COVID-19 After-Action Report

March 2023

Tacoma-Pierce County
Health Department
Healthy People in Healthy Communities

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Overview

Incident name and mission number	COVID-19 pandemic #20-0265
Health Department incident name	2020 January COVID Response
Incident dates	January 2020—December 2022
Scope	This After-Action Report (AAR) was created for an actual event. See additional information in the *Summary* section.
Mission areas	Response and Recovery | See FEMA's Mission Areas and Core Capabilities
PHEP capabilities	Capability 3: Emergency Operations Coordination Capability 4: Emergency Public Information and Warning Capability 5: Fatality Management Capability 6: Information Sharing Capability 8: Medical Countermeasure Dispensing and Administration Capability 9: Medical Materiel Management and Distribution Capability 10: Medical Surge Capability 11: Nonpharmaceutical Interventions Capability 12: Public Health Laboratory Testing Capability 13: Public Health Surveillance and Epidemiological Investigation Capability 14: Responder Safety and Health Capability 15: Volunteer Management See CDC's Public Health Emergency Preparedness and Response Capabilities
Objectives	Objectives changed regularly throughout the response and operational periods.
Threat or hazard	Pandemic: COVID-19
Incident description	In December 2019, China recognized a cluster of "pneumonia of unknown cause" cases in Wuhan, Hubei province. In early January 2020, the virus was identified as novel coronavirus SARS-CoV-2 and cases spread rapidly to other parts of the world. Tacoma-Pierce County Health Department activated a small emergency response team in early January to plan. On Jan. 20, 2020 Washington identified the first case of COVID-19 in the U.S. and Pierce County hospitals cared for some of the first cases. In March 2020, Pierce County Department of Emergency Management and the Health Department began Unified Command to manage the pandemic response in Pierce County. Unified Command and joint operations continued until November 2021. At that time, Unified Command ended, and the Health Department continued incident management through 2022.
Point of contact	Gabrielle Hubbard, Project Manager Public Health Emergency Preparedness and Response

Summary

Purpose

This After-Action Report (AAR) is intended to capture highlights, successes and areas for improvement from our COVID-19 pandemic emergency response from January 2020—December 2022. It also suggests recommendations to strengthen our programs, emergency preparedness and response efforts.

Scope

The report is limited to Health Department activities during the COVID-19 response. It is not a review of our partner agencies' actions or meant to be a whole-of-government report.

For broader scope, see Pierce County Department of Emergency Management's COVID-19 Region V report.

Limitations

Although we dedicated much time and consideration to this report, it was not feasible to capture everything that occurred at the Health Department during the COVID-19 pandemic response. Staff turnover, recency bias, pandemic fatigue and other public health work limited complete data collection.

Considerable effort was made to make this report a fair representation of our pandemic response.

Methodology

This report was informed by an earlier version of our COVID-19 AAR/IP developed in collaboration with our vendor, Tetra Tech. This earlier version included feedback from:

- 40 individual staff interviews.
- 5 interviews with external groups:
    - Washington State Department of Health (DOH).
    - Healthcare organizations.
    - Local emergency managers.
    - Pierce County Department of Emergency Management (DEM) and Incident Management Team (IMT) members.
    - Community engagement contracted partners and outreach workers.
- 4 interviews with internal groups:
    - Management Team.
    - Wellness, Operations and Resilience Committee (WORC).

    - Public Health Emergency Preparedness and Response (PHEPR) program.
    - Community Engagement leads.
- 295 survey responses from staff and partners.

This final version includes additional information and increased staff participation in the review process.

Report Structure

We divided this report into 10 sections:

- Community Engagement.
- Pierce County Department of Emergency Management (DEM).
- Equity.
- Incident Command System (ICS).
- Incident Management.
- Partnerships.
- Public Information and Communications.
- Staffing and Human Resources.
- Surveillance: Data Management, Analysis and Reporting.
- Volunteers.

Each section reviews topics associated with that area including observations, analysis and recommendations. These sections were major themes discovered during after-action process.

Incident Response Highlights

Note: this timeline captures COVID-19 response information only. It does not capture other emergencies or significant events that were happening concurrently with the response.

Key Dates and Milestones

- **Week of January 6, 2020:** We stood up our COVID-19 response planning team.
- **January 20, 2020:** First confirmed case in U.S. identified in Snohomish County, Washington.
- **January 21, 2020:** We activated our COVID-19 emergency response team.
- **Feb. 29, 2020:** Governor Jay Inslee proclaimed a state of emergency in Washington.
- **March 2020:** We began early and proactive education, intervention, surveillance and testing with congregate care facilities in Pierce County.
- **March 6, 2020:** First case identified in a Pierce County resident.
- **March 11, 2020:** Health Department and DEM transitioned to Unified Command. Some Health Department staff moved to Pierce County Emergency Operations Center (EOC).
- **March 12, 2020:** Gov. Inslee announced Pierce, King and Snohomish County schools closed from March 16 through April 24 or later.
- **March 15, 2020:** Gov. Inslee announced 2-week closure of all restaurants, bars, entertainment and recreational facilities.
- **March 18, 2020:** First quarantine site opened at The Salvation Army.
- **March 18, 2020:** First reported death of a Pierce County resident from COVID-19.
- **March 21-25, 2020:** First large scale testing clinic in Pierce County at the Tacoma Dome. This was the first Community-Based Testing Site (CBTS) in the U.S.
- **March 23, 2020:** Gov. Inslee announced Stay Home, Stay Healthy order.
- **April 2, 2020:** First isolation site opened in collaboration with Metropolitan Development Council.
- **April 6, 2020:** Gov. Inslee announced school closures through the end of the school year.
- **April 8, 2020:** Pierce County's Temporary Care Center opens for isolation and quarantine services.
- **May 1, 2020:** Gov. Inslee announced phased reopening approach to begin May 5.

