



# RESTORE:

## The Colorado Blueprint for Innovative Public Health Workforce Development

MARCH 2023


# Acknowledgements

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Questions about the public health workforce or the Blueprint?

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# RESTORE: The Colorado Blueprint For Innovative Public Health Workforce Development

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# Working Toward the Blueprint

**During the COVID-19 pandemic, the need to build the public health workforce's capacity was critical to responding at the state and local levels.** In Colorado, as a local-control state, the onus of public health work falls heavily on local public health agencies (LPHAs) to ensure that rural and urban residents have access to services. Though support from state agencies and partners can be helpful, local agencies and organizations see and hear the issues that face their communities every day and must be responsive to meet the needs of their communities. To build collaborative and strategic support for local public health agencies and communities, the Colorado Public Health Workforce Collaborative (CPHWC) was formed in April 2020.

Persistent health disparities, exacerbated by the COVID-19 crisis, have highlighted the need for the public health workforce to evolve. For example, COVID-19 morbidity and mortality rates disproportionately affected historically marginalized racial and ethnic groups. There has been a need for surge capacity of the workforce, new skills and capabilities in emergency preparedness, expanded service delivery in disproportionately impacted communities, and the ongoing need to maintain the core public health services. To respond to other current and future public health emergencies and concerns, Colorado must have a resilient, skilled, and sustained public health workforce.

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“Public health professionals try to prevent problems from happening or recurring through implementing educational programs, recommending policies, administering services, and conducting research – in contrast to clinical professionals like doctors and nurses, who focus primarily on treating individuals after they become sick or injured. Public health also works to limit health disparities. **A large part of public health is promoting health care equity, quality and accessibility.**”

- CDC Foundation

CPHWC has been meeting since 2020 to support public health transformation and collaborative workforce development. For much of 2020 and 2021, the CPHWC specifically prioritized working with state and local partners to respond to the COVID-19 pandemic. This included the development of five workgroups: Training, Data, Policy, Communications, and Funding. These groups developed charters and met as needed to meet their purpose.

As the COVID-19 pandemic continued, it became increasingly clear that the pervasive issues with the public health workforce were going to impact the field beyond COVID-19. A critical need exists to preserve the emergency response, communications, and relationship-building capacities honed during the pandemic while re-balancing the workforce to better support non-emergent core services. The highly valued, highly supportive workforce was also experiencing pandemic-related burnout. In November 2021, a steering committee was formed to identify the priorities of the Colorado public health system and develop a blueprint for strengthening and supporting the public health workforce for the foreseeable future. The steering committee met several times culminating in a day-long working session with local and state-level public health leaders in June 2022. During this working session, the steering committee and public health leaders reached a consensus on the ongoing purpose of this Blueprint and the strategic focus areas.



# Colorado's Blueprint for Public Health Workforce Development

**Colorado must celebrate our dedicated public health workforce and we also must acknowledge the need to restore and build it.** The purpose of the Blueprint and the aim of the CPHWC is to build and sustain a skilled and diverse public health workforce that reflects the communities they serve and prepares an inclusive public health ecosystem to produce positive and equitable outcomes. We have a chance to build a stronger workforce that is innovative and responsive to our communities. The future of public health starts now, and we need a skilled and competent workforce to propel us forward.

*RESTORE: The Colorado Blueprint for Innovative Public Health Workforce Development* (the Blueprint) is in alignment and illustrates the State of Colorado **Foundational Public Health Capabilities** including:

- Assessment and planning;
- Communications;
- Policy development and support;
- Partnerships;
- Organizational competencies;
- Emergency preparedness and response; and
- Health equity and the social determinants of health.

The Blueprint also reinforces opportunities to strengthen the delivery of the State of Colorado **Foundational Public Health Services** that include:

- Communicable disease prevention, investigation and control;
- Environmental public health;
- Maternal, child, adolescent, and family health;
- Chronic disease, injury prevention, and behavioral health promotion; and
- Access to and linkage with healthcare.





## Research & Literature

In a preliminary literature scan (refer to Appendix A for references), current studies illustrate that applied experience in the field is valuable, as is mentorship for early public health careerists and professional development for those continuing in the field. In the scan, there was unified support for partnerships with colleges and universities to support recruitment pathways to public health careers. Additionally, continual data collection to demonstrate the impact of workforce advancement, development, and modernization efforts was supported in the literature.

The need for the public health workforce to demographically reflect the population it serves was an important theme. The demographic reflection helps with better service provision and improved client-provider communication and compliance with recommendations. There was a consistent reference to equity and inclusion as integral to hiring, promotion, and pay structures across the research. Also, innovation was found to be important in the workplace, and innovation in workforce recruitment practices is needed. Finally, a supportive working environment that is conducive

to the needs of the workforce was cited as helpful for retention and employee mental health. This includes addressing transportation and caregiving gaps for the workforce and fostering a supportive and positive daily work environment as key retention strategies.

The intersection of innovation, working environment, and practical employee benefits seem to be most salient for equitable workforce advancement according to this preliminary scan. Each of these respective themes presents the potential for further standalone literature reviews and environmental scans. The themes also represent possible future collaborative priorities and can serve as an impetus for additional focused research questions that may also include the workforce in environmental health, nursing, and epidemiology, for example.

The national scan served as a resource to help bridge Colorado's planning to the national public health workforce development landscape.



## Four Strategic Focus Areas

The Blueprint is a guiding tool to inform unique and innovative action plans across Colorado to support building a stronger public health workforce. The focus areas are intended to be a call to action for all public and environmental health employers, local public health agencies, institutes and community-based organizations, colleges and universities, policymakers, hospitals, healthcare providers, faith-based organizations, schools, civic leaders, and members of the larger public health community. It is intended to be transferable for consideration across the diverse capabilities, services, and clinical career pathways in public health. CPHWC members also have the opportunity to adopt select focus areas and strategies based on organizational priorities.

**To address public health workforce gaps and needs, the CPHWC together identified the following four focus areas for this Blueprint:**

- ▶ **1. Recruit** and attract a diverse workforce into public health;
- ▶ **2. Develop career and educational pathways** including training for those interested in pursuing a career in public health;
- ▶ **3. Retain** the public health workforce to keep talented employees, sustain positive outcomes, and foster a positive work atmosphere; and
- ▶ **4. Inform** public health decisions with **workforce data** to identify trends, gaps, and develop metrics.



