Appendix G: Detailed Methods

- Study Design
  - Figure 1: Study design schematic
  - Table 1: Data collection methods & response rates
- Qualitative Phase
  - Individual Interviews
    - Interview Methodology
    - Interview Sampling and Response Rates
      - Table 2: Interview sampling strategies
      - CBOs
        - Table 3: CBO interviewee representation by population served, region, and funding range
      - LPHAs
        - Table 4: LPHA interviewee representation by region and size band
        - Table 5: Funding ranges
      - OHA Staff and Managers
      - OHA Director's Offices
      - Health Care Associations
      - Non-OHA State Government Agencies
      - Tribal Nations
      - Tribal Organizations
      - Professional Associations:
      - Public Health Advisory Board (PHAB):
      - Superintendents
    - Interview Recruitment
    - Interview Guide Development
    - Interview Data Collection
    - Interview Data Transcription & De-identification

- Interview Analysis
- Focus Groups
  - Focus Group Methodology
  - Focus Group Sampling
    - CBOs
      - Figure 2: In which region of Oregon is your organization located?
      - Figure 3: What is your role in your organization?
      - Figure 4: How many employees are currently employed at your organization?
      - Figure 5: How long have you been in your current position?
    - City, County, and Tribal Emergency Management
      - Figure 6: In which region of Oregon is your organization located?
      - Figure 7: Which of the following best describes your organization?
      - Figure 8: What is your current role and/or title in the EM office/program?
      - Figure 9: How long have you been in your current position?
    - Tribal Organizations:
    - School Principals
      - Table 6: Focus group sampling strategies
  - Focus Group Recruitment
  - Focus Group Guide Development
  - Focus Group Data Collection
  - Focus Group Data Transcription & De-identification
  - Focus Group Data Analysis
- Process Interviews
- Document Review + Analysis
  - Executive Orders from the Governor's office
  - Funding and Spending
  - Enforcement

Quantitative Phase

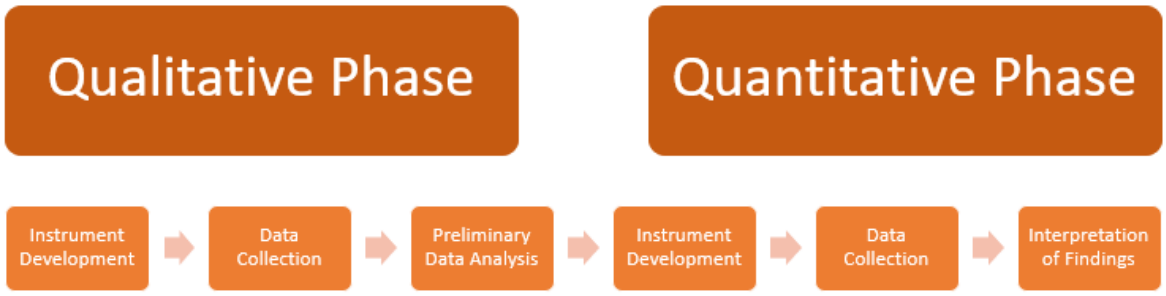
- Survey
  - Survey Methodology
  - Survey Sampling

CBOs
CCOs
LPHAs
Education
Emergency Management
Tribes
Survey Development
Survey Data Collection
Survey Data Analysis
Secondary Data Analysis
Secondary Data Sources
Secondary Data Analysis
Interpretation of Findings
Counties by Region
Figure 10: Counties by region

Study Design

To ensure we were able to successfully answer the research questions set forth by the Oregon State Legislature, we used an exploratory sequential design for this study, a robust mixed-methods study design. A mixed-methods study design was most appropriate for this study, as it allows the integration of qualitative data to provide an enhanced understanding and interpretation of quantitative findings. With this design, the qualitative phase of the study, including data collection and preliminary analysis, precedes quantitative data collection and analysis. Quantitative data instruments are then informed by qualitative study findings, enhancing the validity of the quantitative measures. A schematic of the study design is presented in Figure 1.

Figure 1: Study design schematic



The study team used a combination of both primary and secondary data collection sources to answer the research questions. In the primary data collection phase, a series of key informant interviews, focus groups, process interviews, and online surveys were used. Secondary data sources used included document reviews and secondary data analysis. See Table 1.

Table 1: Data collection methods & response rates

PRIMARY DATA COLLECTION						SECONDARY DATA COLLECTION	DOCUMENT RECORD AND REVIEW
Informants	Process interviews	Qualitative Interviews (response rate)	Number of qualitative interviewees	Surveys (response rate)	Focus Groups (participants)	Data Sources	Records from OHA + others
Professional Associations	n/a	3 (100%)	3	n/a	n/a	• Oregon COVID-19 Dashboards • Oregon BRFSS • US Census • NIH COVID-19 Pandemic Vulnerability Index • Oregon Hunger Task Force • Oregon Child Immunization Data Dashboard • Oregon State Cancer Registry • End HIV Dashboard • National Survey on Drug Use and Health • Oregon Violent Death Reporting System	Over 1,000 documents reviewed from OHA, web research, and other state agencies
CBOs	n/a	23 (96%)	24	63 (36%)	4 (27)		
CCOs	n/a	n/a	n/a	7 (47%)	n/a		
OHA OEI	n/a	1	5	n/a	n/a		
Health Care Associations	n/a	3 (100%)	3	n/a	n/a		
City, County, and Tribal Emergency Man.	n/a	n/a	n/a	22 (17%)	6 (10)		
LPHAs	n/a	16 (100%)	17	39 (33%)	n/a		
OHA Directors	n/a	12 (100%)	12	n/a	n/a		
OHA Staff + Managers	9	20 (100%)	20	n/a	n/a		
PHAB (not gov't)	n/a	3 (50%)	3	n/a	n/a		
State Agencies	2	7 (63%)	9	n/a	n/a		
Tribal Orgs.	n/a	2 (50%)	3	n/a	1 (7)		
Tribal Nations	n/a	7 (78%)	13	1 (11%)	n/a		
Total	**11**	**97 (89%)**	**112**	**132 (29%)**	**11 (44)**		

Qualitative Phase

In the qualitative phase of this study, a variety of data collection methods were used, including individual interviews, group interviews, focus groups, and document review.

