
"I believe that Communications, strategies were exceptional and should continue to be built upon."
"Quick responses to email communication Willingness to work with developmentally disabled individuals Availability to help with vaccinations/ testing as needed"

Question 11: What innovations (policies, practices, technologies, resources, partnerships, systems, etc.) were developed or acquired by the County during the COVID-19 pandemic that contributed positively to the response?

The utilization of technologies such as zoom calls for communications and the online reporting portal were positive attributes noted by respondents. Collaboration between agencies through different tools was also noted.

Highlighted Participant Responses
"The move from the google doc to the online reporting portal was a great improvement."
"The reporting portal was helpful because employers could check a box for Resources, Guidance, A call back, and Other when reporting cases/outbreaks, for any questions that came up"
"Social Media (Facebook/ IG) and website"
"Zoom Trainings and email notices."

Question 12: How should Solano County maintain and strengthen relationships that were built with other agencies during the pandemic moving forward?

Responses regarding continued communication and joint training were highlighted as a way to maintain and strengthen these relationships.

Highlighted Participant Responses
"Continue communication and effectively educate Solano cities."
"Continue communicating with us by emails"
"Maintain communication since there will always be problems that should be addressed in the future."
"Keep being available for questions and within email's reach to help with questions/cases."

Question 13: Do you have any additional thoughts about the pandemic response you wish to share?

Highlighted Participant Responses
Thank you for your work. I appreciated seeing regular Facebook posts about testing locations and vaccine clinics.
Don't treat non-County organizations as the enemy, but as potential partners while avoiding the cop like approach to interactions.
"(I) Must admit that we did not find Solano County PH to be a useful resource for our employees at any point during the pandemic. Our only engagement was in submitting State required COVID case reports, and even after those submissions there was no or minimal follow-up from SPH."
"I serve in both Yolo and Solano, Yolo had great testing with UCDavis [sic] affiliate but everything else was not great, Solano County far outpaced most counties in quick response and communication. Well done."
"Solano County was never ahead of the game, always waiting last minute- horrible covid response"



COMMUNITY SURVEY

Overview

The County distributed this survey to 15,898 community members (514 via QR and 15,384 via social media platforms). The survey consisted of 14 total questions: one checkboxes question, four multiple choice questions, three qualitative questions, and six demographic questions. 36 individuals responded to the survey.

Summary

The survey results indicate that most respondents found Solano County's COVID-19 vaccine distribution to be effective, with 70% either strongly agreeing or agreeing. However, the effectiveness of the County's COVID-19 testing system received mixed responses, with 59% either strongly agreeing or agreeing, and 32% either disagreeing or strongly disagreeing.

Regarding the impact of reduced services from the County during the pandemic, 49% of respondents either strongly agreed or agreed that it negatively affected them or their families. However, a significant 40% remained neutral on this issue.

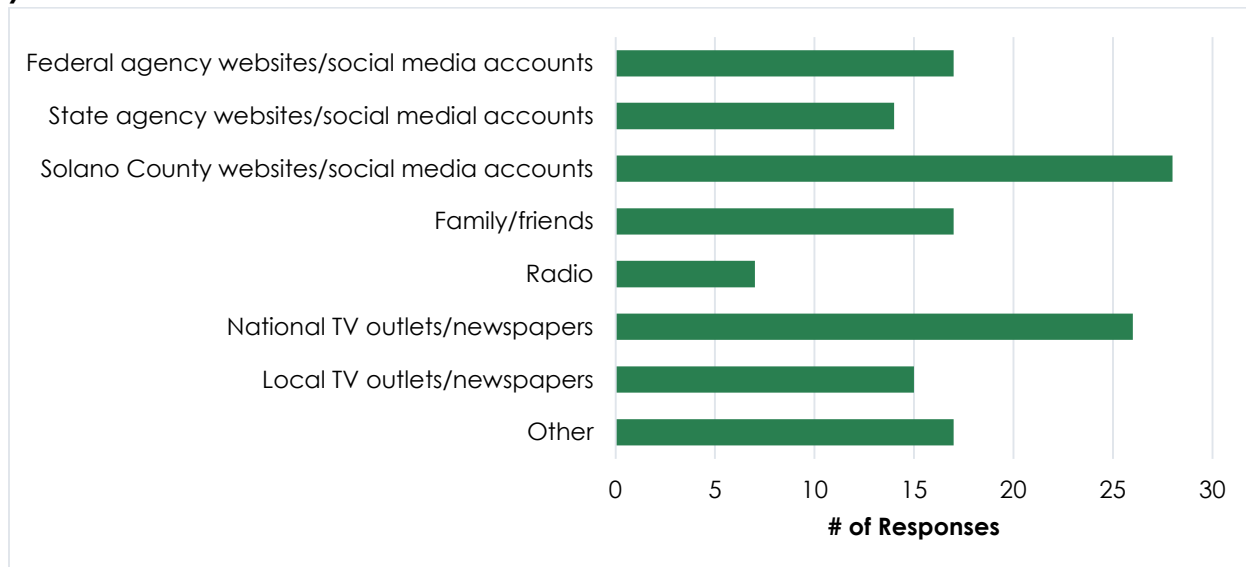
In terms of the County's overall response to the pandemic, 76% of respondents either strongly agreed or agreed that they supported and agreed with the actions taken by Solano County. When asked about the equity of the County's response, some respondents felt the County responded appropriately and equitably, while others expressed concerns about the technology-based approach, which they felt could exclude certain populations.