# Fundamental Areas of Support

For each of the focus areas to be successful, they must each address the following fundamental areas of support:

- ▶ 1. System alignment and coordination
- ▶ 2. Communication
- ▶ 3. Equity, diversity, and inclusion
- ▶ 4. Advocacy
- ▶ 5. Legislation
- ▶ 6. Funding

First, system alignment and coordination require that partners across sectors and organizations are working toward similar public health workforce goals and strategies. This supports collective impact

and measurable change. Next, communication is necessary to assure that the public is aware of the value of public health and its workforce. Additionally, justice, equity, diversity, and inclusion of communities in Colorado’s foundational public health capabilities and core services are integral to reducing health disparities and achieving equitable outcomes. Further, advocacy to educate key decision-makers on public health gaps, needs, and priorities can lead to changes in legislation that support funding and sustainability. The fundamental areas of support should be integral to the implementation of comprehensive public health programs, services, and strategies in the Blueprint.

As we move onto the next steps for implementation of the Blueprint, teams responsible for developing specific strategies for each of the focus areas will ensure each of the fundamental areas of support are addressed in their action plans.



# Modernization of Public Health in Colorado

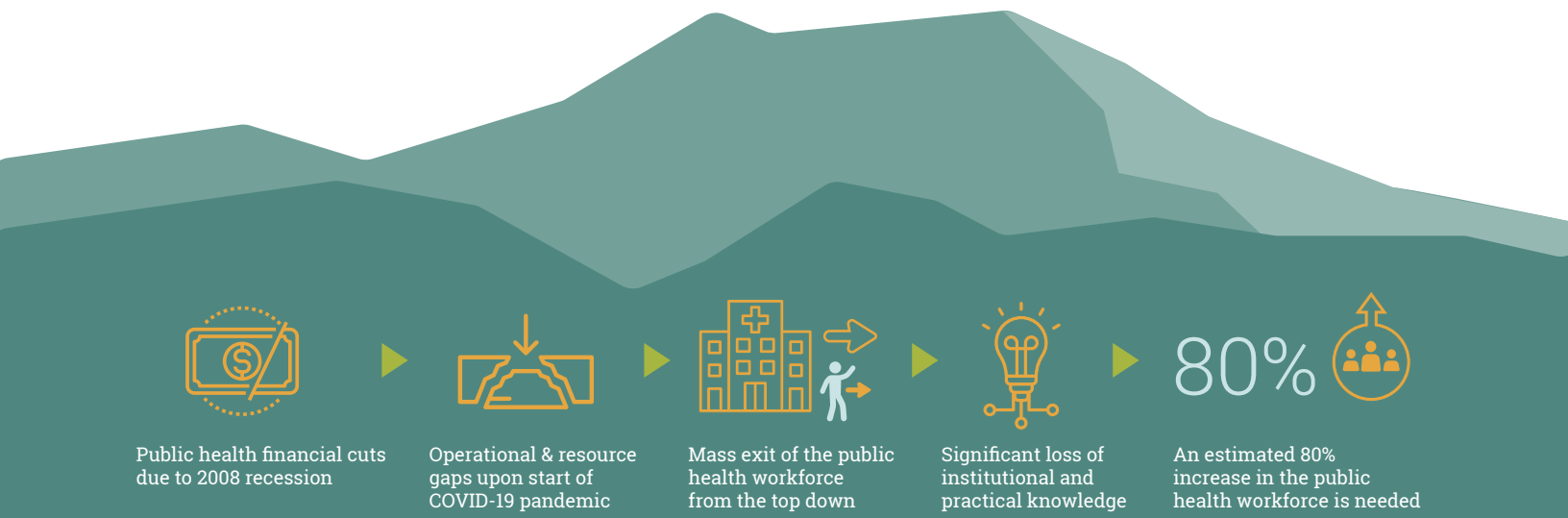
**There is significant evidence that properly staffed and funded public health systems are a cost-effective approach to improving the health outcomes of communities.** While a systematic review of public health interventions found that investment in activities in high-income countries had a median return of 14:1 ratio (Masters et al., 2017), it has been seen time and again that public health is chronically underfunded (Trust for America's Health, 2021) impacting the field's ability to respond to the needs of local communities and emergencies as they arise. There is a call, nationwide, to change the way public health is funded and to transform the system to ensure it can respond to and support all communities in an equitable and just way. Public health focuses on improving healthy habits and environments that, in turn, lower healthcare costs for individuals and society.

Building on years of work and preparation, this Blueprint provides clear direction for the capacity-building needed to support governmental public health’s efforts to modernize the public health system and workforce (Public Health National Center for Innovations, 2018). The term “modernize” includes the broad and necessary updating of laws, practices, and standards to address contemporary circumstances and challenges of the public health system (Institute of Medicine, 2011). A modern workforce is essential to reverse declining health outcomes and reduce healthcare costs because efficiencies, resources, technology, and optimum skill implementation are improved.

Throughout Colorado and the Rocky Mountain West, the already stretched public health workforce was forced to quickly evolve to meet the needs of the COVID-19 pandemic. Public health experienced financial cuts due to the 2008 recession, and resources were not fully restored. This left operational and resource gaps upon the start of the COVID-19 pandemic. The pressures of the ongoing emergency response led to a mass exit of the workforce from the top down, including more

than 24 LPHA leaders departing their positions in Colorado since the start of the pandemic, as well as significant additional departures continuing to occur across agencies (Baker and Ivory, 2021). Long-time public health workers left the field due to burnout and moral distress stemming from long hours, threats of violence, and political battles. These departures in whole have led to a significant loss of institutional and practical knowledge. There is a significant number of departures among community-based organizations and clinical partners as well. To respond to future public health emergencies and concerns, the de Beaumont Foundation (2022) estimated an 80% increase in the public health workforce is needed. Colorado must have a modernized, resilient public health system that can respond to community needs – especially those of diverse and marginalized communities.

Colorado has begun to work to modernize its public health system and ensure it can be responsive to community needs. In 2008, the Public Health Act was put into place, which included instituting a minimum package of core public health services (Core Services, defined above) that all LPHAs are required to deliver directly or assure through



partnerships, which was later recommended as an essential step by the Institute of Medicine (IOM) to improve financing public health (2011). Unfortunately, these requirements were left unfunded, resulting in wide disparities in the core service provision between local agencies in addition to a significant, statewide implementation deficit leading to disparities across the state in health outcomes. The gap is most poignant in the San Luis Valley and in Southeast Colorado where the Centers for Disease Control and Prevention (CDC)/ Agency for Toxic Substances and Disease Registry (ATSDR) Social Vulnerability Index shows the greatest vulnerability across the state with an average of 0.9065 (Agency for Toxic Substances and Disease Registry, 2020). These regions were also some of the lowest in Core Service Implementation statewide, averaging 6.57 out of 10 (Habile Consulting LLC, 2020).