Given the short timeframe to collect, analyze, and report information for Report 1, all qualitative interviews could not be conducted and analyzed prior to survey distribution (the ideal sequence to allow qualitative responses to inform survey development). Therefore, the study team opted for conducting interviews in two phases, Phase 1 interviews were conducted and analyzed in July 2022 and informed survey development and specific response options for multiple choice questions. A total of 26 interviews were conducted in Phase 1, with six OHA Staff/Managers, eight LPHAs, 10 CBOs, and two Tribal Nations. Sampling strategies and analysis methods were consistent across Phase 1 and Phase 2 interviews, as described below.

Individual Interviews

Interview Methodology

Rede engaged a diverse set of informant groups for individual interviews, including CBO Directors; LPHA Administrators; OHA Staff and Managers, including most cabinet-level staff; Health Care Associations; State Government Agencies; Tribal Health Directors; Tribal Organizations; Professional Associations, and members of the PHAB. In total, Rede Group, and partners supporting the project, conducted a total of 97 interviews (with 112 interviewees) for Report 1 between July and October 2022, which yielded an overall response rate of 89% for interviews.

Interview Sampling and Response Rates

Qualitative data is an excellent source and is both time and resource-intensive to collect. Given the time constraints of this study, it was not possible to interview every person involved in Oregon's Public Health System Response to the COVID-19 pandemic. Therefore, we used both probability and purposeful sampling strategies as well as stratified random sampling, a type of probability sampling strategy in which the

population is divided into smaller subgroups called strata. This was utilized to ensure the representativeness of our evaluation sample to the larger target population and thus, the generalizability of findings. In stratified random sampling, the study participant groups are divided into mutually exclusive, non-overlapping groups of sampling units called strata. Within each stratum, we pulled a random sample by assigning each potential informant a number and used a random number generator to pull individuals.

Table 2: Interview sampling strategies

Random sampling	Stratified random sampling	Purposeful sampling	Census
● LPHAs	● CBOs ● OHA Staff and Managers	● Tribal Orgs. ● Professional Associations ● PHAB (non-gov't) ● Health Care Associations ● OHA Directors ● OHA DEI ● State Agencies	● Tribal Nations

<u>CBOs</u>

Rede received a list of 174 community-based organizations from OHA, who all received health equity grant funding to support the COVID-19 response within the communities they served. This list included two American Indian/Alaska Native (AI/AN) serving organizations that Rede removed from the sampling frame, as they would be engaged and analyzed separately. The remaining 172 CBOs were reviewed to determine the primary population served. Rede opted for stratified random sampling and randomly selected two organizations from each of the following population categories:

- African American (AA)/Black;
- Asian/Pacific Islander;

- People with disabilities;
- Faith-based organizations;
- People who are houseless/unhoused;
- LGBTQIA+;
- People with mental health and/or substance use disorders (MH/SUD);
- Older adults;
- Refugees; and
- Youth.

In cases where potential interviewees were unresponsive to multiple recruitment attempts, Rede randomly sampled an alternative participant.

CBO sampling and response rates are detailed in Table 3. Region and funding level were not used as a sampling frame for CBOs, however, to show representation across regions and funding ranges, the number of interviewees from each region and funding range are shown. A total of 23 CBO interviews were conducted with one or more CBO from each priority population, region, and funding range. See Figure 10 for regions and Table 5 for funding ranges.

Table 3: CBO interviewee representation by population served, region, and funding range

	Sample Size	Number of Interviews Conducted	Response Rate	Percent of all interviews
Population served				
AA/Black	2	2	100%	9%
Houseless	2	2	100%	9%
LGBTQIA+	2	2	100%	9%
Latinx	2	3	150%	13%
Pacific Islander	2	2	100%	9%
Refugee	2	2	100%	9%
Disabilities	2	2	100%	9%
Asian	2	2	100%	9%

	Sample Size	Number of Interviews Conducted	Response Rate	Percent of all interviews
Faith	2	2	50%	9%
Youth	2	1	50%	4%
Older Adults	2	1	50%	4%
MH/SUD	2	2	100%	9%
Region				
Region 1	n/a	15	n/a	65%
Region 2	n/a	2	n/a	9%
Region 3	n/a	3	n/a	13%
Region 4	n/a	2	n/a	9%
Region 5	n/a	1	n/a	4%
Funding Range (FR)				
FR1	n/a	2	n/a	9%
FR2	n/a	4	n/a	17%
FR3	n/a	4	n/a	17%
FR4	n/a	3	n/a	13%
FR5	n/a	2	n/a	9%
FR6	n/a	2	n/a	9%
FR7	n/a	6	n/a	26%

LPHAs

Rede pulled a list of LPHA Administrators from OHA's website. After it was confirmed that the list was not entirely accurate, Rede acquired an updated list from OHA and cross-referenced it to fill in the gaps. The resulting list included 32 LPHAs (OHA held the local public health authority for Wallowa County for the duration of the pandemic resulting in no contact information for this study, Curry County transferred their local public health authority to OHA midway through the COVID-19 pandemic resulting in no

contact information for this study, and North Central Public Health holding the public health authority for Gilliam, Sherman, and Wasco counties did not dissolve a unified public health authority until the end of the study timeframe, and therefore we had a single point of contact for North Central Public Health for the study). Rede randomly selected 16 Administrators (50% of LPHAs) for individual interviews. In cases where potential interviewees were unresponsive to multiple recruitment attempts, Rede randomly sampled an alternative participant until targets were met. All 16 LPHAs were interviewed for the study. Region and population size bands were not used as a sampling strategy for LPHAs however, the number of interviewees from each region and size band are detailed in Table 4 to demonstrate the representation of interviewees across the geographic region and population size.

Table 4: LPHA interviewee representation by region and size band

	Number of interviews conducted	Percent of all interviews
Region		
Region 1	3	19%
Region 2	2	13%
Region 3	2	13%
Region 4	5	30%
Region 5	4	25%
Size Band		
Xsmall	2	13%
Small	6	37%
Medium	4	25%
Large	4	25%

Size bands for LPHA study participants were adapted from a public health modernization funding formula provided by OHA. To ensure the anonymity of study participants, LPHAs were sorted by population and grouped into modified size bands with five or more

LPHAs in each band. This resulted in four size bands: extra-small ("Xsmall"), small, medium, and large.

Funding ranges were also established to compare data among CBOs and tribal organizations. Each of the seven funding ranges contain at least five CBOs and/or tribal organizations in each group. The funding amounts in each range were determined by analyzing funding documents provided to the study team by OHA. The funding amounts for each organization were totaled across 4 funding streams: health equity grant funding, Coronavirus Relief Funds (CRF), FEMA Wraparound funds, and FEMA vaccination funding through the Vaccine Operations Equity Team (VOTE) within OHA. After adding the total funding amount across funding streams, CBOs and tribal organizations were sorted based on funding amount and grouped into the seven funding ranges detailed in Table 4 below. Funding ranges were used to assess representation across funding amounts for CBO participants in the study.