Respondents suggested that the County could have improved its response by disseminating information faster and across more platforms, improving the appointment system, providing more on-site leadership, and coordinating better with other health officers. Some respondents also suggested that the County could have worked with a temp agency to support vaccination clinics.

Despite these suggestions for improvement, respondents highlighted several areas where they felt the County excelled in its response. These included the availability of testing and vaccination sites, the operation of the Fairgrounds vaccination site, adherence to mask and vaccine mandates, and communication with the public.

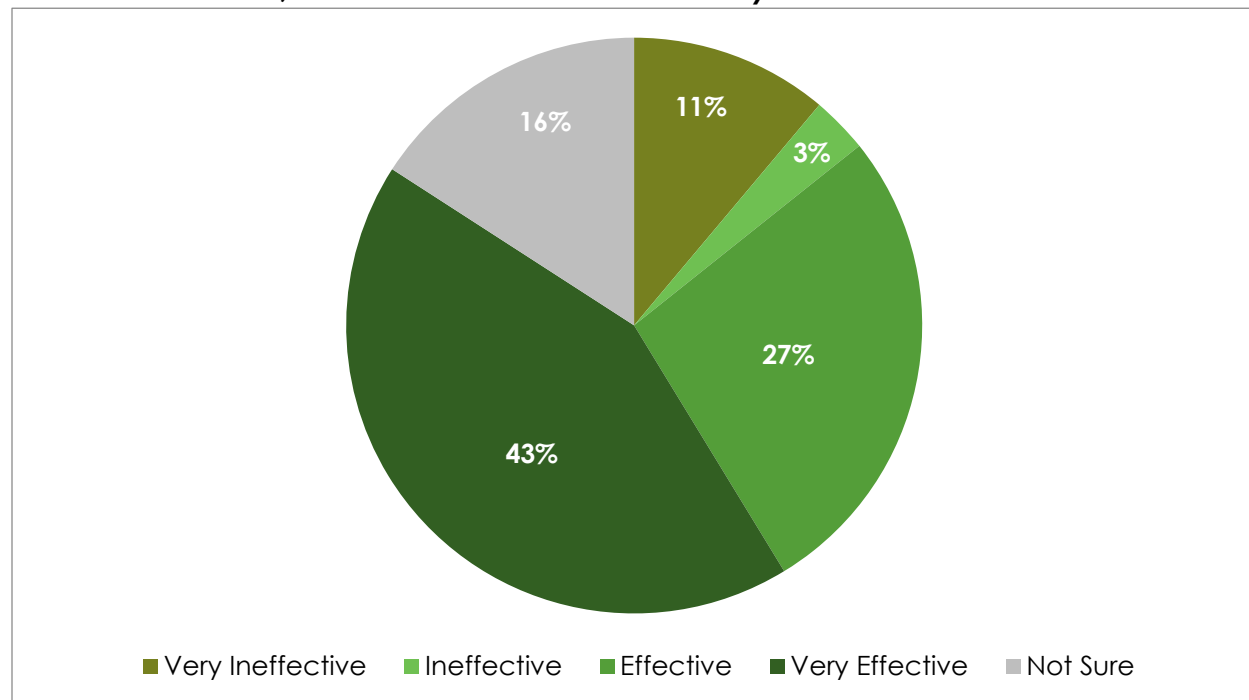
Results

Question 1: How did you get information about COVID-19? Please select the 3 options you used most often.

