



Costing the Foundational Public Health Services in Ohio

FULL REPORT FOR FISCAL YEAR 2022
PREPARED BY SIMONE SINGH, PHD (OCTOBER 2024)

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EXECUTIVE SUMMARY

This report offers a comprehensive analysis of the costs incurred by local health departments (LHDs) in Ohio for delivering the Foundational Public Health Services (FPHS) during fiscal year (FY) 2022. It details the expenditures of Ohio LHDs on the FPHS and highlights any gaps in fully achieving these services. Additionally, the report estimates the additional annual investments required to address existing resource gaps and ensure full implementation of the FPHS, based on FY 2022 data.

The analysis was based on data from 93 Ohio LHDs serving over 10.1 million Ohioans. LHDs included in this report served communities ranging from approximately 10,000 residents to more than 900,000 residents and were located in communities across the state representing all five Association of Ohio Health Commissioners (AOHC) districts.

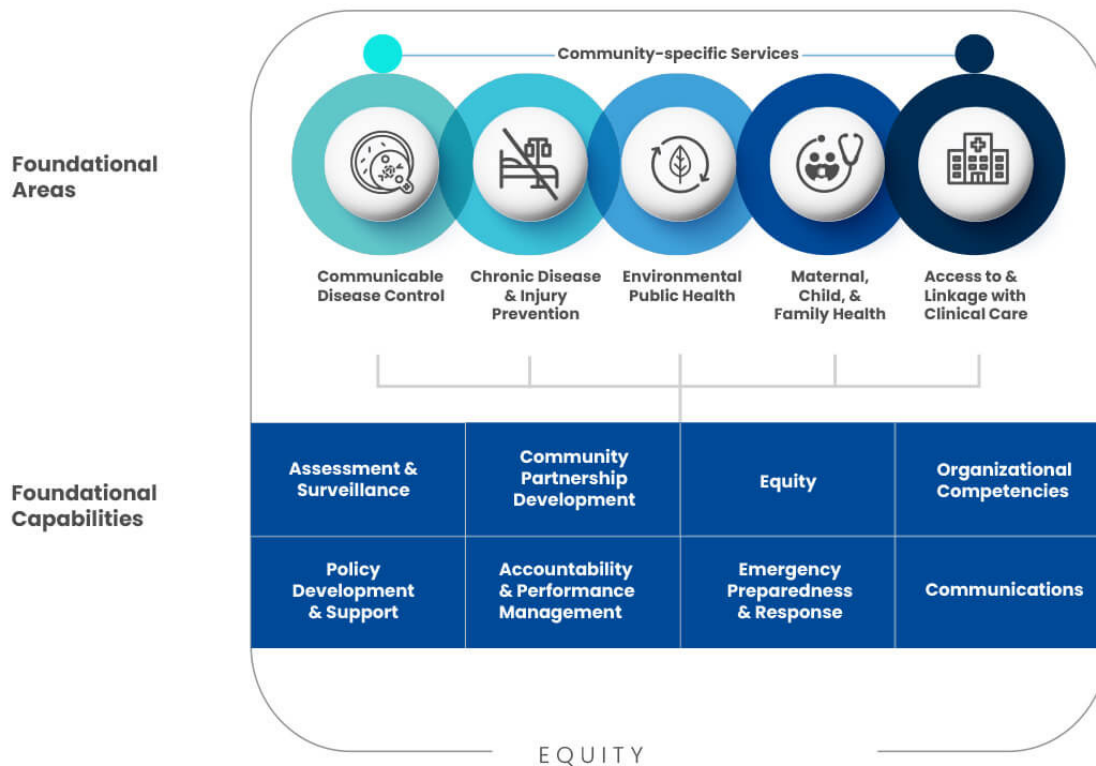
Foundational Public Health Services Framework

The FPHS define a minimum package of public health capabilities and programs for communities across the United States. The FPHS framework (see Figure E1) outlines the vital role and unique responsibilities of governmental public health and can be helpful in identifying existing capacity and resource gaps. The framework consists of two main components: Foundational Capabilities and Foundational Areas.

- **Foundational Capabilities** are the cross-cutting skills and capacities needed to support basic public health protections that are key to ensuring the community's health and achieving equitable health outcomes. These include Accountability and Performance Management, Assessment and Surveillance, Communications, Community Partnership Development, Emergency Preparedness and Response, Equity, and Organizational Competencies.
- The Foundational Capabilities represent the infrastructure needed to provide the **Foundational Areas**, the basic public health, topic-specific programs aimed at improving the health of the community affected by certain diseases or public health threats. They include Access to and Linkage with Clinical Care, Chronic Disease and Injury Prevention, Communicable Disease Control, Environmental Public Health, and Maternal, Child, and Family Health.

Figure E1: Foundational Public Health Services Framework

Foundational Public Health Services



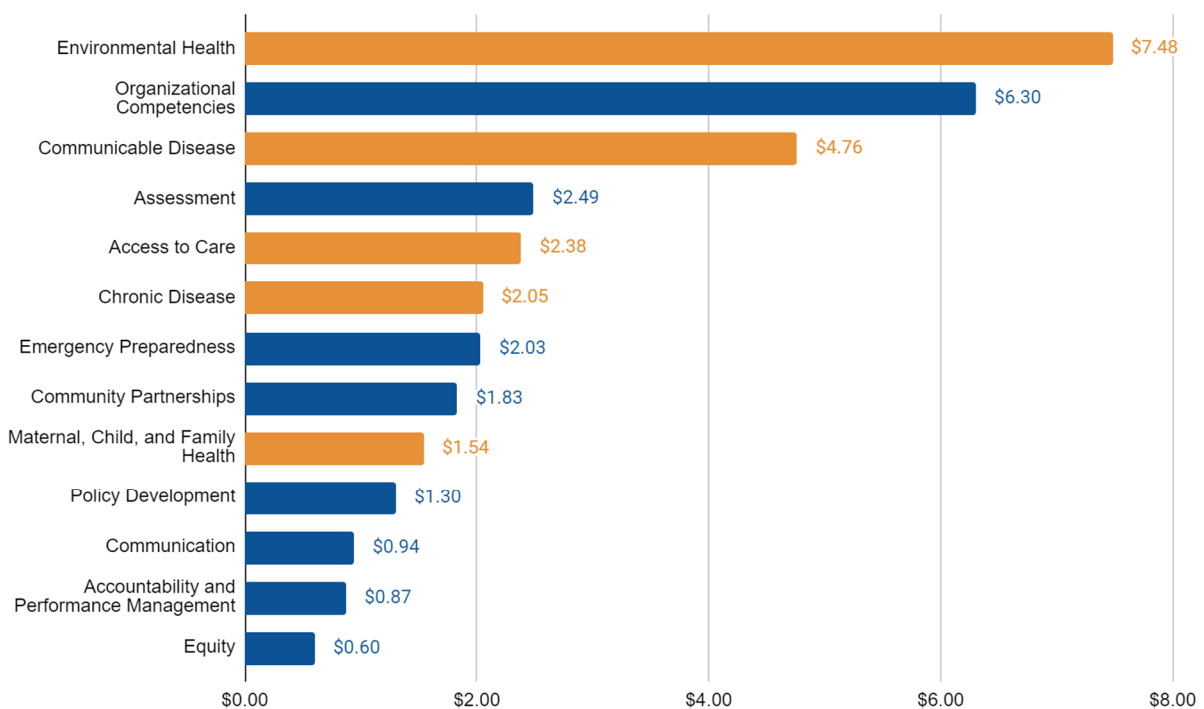
February 2022

Source: PHAB. <https://phaboard.org/center-for-innovation/public-health-frameworks/the-foundational-public-health-services>.

Key Findings

- In FY 2022, Ohio LHDs spent an average of \$34.57 per capita on the FPHS. Of this amount, \$16.36 per capita (47 percent) went toward the Foundational Capabilities and \$18.21 per capita (53 percent) went toward the Foundational Areas.
- Average per capita spending on the 13 foundational services that comprise the FPHS varied widely (see Figure E2). In FY 2022, FPHS spending ranged from \$0.60 per capita for Equity to \$7.48 per capita for Environmental Health.

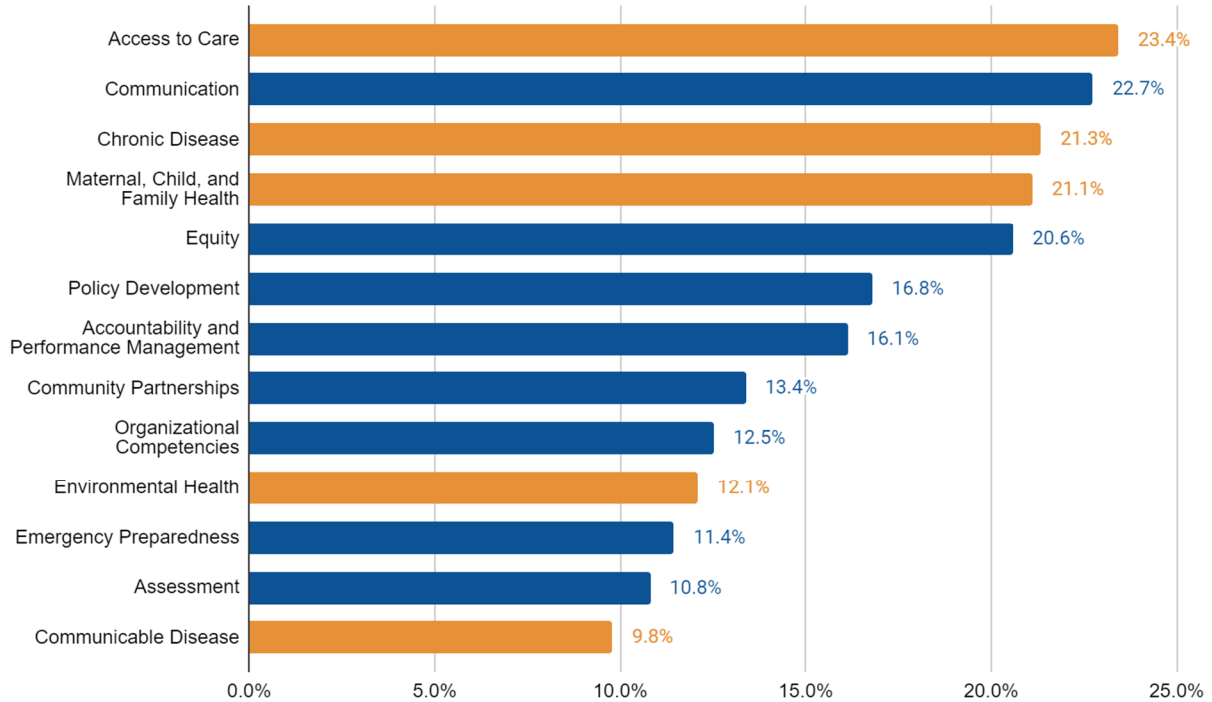
Figure E2: Per capita spending on the Foundational Public Health Services, FY 2023



Note: Foundational services that are part of the Foundational Capabilities are shown in blue while foundational services that are part of the Foundational Areas are shown in orange.