Note: Funding ranges were based on funding tracking sheets that reflected one point in time. Due to the ongoing nature of the pandemic, it is likely that some CBOs and tribal organizations are no longer in the funding ranges that they were initially assigned to for the purpose of this study. Additionally, the funding streams used to determine these funding ranges do not reflect all of the funding provided to CBOs and tribal organizations, nor do they reflect all the fundees that may have received funding through different funding streams.

Table 5: Funding ranges

Funding range group	**$ amount**
FR 1	$199,999 or less
FR 2	$200,00 - $399,999
FR 3	$400,000- $599,999
FR 4	$600,000 - $799,999

FR 5	$800,000 - $999,999
FR 6	$1,000,000 - $1,199,999
FR 7	$1,200,000 or more

OHA Staff and Managers

OHA provided two lists of staff and managers who worked on the COVID-19 response at OHA: a list of the Incident Management Team (IMT) and the COVID Recovery and Response Unit (CRRU). After reviewing the lists and removing 127 total duplicates, Rede created two separate lists of IMT and CRRU staff categorized into “Epi/Data'' positions, managers, and non-managers. Then, Rede conducted purposeful sampling among IMT and CRRU staff and managers.

IMT: Rede selected an initial target of 12 IMT staff and managers, with eight being PHD staff/managers and four being non-PHD staff/managers. Within the eight PHD staff/managers, Rede selected four PHD staff and four PHD managers.
To begin sampling, four people from the IMT Epi/Data list were selected. These four people also filled positions as PHD and non-PHD staff/managers. After accounting for the Epi/Data positions, the remaining contacts were randomly selected until Rede reached the targets of eight (four staff and four managers) PHD and four non-PHD staff.

CRRU: The same processes for the IMT sampling were followed for CRRU, with different targets. Rede’s goal was to interview eight members of the CRRU list, with four being managers and four being staff. Just as with the IMT sampling process, Rede first selected four contacts from the Epi/Data list, and then selected the remaining four contacts from the staff and manager lists to get a total of eight interviewees.

From each list that was sampled, two back-ups were also pulled at the time of random sampling in case members of the original sample were unresponsive. In cases where

Rede had to engage the back-ups and they were also not responsive, more contacts were randomly sampled until targets were met. A total of 20 OHA staff and managers were interviewed (12 staff and 8 managers), resulting in a response rate of 100%.

OHA Director's Offices

Using two organization charts from OHA's website, project leads identified a list of 13 individuals they felt would have information relevant to the study questions. This list was reviewed by OHA to confirm position titles and contact information were accurate. Then, Rede requested interviews from all 13 on the list; 9 from the OHA Director's Office and four from the PHD Director's Office. One OHA Director was no longer in their position therefore, outreach was suspended. A total of 12 interviews from the Director's Office were completed. One interviewee from the OHA Director's Office suggested Rede speak to additional team members working in the OHA Office of Equity and Inclusion (OEI). Rede reached out to a group of four OEI staff and successfully completed the group interview.

Health Care Associations

The following Health Care Associations were listed as possible study participants in the RFP, and in Rede's project proposal:

- Oregon Academy of Family Physicians (OAFP);
- Oregon Assoc. of Hospitals and Health Systems (OAHHS); and
- Oregon Primary Care Association (OPCA).

Rede researched the organizations to find contact information of executive-level leadership at each organization, and all three provided individual interviews.

Non-OHA State Government Agencies

Numerous state-level agencies were included in the RFP and in Rede's project proposal. For Report 1, Rede conducted interviews with:

- Oregon Occupational Safety & Health (OR-OSHA);
- Oregon Department of Justice (DOJ);
- Oregon Office of Emergency Management (OEM);
- Oregon Department of Human Services (ODHS); and
- Business Oregon.

Purposeful sampling was conducted for each organization to engage executive leadership.

Tribal Nations

OHA provided a list of contact information for the nine Tribal Health Directors in Oregon. Rede reached out to all of these contacts for individual interviews and completed interviews with seven Tribal Nations.

Tribal Organizations

Rede, in collaboration with one of our partners, Kelly Gonzales, PhD, produced a list of tribal organizations to engage in this study. Two organizations came from the list of CBOs who received COVID-19 health equity funding provided by OHA, two were named in our RFP, and two were suggested by Rede staff or our partner. Executive leadership from all organizations on the list were contacted to participate resulting in two completed interviews.

Professional Associations:

Three professional associations were named in the RFP and Rede's proposal:

- Association of Oregon Counties (AOC);
- Coalition of Local Health Officials (CLHO); and
- League of Oregon Cities (LOC).

Executive leadership was purposefully sampled from each organization and all three interviews were completed.

Public Health Advisory Board (PHAB):

Rede acquired a list of PHAB members from the OHA website that was then verified with the OHA. Members with any OHA, LPHA, or Tribal Health Director affiliation were removed from the sampling frame as they were already engaged in the study through other study participant groups. That left seven members, and six were randomly selected to participate, with one designated back-up in case a randomly sampled member was unresponsive or declined to participate. This back-up member had already participated in the study via a focus group for CBOs and was ultimately excluded from PHAB sampling. A total of three PHAB members were interviewed for this study.

Superintendents

Rede had planned to include interviews with superintendents of educational service districts (ESDs) and school districts in Report 1. However, after consulting with the Oregon Department of Education (ODE), it was decided that school district staff would instead be engaged for inclusion in Report 2 due to the summer being very poor timing to engage school districts.

Interview Recruitment

The primary method for recruiting interview participants was via email. Recruitment email scripts were written and distributed by Rede staff. To boost response rates, recruitment email scripts were also provided to the client and to Rede's partners on the project and sent out throughout the data collection time period. If a participant was unresponsive to an initial email, at a minimum, one follow-up email was distributed, and in most cases, multiple follow-up emails and a phone call were made during recruitment. Incentives were offered to CBOs for their participation in the study at $40/hr for interview and focus group participation.

Before scheduling, Rede requested information from potential interviewees about the length of time in their position, with the goal of interviewees meeting the following criteria:

1. Interviewees that had been in their current position since March 2020 or had been involved in the COVID-19 response within their organization in another position since March 2020.
    a. If the potential interviewee did not meet the above item 1 criteria, Rede requested an additional interviewee within the organization who had been involved with COVID-19 response at a Director/Administration/leadership level since March 2020.
    b. If the intended interviewee was unavailable during the data collection timeframe, Rede requested an alternative interviewee at the Director/Administration/leadership level who met criteria 1 above.