- **May 2020:** Coronavirus Aid, Relief, and Economic Security (CARES) Act funding received.
- **May 2020:** Began distribution of food and care packages to support isolation and quarantine (I/Q).
- **May 2020:** Expanded testing in homeless shelters.
- **May 31, 2020:** Gov. Inslee issued Safe Start proclamation as Stay Home, Stay Healthy order expired.
- **June 5, 2020:** Pierce County moved into Phase 2 of Gov. Inslee's Safe Start Plan.
- **June 23, 2020:** Gov. Inslee announced statewide mask mandate.
- **July 2020:** Large hiring surge at the Health Department.
- **July 23, 2020:** Gov. Inslee announced rollbacks to some activities to slow COVID-19 exposure.
- **July 2020:** Pierce County unified response began COVID-19 vaccine planning.
- **November 15, 2020:** Gov. Inslee announced restrictions for social gatherings and business occupancy to reduce COVID-19 rates.
- **November 23, 2020:** School-Based Testing Pilot Program began with White River School District. This program expanded to include Eatonville and Peninsula School Districts.
- **December 2020:** CARES funding ended.
- **December 14, 2020:** First COVID-19 vaccine received by healthcare providers in Pierce County.
- **December 26, 2020:** Pierce County's first public COVID-19 vaccine clinic.
- **January 5, 2021:** Gov. Inslee announced Healthy Washington-Roadmap to Recovery, a phased regional recovery approach.
- **February 2021:** Testing Branch increased community testing efforts.
- **February 1, 2021:** Puget Sound Region (Pierce, King, and Snohomish counties) moved to Phase 2 of the Healthy Washington plan.
- **March 2021:** External hires for command positions began (e.g., Planning Section Chief).
- **March 2021:** Many Health Department staff deactivated to return to regular programs.
- **April 15, 2021:** Everyone 16 and older became eligible for the vaccine.
- **May 13, 2021:** Gov. Inslee announced statewide reopening date of June 30 and short-term statewide move to Phase 3 on May 18.
- **June 30, 2021**: Most COVID-19 restrictions lifted and Washington reopened.

- **July 28, 2021:** Gov. Inslee recommended mask-wearing in public indoor settings in areas of substantial or high COVID-19 transmission.
- **August 2021:** Temporary Care Center closed. I&Q responsibilities transferred entirely to Health Department.
- **August 2021:** Delta variant wave began.
- **September 2021:** Agency restructuring began. This transitioned COVID-19 response emergency response teams into the Department's normal business model (e.g. divisions and programs)**.**
- **September 2021:** First vaccine boosters recommended.
- **September 3, 2021:** Dr. Anthony L-T Chen issued health order requiring Pierce County residents wear masks at all outdoor events with 500 or more people, regardless of vaccination status.
- **September 9, 2021:** President Biden implemented a 6-pronged action plan that included mandating vaccinations for federal workers and employees at companies with more than 100 workers.
- **September 13, 2021:** Gov. Inslee amended Washington Ready to require facial coverings for large outdoor events with 500 or more people.
- **October 18, 2021**: Gov. Inslee issued proclamation requiring vaccination verification for large events effective Nov. 15, 2021.
- **November 23, 2021:** Pierce County's Unified Command ended.
- **December 4, 2021**: First 3 cases of Omicron variant reported in Washington in Pierce, King and Thurston counties.
- **December 2021**: 1.2+ million doses of vaccine administered 1 year after it first arrived in Pierce County.
- **December 2021-January 2022:** Demand for testing increased due to Omicron variant. Long lines at testing sites causes sites to occasionally shut down from traffic and flow problems.
- **January 2022:** DEM opened temporary testing at Fairgrounds; Health Department stood up long-term operations there.
- **March 12, 2022:** Mask mandate in most indoor settings in Pierce County lifted.
- **August 2022:** Bivalent boosters first recommended and approved by the FDA.
- **October 31, 2022:** Washington's emergency proclamation ended.
- **December 31, 2022:** Health Department reduces emergency response to "off-normal," effectively ending most parts of emergency response, including Situation Reports (SitReps) and Incident Action Plans (IAPs). Work continues under existing Health Department programs.

For more information:

- **Federal:** See CDC Museum's COVID-19 Timeline.
- **State:** See Statewide COVID-19 information.
- **Local:** See local Situation Reports and Incident Action Plans.

Operational Highlights

As of October 2022.

- 750,000+ test kits distributed to the public.
- 16,500+ test kits delivered to facilities experiencing outbreaks.
- 100+ mobile testing events hosted by our contractor, LTS, since June 2022.
- In March 2020, stood up the Community-Based Testing Site at the Tacoma Dome within 6 days of notification from the federal government. The purpose of this program was to provide test kits, PPE and lab processing to "hot zones" in Washington State. Pierce County stood up the first site in the state and delivered 996 tests to high-risk and high-priority groups in the county over 5 days.
- In fall 2020, we partnered with Eatonville School District, Peninsula School District and White River School District to test for COVID-19 in K-12 schools, known as the School Testing Pilot. Findings from this partnership were published in the American Journal of Public Health: *Rapid Antigen Screening of Students and Staff for SARS-CoV-2 in Rural School Districts, Pierce County, WA, 2020.*
- 2,000+ outbreaks investigated since March 2020.
- 1,500+ testing events performed by our drop teams.
- 275,000+ calls and text attempted by disease investigators since July 2020.
- 2,000+ vaccine clinics hosted by the Health Department.
- 100 Casual and Connected vaccine events in 2021, with 52% of 1,305 survey respondents identifying as BIPOC (Black Indigenous, People of Color) and rating the clinic experience as 4.9/5 stars.
- 145,000+ vaccines administered directly or by Health Department contractors.
- Encouraged and supported vaccination by all Pierce County providers. More than 1.8 million vaccines have been administered to Pierce County residents so far.
- 19,000+ residents were connected to a vaccine opportunity or culturally appropriate COVID-19 information by the Community Engagement team since June 2021.

- 250+ people provided isolation and quarantine services since July 2021. This does not include isolation and quarantine services offered through the Temporary Care Center or from the Care Coordination team earlier in response.
- Nearly 400 contracts executed since the beginning of COVID-19.
- Communications received a community relations award and Public Relations Professional of the Year from the Public Relations Society of America, Puget Sound chapter, for outstanding COVID-19 communications in 2021.
- Our Isolation and Quarantine video, developed in collaboration with Pierce County Television (PCTV), won an Award of Distinction from the National Association of Telecommunications Officers and Advisors (NATOA) in 2021 at the 36th Annual Government Programming Awards (GPA).
- Our Community Engagement methods and strategies were recognized nationally by the Robert Wood Johnson Foundation.
- 600+ agency-represented staff hired through staffing agencies to support response efforts.
- 1,100 spontaneous community volunteers supported COVID-19 response in addition to Pierce County Medical Reserve Corps volunteers. Volunteers contributed nearly 21,000 hours to COVID-19 response.
- 4,500+ requests for supplies, equipment or services received internally by the logistics team.
- Developed tools and resources to help community and partners promote and answer questions about COVID-19, including the Faith Leaders Conversation Series (Summer 2021), Business Tool Kit (2021) Spanish and pediatric Lunch and Learns series (Winter 2021) and the COVID-19 Vaccine Community Outreach Toolkit (2021).
- Implemented innovative telemedicine test to treat program to increase access to antivirals.
- Our technology equipment and environment improved to include 350+ new laptops and monitors, migration to Office 365 and Teams, new remote work capabilities and roll out of a disaster recovery site for redundant internet and storage.
- In 2022, our Community Engagement team accepted the Community Pillars Award from the Pierce County Community Engagement Taskforce and the Community Service Award from Pierce County Medical Society, along with our Communications team.
- Our Director of Health, Dr. Anthony L-T Chen, received awards, including a Community Health Excellence Award from NW Asian Weekly and a Community Service Award from Pierce County Medical Society, for his work and leadership during the pandemic.