To explore and quantify these disparities and deficits, state and local partners, led by the Colorado Association of Local Public Health Officials (CALPHO) and the Colorado Department of Public Health and the Environment (CDPHE), coalesced needed system improvement efforts under one movement, called **Public Health Transformation** (Transformation). The first step of Transformation was to revise the Core Services, which was done by statute in 2019 and now encompasses the foundational capabilities and foundational public health services.



**FIGURE 1.** *Foundational Capabilities and Foundational Public Health Services*

Following the revision of the public health Core Services, additional efforts included a comprehensive cost and capacity assessment to:

1. Determine current statewide implementation and spending on core public health services, and
2. Estimate the cost to fully deliver the updated core public health services and capabilities for each agency and the state.



**The assessment revealed significant implementation gaps in most agencies, and an overall state-wide Core Services implementation gap of 61%.** It also provided an estimate of the total annual investment needed to bring that level to 100% – about \$180 million (Habile Consulting LLC, 2020).

These data and assessments were analyzed, and a Statewide Modernization Roadmap (Roadmap) was to be initiated in March 2020 but was halted due to the COVID-19 pandemic response.

The COVID-19 pandemic has served to further exacerbate the capacity issues explored in the initial assessments. A recent nationwide study of how pandemic response impacted other public health functions found significant reductions in services and protections in areas like maternal and child health (-42%), chronic disease prevention (-39%), and substance abuse prevention (-28%) because of the redeployed workforce (Kintziger et al., 2021). Many of these redeployments have yet to be reversed and may never be recovered due to a drop in the retention of public health employees.

Additionally, according to the 2021 Public Health Workforce Interest and Needs Survey (PH WINS) completed by the de Beaumont Foundation, nearly a third of the governmental public health workforce plans to leave their organizations in the next year (2022). This is after significant turnover has already taken place in those organizations before 2021. Additionally, there is a high level of stress and burnout in the workforce that leads to additional turnover, further setting the field back in the progress that is needed to recover and modernize.

Several partners across Colorado have been engaged in re-initiating the work of Transformation through modernization and intend to explore how any next steps need to be adjusted and informed by COVID-19 response and recovery while also exploring what steps are possible from the original data to move public health forward. These efforts include the modernization of data and technology, financing, governance and law, recovery, and workforce.

To respond to current and future public health emergencies as effectively as possible, we must have a resilient, skilled, sustained, and community-engaged public health workforce. To reach this goal, we also should serve traditionally medically underserved communities, underrepresented groups, and people with disabilities as well as areas with health professional shortages.

What started as a group of committed public health partners coming together to support emergency operations in Colorado's local and state public health agencies has evolved into the CPHWC. The CPHWC is serving as the convening body for workforce development and will help ensure the work is aligned with the goals of transformation and modernization.



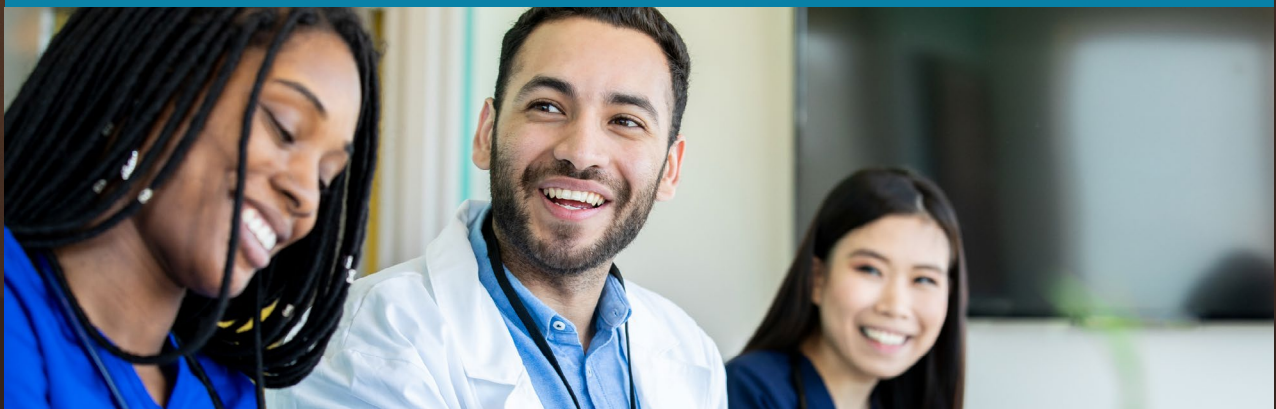
**FIGURE 2.** *Public Health Systems Modernization*

## FOCUS AREA 1:



# Recruit and Attract a Diverse Workforce Into Public Health

With the mass exit of the public health workforce across Colorado and the country in addition to high levels of attrition due to retirement (de Beaumont Foundation, 2022) attract new and more diverse talent to the field. There must be a clear understanding of what the field of public health is and what it brings to the health of communities to attract new and diverse talent.



## Why Get Involved?

Leaning on the expertise of people across the field of workforce development, public health must take a strategic, long-term, and adaptable approach to get potential workers excited about joining the workforce and recruiting them to start and stay in the field.



## Toolbox of Possible Strategies to Restore the Workforce Together

- **Assure review and updating of job descriptions** to accurately reflect the competencies and skills required for the role, including any needs for certification and the appropriate education level necessary for the role.
- **Foster and create safe workplace cultures** that are inclusive and diverse.
- **Offer access to various employee benefits** such as expanded paid time off, wellness support, etc.
- **Recruit from other fields/sectors** with specific connections and alignment with public health.
- **Incentivize going into public health**, including in rural and frontier areas, through scholarships, housing stipends, loan repayment programs, etc.
- **Improve hiring practices, promotion, and pay** to be more equitable and diverse.
- **Offer remote working opportunities**, as permissible for the job responsibilities, to help increase access to diverse talent and offer increased community access to public health support.
- **Increase competitive compensation and benefits.**
- **Implement recruitment strategies and workforce development partnerships** that are relevant to underrepresented groups.
- **Consider accessible language** as appropriate for hiring and the role.
- **Engage the relevant private workforce** that may be interested in the benefits of working in public health.
- **Engage those from the retired workforce** who still may be seeking part-time employment or the benefits of working in public health.
- **Build entry-level engagement programs** to develop future public health leaders.
- **Build new and innovative public health positions** and workforces in areas that apply to skills such as technology, climate change, etc.