2. An interviewee could request an additional interviewee to join (such as the LPHA Director requesting the Public Health Director within their organization to join), but approval was evaluated on a case-by-case basis by Rede.

Interview Guide Development

Rede staff developed interview guides for each informant group and two additional guides to allow for tailored questions for DOJ and OR-OSHA that differed from the other State Agencies (13 guides in total), which were then reviewed by partners based on area of expertise.

Interview Data Collection

Interviews were scheduled for 45-90 minutes and were conducted by Rede staff or a partner via Zoom between July and Oct. 2022.

Interview Data Transcription & De-identification

Interviews were recorded and uploaded to Rev for professional transcription. Once transcribed, interviews were reviewed by the interviewer for accuracy and de-identified to omit any information that could compromise the confidentiality of participants. De-identification journals were used by the analysts to record omitted information and for consistency in de-identification. Once the transcript was de-identified, the file was relabeled to remove participant names and uploaded to Dedoose qualitative analysis software for coding and analysis.

Interview Analysis

Rede staff and contracted partners were divided into analysis teams and assigned to each of the 10 study participant groups for analysis. Coding teams reviewed transcripts for their respective data set and collaborated to develop a coding tree. One of the analysts then entered the coding tree into Dedoose. To establish inter-rater reliability, 1-3 of the same transcripts were coded by two analysts until consistency across coding reached at least 90%. Once inter-rater reliability was established, the remaining transcripts within the data set were divided among the coders and coded by one analyst each. When a data set contained three or fewer transcripts, a single analyst was

assigned to code the data set. After transcripts were coded, analysts reviewed codes and excerpts for key themes and important narratives.

Focus Groups

Focus Group Methodology

To broaden participation and expand on findings from the individual interviews, Rede engaged participants in focus groups. Focus groups were conducted with CBOs; City and County Emergency Management; and Tribal Organizations. In total, Rede Group, and partners supporting the project, conducted a total of 11 focus groups with 44 participants for Report 1.

Focus Group Sampling

CBOs

As previously described in interview sampling, CBOs who received COVID-19 health equity funding were sorted into 10 primary populations served for this study. Four populations were identified as 1) priority populations within the pandemic response and 2) having at least six possible contacts after removing interview participants. In addition to this criteria, the study team evaluated the percentage of CBOs within a priority population that would have been engaged either through an interview or focus group in an attempt to achieve 50% or more of the CBOs within each priority population represented in this report. Rede also created a fifth focus group to hear from CBOs serving rural populations. Ultimately, Rede sampled CBOs serving:

- AA/Black individuals/communities;
- Latinx individuals/communities;
- People with disabilities;
- People who are houseless/unhoused; and
- Rural individuals/communities.

After removing CBOs that had already been interviewed for the study, all CBOs were categorized as rural or urban using the geographic designations provided by the Oregon

Office of Rural Health[1] and 12 CBOs were randomly sampled and asked to join the rural focus group. After removing those pulled for a rural focus group, Rede then randomly sampled 12 CBOs (or all remaining CBOs if 12 were not available) from each of the four population groups to participate in the other four focus groups. Ultimately, four focus groups were completed with CBOs serving rural populations, AA/Black individuals/communities, Latinx individuals/communities, and the houseless/unhoused. No CBOs serving people with disabilities agreed to participate in the focus group. A total of 27 CBOs participated in the four CBO focus groups.

At the conclusion of each focus group, a demographic survey was distributed to all participants asking them to provide information about their region, role within their organization, the number of employees at their organization, and the length of time they've spent in their current position. Sixteen of twenty-seven CBOs completed the demographic survey. Results of the survey are summarized below in Figures 2-5:

[1] Oregon Office of Rural Health. (2020, October 8). *Spreadsheet of Oregon Zip Codes, Towns, Cities and Service Areas and their ORH Urban/Rural/Frontier Designation.* Excel sheet. https://www.ohsu.edu/oregon-office-of-rural-health/about-rural-and-frontier-data

Figure 2: In which region of Oregon is your organization located?

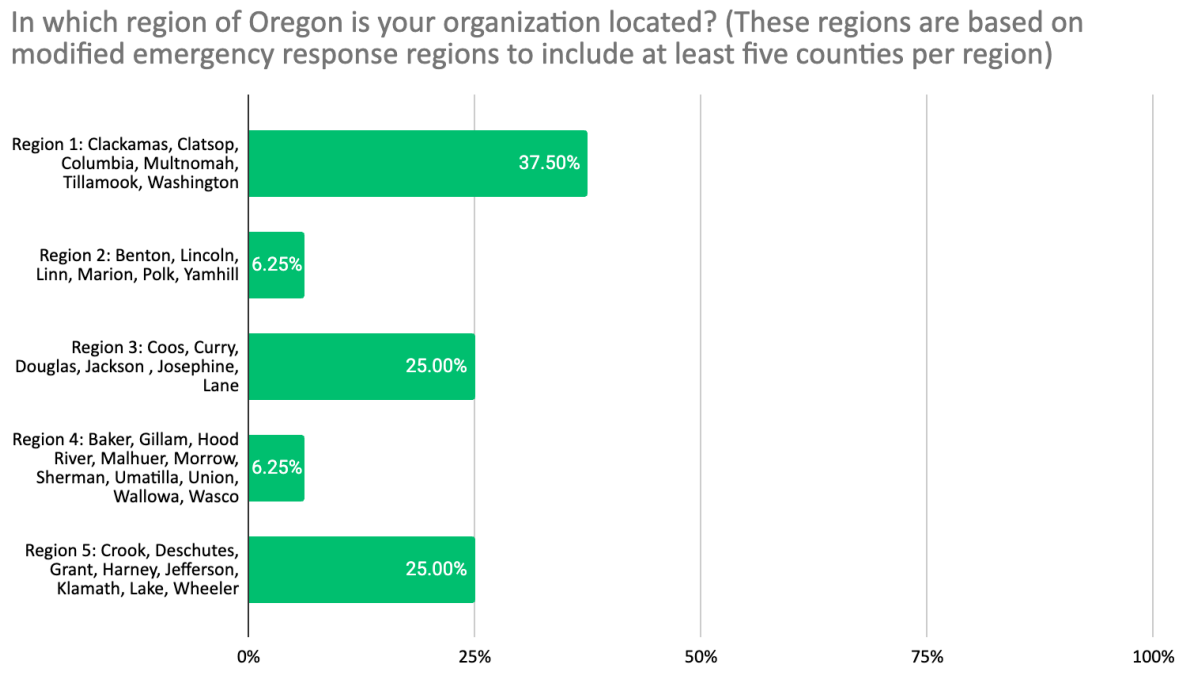
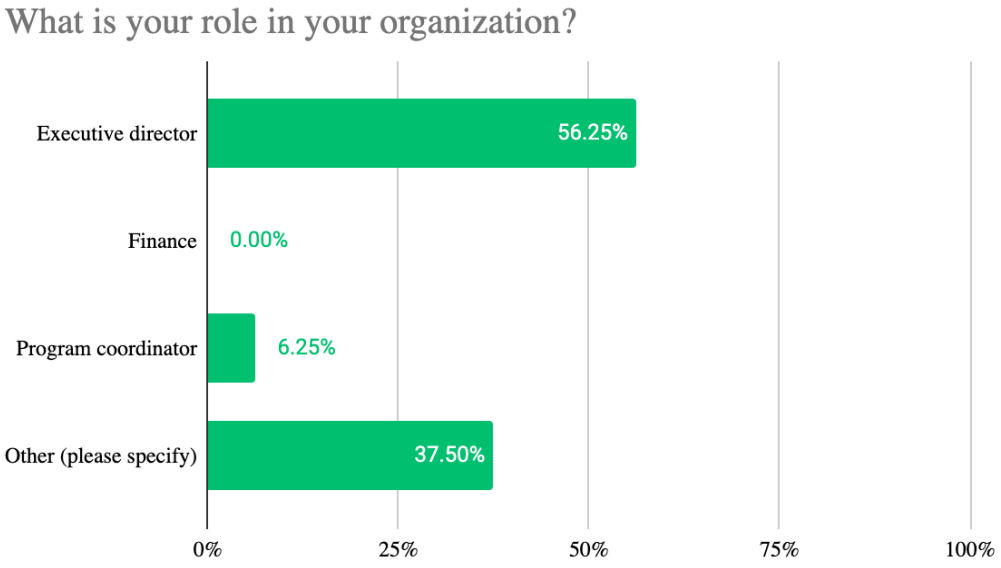