After-Action Report

Community Engagement

We formed the Community Engagement team during COVID-19 to address inequities that existed before, during and after the pandemic. Using a data driven approach, the team ensures meaningful, respectful engagement with communities and partners. The team leverages skills, knowledge, and experience to:

- Prevent disease.
- Decrease the burden on communities.
- Support equitable recovery.

Observation 1: Strength. Our Community Engagement team engaged with a network of community partners to increase trust, address access gaps and improve the outcomes of the response to COVID-19.

Community Outreach Workers leveraged existing relationships and lived experience to build a network of trusted messengers. These messengers shared information, testing and vaccine opportunities, and other resources in a culturally grounded and accessible way.

> **Analysis:** Health equity is one of our core values. We embedded equity into ICS as a critical function of response and recovery. Tapping the expertise of employees who understand and have access to diverse communities across the county proved an effective model to share information, learn about needs, and adjust services and information as needed. Community Engagement's work strengthened the Health Department's commitment to equity among Pierce County government agencies, City of Tacoma and community organizations. The pandemic response efforts led to increased vaccination, improved trust and meaningful partnerships that set groundwork for future of public health initiatives.
>
> **Recommendation 1.1:** Build a robust community engagement infrastructure for Pierce County and operationalize practices and strategies that promote equity and racial justice into everyday public health work. Review this model regularly and adapt to changing population and community.
>
> **Recommendation 1.2:** Build community engagement best practices into emergency response plans.

Observation 2: Area for Improvement. Improve Community Engagement collaboration with other Health Department programs and share community feedback and input across our agency.

> **Analysis:** Trust is built over time. Pierce County communities have varying levels of trust in healthcare and public health information. To restore, repair and improve trust, the Health Department needs to support community members to share information in a culturally appropriate way of their choosing. Additionally, acting on information from the community should be equally valued. Community Engagement team members expressed the need for a formal process to follow up on community feedback, suggestions and needs. The information the Community Engagement team collects has

value across the Health Department. Some team members also expressed a sense of isolation from the rest of the organization and a desire to be valued and better incorporated.

Recommendation 2.1: Value and appropriately compensate the expertise of Community Engagement staff and community members with lived experience.

Recommendation 2.2: Establish a process to ensure Health Department programs integrate with Community Engagement to share information and establish stronger community relationships. Create a transparent and accessible system to consider and implement community feedback.

Recommendation 2.3: Develop strategies and processes to strengthen the cultural appropriateness and relevance of Department operations and services. Strategies and processes should include or represent (e.g. community voice data) those most affected by inequitable health outcomes.

Observation 3: Area for Improvement. Community Engagement staff struggled to roll out public health interventions and recommendations (e.g. masking, physical distancing, testing, vaccine) effectively across all community and demographic lines. Community-identified priorities and needs should shape response strategies.

Analysis: While we based community outreach on evidence-based practices, the Health Department struggled to balance effective and timely response with effective community engagement and in some cases did not implement proven engagement best practices. We missed opportunities to understand community beliefs and establish trusted relationships with leaders in some population segments because we prioritized a timely response. Foundations of dialogue and inclusion are critical to the success of behavior change strategies. Frameworks exist to advance community engagement in emergency, as well as non-emergency public health work.

Recommendation 3.3: Implement consistent community engagement methods for emergencies and across the Health Department. Support capacity building and training for community engagement competencies during emergency and non-emergency public health work.

Pierce County Department of Emergency Management (DEM)

Observation 1: Strength. DEM was an engaged partner at the onset of the incident. At the early stages of activation at the Health Department, both formal and informal communication with the DEM was considered good. Information sharing was rapid and efficient. Staff identified that DEM was knowledgeable about allocating FEMA money and setting up large vaccination clinics. The unprecedented and lengthy COVID-19 response strained relationships between the two organizations. Leaders in both agencies committed to regular communication.

Observation 2: Strength. DEM's partnership with testing, PPE storage and distribution and JIC facilitated needed services and facilities during the incident.

DEM provided a warehouse for PPE storage and coordinated distribution. DEM partnered with the Health Department to provide testing sites in several locations throughout Pierce County. This enabled the Health Department to focus its efforts on mobile testing sites and smaller locations that appealed to communities most impacted by COVID-19.

In addition, Health Department staff used DEM's JIC facility to hold communication meetings and centralize communication operations. The technology and resources provided through the JIC supported the incident. DEM established and operated vital isolation and quarantine capacity and implemented numerous high-volume vaccination clinics providing much needed vaccination capacity.

Observation 3: Area for Improvement. Each organization's working knowledge of ICS and planning assumptions are significantly different, limiting benefits of Unified Command for the residents of Pierce County.

> **Analysis:** After the first couple of weeks, both departments found they had differences in their expectations. A significant schism took place between the two organizations under Unified Command. In the interviews with Health Department staff, the most critical feedback concerned the relationship between the two departments, the conflicting communication styles, the lack of perceived respect, and the resulting fission between the two organizations. Unified Command remained from March 2020-Nov. 2021. Agencies co-located in the Pierce County Emergency Operations Center (EOC) from March 2020-Aug. 2021.
>
> **Recommendation 3.1:** Establish and implement a joint Health Department/DEM multi-year training and exercise program for ICS/Response Operations.
>
> **Recommendation 3.2:** Review and update the ESF #8—Public Health and Medical Services Annex to the Pierce County Comprehensive Emergency Management Plan with DEM and appropriate partners.
>
> **Recommendation 3.4:** Develop a framework that outlines standard operating procedures of when the Health Department and DEM enter and exit Unified Command.

Observation 4: Area for Improvement: The realities of a prolonged, intense emergency response took an emotional toll on staff from both agencies. That, combined with a difference in response culture, sometimes created an elevated level of tension among EOC staff.

Analysis: Health Department and DEM staff reported intermittent conflict and divisive language to senior leadership of both organizations. Both organizations made efforts to navigate the differing levels of training, terminology, workplace cultures, and expectations. Some staff reported that conditions remained stagnant, despite efforts by both agencies to address issues.

Recommendation 4.1: Work with DEM to establish joint operating principles to mitigate future tension and build trust.

Recommendation 4.2: Continue to cultivate DEM and Health Department staff relationships and partnerships where staff have similar roles and positions.

Equity

This section primarily focuses on systems and structures.