# Strategies in Action

## COLORADO

*Build entry-level engagement programs to develop future public health leaders.*

Denver Department of Public Health and Environment began an innovative program in 2021 in partnership with the Colorado Department of Labor and Employment (CDLE) and Trailhead Institute, to hire community health worker apprentices registered with the U.S. Department of Labor (USDOL). With training partners from the Patient Navigation and Community Health Worker Training Program (PNCT), Arapahoe Community College, and the Rocky Mountain Public Health Training Center (RM-PHTC), apprentices receive 144 hours of instruction while practicing the skills learned through on-the-job learning experiences. Building on the success of this program, partners from the CPHWC were successful in writing a Public Health AmeriCorps grant to create Colorado Public Health Works, a groundbreaking AmeriCorps Apprenticeship program providing career entry into the field of public health intended for people ages 17-25 from local communities throughout Colorado. This innovative program marks the first

time AmeriCorps has integrated with a registered apprenticeship program in Colorado and is paving new pathways into the field for Colorado's next generation of public health leaders.

Through the Colorado Public Health Works program, AmeriCorps members will serve in regions throughout the state to build the capacity of local public health organizations, and many will simultaneously pursue certification as a community health worker through a USDOL registered apprenticeship, leveraging the benefits of both programs to provide an on-ramp to a career in public health.







## NATIONAL

### *Incentivize going into public health through scholarships and loan repayment programs.*

#### HR 3297 Public Health Workforce Loan Repayment Act of 2021

Other fields, like healthcare, have used loan repayment as a successful strategy to recruit talent into positions that are hard to fill, such as rural or marginalized communities. The **Public Health Workforce Loan Repayment bill** builds on these successful strategies to establish a student loan repayment program for public health professionals. As a condition of participation, recipients must agree to complete a period of full-time employment with a state, tribal, or local public health agency.

Individuals eligible for this program include those with public health or health professions degrees, as well as those with degrees in statistics, computer science, or related information technology fields.

The bill was introduced in the U.S. House of Representatives, and it is a strong national example of the actions and advocacy that can be taken on to attract people into public health. It has not been passed into law to date, though governmental and non-profit employees, in many cases, have been eligible for the Public Service Loan Forgiveness Program since its inception under the College Cost Reduction and Access Act of 2007.





## FOCUS AREA 2:

# Develop Career and Educational Pathways Including Training for Those Interested in Pursuing a Career in Public Health

Those who currently work in the field of public health often describe their path to the field as accidental. Anecdotally, they often are not seeking out public health as a field to work within but find themselves there through varied paths.



## Why Get Involved?

This focus area is meant to build systems and structures necessary to ensure people not only know about public health as a career option but that they purposefully select it as a career path.



### Toolbox of Possible Strategies to Develop Career & Educational Pathways

- **Continually map public health career pathways** that define entry-level careers and advancement opportunities.
- **Create learning pathways** in partnership with academic, high school, college, and industry partners.
- **Standardize training** for specific roles and share training resources across organizations across all geographic regions in Colorado.
- **Provide cross-training** for positions across the field.
- **Provide just-in-time training** for new and emerging issues across the field.
- **Adjust credentialing and training requirements** to meet the needs of the field and communities.
- **Develop pre-apprenticeship and apprenticeship opportunities** to start engagement along the career pathways.
- **Work with public health agencies** to ensure there is a focus on a skills-based workforce, including strategic skills.
- **Establish statewide peer support, coaching, and mentorship programs** for diverse leaders and emerging leaders across the field.
- **Align with the [Quality Jobs Framework](#)** to ensure public health uses best practices from the field of workforce development.
- **Emphasize and train on communication skills** for public health workers to support and advocate for the field.

# Strategies in Action

## COLORADO

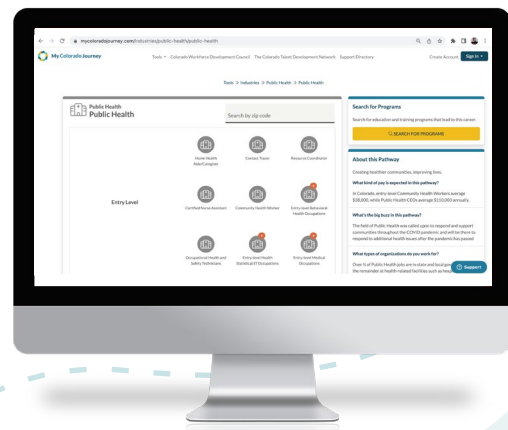
*Map current career pathways on MyColoradoJourney.com and update the map with a reimagined pathway.*

In the fall of 2020, the Colorado Workforce Development Council (CWDC) was required by statute to add a new field into their career pathways on [My Colorado Journey](#). My Colorado Journey is an online resource for job seekers and students to connect to careers, education planning, and support resources as they seek out new and different careers. With the focus and emphasis on the COVID-19 pandemic and a spotlight on public health, several partners from the field of public health successfully advocated for public health to be CWDC's next pathway.

After several iterations of the pathways were discussed, changed, updated, and revised, the final Public Health Career Pathway was released on [My Colorado Journey](#). The pathway includes three different paths within public health: Public Health, Environmental Health, and Administration. In the following diagram, the black dashed lines indicate separation between entry, mid and advanced

career milestones and the red dashed lines indicate potential pathways from entry positions to mid and advance positions. The positions and skills listed throughout the career pathway connect with similar positions in other fields across the My Colorado Journey platform to ensure job seekers and students can see themselves within public health based on skills and interests.