Figure 3: What is your role in your organization?



"Other" responses in Figure 3 included partnerships director, community care director, director of development, president, and case manager.

Figure 4: How many employees are currently employed at your organization?

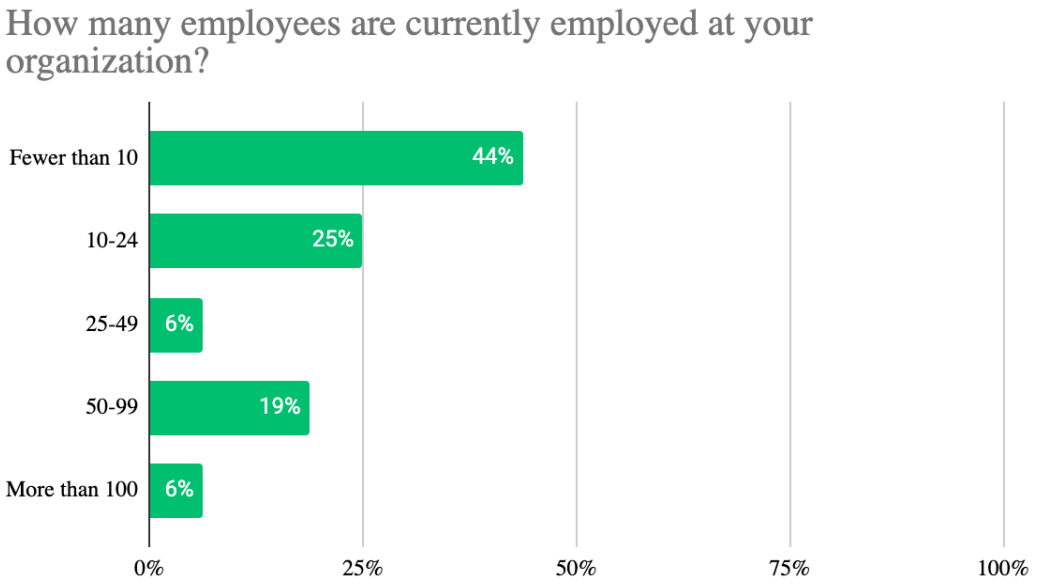
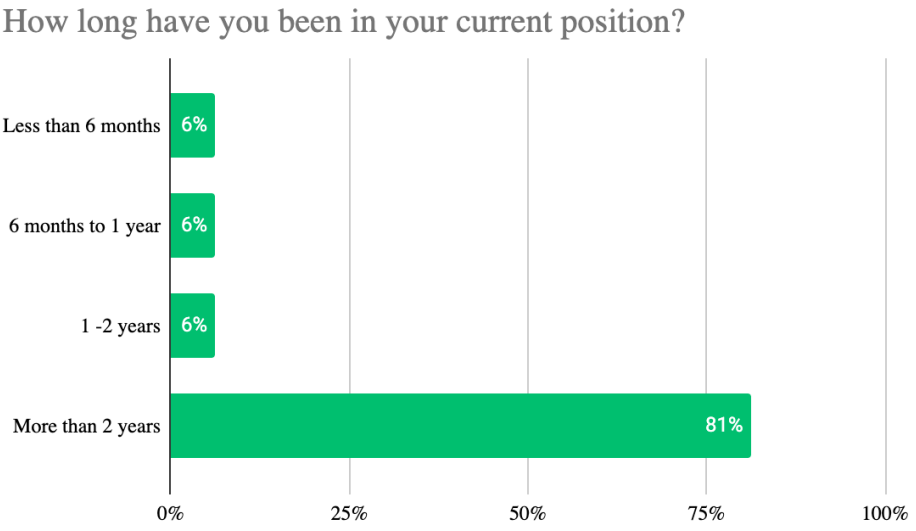


Figure 5: How long have you been in your current position?



City, County, and Tribal Emergency Management

Rede acquired a list of City, County, and Tribal Emergency Management offices from our partners at CCS. These offices were then split up into five regions (see Figure 10). Up to 12 (or all if fewer than 12 in a region were listed) from each region were randomly selected to participate in focus groups. Rede had planned to conduct five focus groups with City, County and Tribal Emergency Management (1 group for each region), however, some members of this participant group had to respond to an emergency that arose just before the focus group was to be conducted. Rede opted to complete two focus groups for Region 1 to accommodate participants who would not be able to make the initial focus group due to their role in responding to wildfires. Ultimately, six focus groups with City and County Emergency Management were conducted with 10 participants.