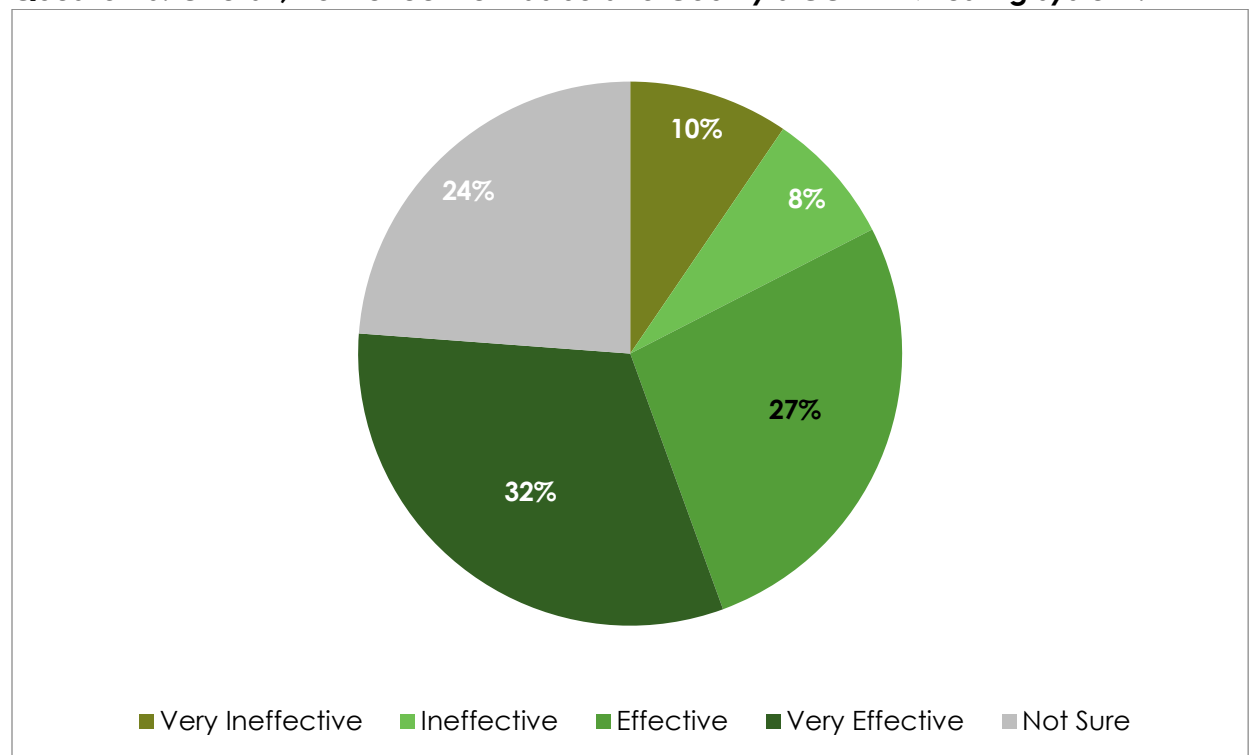


When given the choice of other the typed responses were Internet, Epoch Times, Daily Wire, Natural News, information provided by employer, Kaiser, local church, Contra Costa Library, SPH staff, CDC, California Department of Health, National Library of Medicine.

Question 2: Overall, how effective was Solano County's COVID19 vaccine distribution?

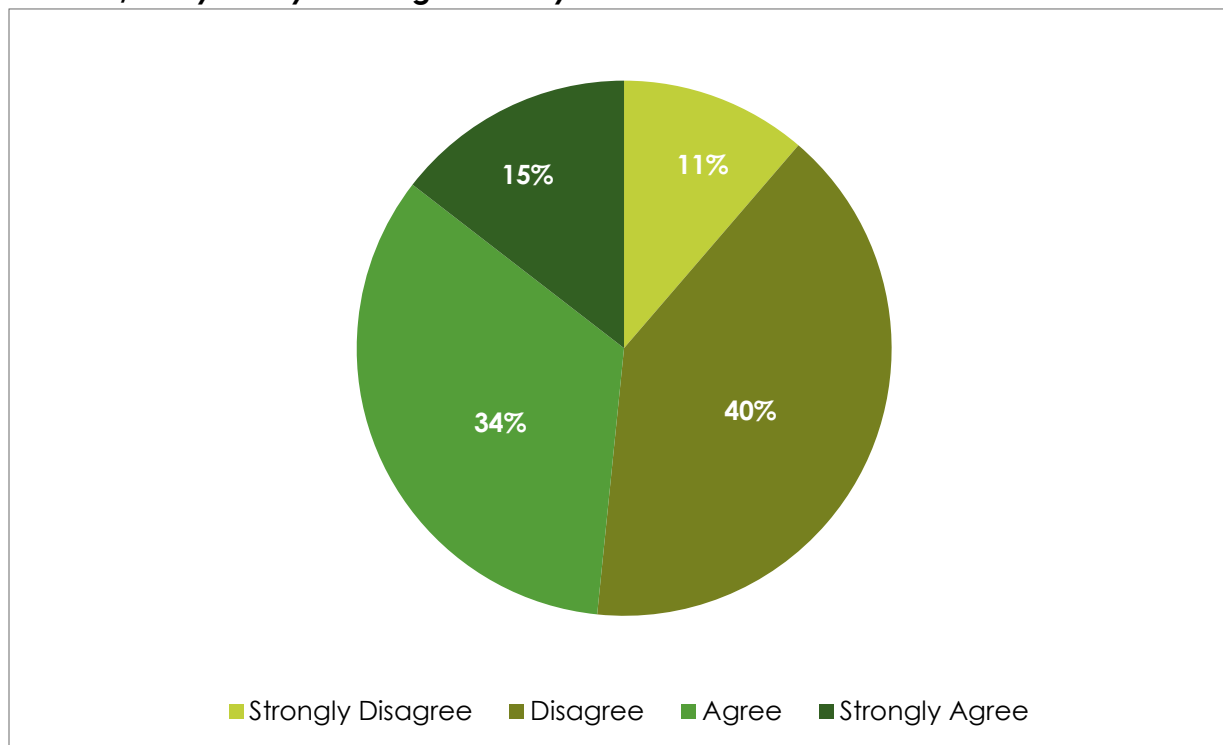


Question 3: Overall, how effective was Solano County's COVID19 testing system?