- Existing levels of spending on the FPHS did not allow Ohio LHDs to fully attain the FPHS in FY 2022 (see Figure E3). Even after taking into account the contributions of community partners, many LHDs reported gaps in the full attainment of the FPHS. Attainment gaps ranged from 9.8 percent for Communicable Disease to 23.4 percent for Access to Care.

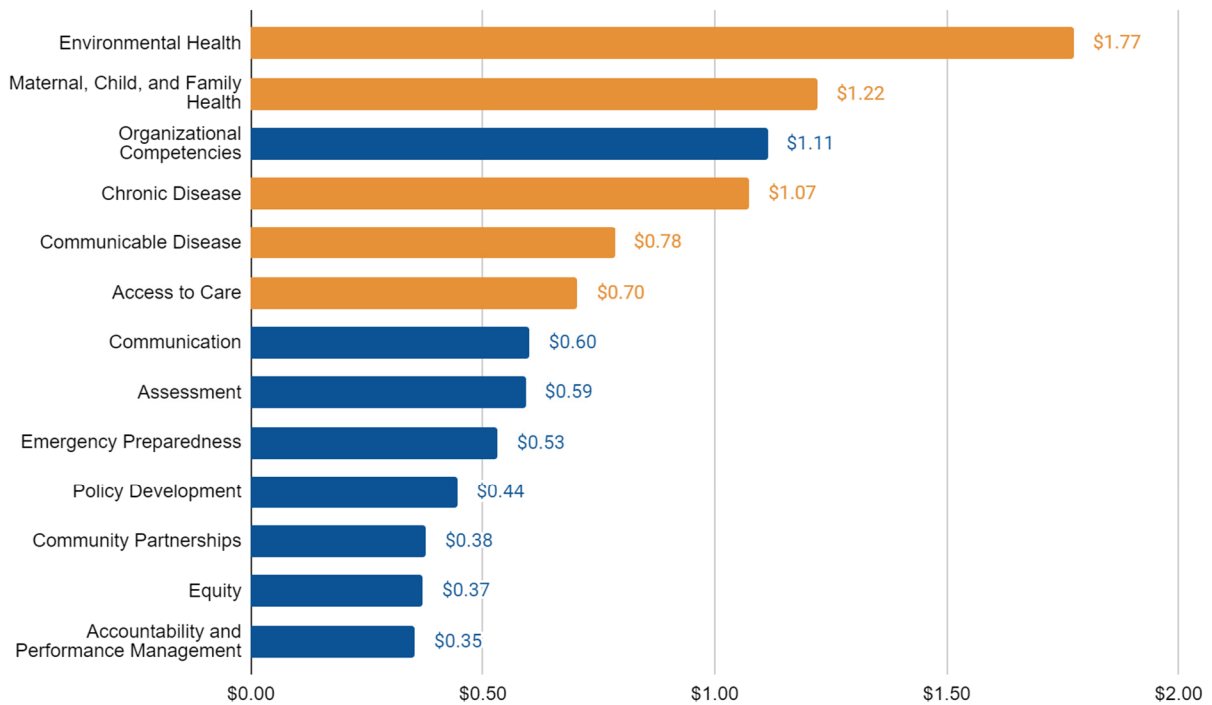
Figure E3: Gaps in attainment of the Foundational Public Health Services, FY 2022



Note: Foundational services that are part of the Foundational Capabilities are shown in blue while foundational services that are part of the Foundational Areas are shown in orange.

- Based on FY 2022 data, an estimated additional investment of \$9.94 per capita and year would be needed to close existing funding gaps and fully implement the FPHS in communities across Ohio. Of this total, \$4.38 per capita, representing 44%, would be allocated to the full implementation of the Foundational Capabilities. The remaining \$5.56 per capita, or 56%, would be directed towards achieving full implementation of the Foundational Areas.
- Additional investment needs varied widely across foundational services (see Figure E4). Environmental Health required the highest per capita investment, with a need of \$1.77 per capita, followed by Maternal, Child, and Family Health (\$1.22 per capita) and Organizational Competencies (\$1.11 per capita). On the other hand, certain foundational services required relatively smaller investments. The areas with the lowest per capita funding needs were Accountability and Performance Management (\$0.35 per capita), Equity (\$0.37 per capita), and Community Partnerships (\$0.38 per capita).

Figure E4: Per capita investment needed to fully attain the Foundational Public Health Services, FY 2022



Note: Foundational services that are part of the Foundational Capabilities are shown in blue while foundational services that are part of the Foundational Areas are shown in orange.

- Based on Ohio's population of 11.76 million in 2022, the total additional annual investment required to fully implement the FPHS across the state was estimated at \$116.9 million. Of this total, approximately \$51.6 million is needed to support the Foundational Capabilities while an additional \$65.4 million is required to fully implement the Foundational Areas.

Thank you for the opportunity to analyze FPHS costing data for Ohio LHDs for FY 2022. For questions or more information, please email singhsim@umich.edu.

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METHODS

Data and Sample

Data on the cost of providing public health services came from the costing of FPHS spreadsheets submitted by Ohio LHDs to the Ohio Public Health Partnership (OPHP). For FY 2022, data was available for 93 Ohio LHDs serving over 10.1 million Ohioans.

The LHDs included in this report served communities ranging from approximately 10,000 residents to more than 900,000 residents and were located across the state representing all five Association of Ohio Health Commissioners (AOHC) districts (see Table 1). A full list of the LHDs included in this report is shown in the Appendix.

Table 1: Descriptive statistics for Ohio local health departments included in the report

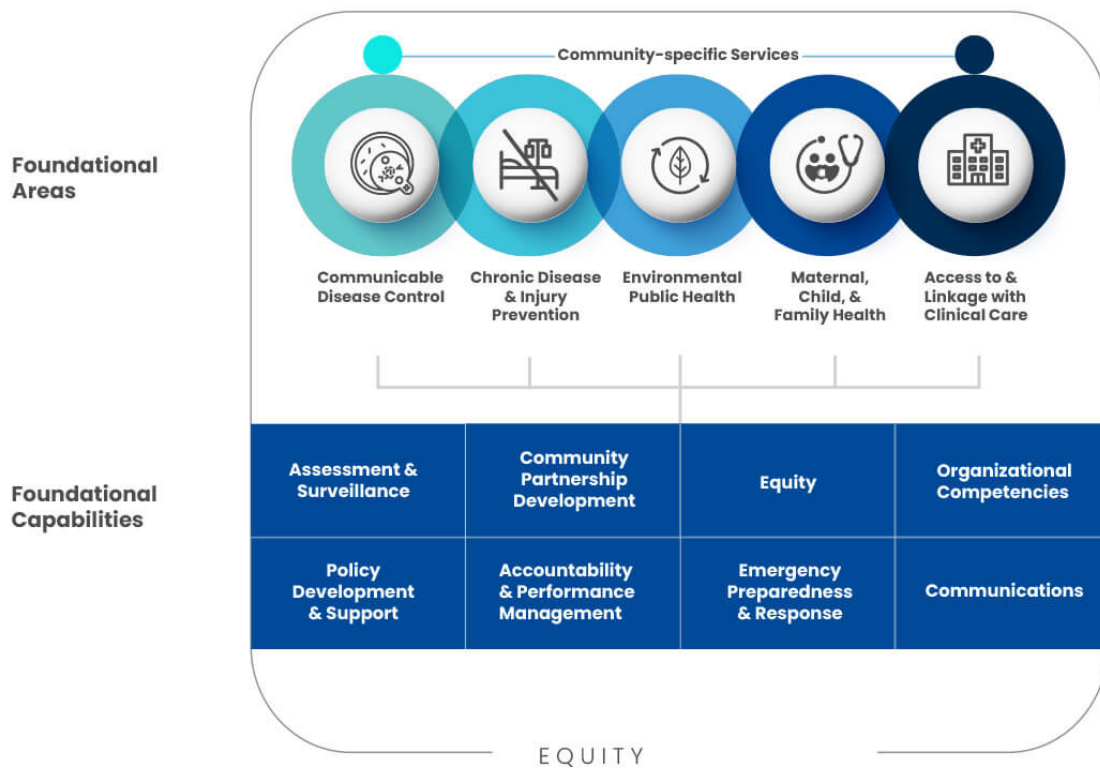
	Number of local health departments (%)
Jurisdiction size	
<30,000 residents	24 (26%)
30,000-49,999 residents	21 (23%)
50,000-100,000 residents	22 (24%)
>100,000 residents	26 (28%)
Geographic location	
Central district	14 (15%)
Northeast district	28 (30%)
Northwest district	16 (17%)
Southeast district	20 (22%)
Southwest district	15 (16%)

Measures

Key measures analyzed for this report included LHDs' current levels of spending on the FPHS; any gaps in the attainment of the FPHS; and the estimated additional investment needed to fully implement the FPHS. The FPHS define a minimum package of public health capabilities and programs for communities across the United States. Figure 1 shows the most recent version of the FPHS framework. The Foundational Capabilities – Accountability and Performance Management, Assessment and Surveillance, Communications, Community Partnership Development, Emergency Preparedness and Response, Equity, and Organizational Competencies - build the infrastructure necessary to support the implementation of five core public health services represented in the Foundational Areas – Access to and Linkage with Clinical Care, Chronic Disease and Injury Prevention, Communicable Disease Control, Environmental Public Health, and Maternal, Child, and Family Health.