At the conclusion of each focus group, a demographic survey was distributed to all participants. Ten Emergency Management staff completed the demographic survey. Results of the survey are summarized below in Figures 6-9:

Figure 6: In which region of Oregon is your organization located?

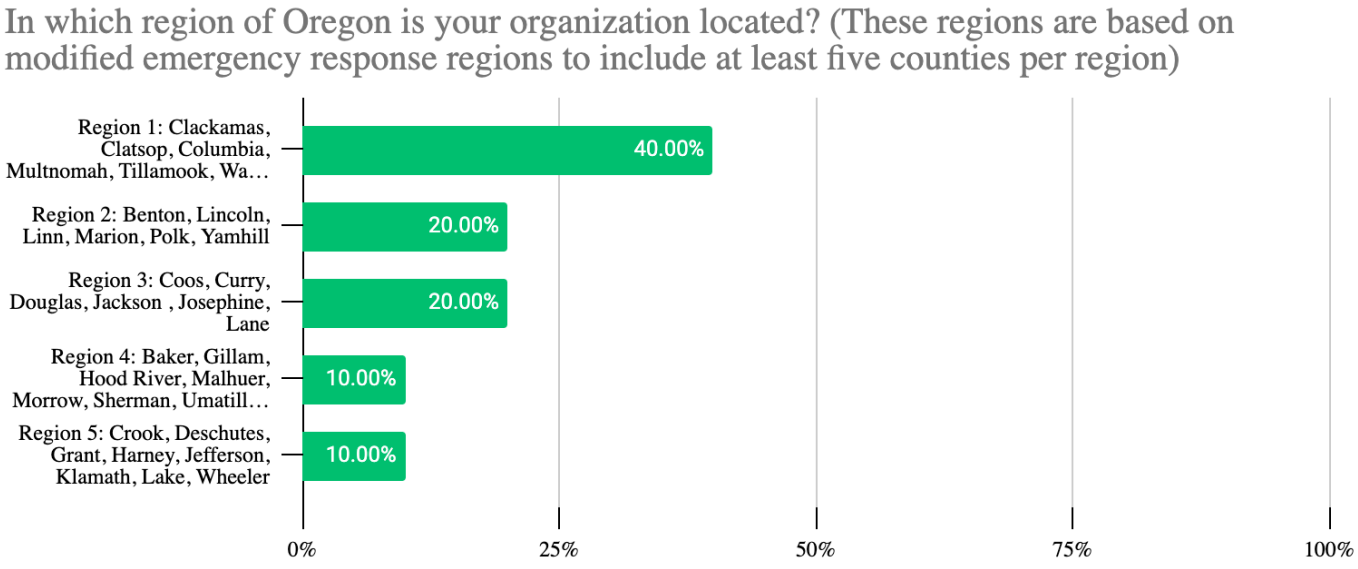
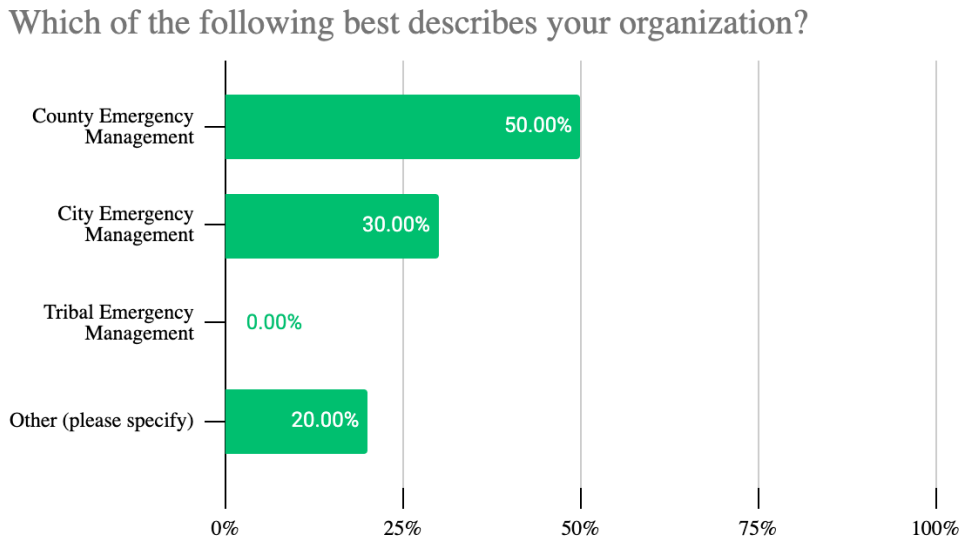


Figure 7: Which of the following best describes your organization?



"Other" responses in Figure 7 included regional government and emergency management liaison.

Figure 8: What is your current role and/or title in the EM office/program?