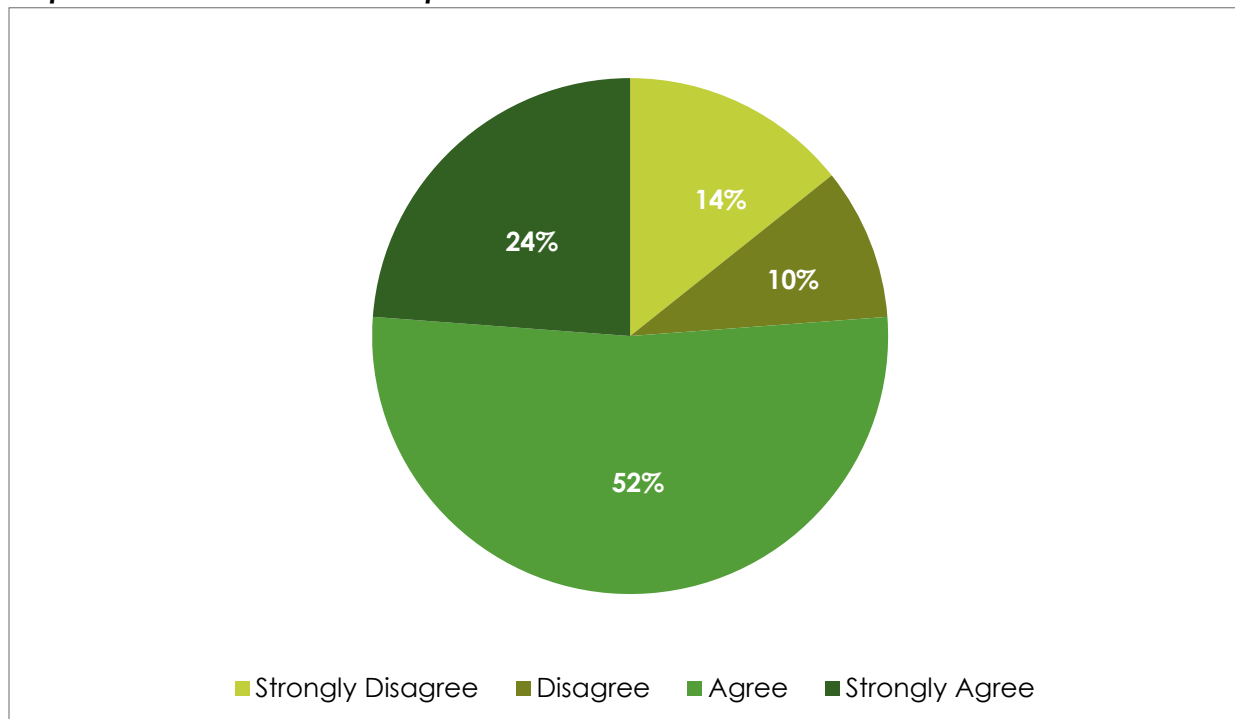




Question 4: Reduced services from the County during the COVID-19 pandemic affected me and/or my family in a negative way.



Question 5: In general, I supported and agreed with the actions Solano County took in response to the COVID-19 response.



Question 6: How equitably do you feel the County responded to COVID-19? Are there specific examples/scenarios that come to mind?

Many respondents either felt that the County did the best they could and responded appropriately or they did not have an opinion. Others felt that the response was very technology based and left some struggling to stay informed who do not normally use technology.

Highlighted Participant Responses
"The County responded appropriately."
"You equally panicked everyone in the County and tried to get anything with a pulse vaccinated whether they needed it or not. Mass vaccination sites are not healthcare. Mandates are not healthcare. Elderly [sic] and those with comorbidities should have been the priority. Not young healthy people."
"I don't know how difficult it was to find out about or sign up without access to the internet."
"I like the fact that they used age and physical condition of the patrons to decide the order of service."
"Very much so. The County provides services and information in many languages and across media outlets. The testing and vaccination centers were embedded in the County through partnerships with community partners like local churches."
"Closing schools hurt the low income people who still have huge learning gaps"
"I think they did well under the circumstances"
"Very equitably - everyone had services available to them"

Question 7: What things do you think Solano County could have done better during the COVID-19 response?

Faster dissemination of information and across many platforms was a large portion of the responses. Others found the appointment system was difficult to use and could have been better.