Figure 1: Foundational Public Health Services Framework developed by PHAB

Foundational Public Health Services



February 2022

Source: PHAB. <https://phaboard.org/center-for-innovation/public-health-frameworks/the-foundational-public-health-services>.

Current spending on the FPHS was defined as total per capita spending on the FPHS as reported by Ohio LHDs on the costing of FPHS spreadsheets. Total per capita spending included both labor and non-labor spending and was adjusted for any existing shared service agreements.

Gaps in the attainment of the FPHS were defined as the percentage of the FPHS that was not provided by either the LHD or its community partners.

The estimated additional investment needed to close any attainment gaps was defined as the cost to fill the gap between what LHDs currently provide and what LHDs should be providing to meet the FPHS.

Estimates of additional investment needs were computed using the following steps: First, we divided each LHD's per capita cost for each foundational service by the respective attainment percentage to obtain the expected per capita cost at full (100 percent) attainment. Second, we multiplied the expected per capita cost at full attainment for each foundational service by the respective attainment gap to obtain the per capita cost required to fill the current gap in attainment, by foundational service.

As in reports for prior years, the estimation process relies on two key assumptions:

1. Any gaps in attainment are fully covered by the LHD alone, without relying on community partners.
2. The costs to cover any gaps in attainment follow the same levels and patterns as the costs LHDs already expended on the FPHS. This assumption implied that (a) there are no economies or diseconomies of scale and (b) the share of labor and non-labor cost remains constant across levels of attainment.

For the purpose of this report, observations with additional investment needs that exceeded \$20 per capita (approximately equivalent to the 95th percentile) were excluded to minimize the impact of outliers on the results reported.

Analytic Strategy

Descriptive analysis was conducted to describe current levels of spending on the FPHS, gaps in attainment of the FPHS, and any additional investment needed to fully attain the FPHS, by foundational services.

All analyses were conducted first for all Ohio LHDs in the aggregate and then broken out by jurisdiction size and geography. Jurisdiction size was defined as the number of people served by an LHD. In line with prior years, LHDs were grouped into the following four population groups: fewer than 30,000 residents; 30,000 to 49,999 residents; 50,000 to 99,999 residents; and 100,000 and more residents. Geographic location was defined in terms of the five AOHC health districts: Central, Northeast, Northwest, Southeast, and Southwest.

All results presented in this report were weighted by jurisdiction size to account for the large variation in the number of residents served across sample LHDs.

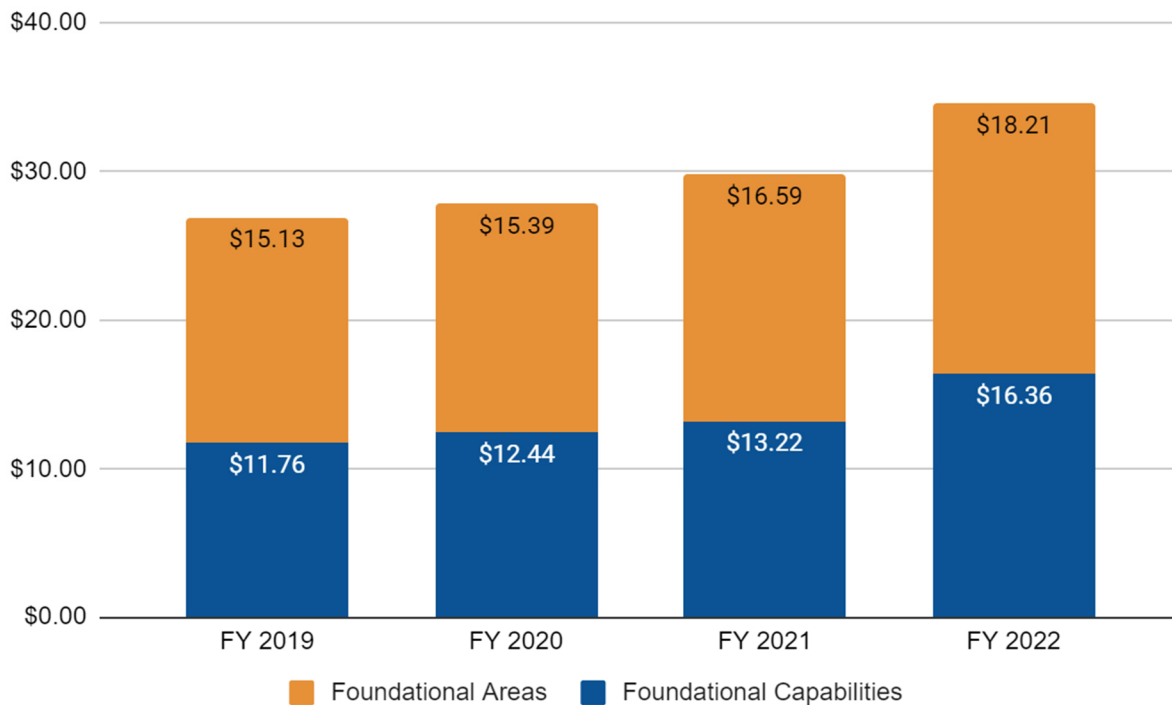
RESULTS

Part 1: Spending on the Foundational Public Health Services

In FY 2022, Ohio LHDs spent an average of \$34.57 per capita on the FPHS (see Figure 2). In comparison, spending on the FPHS averaged \$26.89 per capita in FY 2019, \$27.83 per capita in FY 2020, and \$29.81 per capita in FY 2021, showing a continuous increase in average spending on the FPHS by LHDs in Ohio.

Of the \$34.57 spent per capita in FY 2022, \$16.36 (47 percent) was spent on the Foundational Capabilities while \$18.21 (53 percent) was spent on the Foundational Areas. Between FY 2019 and FY 2022, average spending on the Foundational Capabilities increased by \$4.60 per capita, or 39 percent, while average spending on the Foundational Areas increased by \$3.08 per capita, or 20 percent.

Figure 2: Per capita spending on the Foundational Capabilities and Foundational Areas, FY 2019 to FY 2022

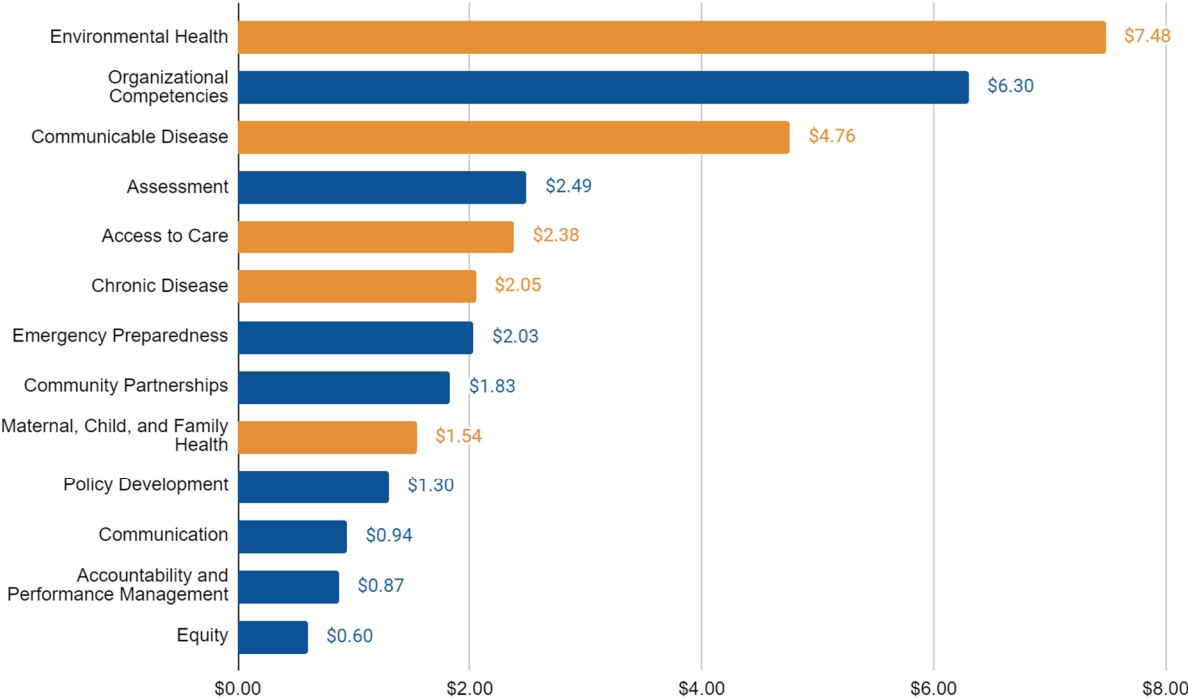


Average per capita spending on the 13 foundational services that comprise the FPHS varied widely (see Figure 3 and Table 2). Foundational services with the largest average per capita expenditures included Environmental Health (\$7.48 per capita), Organizational Competencies (\$6.30 per capita), and Communicable Disease (\$4.76 per capita).