The COVID-19 pandemic brought social and racial injustice and inequity to the forefront of response. Poverty, racism, lack of access to healthcare and other factors left some people less protected from COVID-19.

Observation 1: Strength. We prioritized and considered equity early in the response, including improving the policies and conditions that left communities less protected from COVID-19.

> **Analysis:** An Equity Officer position reported to the Incident Commander starting March 2020. That fall, we held 15 listening sessions with 201 participants to better understand inequities in Pierce County during the pandemic. These community voices shaped the results of the Pierce County COVID-19 Health Equity Assessment (December 2020), which found the pandemic was worse for people of color and their communities. Children, youth and families experienced disproportionate effects because of:
>
> - School closures.
> - Illness.
> - Primary caregivers who died.
> - The toll of working on the front lines.
> - Lost jobs and wages.
> - Lack of access to healthcare.
> - Lack of access to childcare.
>
> This assessment was an important resource and reference throughout the response.

Observation 2: Area for Improvement. Equity was applied inconsistently across response operations. Some programs and teams practiced equity, while in others, it was developing or non-existent. This inconsistency perpetuated inequities.

> **Analysis:** Some programs and people in the Health Department operate through a lens of equity as a normal part of their work. When those people joined the COVID-19 response, they continued to use equity as a guide for decision-making. For example, equity was a high priority for vaccination clinics and Community Engagement. However, some programs did not consider equity in decision-making.
>
> ICS was not built on equity principles. Historically, equity is not considered in emergency response. Tactics were developed during the COVID-19 response to include equity to differing degrees of success. The COVID-19 Equity Officer had difficulty advocating for the need for equity in the middle of response; equity needs to be considered and prioritized from beginning to end.
>
> The Health Department did not have many staff trained in equity skills to fill the Equity Officer role. Some of the main systems to evaluate through an equity lens are human resources, business support services and procurement, performance management and policy development.

Recommendation 2.1: Continue to include the Equity Officer in strategic conversations and decision-making early in an incident response.

Recommendation 2.2: Assure equity is part of decision-making across incident command.

Recommendation 2.3: Implement equity performance measures and training for all Health Department staff in preparation for response activities.

Observation 3: Area for Improvement. People received recognition and praise for putting in long hours, responding to late evening requests, and acting swiftly to respond to requests, no matter the hour. Elevating the example of overwork minimizes the importance of work/life balance, healthy boundaries and rest. This pattern led to burnout, stress, resentment, and ultimately workforce turnover.

Analysis: Staff indicated they were told this was an incident of epic proportion and the whole team had to do all they could to get the job done. People reported being called at home after 11 p.m. and told to report to work early in the morning. Staff also recounted being called into work with no regard for children and elder care issues. Staff felt unsafe saying no.

Recommendation 3.1: Emergency activations must account for safety, mental health concerns and the stress of long-term deployments to EOC positions. Establish, publish and enforce required time off. Supervisors in ICS should support time off requirements.

Recommendation 3.2: Activate a Resilience Officer in ICS for lengthy emergency response activations.

Incident Command System (ICS)

Observation 1: Strength. People with training in ICS assisted others in the application of Incident Command, and people without training adapted and learned quickly.

Analysis: Staff were commended for their understanding and adaptation of basic ICS training to the COVID-19 response. Mentoring was identified as a best practice, as was taking time during response operations to describe and define the application of ICS training to the situation. Just-in-time training was executed well internally. Health Department staff have better understanding of ICS post-COVID-19 response.

Recommendation 1.1: Capture the use of mentorship during activations as a best practice in response plans and training and exercise.

Observation 2: Strength. Staff supported using ICS at the beginning to organize and manage the response.

Analysis: ICS offered notable advantages to organize work like:

- Direct access to leaders in decision-making positions.
- A clear and focused mission, work assignments and operational periods that helped with accountability.
- Temporary assignments and leadership opportunities that allowed discovery of new skills.
- Flexibility to move staff into different positions and reach operational objectives.
- Structured daily briefings to aid in planning, collaboration and problem-solving.

Recommendation 2.1: Build on ICS knowledge, skills and abilities across the Health Department.

Observation 3: Area for Improvement. Work remained in ICS and with the emergency response team longer than it should have.

Analysis: ICS was used to structure and organize COVID-19 work for more than 2 years. Over time, most staff expressed frustration with ICS to manage work, as well as the “restructure process” to integrate COVID-19 work back into programs across the Health Department.

Recommendation 3.1: Determine a standard transition point for emergency response into regular Health Department operations for future public health emergencies.

Observation 4: Area for Improvement: Health Department staff did not have enough ICS or emergency management training prior to the pandemic.

Analysis: Training was inconsistent for staff across the Health Department. While FEMA trainings are required for staff upon hire, some had never taken them or forgot what they had learned. For staff with training, there were infrequent opportunities to reinforce training which led to predictable issues. Some staff were not prepared at all for assignment in the EOC, and most were underprepared for a long-term deployment in an EOC position.

Traditional emergency preparedness and response trainings have been challenging to apply to public health staff and public health scenarios. Staff faced challenges related to attending and completing training (e.g. frequency, location, funding, pre-requisites, time required).

Supervisors in ICS were not consistent in their understanding and application of ICS and the use of IAPs; SitReps; goals, strategies, objectives and tactics; the Planning P; and briefings. Transitions between Branch Directors and Section Chiefs were inconsistent, which would lead to problems following through on tasks and meeting expectations.

Recommendation 4.1: Conduct joint trainings with emergency management agencies to prepare for a future regional exercise or emergency.

Recommendation 4.2: Improve emergency preparedness and response training and exercise plan and requirements for staff.

Recommendation 4.3: Partner to improve delivery of emergency management trainings to public health staff and agencies.

Incident Management

Observation 1: Strength. The Health Department applied lessons learned and best practices from its previous activations.

> **Analysis:** Staff reported that prior response with flu vaccine clinics helped them prepare and manage expectations about the operational requirements required for COVID-19. They applied best practices from emergency responses like measles and the H1N1 pandemic to COVID-19.
>
> **Recommendation 1.1** Continue to build emergency preparedness and response capabilities, especially in the Health Department's Communicable Disease Control Division, to prepare for the next pandemic or disease outbreak. Share institutional knowledge and lessons learned with the next cycle of public health professionals.
>
> **Recommendation 1.2:** Update the Medical Countermeasures Plan to reflect lessons learned from COVID-19.

Observation 2: Area for Improvement. The process for decision-making and the division of roles and responsibilities among the Health Department's Management Team, Incident Commander, Continuity of Operations lead roles and other ICS decision-making positions was unclear.