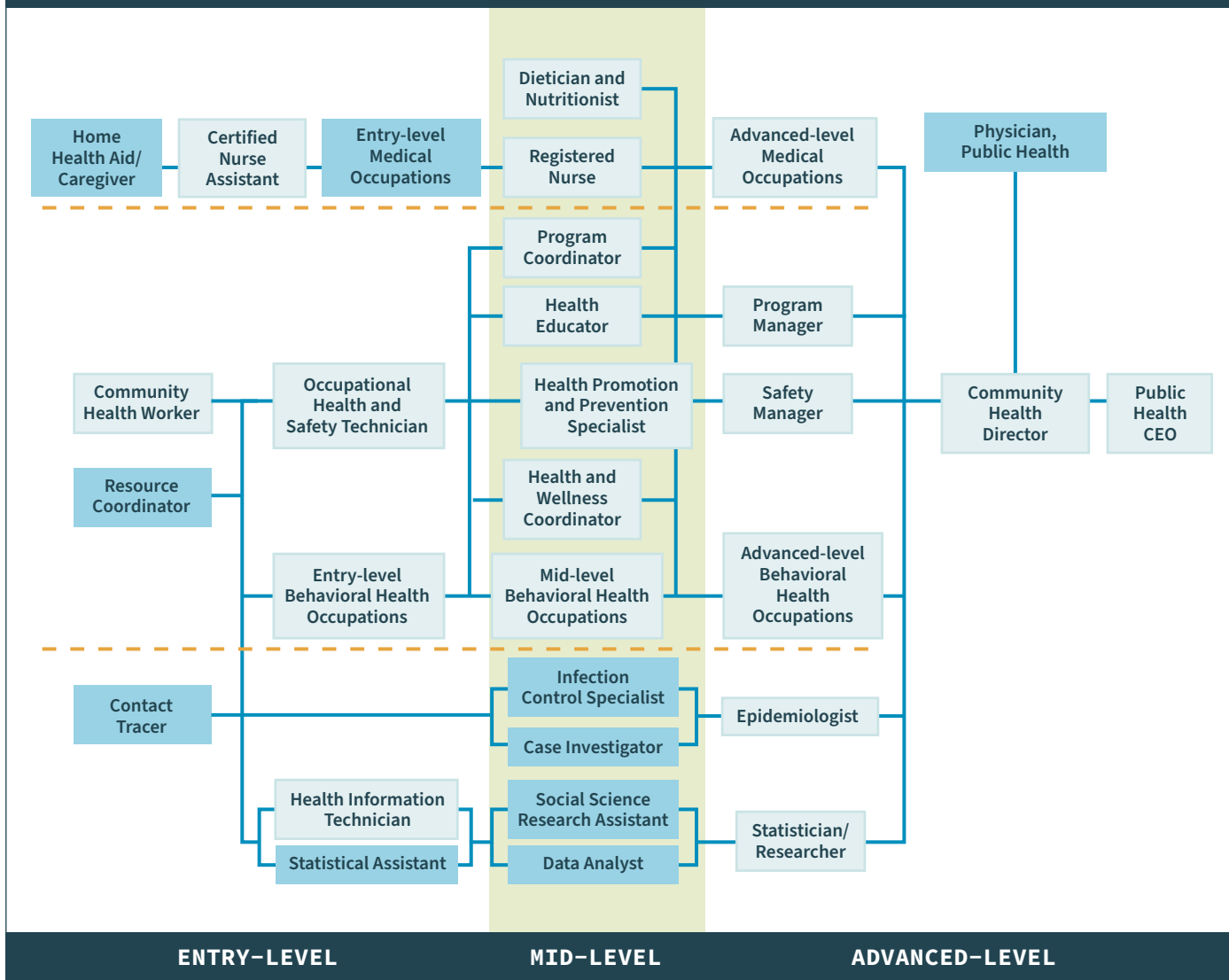
The intention of the career pathways on My Colorado Journey is for the pathways to be updated on an ongoing basis. By having pathways mapped to the current state of the field of public health, there will be several opportunities to expand and reimagine how these pathways can change to attract and sustain future public health leaders.





# Colorado's Public Health Pathway

## PUBLIC HEALTH



**FIGURE 3.** Colorado's Public Health Career Pathway

***Work with public health agencies to ensure there is a focus on a skills-based workforce, including strategic skills.***

The **Adapting and Aligning Public Health Strategic Skills** report was released by the de Beaumont Foundation in 2021 as a follow-up to the initial report from 2017, **Building Skills for a More Strategic Public Health Workforce: A Call to Action**. This updated report takes into consideration the impacts of COVID-19 and the clear need to address racial equity. It revises the strategic skills named in the 2017 report to better align with the needs of the system and communities now.

The report also provides recommendations for how states and communities can take active steps to put these strategic skills in place. Those recommendations include:

- ▶ 1. Elevate the importance of strategic skills;
- ▶ 2. Invest in strategic skills development;
- ▶ 3. Build systems, not silos;
- ▶ 4. Create a coordinating mechanism; and
- ▶ 5. Develop effective and engaging training

<b>RENEWED STRATEGIC SKILLS</b>	<b>CONSORTIUM STRATEGIC SKILLS</b>
Effective Communication	Persuasive Communication
Data-Based Decision Making	Data Analytics
Justice, Equity, Diversity, and Inclusion	Diversity and Inclusion
Resource Management	Resource Management
Change Management	Change Management
Systems and Strategic Thinking	Systems Thinking
Community Engagement	N/A
Cross-Sectoral Partnerships	N/A
Policy Engagement	Policy Engagement
N/A	Problem Solving



**FIGURE 4.** *Renewed Strategic Skills*



## FOCUS AREA 3:

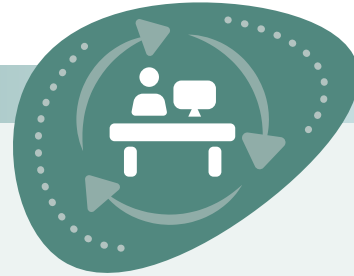
# Retain the Public Health Workforce to Keep Talented Employees, Sustain Positive Outcomes, and Foster a Positive Work Atmosphere

Data from the 2021 Public Health Workforce Interest and Needs Survey (PH WINS) states that nearly one third of the current workforce is considering leaving in the next year, and that is after a significant loss during the pandemic was already realized.



## Why Get Involved?

The high levels of turnover experienced during the pandemic as well as the potential of additional loss across the field demonstrate the need to focus on retaining the talent that exists or will soon be entering the public health workforce. This focus area is meant to assure equitable pay, promotion, and development of public health employees.