On the other end of the spectrum, certain foundational services received substantially lower funding. Foundational services with the lowest average per capita expenditures included Equity (\$0.60 per capita), Accountability and Performance Management (\$0.87 per capita), and Communication (\$0.94 per capita).

This wide disparity in per capita spending reflects differing levels of funding availability, prioritization, and resource allocation among these essential services, with some areas receiving robust support while others are potentially underfunded.

Figure 3: Per capita spending on the Foundational Public Health Services, FY 2022



Note: Foundational services that are part of the Foundational Capabilities are shown in blue while foundational services that are part of the Foundational Areas are shown in orange.

Table 2: Per capita spending on the Foundational Public Health Services, FY 2022

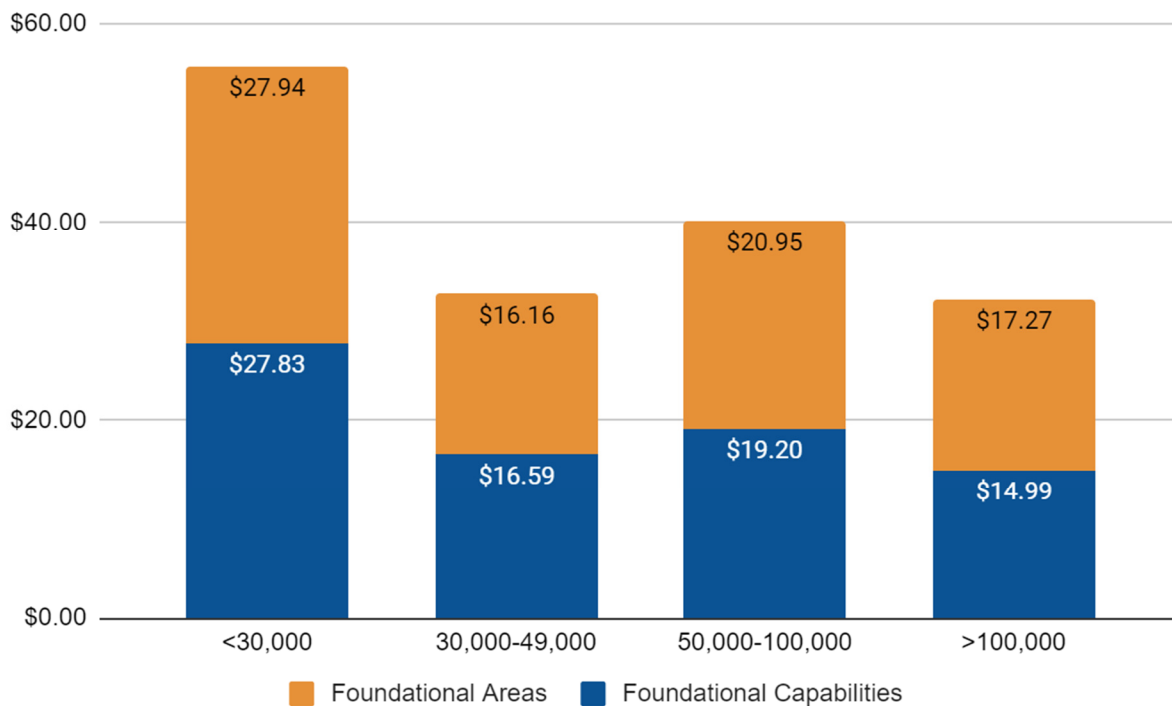
	Mean	25th Percentile	Median	75th Percentile
<i>Foundational Capabilities</i>				
Assessment	\$2.49	\$1.40	\$2.12	\$3.04
Emergency Preparedness	\$2.03	\$1.21	\$1.64	\$2.75
Communication	\$0.94	\$0.27	\$0.67	\$1.44
Policy Development	\$1.30	\$0.47	\$0.81	\$1.89
Community Partnerships	\$1.83	\$0.34	\$0.94	\$2.13
Organizational Competencies	\$6.30	\$2.51	\$6.09	\$9.02
Accountability and Performance Management	\$0.87	\$0.22	\$0.46	\$1.34
Equity	\$0.60	\$0.23	\$0.34	\$0.57
<i>Foundational Areas</i>				
Communicable Disease	\$4.76	\$1.99	\$3.61	\$7.45
Chronic Disease	\$2.05	\$0.56	\$1.16	\$2.92
Environmental Health	\$7.48	\$5.22	\$6.76	\$9.11
Maternal, Child, and Family Health	\$1.54	\$0.49	\$0.80	\$1.72
Access to Care	\$2.38	\$0.14	\$0.63	\$1.28

Spending by Jurisdiction Size

Average per capita spending on the FPHS varied noticeably across jurisdiction size (see Figure 4 and Table 3). In FY 2022, average spending was highest among LHDs serving fewer than 30,000 residents (\$55.77 per capita) followed by LHDs serving 50,000 to 100,000 residents (\$40.15 per capita). LHDs serving 30,000 to 50,000 residents spent \$32.75 per capita while LHDs serving more than 100,000 residents spent \$32.26 per capita on the FPHS.

With the exception of LHDs serving 30,000 to 50,000 residents, Ohio LHDs spent somewhat more per capita on the Foundational Areas than the Foundational Capabilities. The share of total spending allocated to the Foundational Areas ranged from 49 percent for LHDs serving 30,000 to 50,000 residents to 54 percent for LHDs serving more than 100,000 residents.

Figure 4: Per capita spending on the Foundational Capabilities and Foundational Areas by jurisdiction size, FY 2022



Ohio LHDs demonstrated a relatively consistent allocation of spending on the FPHS, regardless of the size of the jurisdiction they served (see Figure 5). While there were notable differences in overall budget size, the proportional distribution of funds across various services remained similar across most LHDs.

The three services that received the largest per capita spending were Environmental Health, Organizational Competencies, and Communicable Disease Control. With the exception of LHDs serving populations of fewer than 30,000 residents, these three services collectively accounted for more than 50 percent of total spending across Ohio LHDs.

In terms of Environmental Health spending, per capita expenditures ranged from \$6.29 per capita for LHDs serving more than 100,000 residents to \$8.67 per capita for LHDs serving between 30,000 and 50,000 residents. Similarly, spending on Organizational Competencies ranged from \$5.46 per capita in LHDs serving 30,000 to 50,000 residents to \$7.51 per capita for those serving between 50,000 and 100,000 residents. Finally, Communicable Disease spending showed similar variation, with LHDs serving populations between 30,000 and 50,000 residents spending \$3.68 per capita, while those serving populations between 50,000 and 100,000 residents spent as much as \$6.29 per capita.

Figure 5: Per capita spending on the Foundational Public Health Services by jurisdiction size, FY 2022

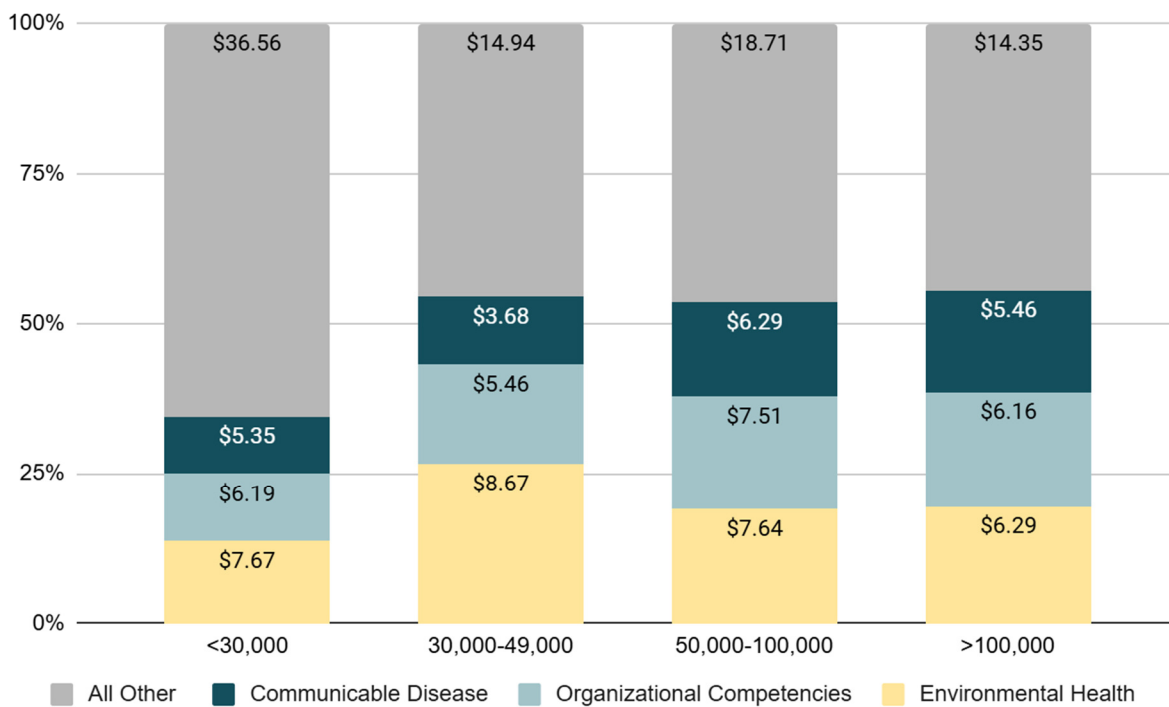


Table 3: Per capita spending on the Foundational Public Health Services by jurisdiction size, FY 2022