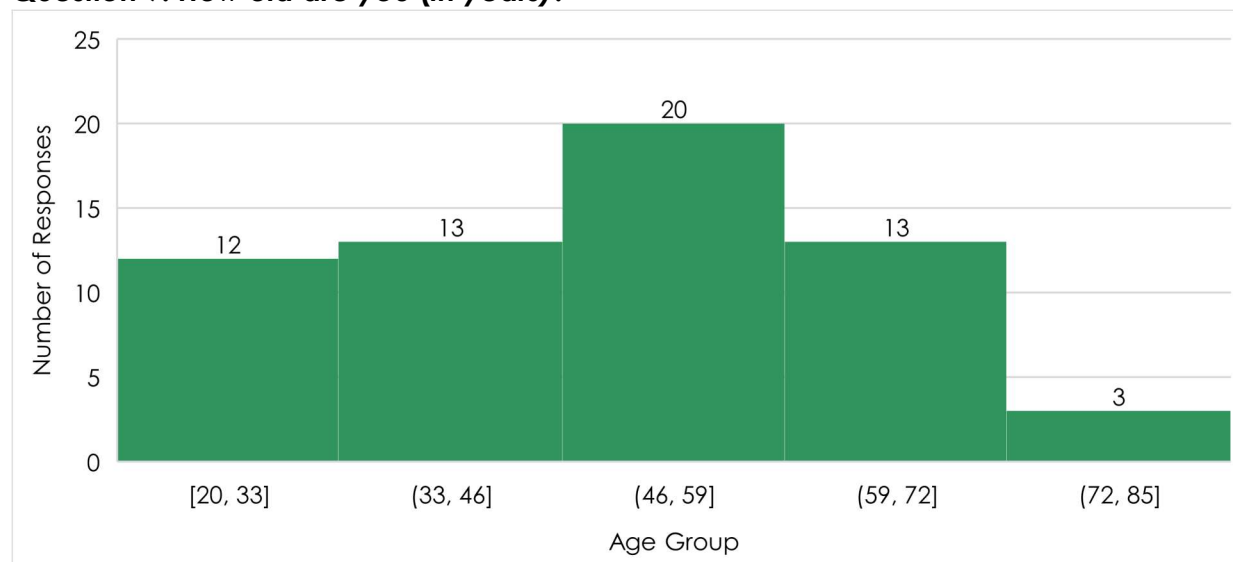
Highlighted Participant Responses
"Been more proactive in checking in on households and businesses"
"Better appointment system"
"Additional leadership on site to support those leaders that had to move from site to site. Emergent issues were sometimes left to unqualified staff to handle who did there [sic] best."
"If funding was available, maybe work with a temp agency support vaccination clinics [sic], etc."
"Public Health Officer was very slow to advise and not coordinated with other neighboring HO's"
"Find out why other parts of the country handle COVID without the locked downs and restrictions."
"Updates on Covid 19 were not easily available as other counties were. Had to continually look up information."
"Would have liked to have seen the County response similar to the Bay Area and Napa."

Question 8: What things do you think Solano County did well during the COVID-19 response?

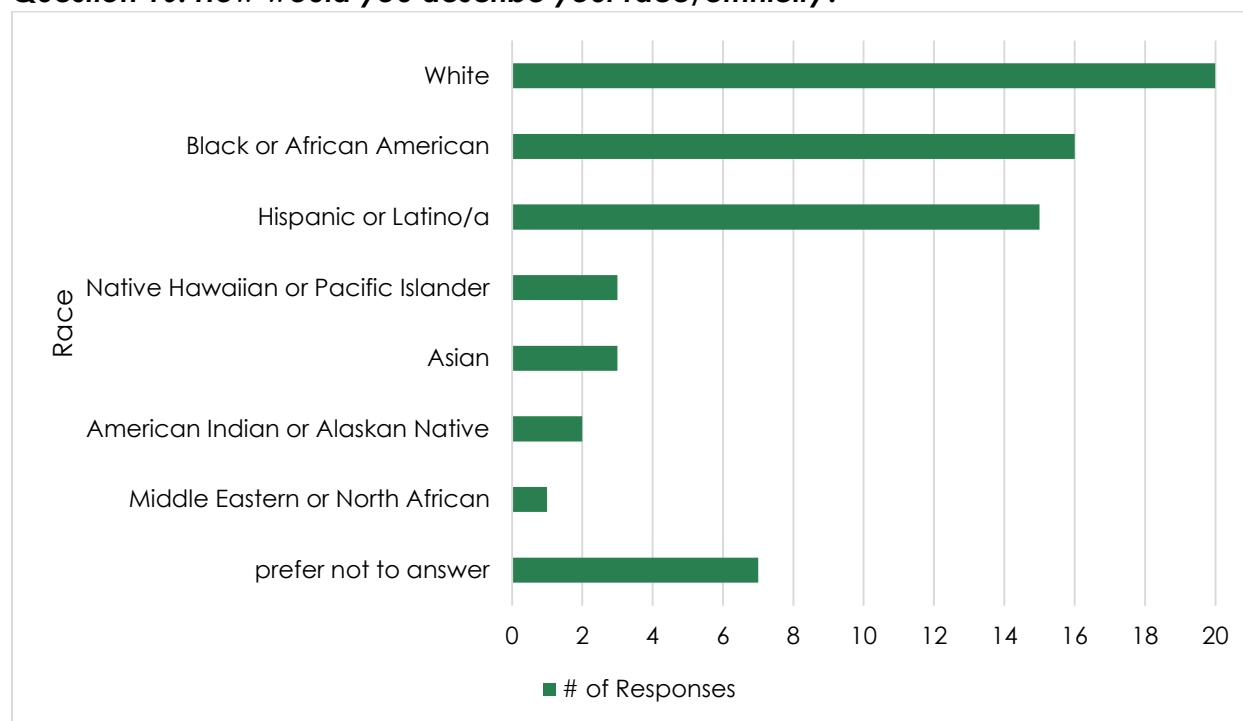
A large portion of respondents stated the County did well with the availability of testing and vaccination sites. Communication with the public was also a positive attribute of the County's response.