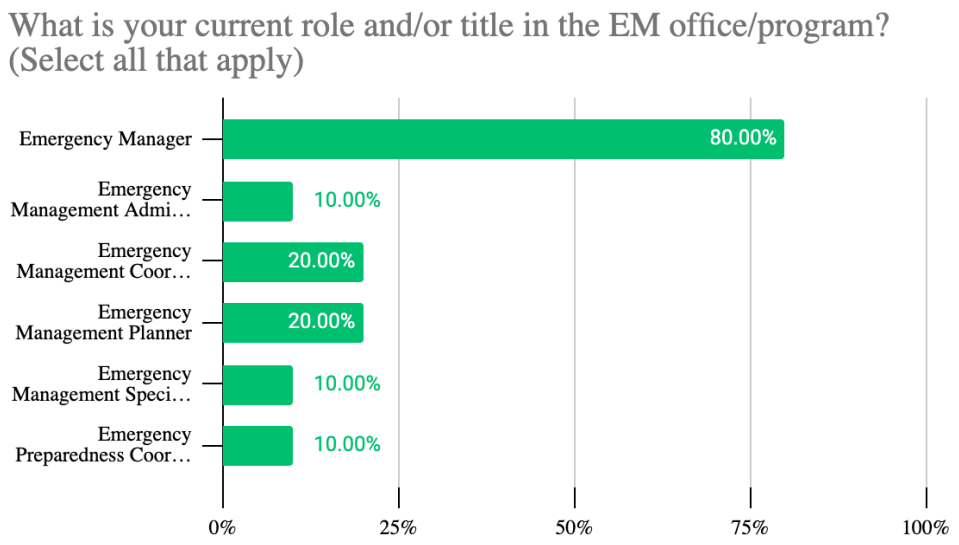
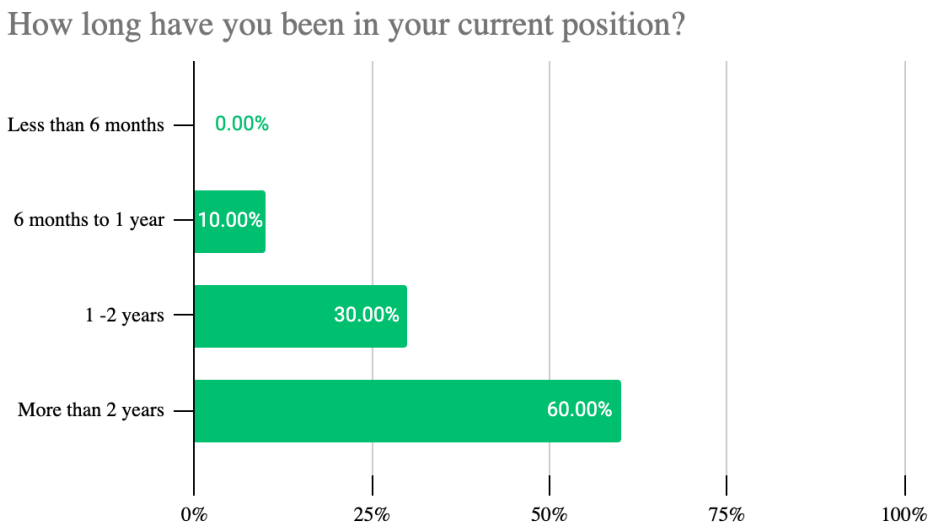


Figure 9: How long have you been in your current position?



Tribal Organizations:

Rede, in collaboration with one of our partners, Kelly Gonzales, produced a list of Tribal Organizations to engage in this study. Two organizations came from the list of CBOs provided by OHA, two were named in our RFP, and two were suggested by Rede staff or

our partner. Executive leadership from all organizations on the list were contacted to participate in the focus groups. One focus group was conducted with 7 participants.

School Principals

Rede had planned to include focus groups with principals in Report 1. However, due to the timing of data collection over the summer, it was decided that school district staff would instead be engaged in Report 2.

Table 6: Focus group sampling strategies

Stratified random sampling	Purposeful sampling
● CBOs ● City, County, and Tribal Emergency Management	● Tribal Orgs.

Focus Group Recruitment

The primary method for recruiting focus group participants was via email. Recruitment email scripts were written and distributed by Rede staff. To boost response rates, recruitment email scripts were also provided to OHA and Rede's partners on the project and sent out throughout the data collection time period.

Focus Group Guide Development

Rede staff developed interview guides for each participant group, which were then reviewed by partners based on area of expertise.

Focus Group Data Collection

Focus groups were scheduled for 90 minutes and were conducted by Rede staff or a partner via Zoom in September 2022.

Focus Group Data Transcription & De-identification

Focus groups were recorded and uploaded to Rev for professional transcription. Once transcribed, focus groups were reviewed by the interviewer for accuracy and de-identified to omit any information that could compromise the confidentiality of participants. De-identification journals were used by the analysts to record omitted information and for consistency in de-identification. Once the transcript was de-identified, the file was uploaded to Dedoose qualitative analysis software for coding and analysis.

Focus Group Data Analysis

Rede staff and contracted partners were divided into analysis teams and assigned to each of the three study participant groups (CBOs, City and County Emergency Management, and Tribal Organizations) for analysis. Due to similarities in the interview guides, Tribal Organization interviews and the focus group were analyzed together. Coding teams reviewed transcripts for their respective data set and collaborated to develop a coding tree. One of the analysts then entered the coding tree into Dedoose. To establish inter-rater reliability, 1-3 of the same transcripts were coded by two analysts until consistency across coding reached at least 90%. Once inter-rater reliability was established, the remaining transcripts within the data set were divided among the coders and coded by one analyst each. When a data set contained three or fewer transcripts, a single analyst was assigned to code the data set. After transcripts were coded, analysts reviewed codes and excerpts for key themes and important narratives.

Process Interviews

During the period of data collection for this report, individual interviewees were chosen by either random stratified sampling or purposeful sampling. However, it became clear that certain questions related to the data being collected would need to be answered by specific individuals. For this reason, the study team developed a second type of individual interview, the process interview.

Participants for these interviews were selected based on advice from our OHA, PHD Contract Administrator (Danna Drum), and were based on questions from Rede to OHA

about specific aspects of the response. The purpose of this interview category was to aid Rede's understanding of particular structures and processes that were established or utilized by OHA for categories of work within the public health system's response to the COVID-19 pandemic. The interviews were 30-60 minutes long and conducted by senior interviewers at Rede. This subject group was in the sampling frame for staff and managers' interviews, but when participating in a process interview, participants were asked to restrict their responses to objective descriptions of structures and processes.

For analysis, process interviews were recorded and transcribed following the data security and storage standards described for all other qualitative data collection methods. These interviews were not coded, but interviewers would instead include findings from the interview in an intrateam memo or another form of communication to the study team. In total, Rede conducted 11 process interviews (nine with OHA staff and managers and two with State Agencies).

Document Review + Analysis

In total, the study team cataloged 1,184 documents and 5 websites pertinent to the study. 1,100 of these documents were provided to the study team by the client, 24 were provided from other sources (including legislators and OHA staff selected for process interviews), and the remaining 60 were procured by the study team from web searches.

For analysis, documents were cataloged and categorized by the type of document and subsector within the public health system (eg. LPHAs, CBOs, Tribal Nations, etc.). Categorization of documents was an iterative process that helped structure document analysis. The study team identified 19 relevant public health subsectors in these documents, including but not limited to OHA; LPHAs; CBOs; tribal nations and organizations; state agencies such as OEM, OLCC, and OR-OSHA; and the Governor’s office. Fourteen general categories of documents were identified, and then documents were further sorted during analysis. Categories of documents that significantly contributed to the writing of this report include:

Executive Orders from the Governor's office

The study team located all executive orders related to the pandemic response in Oregon from the Governor's office website. These executive orders were used, in collaboration with OHA, to establish the stages of the pandemic that the study team used in primary data collection and analysis for this report.

Funding and Spending

Funding and spending documents were identified as budgeting guidance, sample contracts with CBOs, work plans and budget forms from LPHAs and Tribal Nations, and FAQ documents for federal funding streams. These documents were used to total the money received by OHA and spent on the Oregon public health system response, give an overview of funded activities, and supplement findings from primary data collection.