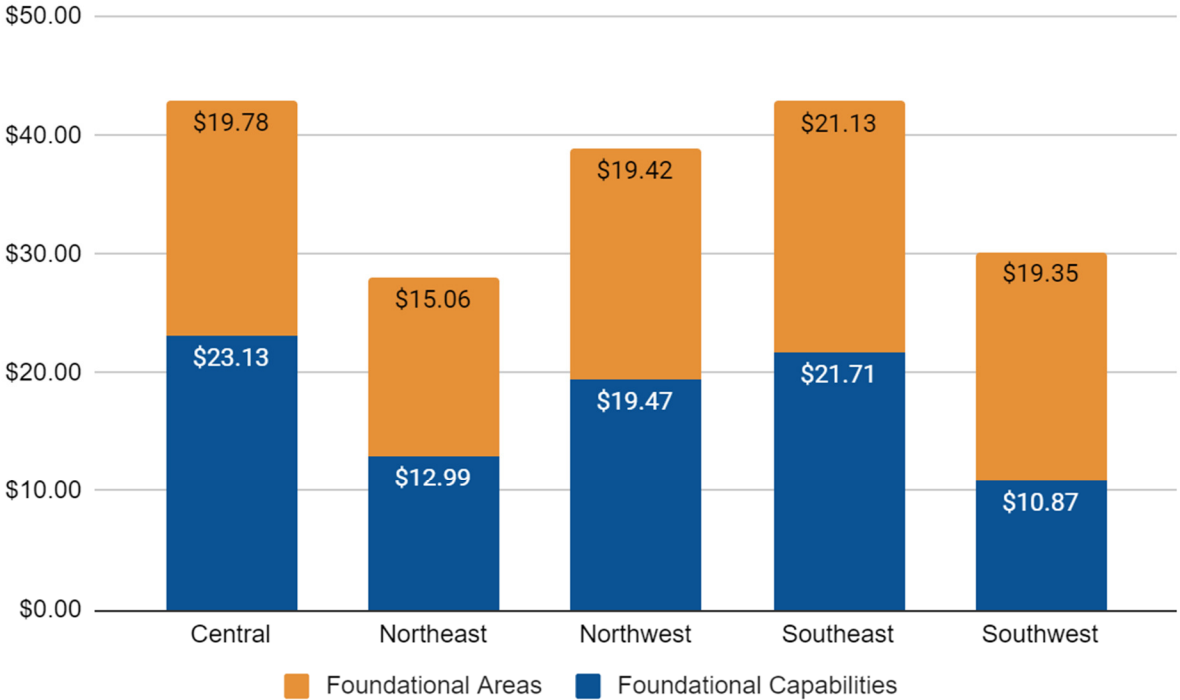
Jurisdiction size	<30,000	30,000-49,000	50,000-100,000	>100,000
<i>Foundational Capabilities</i>				
Assessment	\$4.94	\$2.45	\$3.33	\$2.16
Emergency Preparedness	\$3.50	\$2.84	\$2.14	\$1.81
Communication	\$2.88	\$0.92	\$1.20	\$0.76
Policy Development	\$3.11	\$1.06	\$1.61	\$1.14
Community Partnerships	\$3.41	\$1.79	\$1.72	\$1.75
Organizational Competencies	\$6.19	\$5.46	\$7.51	\$6.16
Accountability and Performance Management	\$2.14	\$1.43	\$1.10	\$0.68
Equity	\$1.66	\$0.64	\$0.59	\$0.53
<i>Total Foundational Capabilities</i>	<i>\$27.83</i>	<i>\$16.59</i>	<i>\$19.20</i>	<i>\$14.99</i>
<i>Foundational Areas</i>				
Communicable Disease	\$6.89	\$4.77	\$5.25	\$4.52
Chronic Disease	\$3.26	\$1.33	\$2.41	\$1.99
Environmental Health	\$9.23	\$7.55	\$7.98	\$7.26
Maternal, Child, and Family Health	\$4.29	\$1.90	\$2.44	\$1.14
Access to Care	\$4.27	\$0.61	\$2.87	\$2.36
<i>Total Foundational Areas</i>	<i>\$27.94</i>	<i>\$16.16</i>	<i>\$20.95</i>	<i>\$17.27</i>
<i>Total Foundational Public Health Services</i>	<i>\$55.77</i>	<i>\$32.75</i>	<i>\$40.15</i>	<i>\$32.26</i>

Spending by Geographic Location

Spending on the FPHS varied significantly by geographic location, reflecting disparities across different regions of the state (see Figure 6 and Table 4). In FY 2022, LHDs in Ohio’s Northeast and Southwest districts had the lowest average per capita spending on FPHS, with the Northeast district allocating just \$28.05 per capita, and the Southwest district slightly higher at \$30.22 per capita. In contrast, spending was considerably higher in the other three districts: LHDs in the Northwest district spent an average of \$38.89 per capita, while LHDs in the Southeast and Central districts recorded the highest average expenditures at \$42.84 and \$42.91 per capita, respectively.

The pattern of spending not only varied in overall per capita amounts but also in the distribution between the two major categories of FPHS: Foundational Areas and Foundational Capabilities. LHDs with the lowest overall spending, notably in the Northeast and Southwest districts, allocated a larger proportion of their budgets to the Foundational Areas. Conversely, LHDs in the Central, Northwest, and Southeast districts, which had higher per capita spending, devoted a somewhat larger share of their budgets to the Foundational Capabilities. This may indicate that LHDs with more resources are investing more in long-term capacity building and systemic improvements that enable them to deliver more effective public health services.

Figure 6: Per capita spending on the Foundational Capabilities and Foundational Areas by district, FY 2022



The composition of Ohio LHDs' spending on the FPHS varied noticeably across different geographic regions, reflecting diverse public health needs and budgetary priorities. Among the three foundational services with the highest per capita spending – Environmental Health, Organizational Competencies, and Communicable Disease Control – their combined share of total spending differed markedly by region. For example, these three services accounted for a substantial 63 percent of total spending among LHDs in the Northeast district. In contrast, they made up only 42 percent of total spending among LHDs in the Southeast district.

Breaking down these services individually further illustrates the geographic variation in spending. In the case of Environmental Health, per capita expenditures ranged from a low of \$6.04 in the Southwest district to a high of \$8.67 in the Northeast district. Spending on Organizational Competencies also varied significantly by location. LHDs in the Southwest district spent \$4.10 per capita, the lowest in the state, while those in the Central district allocated more than double that amount, at \$8.70 per capita. Finally, Communicable Disease showed similar geographic variation. LHDs in the Northeast district allocated \$3.68 per capita to this service, while those in the Northwest district spent significantly more, averaging \$6.29 per capita.

Figure 7: Per capita spending on the Foundational Public Health Services by district, FY 2022

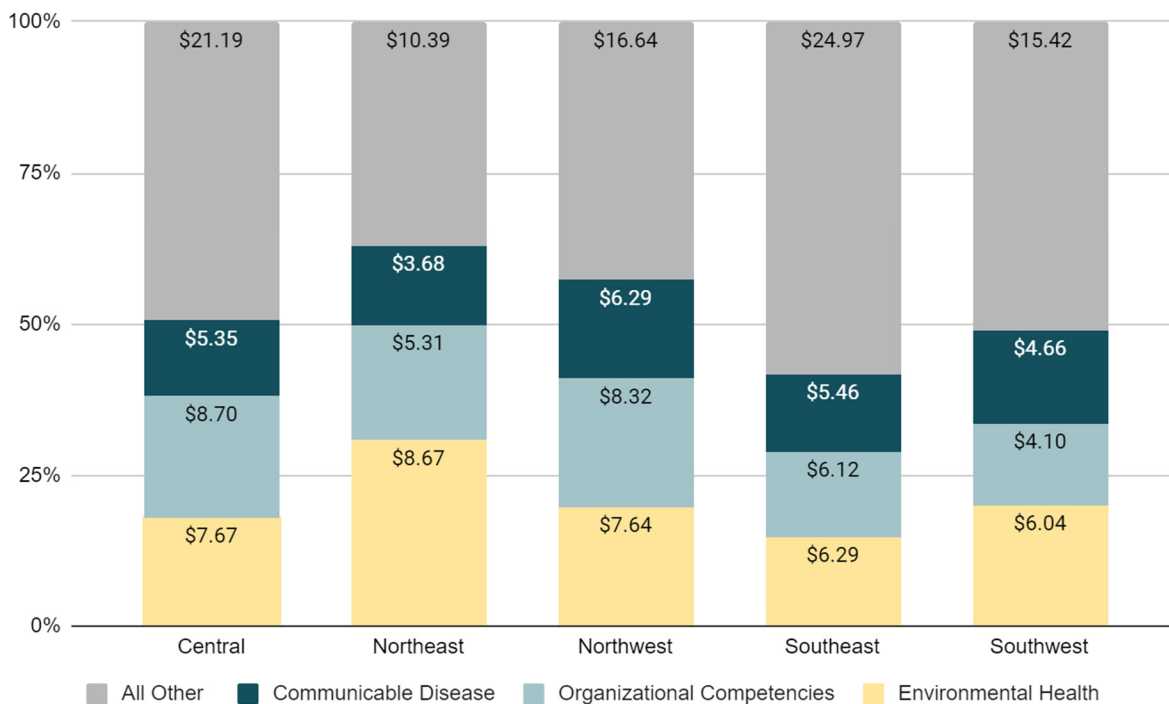


Table 4: Per capita spending on the Foundational Public Health Services by district, FY 2022