Highlighted Participant Responses
"Offered all 3 vaccine options"
"The Fairgrounds vaccination site was very well run."
"Vaccine distribution at the Solano County Fairgrounds was well run and easy to get shots from. The clinic in the Solano Mall was well run as well."
"Following mask and vaccine mandates."
"Kept people informed of what was happening in Solano and at the state level"
"Communication"
"They continued to provide services"

Question 9: How old are you (in years)?

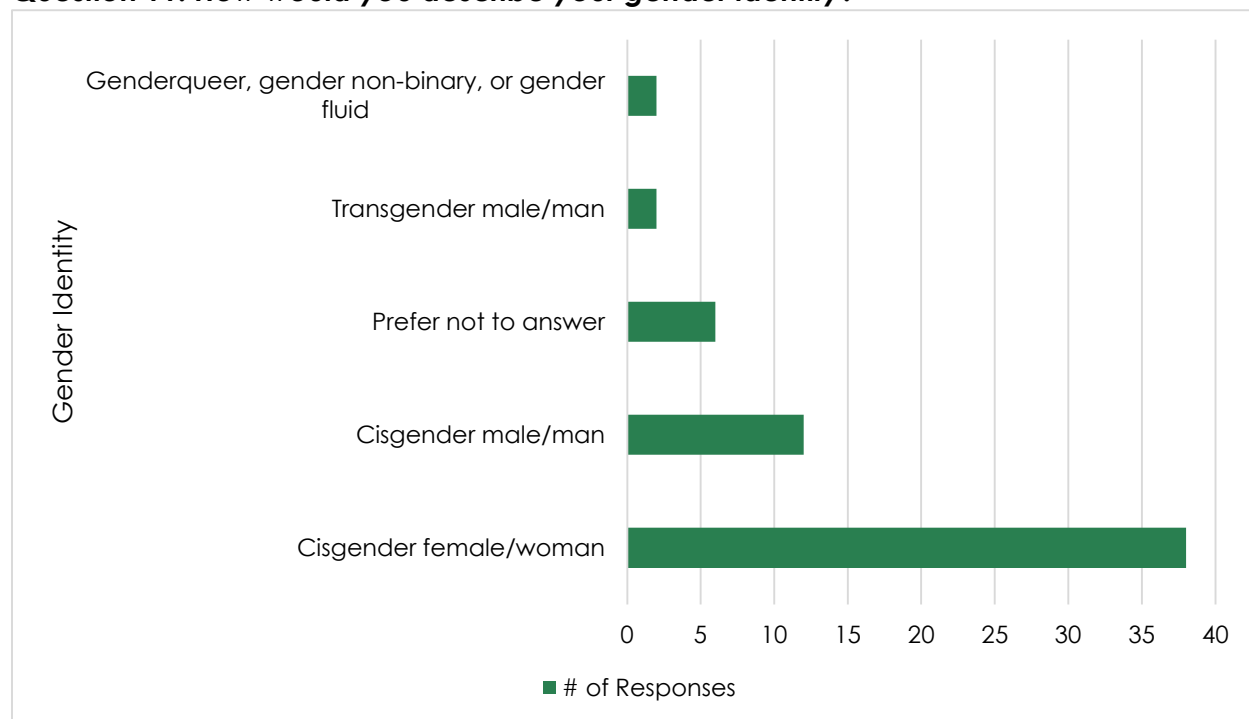


Question 10: How would you describe your race/ethnicity?