> **Analysis:** Many staff struggled with the fast-paced decision-making in the EOC. They also struggled understanding which levels had authority to make decisions and who should be accountable. Often there were too many or too few people in a meeting or group that needed to make decisions to keep the response progressing. Improved ICS training will help address this issue.
>
> **Recommendation 2.1:** Define and delineate the roles and responsibilities between the Continuity of Operations team, Management Team, and the Incident Commander/emergency response team during an emergency.

Observation 3: Area for Improvement. Silos that formed over time between teams in ICS created challenges for operational coordination and sharing information.

> **Analysis:** At the beginning of the pandemic, staff seemed to be on board with mission-driven objectives and the teamwork required to achieve them. After an extended time in ICS, silos began to form between teams. Some teams were more difficult to work with because they would establish policies and procedures without consulting others or the chain of command.
>
> **Recommendation 3.1:** Capture this observation (i.e. siloing) in an emergency response plan or guide to monitor, assess and correct in future emergency responses.

Partnerships

See related information in the Community Engagement section.

Observation 1: Strength. Our staff and partners invested in community relationships, programming, plans, tools, and processes prior to the pandemic which allowed for many stakeholders to engage with us during COVID-19.

Analysis: Robert Wood Johnson Foundation (RWJF) highlighted and celebrated Tacoma in its collection COVID-19 Community Response: Emerging Themes Across Sentinel Communities for its work to engage with communities before and throughout the pandemic:

"For example, the TPCHD had identified geographic 'communities of focus' for their health promotion efforts, which they used to center their pandemic response activities, and the city of Tacoma's Equity Index and departmental Racial Equity Action Plans helped the city to prioritize efforts in a way that was rooted in data and accountability metrics. Elected officials in Tacoma were consistently focused on the disproportionate impact of COVID-19 on communities already experiencing vulnerability, which city staff noted allowed them to experiment with innovative approaches to reach these groups.

Nonprofit and health care stakeholders cited a collaborative and engaged approach on the part of TPCHD as a critical factor in the community's success. Decision makers across sectors sought a diverse set of voices to weigh-in on response and response priorities, including experts and high-profile organizations and national networks, as well as smaller community-based organizations and residents.

These approaches helped to guide COVID-19 mitigation, testing, and vaccination strategies in the community; to target communications about small business relief programs; and informed the ways in which the community spent federal and philanthropic response funds."

Recommendation 1.1: Continue to lead Community Engagement work nationally and identify best practices and lessons learned to share with partners to advance this work.

Observation 2: Strength. Pre-pandemic relationships with partners resulted in collaboration and good customer service.

Analysis: Collaborative decisions with partners ranged from where to place testing centers and isolation and quarantine sites; how and where distribute testing kits and PPE; and best practices on supporting COVID-19 vaccine clinics in businesses, places of worship and recreation.

We took deliberate action to develop and strengthen working relationships with more than 90 partners serving 21 key communities and sectors more susceptible to the negative impacts of COVID-19. Prior partnerships via community coalitions, Communities of Focus teams and Family Resource Centers allowed for quick and trusted engagement.

For example, a local leader called upon the Health Department to increase vaccination rates in Parkland and Spanaway. Health Department teams and community partners mobilized to canvas

businesses, conduct education at large community complexes, and partner with the libraries, local school districts and churches to offer accessible vaccination clinics.

When surveyed, partners noted several strengths from the Health Department like:

- When partners had challenges, they knew they could always call Health Department staff for individual assistance.
- Pre-existing partnerships including preventative programs and coalition participation created cross-system knowledge and built trusting relationships.
- Staff professionalism, accessibility, and commitment to service.

Recommendation 2.1: Document all partnerships in reports and communications and continue partnership development as a best practice.

Observation 3: Strength. Newly formed partnerships led to better health outcomes for the community and will provide new opportunities for public health.

Analysis: Relationships with long-term care facilities, courts, Emergency Medical Services (EMS), and jails, prisons and detention centers strengthened during the pandemic. Prior to COVID-19, these were partners that we did not regularly engage with. This offers a unique opportunity post-pandemic.

Recommendation 3.1: Continue to invest in partnerships newly formed during COVID-19 and work to strengthen partnerships that posed challenges (e.g. homeless service providers).

Observation 4: Strength. Regular meetings and relationships with hospital partners permitted coordinated response and a reliable avenue for problem-solving.

Analysis: Health Department staff met and communicated with healthcare partners regularly. A standing meeting schedule facilitated the coordination of resources and capabilities, supported rapid adaptation for allocation needs, and assisted with tracking inventory and planning vaccination clinics. The meetings also helped participants prepare to advocate to DOH, Governor's office and other state agencies for assistance. Partners noted that the Health Department took some of the stress off the hospital systems.

Recommendation 4.1: Memorialize hospital and healthcare partnership during COVID-19.

Recommendation 4.2: Continue to invest in relationships with healthcare and the healthcare coalition at all levels of the Health Department.

Observation 5: Strength. Pre-existing and developed relationships with local and regional pharmacies aided in response operations.

Analysis: Pharmacies did extraordinary work to augment COVID-19 vaccine rollout to the community. Small family pharmacies, including pharmacies with only 1–2 staff, were regarded as heroes for getting vaccinations into the community and serving areas across the county.

Recommendation 5.1: Memorialize pharmacy partnerships during COVID-19.

Recommendation 5.2: Continue immunization momentum in the community with pharmacy partnerships, including promoting the Vaccines for Children (VFC) program and facilitating school-pharmacy partnerships and referrals to pharmacies for vaccines.

Observation 6: Strength. Tacoma-Pierce County Equity Action Network (EAN) formed in response to COVID-19.

Analysis: EAN is a collection of more than 80 community partners. EAN promotes pro-equity policies and steps to address societal inequities. It builds relationships with community leaders on policies to address these areas. It encourages intentional community building and amplifies the voices, experiences, and solutions of communities and partners. It also encourages more people to get involved in shaping the health of their community.

Recommendation 6.1: Fund and support a convening role for public health staff before, during and after emergencies to build and sustain relationships to address societal inequities.

Recommendations 6.2: Continue to develop community focused coalitions and partnerships and networks, like EAN, Communities of Focus teams and coalitions to advise on policy and operational decisions.

Public Information and Communications

Observation 1: Strength. Social media information, advertising, earned media, and other traditional formats produced for the COVID-19 incident had a high impact on the public.

Analysis: We routinely produced and updated information to the public via a variety of formats, including our website, social media (e.g., Facebook, Instagram), earned media, paid media and media briefings/interviews. The Communications team/Joint Information Center (JIC) produced professional documents that were accurate and well designed, maintained a great website, used social media platforms quickly and with a clear focus, and produced comprehensive advertising campaigns promoting protective measures, testing and COVID-19 vaccination. Social media outreach and advertising campaigns were reported to be highly successful.