	Central	Northeast	Northwest	Southeast	Southwest
<i>Foundational Capabilities</i>					
Assessment	\$2.62	\$2.44	\$2.76	\$3.67	\$1.96
Emergency Preparedness	\$2.34	\$1.78	\$2.41	\$2.79	\$1.64
Communication	\$1.46	\$0.62	\$0.89	\$1.63	\$0.65
Policy Development	\$2.14	\$0.82	\$1.38	\$2.19	\$0.80
Community Partnerships	\$4.14	\$0.68	\$2.36	\$2.43	\$0.68
Organizational Competencies	\$8.70	\$5.31	\$8.32	\$6.12	\$4.10
Accountability and Performance Management	\$0.94	\$0.80	\$0.79	\$1.82	\$0.66
Equity	\$0.79	\$0.54	\$0.56	\$1.06	\$0.38
<i>Total Foundational Capabilities</i>	\$23.13	\$12.99	\$19.47	\$21.71	\$10.87
<i>Foundational Areas</i>					
Communicable Disease	\$5.35	\$3.68	\$6.29	\$5.46	\$4.66
Chronic Disease	\$3.11	\$1.20	\$2.08	\$3.31	\$1.77
Environmental Health	\$7.67	\$8.67	\$7.64	\$6.29	\$6.04
Maternal, Child, and Family Health	\$1.34	\$1.12	\$1.86	\$3.19	\$1.63
Access to Care	\$2.31	\$0.39	\$1.55	\$2.88	\$5.25
<i>Total Foundational Areas</i>	\$19.78	\$15.06	\$19.42	\$21.13	\$19.35
<i>Total Foundational Public Health Services</i>	\$42.91	\$28.05	\$38.89	\$42.84	\$30.22

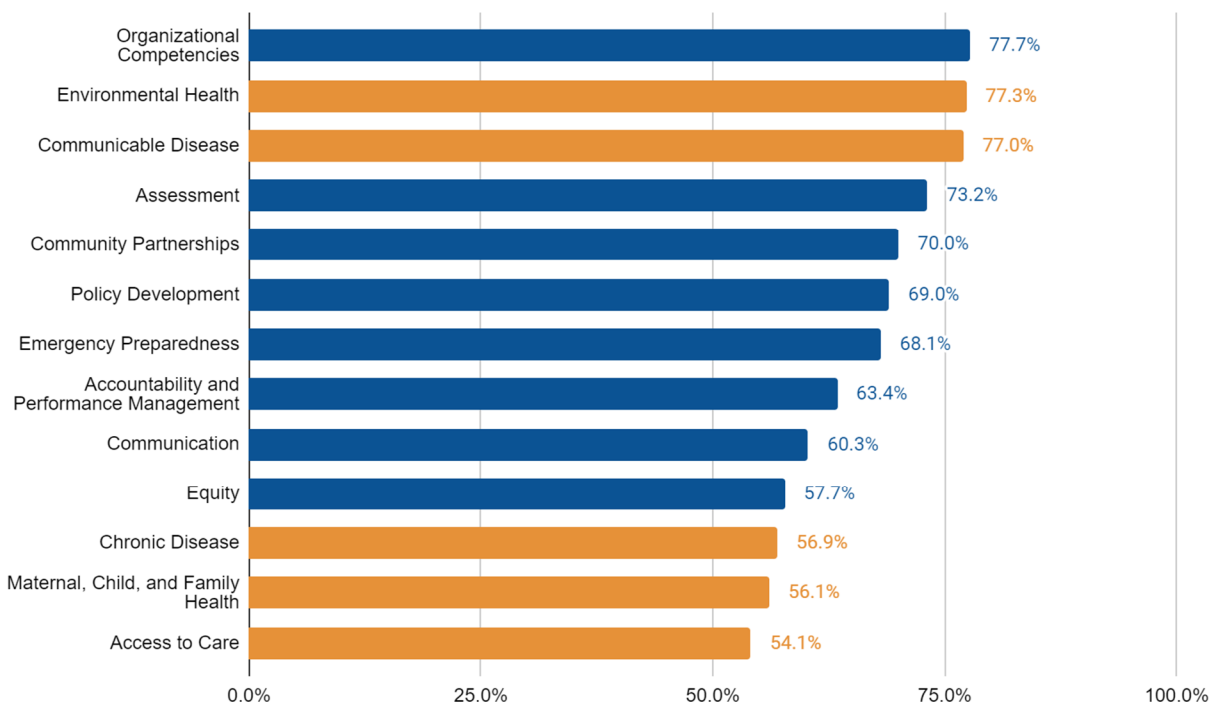
Part 2: Attainment of the Foundational Public Health Services

Agency-level attainment rates for the FPHS varied significantly across different service areas, reflecting differences in the ability of Ohio LHDs to meet public health goals (see Figure 8). In FY 2022, the services with the highest levels of attainment were Organizational Competencies (78 percent), Environmental Health (77 percent), and Communicable Disease (77 percent).

In contrast, several foundational services experienced much lower levels of agency-level attainment, suggesting that certain areas of public health may require additional resources or attention. These included as Access to Care (54 percent), Maternal, Child, and Family Health (56 percent), Chronic Disease (57 percent), and Equity (58 percent).

Overall, these variations in agency-level attainment rates highlight areas of strength and opportunities for improvement within Ohio's public health system. While some areas are well funded, other critical areas may require targeted interventions and enhanced support to improve their effectiveness across the state.

Figure 8: Agency-level attainment rates of the Foundational Public Health Services, FY 2022



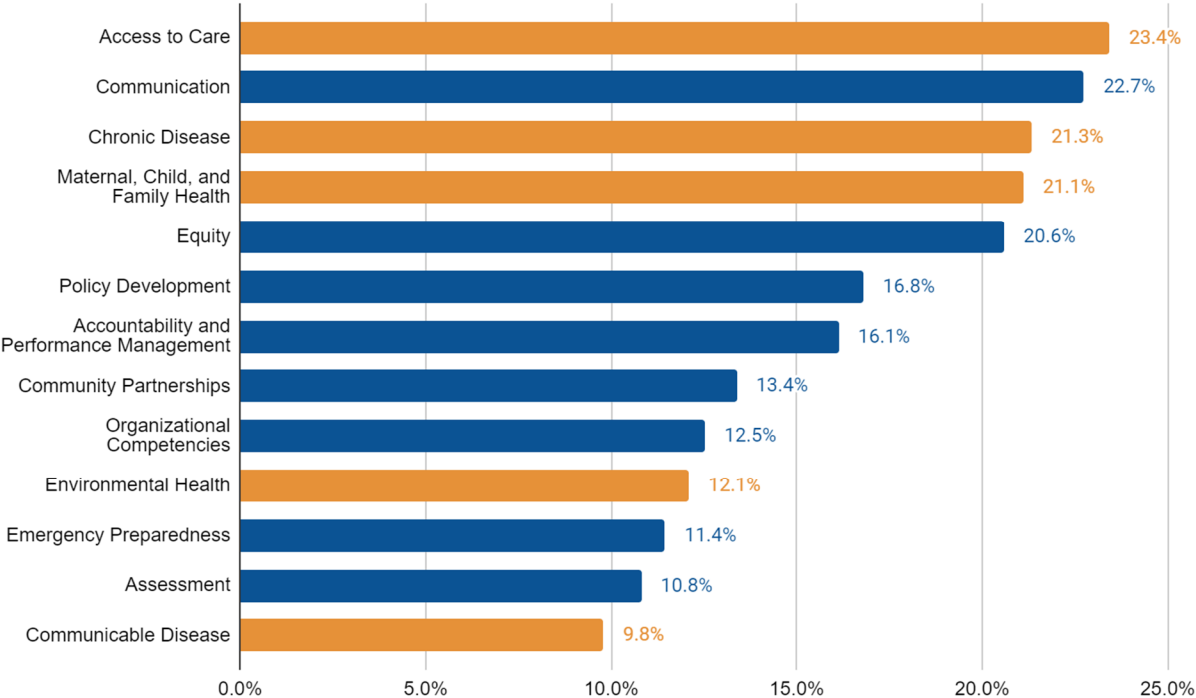
Note: Foundational services that are part of the Foundational Capabilities are shown in blue while foundational services that are part of the Foundational Areas are shown in orange.

As in previous years, current levels of spending on the FPHS were insufficient to enable many Ohio LHDs to fully implement the FPHS in their communities (see Figure 9). Despite ongoing efforts to allocate resources effectively, many LHDs faced significant gaps in their ability to meet essential community needs, indicating a pressing need for additional funding.

Among the services with the largest average gaps in attainment were several areas critical to both immediate health needs and long-term community well-being, including Access to Care (23 percent), Communication (23 percent), Chronic Disease (21 percent), Maternal, Child, and Family Health (21 percent), and Equity (21 percent).

In contrast, some foundational services showed relatively lower attainment gaps, suggesting that certain areas of public health have been better supported or prioritized. These included Communicable Disease (10 percent), Assessment (11 percent), and Emergency Preparedness (11 percent). This finding likely reflects the increased focus and funding directed toward assessment, emergency preparedness, and infectious disease control in recent years, especially in response to the COVID-19 pandemic, which highlighted the importance of robust surveillance and response systems.

Figure 9: Gaps in attainment of the Foundational Public Health Services, FY 2022



Note: Foundational services that are part of the Foundational Capabilities are shown in blue while foundational services that are part of the Foundational Areas are shown in orange.

Attainment by Jurisdiction Size

Smaller LHDs, particularly those serving populations of fewer than 50,000 residents, often faced more significant resource and attainment gaps compared to larger LHDs (see Figure 10 and Table 5). However, regardless of size, LHDs across the board tended to experience similar gaps in specific areas. Foundational services with high gaps in attainment included Communication, Equity, Chronic Disease, and Access to Care. These challenges underscore the need for strategic investments and tailored support across all LHDs to ensure that foundational public health services can be consistently delivered, regardless of population size.