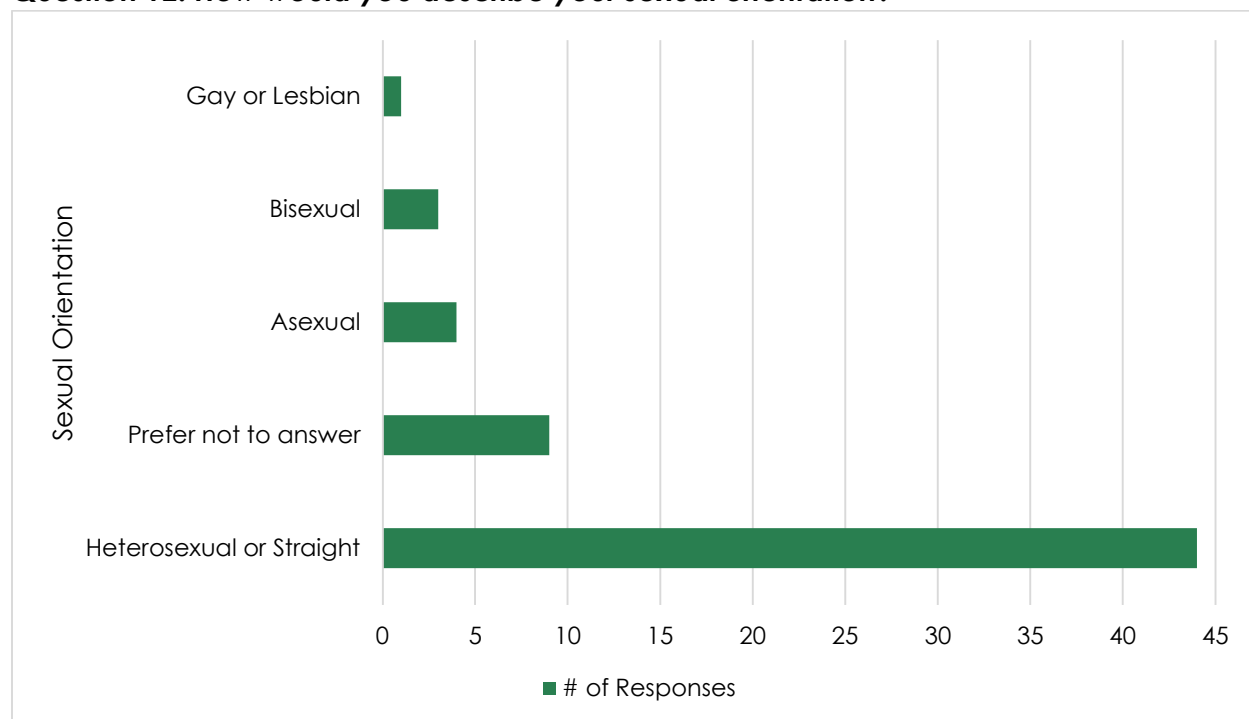




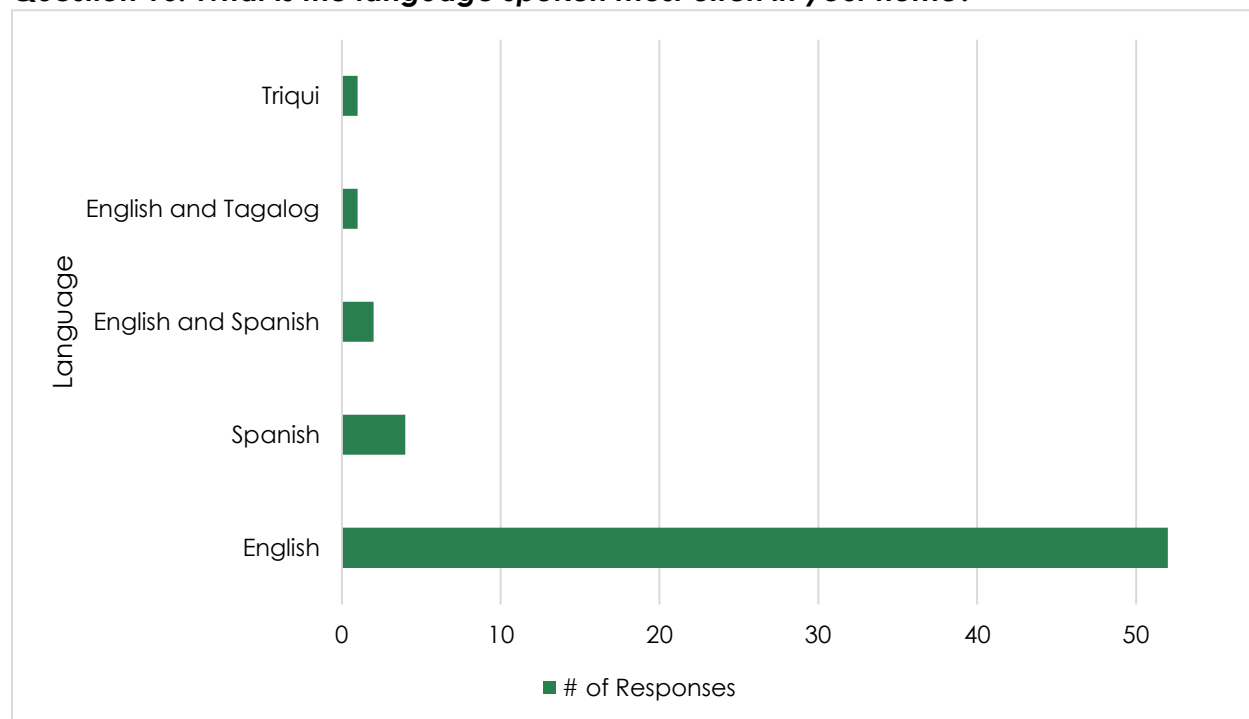
Question 11: How would you describe your gender identity?