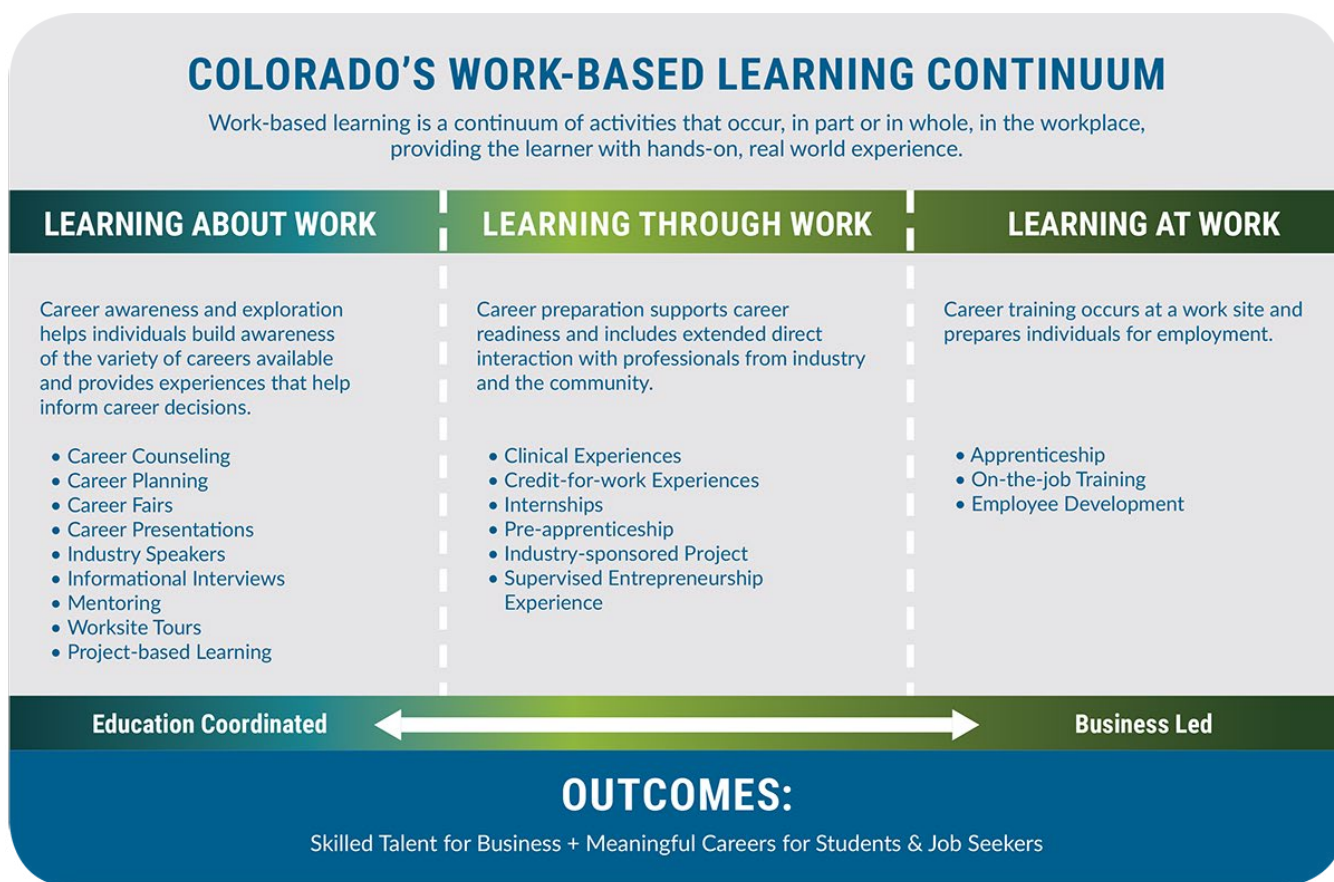


## Toolbox of Possible Strategies to Retain the Workforce

- **Provide resources and incentivize equitable participation** for current public health leaders and staff to support resilience and reduce burnout.
- **Develop worker orientations** and move away from ‘trial by fire’ and into purposeful training and practice within the field.
- **Expand and strengthen on-the-job training and education**, building on the work-based learning continuum (see below) to learn about work, learn through work, and learn at work.
- **Engage early careerists in decision-making**, such as defining public health priorities and assessing the alignment of current organizations to address emerging trends and needs.
- **Reignite the Public Health Alliance** as a way for public health professionals to connect across specific expertise and skills.
- **Offer training plans, stipends, and support** for those interested in certifications.
- **Organize and strengthen public health communities of practice.**
- **Emphasize the importance of shared decision-making** and the value of engaging multiple perspectives and competencies.
- **Work with partners across sectors** to provide resources for social needs to keep employees in their positions including access to housing, transportation, and childcare.
- **Develop programs for emerging leaders** across the field to ensure they move up within the pathway and remain in the field.
- **Assure equity in the representation of underrepresented groups** across all levels of public health organizations, from entry-level to executive.
- **Deploy employee satisfaction surveys and “stay interviews”** for insights on organizational culture and retention.



- **Collect and understand pay dynamics** impacting the public health workforce.
- **Advocate for adequate funding** to support sustainability of the public and environmental health workforce, including considerations for competitive and equitable wages.
- **Cover continual cost of living increases** relative to urban, rural, and frontier area needs.
- **Continue ensuring work-life balance** and a supportive working atmosphere that offers flexibility, earned recognition, possible tuition reimbursement, sufficient paid time off, sabbaticals during milestone service years (e.g. after five years, 10 years, etc.), and quality of life benefits.



**FIGURE 5.** *Colorado's Work-Based Learning Continuum*

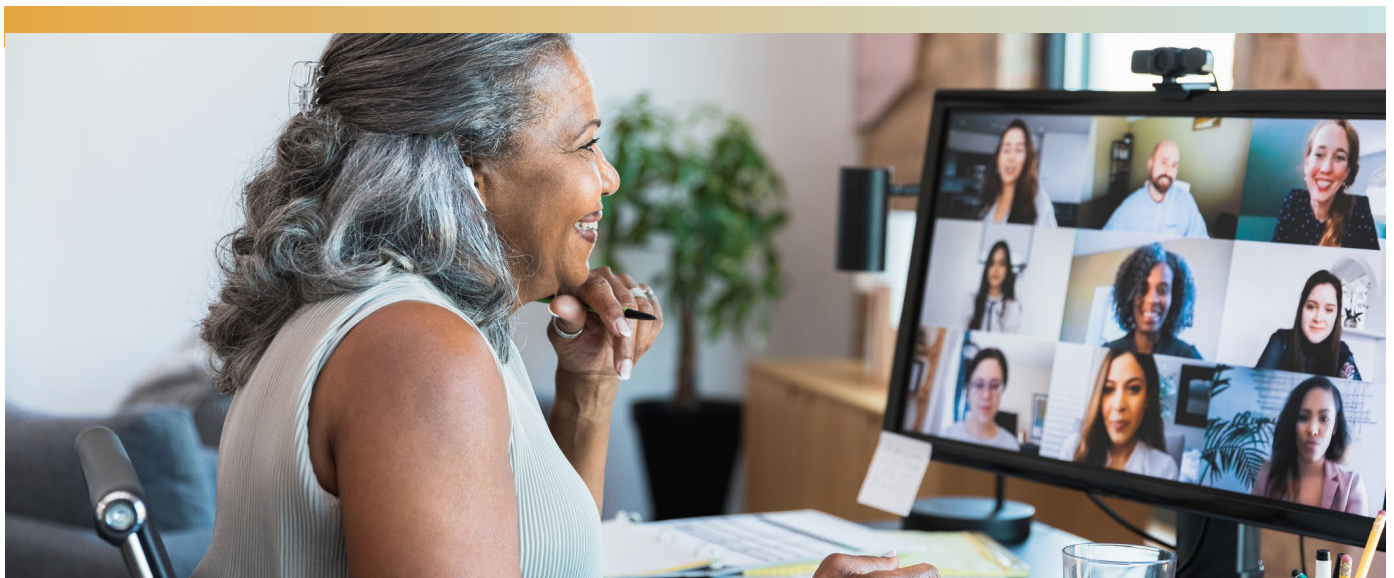
# Strategies in Action

## COLORADO

*Provide resources and incentivize participation in programs for current public health leaders and staff to support resilience and reduce burnout*