Figure 10: Gaps in attainment of the Foundational Public Health Services by jurisdiction size, FY 2022

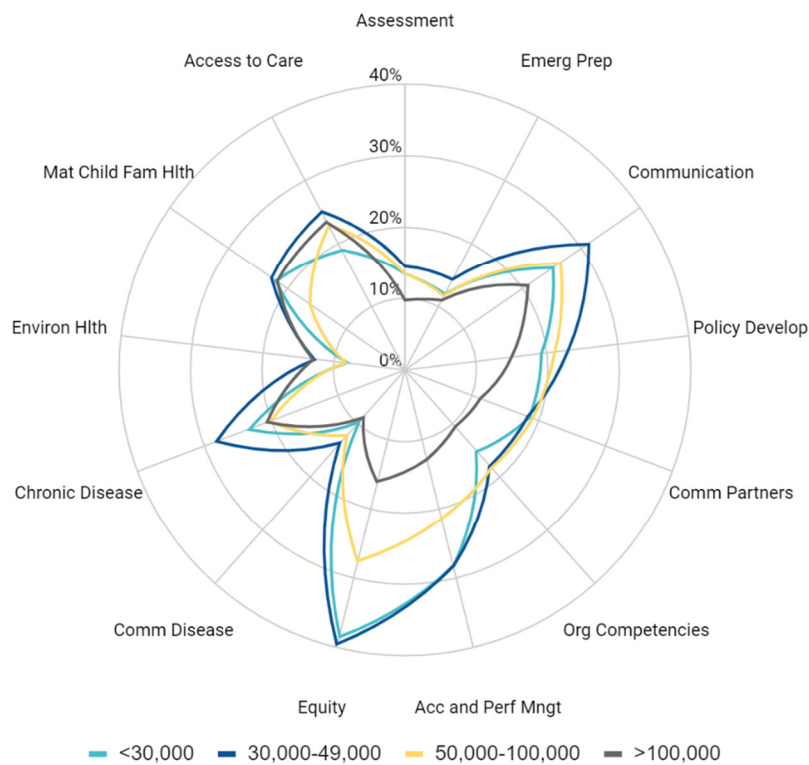


Table 5: Gaps in attainment of the Foundational Public Health Services by jurisdiction size, FY 2022

	<30,000	30,000-49,000	50,000-100,000	>100,000
<i>Foundational Capabilities</i>				
Assessment	13%	15%	13%	10%
Emergency Preparedness	12%	14%	12%	11%
Communication	25%	31%	26%	21%
Policy Development	19%	23%	21%	15%
Community Partnerships	19%	18%	19%	11%
Organizational Competencies	15%	18%	18%	11%
Accountability and Performance Management	28%	28%	21%	13%
Equity	38%	39%	27%	16%
<i>Foundational Areas</i>				
Communicable Disease	10%	14%	12%	9%
Chronic Disease	23%	28%	20%	21%
Environmental Health	8%	13%	8%	13%
Maternal, Child, and Family Health	22%	23%	16%	22%
Access to Care	19%	25%	23%	24%

Attainment by Geographic Location

Gaps in attainment across Ohio LHDs varied significantly by geographic location (see Figure 10 and Table 6), highlighting regional disparities in the capacity to deliver essential public health services. LHDs in the Central, Northeast, and Southwest districts generally reported some of the smallest gaps in attainment of the foundational public health services. LHDs in the Southeast district reported somewhat larger gaps, especially in Communication and Equity. The largest attainment gaps were reported by LHDs in the Northwest district, particularly in critical areas such as Communication, Accountability and Performance Management, Equity, Maternal, Child, and Family Health, and Access to Care. These regional disparities suggest the need for targeted interventions to address specific geographic challenges and ensure that all LHDs, regardless of location, can meet the foundational public health needs of their communities.

Figure 10: Gaps in attainment of the Foundational Public Health Services by district, FY 2022

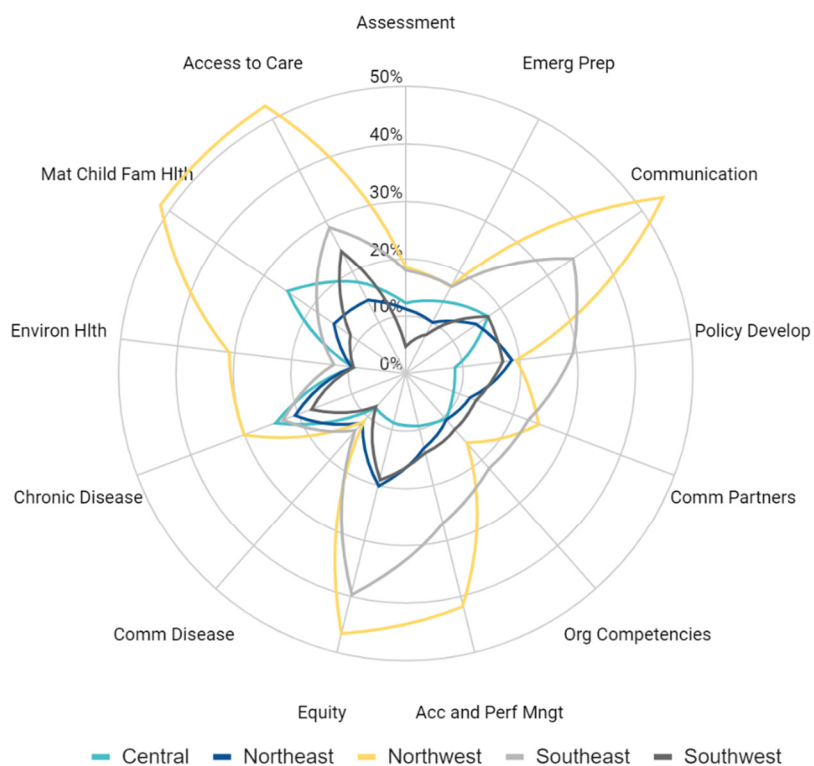


Table 6: Gaps in attainment of the Foundational Public Health Services by district, FY 2022

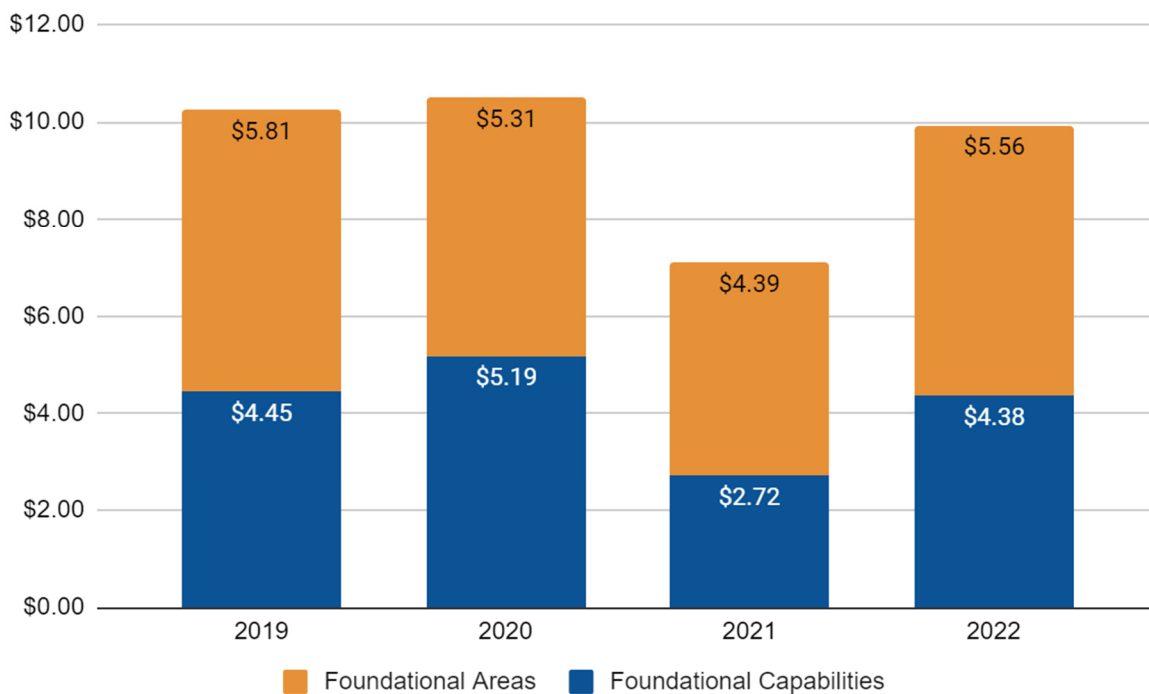
	Central	Northeast	Northwest	Southeast	Southwest
<i>Foundational Capabilities</i>					
Assessment	12%	11%	19%	18%	5%
Emergency Preparedness	14%	10%	17%	17%	8%
Communication	17%	15%	54%	35%	17%
Policy Development	9%	19%	19%	29%	17%
Community Partnerships	9%	12%	25%	23%	13%
Organizational Competencies	11%	11%	16%	22%	13%
Accountability and Performance Management	9%	13%	42%	27%	14%
Equity	9%	20%	47%	40%	19%
<i>Foundational Areas</i>					
Communicable Disease	8%	11%	11%	13%	8%
Chronic Disease	24%	21%	30%	23%	18%
Environmental Health	9%	10%	31%	12%	9%
Maternal, Child, and Family Health	25%	15%	52%	19%	12%
Access to Care	18%	14%	53%	29%	24%

Part 3: Investment Need to Fully Attain the Foundational Public Health Services

Based on FY 2022 data, an additional annual investment of approximately \$9.94 per capita would be required to address current funding gaps and fully implement the FPHS across all communities in Ohio (see Figure 11 and Table 7). Of this total, \$4.38 per capita, representing 44%, would be allocated to the full implementation of the Foundational Capabilities. The remaining \$5.56 per capita, or 56%, would be directed towards achieving full implementation of the Foundational Areas.