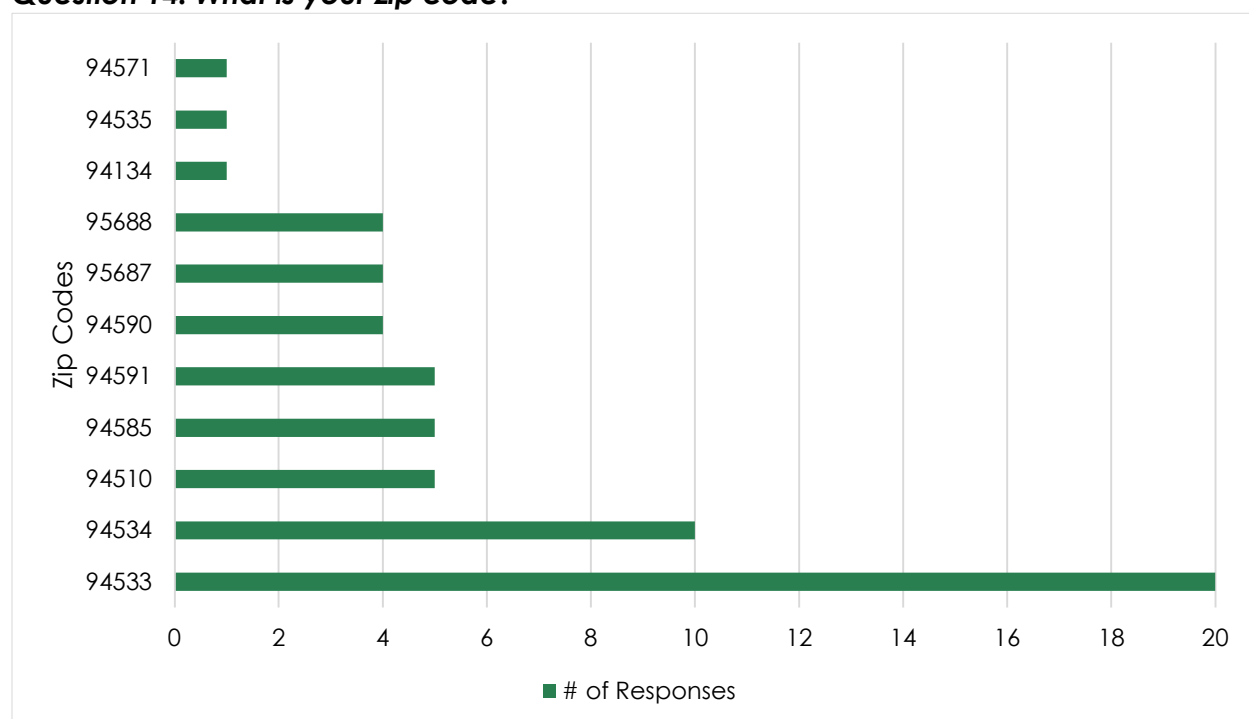
Question 12: How would you describe your sexual orientation?



Question 13: What is the language spoken most often in your home?



Question 14: What is your zip code?



SURVEY COMPARATIVE ANALYSIS

Communication

All three surveys highlighted the importance of communication. The internal staff survey pointed out mixed feelings about the effectiveness of communication during the COVID-19 response. The external organizations survey noted excellent communication as a strength of Solano County's pandemic response. The community survey also praised the County's communication with the public.

Vaccination Efforts

The internal staff and external organizations surveys both identified the implementation of mass vaccination as a strength of the County's response. The community survey also found the County's vaccine distribution to be effective.

Technology Use

The use of technology was a common theme in the surveys. The internal staff survey suggested investing in technologies for emergency response. The external organizations survey saw the transition from Google Docs to an online reporting portal as a positive innovation. However, the community survey pointed out that the County's technology-based approach could exclude certain populations.

Support for Diverse Populations

The internal staff and external organizations surveys both highlighted the need for better support for non-English speaking communities and people with AFN.

Areas for Improvement

All three surveys identified areas for improvement in the County's response. These included better support for employees (internal staff), improved coordination (external organizations), and faster dissemination of information (community).

Perception of County's Response

All three surveys had mixed views on the County's overall response to the pandemic. Some respondents felt the County responded appropriately, while others suggested areas for improvement or criticized certain aspects of the response.



Acronyms

Acronym	Definition
AAR	After-Action Report
AFB	Air Force Base
AFN	Access and Functional Needs
ALF	Assisted Living Facility
ALS	Advanced Life Support
ALS-RN	Advanced Life Support-Registered Nurse
ASB	Administrative Support Bureau
BLS	Basic Life Support
BOS	Board of Supervisors
CAO	County Administrator's Office
CBO	Community-Based Organizations
CDC	Centers for Disease Control and Prevention
CDPH	California Department of Public Health
CI	Case Investigation
CLIA	Clinical Laboratory Improvement Amendment
CONSTANT	Constant and Associates, Inc.
CORE	COVID Outbreak Response and Infection Prevention Education
CT	Contact Tracing
DOC	Department Operations Center
DoD	Department of Defense
DSW	Disaster Service Worker
EAP	Employee Assistant Program
EMS	Emergency Medical Service
EMT	Emergency Medical Technicians
EUA	Emergency Use Authorization
FAST	Fairfield and Suisun Transit
FDA	Food and Drug Administration
FQHC	Federally Qualified Health Center
HCC	Healthcare Coalition
HHS	Health and Human Services
HR	Human Resources
IAP	Incident Action Plan
IC	Infection Control
IP	Improvement Plan
IT	Information Technology

JIC	Joint Information Center
LEP	Limited English Proficiency
LTCF	Long-Term Care Facility
MHOAC	Medical Health Operational Area Coordinator
MRC	Medical Reserve Corps
NACo	National Association of Counties
ODAS	Older and Disabled Adult Services
PCR	Polymerase Chain Reaction
PHI	Personal Health Information
PII	Personally Identifiable Information
PIO	Public Information Officer
PPE	Personal Protective Equipment
PTO	Paid Time Off
PTSD	Post-Traumatic Stress Disorder
SNF	Skilled Nursing Facilities
SNIFS	Skilled Nursing and Intermediate Care Facilities
SOP	Standard Operating Procedures
SPH	Solano County Public Health
SPOT	Shared Portal for Outbreak Tracking
STA	Solano Transportation Authority
WHO	World Health Organization

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