Enforcement

The category of enforcement documents contains many sub-types of documents. The study team received 888 documents in this category, including:

- Warning letters and general guidance documents from OHA to support compliance with executive orders;
- OHA reopening team emails containing constituent complaints about non-compliance of businesses and other organizations in their communities;
- Complaint forms and notices of alleged safety or health hazards from OR-OSHA, and a tracking sheet of all COVID-related violations and inspections that OR-OSHA investigated from May of 2020 - September of 2022; and
- License inquiries and notices of license suspensions from the Oregon Liquor and Cannabis Commission (OLCC) to businesses out of compliance with executive orders.

Quantitative Phase

Survey

Survey Methodology

Primary data collection for quantitative data was collected via a series of online surveys that were tailored for each informant group. There were a total of five unique surveys distributed to five informant groups (CBOs, CCOs, LPHAs, Local EMs, Tribes) identified by OHA in the RFP.

Survey Sampling

CBOs

The survey was distributed to 166 CBOs who received Health Equity funding from OHA (after removing undeliverable email addresses). There were a total of 66 responses, with five respondents that did not complete the survey beyond the demographic information and three respondents that submitted partial surveys, for a response rate of 37%. The three partial responses are included in the analysis.

CCOs

The survey was sent to the CEO/ED/President of each 16 Oregon CCOs. A total of 7 returned surveys are included in the sample for CCOs, for a response rate of 44%.

LPHAs

The survey was distributed to all Oregon LPHAs. It was sent to a variety of positions within each LPHA, including Administrator, Public Health Director, PH Officer, Communicable Disease Lead, Emergency Preparedness Manager or Coordinator, Public information officer, Equity lead or liaison (if applicable), and Epidemiology lead (if applicable), for a total of 118 recipients (after accounting for bounced back emails). A total of 40 returned surveys are included in the sample for LPHAs, with one respondent that did not complete the survey beyond the demographic information and one respondent that submitted an incomplete survey, for a response rate of 33%. Although

surveys were completed by LPHA in each of five regions, there is not enough representation across regions to conduct analysis of LPHA surveys by regions.

Education

Rede intended to send a survey out to School District and Educational Service District Superintendents. However, due to the timing of data collection over the summer and in coordination with ODE it was decided that Superintendents would instead be engaged for Report 2.

Emergency Management

The survey was distributed to all city, county, and tribal emergency management offices in Oregon. It was sent to a variety of positions within each agency, including Managers, Operations, Training, Community Planning, and Resilience, for a total of 128 recipients (after accounting for bounced back emails). There were a total of 23 responses, with 2 respondents that did not complete the survey beyond the demographic information and one respondent that completed less than 25% of the survey, for a response rate of 16%. Data from the incomplete survey were included in analysis.

Tribes

The survey was distributed to the Health Director or equivalent position at each of Oregon's nine federally recognized Tribes. Only one Tribe responded to the survey, so these data will not be included in the report.

Survey Development

All surveys were developed by the study team. After preliminary qualitative analysis, the study team used these findings to inform development of each specific survey. After a survey matrix was completed, surveys were reviewed by a community partner. Partners' feedback was integrated into the survey before programming. For the CBO, LPHA, and Emergency Management surveys, a pilot survey was sent out to members of the target population group. Based on the pilot survey, additional changes were made to the surveys prior to finalizing the survey.

Survey Data Collection

For the CBO, LPHA, and Emergency Management surveys, a pilot survey was sent out to gather feedback and make changes prior to sending out to the entire list of recipients. Surveys were disseminated through Survey Monkey directly to recipients with a unique link in order for the study team to track responses and provide reminders. The surveys were intended to be open for two weeks for each participant group, however, due to difficulties in getting responses, the surveys were open longer than anticipated as additional recruitment strategies were utilized.

Survey Data Analysis

Survey data was downloaded from Survey Monkey and analyzed within Google Sheets. The primary approach to analysis was descriptive, and when possible, subclass analysis was performed (such as by Region and/or pandemic Stage). Charts and other data visualizations were created to help interpret data to identify significant findings.

Secondary Data Analysis

In order to answer the following question, "What were the differences in COVID-19 health outcomes by race, ethnicity, disability, age, and geography?", it was necessary to use secondary data sources. We also used secondary data sources to compare health equity outcomes related to the COVID-19 pandemic response, including second-hand health disparities resulting from the increased strain on hospitals, health systems, and resources. Detailed methodology relating to secondary data sources are described below and additional information for specific indicators can be found in Appendix J and Appendix K.

Secondary Data Sources

The study team used an array of different sources of secondary data. All of the COVID-19 health outcome data, including COVID-19 case indicators, COVID-19 testing metrics, COVID-19 mortality indicators, hospitalization indicators, vaccination data, and emergency department visits came from the OHA COVID-19 Dashboard. The study team also used specific reports from OHA when data was unavailable on the COVID-19 dashboard. An example of this is that COVID-19 data on individuals with disabilities comes from a report by OHA that is updated quarterly; another example is incidence of MIS-C.

Data on the indirect effects of COVID-19 come from an array of sources, including OHA vital statistics and online dashboards, as well as a presentation on the indirect effects of COVID-19 from the PHD. Through meetings with staff from OHA and Program Design and Evaluation Services (PDES), we were able to access data from PDES related to the tracking and reporting of measures of the indirect effects of COVID-19 using the Healthier Together Oregon framework.

Secondary Data Analysis

We examined COVID-19 health outcomes using basic descriptive statistics, focusing on epidemiological indicators of community spread, disease severity, and strain on the health care system. In many instances, we examined existing data by stage, across geography, age, race, and ethnicity.

Interpretation of Findings

Findings pertaining to funding and CBOs across primary and secondary data sources were reviewed with partners in one 90-minute meetings and through

email. Partners included leadership from CBOs representing organizations primarily serving BIPOC, rural, and community members with a disability.

OHA convened a review committee of OHA staff, LPHA, Tribal Nation, and CBO representatives. The study team presented key findings and preliminary recommendations to the review committee to answer questions and gather feedback.

Counties by Region

For this study, counties were divided into five regions. Oregon's Emergency Management regions[2] were modified to include at least five counties in each region to support the confidentiality of study informants. These regions were used to inform regional representation in data collection and as an analytic framework for the survey.

[2] https://www.oregon.gov/oha/PH/PREPAREDNESS/PARTNERS/Pages/Regional-Support.aspx

Figure 10: Counties by region