### CALPHO Resilience and Burnout Series for LPHA Directors

For several months during the COVID-19 pandemic, CALPHO held regular, informal, small-group virtual sessions for local public health directors through a free service offered by the University of Colorado School of Psychiatry. Participants shared their experiences – often traumatic – in group discussions moderated by a therapist. Recognizing that directors needed to address their staff’s recovery as well as their own, CALPHO secured funding from NACCHO and launched a more formal series of learning and sharing sessions. These were professionally facilitated and included guest speakers experienced in trauma, moral injury, and disaster response. The series aimed to provide directors with language and tools to hold similar recovery-focused sessions with their staff while functioning as a forum for sharing their trauma and healing.

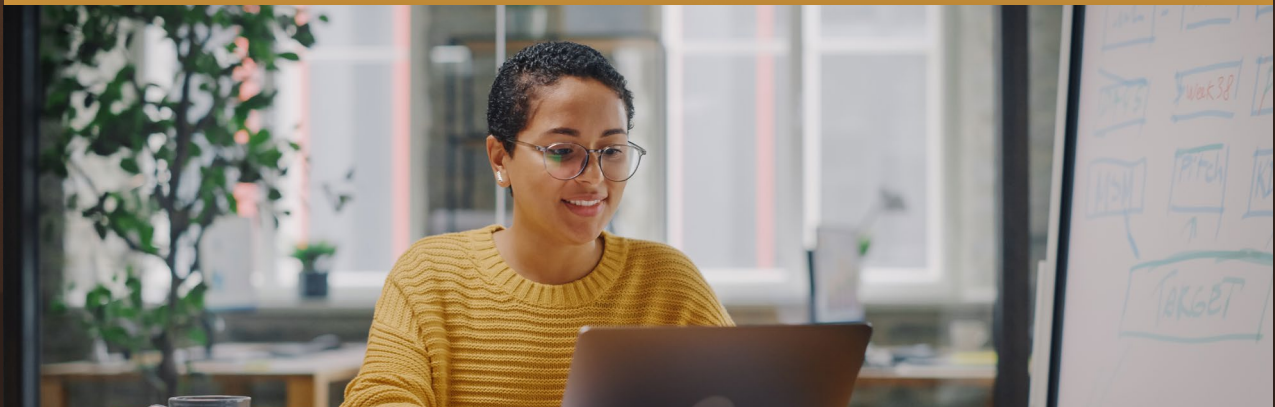




## FOCUS AREA 4:

# Inform Public Health Decisions With Workforce Data to Identify Trends, Gaps, and Develop Metrics

One of the biggest deficits in obtaining measurable results in any of the other focus areas is the lack of consistent and reliable data about the public health workforce. These data are needed to prioritize where resources should be allocated to address the root causes of the workforce issues at hand as well as identify which strategies are needed and when.



## Why Get Involved?

Data systems in public health need modernization and workforce data is needed to elevate the needs of the field as well as elevate the field as an industry in need of resources and attention. These data have been sought after for years as needed for decision-making and resource allocation including in the 2012 IOM *Report For the Public's Health: The Role of Measurement in Action and Accountability*.



## Toolbox of Possible Strategies for Evidence-based Decision Making

- **Clearly define and understand the statewide public health workforce**, including the role of public health adjacent organizations.
- **Leverage national, in-state, out-of-state, and local data** as available to gain insights on workforce needs and gaps.
- **Assure appropriate access to statewide and localized data sources** representative of Colorado's range of geographic areas, population groups, and communities.
- **Regularly review organization hiring, promotion, and reasons for leaving data** for trends and possible inequities.
- **Activate storytelling** to humanize the data in ways that more holistically represent the public health workforce.
- **Develop equity-oriented data systems** (National Commission to Transform Public Health Data Systems, 2021), collect core data sets for tracking the public health workforce and support others in creating and fielding data collection strategies.
- **Analyze the interplay** between governmental public health, nonprofits and institutes, and additional public health-adjacent organizations to inform competencies and ensure surge capacity.
- **Streamline systems and identify other technical needs and support** for monitoring and measuring the progress of goals outlined in other focus areas.
- **Connect data methods** with the State of Colorado foundational public health capabilities and public health core services, and overall aims to modernize healthy workplaces and healthy workforces.
- **Disseminate and support implementation of best practices** to increase each agency's capacity to continually collect and use workforce data for their needs.

# Strategies in Action

## COLORADO

*Collate existing data sources and identify what data are missing or incomplete to fully understand the public health workforce.*

### Colorado Public Health Workforce Gaps and Needs Assessment

Through the leadership of CALPHO and CDPHE, a steering group has been formed including CALPHO, CDPHE, Colorado Health Institute (CHI), and Trailhead Institute to identify what the gaps and needs are for the public health workforce across Colorado. The gaps and needs assessment will be used to develop a primary data collection strategy, recommend interventions to address gaps identified, and establish a model for monitoring future public health workforce shortages.

## NATIONAL

*Develop and collect core data sets for tracking the public health workforce and support others in creating and fielding data collection strategies.*

### Public Health Workforce Interest and Needs Survey (PH WINS).

In 2017, the de Beaumont Foundation released and analyzed the first Public Health Workforce Interest and Needs Survey (PH WINS). The goal of this survey is to gather information from individuals within the governmental public health workforce about their needs, interests, and engagements across the field. The survey was duplicated in 2021, after the COVID-19 pandemic. [Results from the 2021 survey](#) have been released and the primary findings include:

- **The majority of the public health workforce identifies as white, female, and over 40 years of age.**
- **72% of the workforce participated in response to the COVID-19 pandemic** and therefore engagement in communicable disease work tripled while other parts of the field, such as environmental health and maternal and child health, decreased
- **Almost one third of the workforce plans to leave** in the next year, further exacerbating the significant losses in the workforce throughout the pandemic.
- **Budgeting and financial management are named as skills most needed** but with poor proficiency across the field.
- **There are pervasive high levels** of stress, burnout, and intent to resign across the field.

Surveys like PH WINS that provide a national picture of the field of public health are key to understanding the needs of workers to develop necessary strategies to address those needs. Colorado did not have high participation in PH WINS and therefore comparisons between state and national data are not possible currently.