During our COVID-19 response, our website traffic grew by 800%, our Facebook following grew by more than 600% and our email subscriptions grew by nearly 900%. We committed to being the reliable source of local public health information during the pandemic.

Our marketing campaigns were fresh and creative, and we witnessed click-through rates about 5 times higher than the industry average. These campaigns had nearly 76 million impressions in 2020 and more than 55 million in 2021, totaling more than 131 million. Our *Vax to the Future* campaign made our COVID-19 vaccine page the top page on our website, with 1.92 million pageviews from its launch in late 2020 through the end of 2021.

In 2022, the Communications Team received awards from the Public Relations Society of America, Puget Sound chapter, for outstanding communications. The community relations award was awarded for “leveraging partnerships to build trust and vaccinate Pierce County,” for digital media, and the Communications & Community Relations Manager was named Public Relations Professional of the Year.

Recommendation 1.1: Memorialize effective emergency communication methods and strategies. Link emergency response Communications Plans (e.g., COVID-19, hepatitis C) in the Public Information Annex as examples to apply for future activations.

Observation 2: Strength. Despite inconsistent messaging from federal and state levels of government and private sources regarding COVID-19, messaging and communications at the county level remained credible and exceptional.

Analysis: In the United States, the public lacked understanding about the disease and its transmission, mitigation measures (e.g. masks, social distancing), vaccinations, and related policies due to a rapidly changing incident and conflicting information from various sources. Data came from a variety of government agencies and private sources, which resulted in information overload. In a high-risk environment, consistent messaging from public health officials is critical.

Our public health messaging, including our talking points for media interviews, was highly consistent. For each interview, the PIO prepared talking points and prepped the spokesperson. On average, we

were quoted in 3 news stories a week. In addition, we received nearly daily coverage from The News Tribune and other outlets where a Department spokesperson was not quoted but reporters used our daily case reports or other online information as their source. Despite eroding trust around public health guidance nationally, regionally and in some pockets, locally our messaging remained highly consistent, and we heard from many stakeholders that they relied on us.

During the response, we broadened the use of our brand-new GovDelivery subscription services, and grew our subscriber base from a few thousand, pre-pandemic, to 140,000 and growing. Case updates, blogs, and other public health messaging delivered through this subscription service became the number one source of referral traffic to our website, leaping well beyond the referral traffic from our social media. Overall, GovDelivery is second only to search in how people get to our website.

We also added new storytelling skillsets, used more video and animation, and continued to increase the level of our design work. We also improved our cultural relevancy by adding a racial equity and justice review to our communications review process over time.

Media interviews were assigned primarily to the incident commander. This limited their attention to important issues in the response.

Recommendation 2.1: Continue with practice of preparing spokespeople for media interviews and offer additional larger group media training opportunities.

Recommendation 2.2: Identify additional spokespeople to share interview burden during busy times.

Observation 3: Strength. In 2020 and 2021, Communications/JIC turned around 512 translated document requests in an average of 3.8 days. We are a leader in advancing language access locally and have exceeded state guidance in the area.

Analysis: The Health Department website is intended to provide accurate information in a variety of languages reflective of the community's needs. While the website offers Google Translate for any language, CLAS best practices promote certified human translation. Early in the response, we modeled our Language Access Plan on Federal Emergency Management Agency (FEMA) and DOH requirements and exceeded these official requirements by creating separate infographic libraries in multiple languages to promote easy access to reliable COVID-19 information and translating most COVID-19 pages and COVID-19 FAQs into Spanish.

English | Español (Spanish) | 한국어 (Korean) | Tiếng Việt (Vietnamese) | Tagalog | Русский (Russian) | 中文 (Simplified Chinese) | More Languages www.tpchd.org/espanol

We experienced a gap with ensuring updates to the Spanish pages when COVID-19 guidance changed. When identified, we improved the process to ensure updates happened in multiple languages at the same time. Communications staff provided translations when requested for COVID-19 publications. We've continued to improve this process, decreasing turnaround time to 2.5 days by November 2022.

We captured these commitments as a part of our COVID-19 CLAS Plan.

Recommendation 3.1: Explore how to better highlight translated resources via our website navigation.

Recommendation 3.2: Continue to look for and partner with non-English media outlets to expand our reach into non-English speaking communities.

Observation 4: Area for Improvement. While the JIC was able to quickly create and operationalize a process to accommodate communication requests of ICS leadership, some General Command staff skipped the communications process, resulting in substandard products.

Analysis: The Communications Team produced 1,011 COVID-19 products in 2020, and 1,147 products in 2021. The average turnaround time from request to completion was 6 business days.

The communications request process was well documented and shared broadly in places such as The Latest, the HUB, and directly with staff, yet the process was still not consistently followed. Beginning in July 2021, Communications regularly hosted communications trainings, but participation was poor.

Some staff executed small communications products (e.g. posters, flyers, and brochures) that did not meet the organization's brand standards and needed to be recreated by Communications. The effect was delay in production and misuse of time during an incident when timely release of communication products was critical.

Recommendation 4.1: Ensure the Public Information Annex and relevant Job Action Sheets refer response staff to use Communications Request Process and that activated staff attend mandatory training on using this process if they are unfamiliar with it.

Observation 5: Area for Improvement. Communications' and/or the PIO's approach to COVID-19 public information and messaging sometimes contradicted Community Engagement or other COVID-19 response staff recommendations for how to reach underserved community members.

Analysis: A disconnect with the COVID-19 communication process, roles, responsibilities, expectations, or decision-making existed between the Communications team and some ICS response requestors. Response staff reported occasionally being dissatisfied with the Communication process because they:

- Felt dismissed, that their expertise wasn't valued or validated, or their input wasn't considered or appreciated.
- Believed the communications approach was not the best strategy or method, or appropriate for their target community or audience.

During this response, especially in the beginning, we did not have time to create tailored messaging for every community we interfaced with. The direction early in response was to prioritize rapid communication and mass media outlets. This conflicted with recommendations and needs of other ICS response teams that focused on reducing COVID-19 health inequities.

While we integrated the new role of Community Engagement in the response in real time, Communications and Community Engagement worked together to meet community needs for public health information, working under high pressure and different levels of training and ICS response

experience. A promising development early in the response was contracting with a number of community partners to develop mini Communication Plans that included an approval process for public health messaging. The contracted community partners then worked on approaches for relevant and culturally sensitive expressions of those messages to share directly with their communities.

Later in the response, we added a racial equity and justice review to the communications review process.

Recommendation 5.1: Continue to modify the PIO/Communications process for both emergency responses and regular Health Department work for more co-creation with Community Engagement and Equity staff, more advance input modes, more listening and consideration of culturally appropriateness, and continual improvement in customer service. In a response, identify ways to balance timely information with the importance of tailored, culturally relevant messaging.

Recommendation 5.2: Determine and distinguish the roles and responsibilities of the PIO/Communications team, the Community Engagement team and the Equity Officer position.

Staff and Human Resources

Observation 1: Strength. Health Department staff adapted as a team to ever-changing challenges presented during the COVID-19 response.

Analysis: From veteran staff to agency-represented hires and volunteers, whether they worked with one another previously or for the first time in COVID-19, Health Department personnel have recalled with pride how their coworkers were committed to serving the public. They were flexible and adapted to rapidly changing circumstances. They met new requirements of evolving guidance, assumed new roles, and found creative solutions to resource and capability gaps.

Recommendation 1.1: Celebrate the Health Department staff who participated in the COVID-19 response.

Observation 2: Strength. The Health Department created and implemented a hiring plan that addressed surge capacity needs for incident response and recovery.

Analysis: Overall, the use of several private sector agencies to vet personnel and provide temporary staff (also known as "agency-represented staff" later in response) surge capacity was considered a success. Staff indicated that they had:

- Flexibility to release agency-represented staff who were not appropriate for positions quickly, which aided focus on the response mission.
- Respect for agency-represented staff dedication, work ethic and ability to learn quickly.
- Value added to their teams from agency-represented staff brought on from fields outside the public health. The diversity and flexibility of these hires was an overall success.

Recommendation 2.1: Capture this surge capacity workforce hiring plan as a best practice.

Recommendation 2.2: Execute contracts annually or have memorandums of understanding (MOUs) in place with multiple staffing agencies to quickly surge if needed during emergencies.

Recommendation 2.3: Add additional areas of expertise on staffing contracts like IT, finance, medical, and administrative support.

Observation 3: Area for Improvement. Inequality between agency-represented staff and the Health Department's regular employees created a perceived caste system creating occasional workplace tensions and unreasonable expectations.

Analysis: While the use of agency-represented staff was positive for filling the need for surge capacity at the start of the incident, as the incident progressed, many regular employees had strong concerns about the use of agency-represented staff. Some issues raised included:

- Agency-represented staff with less experience and/or education were paid significantly more per hour for all time worked compared to regular employees.

- Agency-represented staff could not leverage the same training systems and resources regular staff could. This resulted in barriers to training all COVID-19 response staff simultaneously.
- Poor onboarding processes and standards for agency-represented staff created pervasive issues internally, like a lack of understanding and supporting agency culture, as the response progressed.
- Unions raised concerns that keeping agency-represented staff for more than 12 months contradicted the Collective Bargaining Unit.
- Employee recognition did not initially include agency-represented staff, and when they were included, it was perceived to be an afterthought.
- Morale was affected by long-term use of agency-represented staff and loss of regular staff to other agencies as the pandemic progressed. This resulted in negative long-term effects on everyone.

Recommendation 3.1: Update policies, procedures and plans with bargaining units, as applicable, to address staffing and HR issues experienced during COVID-19.

Recommendation 3.2: Create a policy that identifies how long surge capacity workforce members can stay in a temporary position before being released or brought into Health Department employee status.

Recommendation 3.3: Increase the number of staff adequately trained for critical roles in ICS like Incident Commander, Public Information Officer, Safety Officer, etc. to at least 3 deep. Maintain this roster of staff and ensure these staff stay current on training. Assure proper handoff between ICS supervisors and improve continuity and follow through after leads switch in response.

Recommendation 3.4: Create a system that recognizes and celebrates work performance for each activation of the EOC and includes volunteers, agency staff, regular staff and partners deployed in response operations. Temporary agency staff are considered employees of the staffing agency, not employees of the Health Department. Create a separate recognition event, specific to the work temporary agency staff are doing.

Observation 4: Area for Improvement. Staff expectations for recognition, mental health resources and stress reduction strategies were not aligned with all supervisors.

Analysis: Staff and volunteers operated for an extended period under a high level of stress. Staff routinely worked overtime throughout the pandemic, sometimes as much as 16 hours day, 7 days a week. In addition to facing stresses at work, staff also experienced stressors in their personal lives but had little free time to adequately manage them. Staff were informed that they were essential, and as such, did not feel they had the option to refuse assignments. Staff stressors included:

- Long working hours for an extended period.
- Worry that they may unintentionally expose their families to COVID-19.
- Distress when the pandemic brought to light many inequities and injustices in the community.
- Witness to and personal experience with burnout and colleagues leaving employment.

The prolonged exposure to stress and trauma contributed greatly to staff personal anxiety and diminished morale. Staff indicated that mental health and stress reduction strategies were not addressed until after the first year of response. ICS leadership provided responder mental health trainings, but those were not disseminated throughout the entire ICS structure, and many staff did not attend them.

We did eventually hire a Resilience Coordinator, but staff indicated it was a late action that was reactive and missed the most traumatic period. Staff also indicated that supervisors did not fully understand the mental, physical and emotional toll the response took on staff.

Recommendation 4.1: Continue to provide mental health support to staff with trauma and negative consequences from responding to COVID-19.

Recommendation 4.2: Pre-identify meaningful mental health and wellness resources that can be readily deployed during incidents and is accessible to volunteers, agency-represented staff and regular employees. Ensure all levels of staff throughout the entire response structure have access to those resources.

Recommendation 4.3: Integrate the use of a Critical Incident Stress Management (CISM) team into future response plans.

Recommendation 4.4: The Incident Action Plan for each operational period in a response should include information and guidance written by the Safety Officer or Resilience Officer to address morale and teambuilding.

Observation 5: Area for Improvement. Staff filled ICS positions outside of their job classification and regular reporting structure, which lead to workplace tension and dissatisfaction.

Analysis: As an incident becomes more complex, as it did during COVID-19, the team structure and positions change in ICS. This occasionally finds someone who is a manager or leader in day-to-day operations assigned to a temporary position in ICS where they are a team member or individual contributor. They may even serve under someone who reports to them in regular work conditions. Staff sometimes ignored assignments and needed reassignment because of this.

Recommendation 5.1: Assess and determine how to properly activate people into ICS that may work outside of class or supervise their peers or superiors.

Recommendation 5.2: Create Job Action Sheets that clearly align with job classifications and corresponding pay scales.

Surveillance: Data Management, Analysis and Reporting

Observation 1: Strength. Data staff used tracking tools, resources, relationships with other organizations, and templates to manage a wide variety of data. We adapted to changing conditions and adjusted accordingly based on new data.