# Next Steps

**RESTORE: The Colorado Blueprint for Innovative Public Health Workforce Development provides actionable strategies, for both the short and long term, to ensure a skilled and sustained workforce.** The next steps will involve building on what is known to work in public health and across other fields. The Blueprint complements the focus areas and strategies of public health modernization efforts across Colorado and the nation.

The Blueprint will guide the development of unique and innovative action plans across Colorado. Each focus area and principles underlying the work of the CPHWC are a call to action for all public and environmental health employers, local public health agencies, institutes and community-based organizations, college and universities, policymakers, hospitals, healthcare providers, faith-based organizations, schools, civic leaders, and members of the larger public health community. It is intended to be transferable for consideration across the diverse capabilities, services, and clinical career pathways in public health.


**These focus areas are offered as evidence-informed strategies to develop, advance, modernize, and transform the public health workforce.**

The toolbox of strategies in support of the focus areas should be explored and coordinated among employers, apprentices and learners, and the public health community. They work together in concert toward the vision of public health workforce transformation requiring the contributions of the full public health system and supporting partners.

CPHWC members can adopt select focus areas and strategies based on organizational priorities. Members also have the chance to demonstrate moving in a unified direction guided by a collective statewide strategy, which is beneficial for the long-term sustainability of statewide workforce programs and initiatives.

The next steps for the CPHWC – and any organizational partner inspired to advance the public health workforce – involve action planning across the public health community and deploying resources for implementation. Each organization within the CPHWC and the larger public health system may explore and determine where and how they can best advance focus areas through action planning (Appendix B).

As the public health community and supporting partners consider which new or proposed strategies work best according to their respective missions, the fundamental areas of support must be considered as integral to comprehensively addressing the Blueprint focus areas:

- 
1. What system alignment and coordination will be needed to implement your organization's action plan?
  2. In what ways can justice, equity, diversity, and inclusion be infused across implementation efforts?
  3. Are there opportunities for collaborative discussion around policy and advocacy to support the implementation of your organization's action plan?
  4. How will your organization contribute to funding your action plan and support the collective sustainability of Blueprint implementation?
  5. Are there tools, toolkits, or resources from implementing your activities that can communicate the value of the public health workforce and lessons learned in support of workforce development?

CPHWC members have already started mapping current efforts across Colorado to deliver on the focus areas. Ideally, this **inventory of initiatives** is updated on an ongoing basis while new and different initiatives are started, ended, and/or changed. This inventory should also be updated to include the work and actions local public health agencies and community partners are doing in the field to support their workforce.

Those engaged across the work of the Blueprint must commit to long-term investment priorities for the field of public health, identify opportunities to do things differently within existing systems, and seek ongoing public and private funding to address the strategic needs of the public health workforce. All of this together will prepare an inclusive public health ecosystem to produce positive and equitable health outcomes for Colorado communities.

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## Appendix C: Action Planning Tool

The Blueprint is a guiding tool to inform unique and innovative action plans across Colorado. The focus areas are intended to be a call to action for all public and environmental health employers, local public health agencies, institutes and community-based organizations, colleges and universities, policymakers, hospitals, healthcare providers, faith-based organizations, schools, civic leaders, and members of the larger public health community. It is intended to be transferable for consideration across the diverse capabilities, services, and clinical career pathways in public health.

CPHWC members may also discuss the inventory of activities and planning during collaborative meetings through June 2023. Members can align current programs, initiatives, and projects to the Blueprint focus areas, and can identify new opportunities. Following the Plan-Do-Study-Act approach, general action plans can be developed over several months and shared publicly. Additionally, detailed aspects of the action planning can be maintained internally within respective organizations as appropriate.

### ACTION PLANNING SUPPORT TOOL

- **Plan:** What are the greatest workforce problems that face our community and stakeholders? Which focus area/s are most relevant to our mission? Consider creating a fishbone diagram.
  
- **Plan:** What programs, initiatives, and projects do we currently offer that address the focus area(s)? Are there any from the existing inventory discussed in the Blueprint initiated by our organization that we want to consider for further action planning?
  - ▶ Describe program, initiative, or project #1:

▶ Describe program, initiative, or project #2:

- **Plan:** What opportunities for programs, initiatives, and projects can we develop to address the focus area(s)? What system alignment and coordination will be needed to implement your organization's action plan? Create your initial storyboard.

▶ Describe program, initiative, or project #1:

▶ Describe program, initiative, or project #2:

- **Reflection:** What opportunities for programs, initiatives, and projects can we develop to address the focus area(s)? What system alignment and coordination will be needed to implement your organization's action plan? Create your initial storyboard.

- Are there tools, toolkits, or resources from implementing your activities that can communicate the value of the public health workforce and lessons learned in support of workforce development?

- **Do:** How will you implement the new program, initiative, or project? In what ways can justice, equity, diversity, and inclusion be infused across implementation efforts? Consider developing a logic model to demonstrate resources needed, activities, and intended outcomes concerning the Blueprint focus areas.

ACTIVITIES FOR PROGRAM, INITIATIVE, OR PROJECT #1	ACTIVITIES FOR PROGRAM, INITIATIVE, OR PROJECT #2

- **Study:** What were the successes of the program, initiative, or project? What were the challenges of the program, initiative, or project? How are you measuring and monitoring success?

PROGRAM, INITIATIVE, OR PROJECT #1		
SUCSESSES	CHALLENGES	MEASURES OF SUCCESS
PROGRAM, INITIATIVE, OR PROJECT #2		
SUCSESSES	CHALLENGES	MEASURES OF SUCCESS

EXISTING PROGRAMS, INITIATIVES, OR PROJECTS		
SUCCESES	CHALLENGES	MEASURES OF SUCCESS

- **Act:** How can you continue the program, project, or initiative based on successful aspects of implementation? How will you fund and sustain the program, project, or initiative? Where can your organization re-examine and adjust its approach for areas where there were challenges?

PROGRAM, INITIATIVE, OR PROJECT #1		
ACTIVITIES AND PROCESSES TO CONTINUE	ACTIVITIES AND PROCESSES TO ADJUST	HOW WILL WE SUSTAIN?

<b>PROGRAM, INITIATIVE, OR PROJECT #2</b>		
<b>ACTIVITIES AND PROCESSES TO CONTINUE</b>	<b>ACTIVITIES AND PROCESSES TO ADJUST</b>	<b>HOW WILL WE SUSTAIN?</b>

<b>EXISTING PROGRAMS, INITIATIVES, OR PROJECTS</b>		
<b>ACTIVITIES AND PROCESSES TO CONTINUE</b>	<b>ACTIVITIES AND PROCESSES TO ADJUST</b>	<b>HOW WILL WE SUSTAIN?</b>





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