Analysis: The data team had the skills and ability to collect, manage, analyze and disseminate both quantitative and qualitative data. The team was adaptable and flexible in order to rapidly respond to the continuously changing data sources, as well as ICS leadership needs and desires. Staff brought on data entry teams for quality control and developed new systems as old ones failed or were not available at the state or federal levels. Although somewhat successful, the need to develop new systems during the pandemic highlighted that public health systems statewide were unprepared to track, analyze, report and make recommendations for this pandemic.

The team had previous working relationships with partners from the Department of Defense (DoD) at Joint-Base Lewis McChord (JBLM), DOH and with epidemiology teams at neighboring counties. Staff also initiated and expanded relationships as needed, such as with the Department of Veterans Affairs (VA).

The Health Department shared COVID-19 data with and received COVID-19 data from other partners (e.g., EMS) through data sharing agreements (DSAs). Data team staff worked hard to improve both the tools in use and relationships to provide internal and external decision-makers and the public with up-to-date and high-quality data. Although coordination with DoD (primarily JBLM and somewhat for the VA) improved dramatically during COVID-19, this was not consistent around all data sources or all staff. Given the large role of DoD in Pierce County, improved collaboration of ideas and specific data sources is needed to monitor health.

Recommendation 1.1: Continue to seek avenues for increased collaboration with local and regional partners. Although coordination with DoD (primarily JBLM and somewhat for the VA) improved dramatically during COVID-19, this was not consistent around all data sources or all staff. Given the large role of DoD in Pierce County, improved collaboration, not just of ideas, but of specific data sources is needed to monitor health. Similarly, DSAs were signed to share data with EMS.

Recommendation 1.2: DSAs should be prioritized or made routine in relevant emergencies or pandemic situations.

Recommendation 1.3: Identify characteristics of the data collection and management tools used that supported or hindered the response. Develop a standard operating procedure to learn from these and ensure that future responses incorporate those lessons learned. This should include topics like data volume, interoperability and quality control. Prioritize and enhance quantitative and qualitative data collection concepts and processes so that they are tested and ready to be used in the next emergency. Such a system should build from and integrate routine data systems used outside outbreak response.

Recommendation 1.4: Partner with DOH as they develop a comprehensive and cloud-based data system that is integrated across local, tribal, state and federal partners and that tracks testing, hospitalization, deaths, and immunizations and generates reports.

Observation 2: Area for Improvement. Effective data-sharing, communication and coordination with ICS response teams was essential to accurately inform decision-making and operations. However, existing silos and ones that developed over time resulted in poor communication, redundant requests and lower quality outputs by the data team.

Analysis: The pandemic created high pressure around data. Data dissemination is most effective when the evidence is clear and easy to understand. However, that is not always feasible in fluid situations such as the pandemic. Politicization of public health data routinely occurred in the public sphere. Data analysis must be rigorous and accurate based on the knowledge available at the time.

Similarly, underlying data quality is critical to ensure that dissemination is appropriate. At times, there was conflict with EOC and ICS response leadership when their desires and needs conflicted with what the data team was capable of. Continuity of data savvy leadership is critical as many underlying details fluctuate and could lead to erroneous interpretation and conclusions.

Recommendation 2.1: Improve integration of teams that work with data to assure data quality (e.g. data entry, epidemiology and disease investigation, information technology, and geographic information systems.

Recommendation 2.2: Surveillance and public information sought to provide their best advice to the public and at times had differing priorities in how to best achieve this goal. Ongoing cross-training to explore the concerns of both teams would lead to improved collaboration on data clarity and reliability.

Recommendation 2.3: Coordinate with Communications to develop fact sheets or infographics that outline data collection systems (both quantitative and qualitative). Highlight how information and evidence:

- Is generated from those systems.
- Is used to make decisions.
- Affects public health and policy for partners.

We can use these fact sheets or infographics to train staff and share with the public to underscore the importance of evidence-based planning and policies.

Volunteers

Observation 1: Strength. Volunteers were a successful, well-managed force multiplier for the Health Department.

Analysis: Integrating volunteers for a variety of tasks throughout response operations worked well to extend the reach of Health Department staff. The Pierce County Medical Reserve Corps (MRC) volunteers were easy to onboard for response operations because they had pre-identified skillsets and had trained and exercised as a team pre-incident.

These highly trained volunteers had completed the required security checks and identification, making their deployment easy to manage and lead. We purchases a new volunteer management system, VolunteerHub, and developed to help volunteer management handle the COVID-19 response. This system helped onboard new volunteers quickly and efficiently. During COVID-19, the volunteer coordination team onboarded more than 300 new MRC volunteers to total 830+ active volunteers in the unit.

Volunteer management existed at the Health Department prior to COVID-19 and continued throughout response operations. The volunteer coordination team increased in size to 3 staff members. MRC volunteers worked well under high-pressure situations seamlessly alongside staff. This group was noted for their enthusiasm to be engaged in a variety of tasks. They were readily available, flexible, and focused on mission assignments. MRC volunteers contributed more than 20,800 hours to COVID-19 response. These volunteer hours provided more than $1 million in direct public savings to the response.

Vetted and trained MRC volunteers were also able to train and lead an additional 1,100+ spontaneous volunteers from the community and other organizations at events and worksites. The volunteer coordination team was able to onboard these volunteers through an abbreviated and expedited screening process developed with the Health Department's HR team.

Many partners were able to augment the public health workforce through this screening process, including MultiCare Health System, Virginia Mason Franciscan Health, nursing school faculty and students, local service clubs, and the Pierce County Medical Society. The MRC managed and tracked all volunteers for COVID-19 response, including non-MRC spontaneous and community volunteers.

Recommendation 1.1: Include the impact volunteers had on COVID-19 response operations in official record-keeping for the incident and use this data in recruitment materials for prospective MRC volunteers.

Recommendation 1.2: Offer mental health support to MRC volunteers that supported COVID-19 response operations.

Recommendation 1.3: Recognize the MRC and volunteers in any COVID-19 acknowledgements as they occur.

Recommendation 1.4: Maintain paid staffing for MRC coordination beyond COVID-19.

Observation 2: Area for Improvement. Overreliance on volunteers for lengthy incidents can be problematic and cause issues.

Analysis: While we highlighted the use of MRC and volunteers as a positive way to respond quickly and effectively to COVID-19, long-term reliance on volunteers may lead to burnout and deplete the MRC immediately and permanently. This led to morale, organizational, engagement and resilience issues for the MRC over time. It may also lead to equity issues if the Health Department relies on unpaid staff for essential services.

Recommendation 2.1: Recruit volunteers and initiate or build relationships with organizations that may be potential sources of volunteers, from skill areas that have depleted since the beginning of the pandemic.

Recommendation 2.2: Improve retention of student nurses and other types of students from area colleges and universities who supported COVID-19 operations.

Recommendation 2.3: Improve volunteer management relations and processes between the MRC and the Health Department.