This investment need for FY 2022 marks a return to pre-COVID levels of around \$10 per capita, in contrast to FY 2021 when the estimated investment need was lower, at \$7.11 per capita. This temporary reduction during FY 2021 can be attributed in part to increased funding focused on communicable diseases and related public health responses during the COVID-19 pandemic.

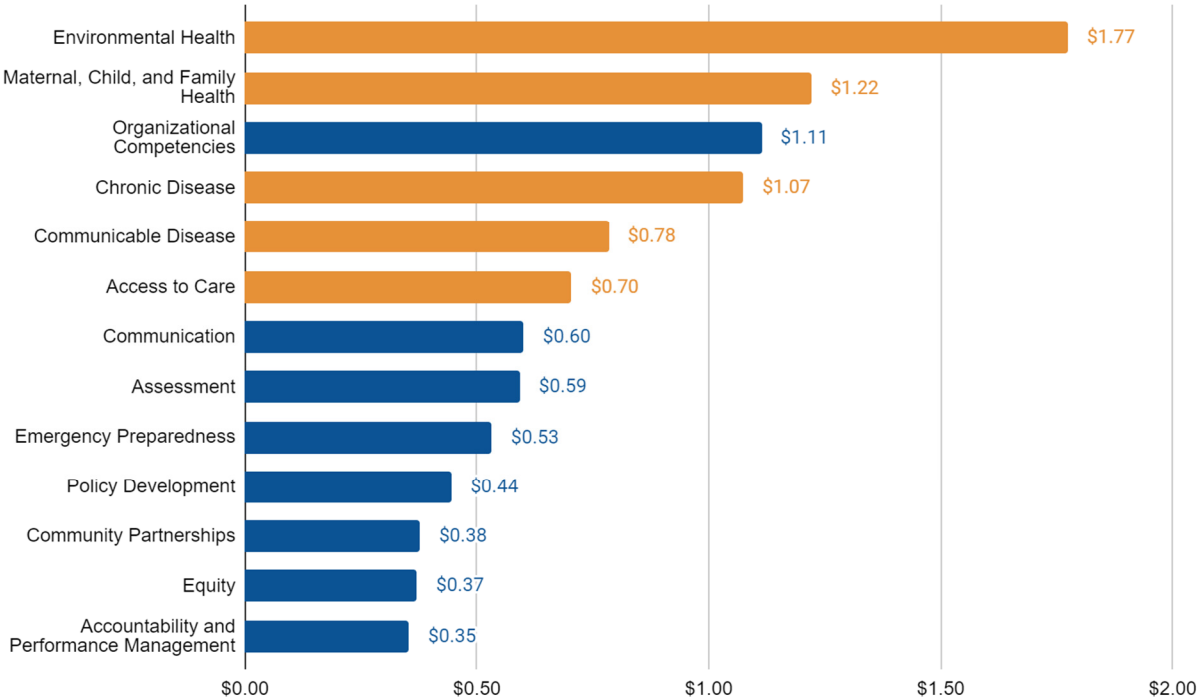
Figure 11: Per capita investment needed to fully attain the Foundational Capabilities and Foundational Areas, FY 2019 to FY 2022



Additional investment needs for the FPHS varied significantly across different service areas (see Figure 12 and Table 7). Among the foundational services, Environmental Health required the highest per capita investment, with an additional need of \$1.77 per capita. This was followed by Maternal, Child, and Family Health (\$1.22 per capita) and Organizational Competencies (\$1.11 per capita).

On the other hand, certain foundational services required relatively smaller additional investments. The areas with the lowest per capita funding needs were Accountability and Performance Management (\$0.35 per capita), Equity (\$0.37 per capita), and Community Partnerships (\$0.38 per capita). Despite their lower per capita needs, these areas remain crucial for the implementation of FPHS across all communities in Ohio.

Figure 12: Per capita investment needed to fully attain the Foundational Public Health Services, FY 2022



Note: Foundational services that are part of the Foundational Capabilities are shown in blue while foundational services that are part of the Foundational Areas are shown in orange.

Based on Ohio's population of 11.76 million in 2022, the total additional annual investment required to fully implement the FPHS was estimated at \$116.9 million (see Table 7). This figure represents the total funding necessary to close existing gaps and ensure comprehensive public health coverage for all Ohio communities. Of this total, approximately \$51.6 million is needed for the Foundational Capabilities while \$65.4 million is required for the Foundational Areas.

Table 7: Per capita and total additional investment needed to fully implement the Foundational Public Health Services in Ohio, FY 2022

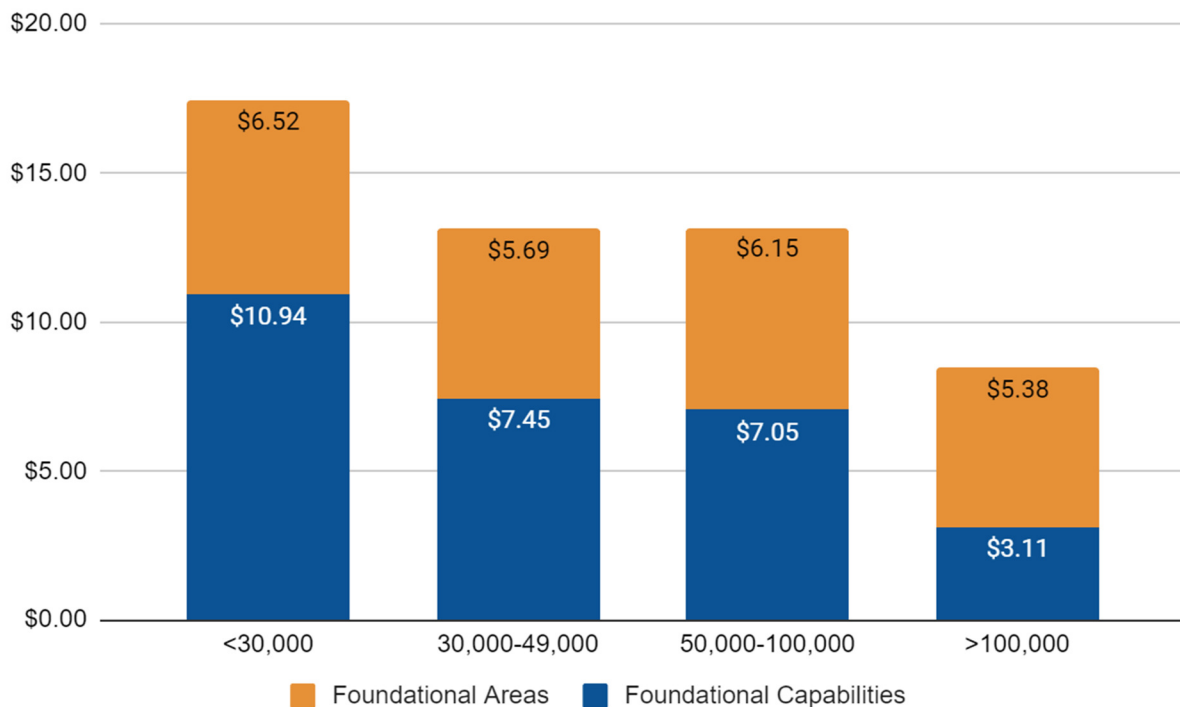
Foundational Service	Additional Investment Per capita	Additional Investment Total for Ohio
Foundational Capabilities		
Assessment	\$0.59	\$7.0 million
Emergency Preparedness	\$0.53	\$6.3 million
Communication	\$0.60	\$7.0 million
Policy Development	\$0.44	\$5.2 million
Community Partnerships	\$0.38	\$4.4 million
Organizational Competencies	\$1.11	\$13.1 million
Accountability and Performance Management	\$0.35	\$4.2 million
Equity	\$0.37	\$4.4 million
Total Foundational Competencies	\$4.38	\$51.6 million
Foundational Areas		
Communicable Disease	\$0.78	\$9.2 million
Chronic Disease	\$1.07	\$12.6 million
Environmental Health	\$1.77	\$20.7 million
Maternal, Child, and Family Health	\$1.22	\$14.4 million
Access to Care	\$0.70	\$8.3 million
Total Foundational Areas	\$5.56	\$65.4 million
Total Foundational Public Health Services	\$9.94	\$116.9 million

Investment Need by Jurisdiction Size

The additional investment needed to fully implement the FPHS in Ohio varied significantly depending on the size of the jurisdiction served by LHDs (see Figure 13 and Table 8). LHDs serving populations of fewer than 30,000 residents would require the highest per capita investment, with an additional \$17.46 per capita needed to fully implement the FPHS in their communities. In contrast, LHDs serving populations of more than 100,000 residents would only need \$8.49 per capita in additional funding to achieve full FPHS implementation.

This disparity in funding needs reflects the different operational scales and challenges faced by LHDs of varying sizes. LHDs serving fewer than 100,000 residents generally had a greater need for investment in the Foundational Capabilities. Conversely, LHDs serving populations of more than 100,000 residents had a relatively greater need for funding the Foundational Areas.

Figure 13: Per capita investment needed to fully attain the Foundational Capabilities and Foundational Areas by jurisdiction size, FY 2022



For the four services with per capita investment needs exceeding \$1 (Environmental Health, Maternal, Child, and Family Health, Organizational Competencies, and Chronic Disease), Figure 14 illustrates how these services contributed to the total investment needs of LHDs in Ohio. In the largest LHDs serving more than 100,000 residents, these four services accounted for a significant portion of their total investment needs, on average comprising more than half of the overall additional funding required. In contrast, for the smallest LHDs serving fewer than 30,000 residents, these same four services make up only slightly more than a quarter of their total investment needs. This implies that smaller health departments may face a broader range of investment demands across the FPHS, with no single category necessarily dominating their overall funding needs.

Figure 14: Per capita investment needed to fully attain the Foundational Public Health Services by jurisdiction size, FY 2022

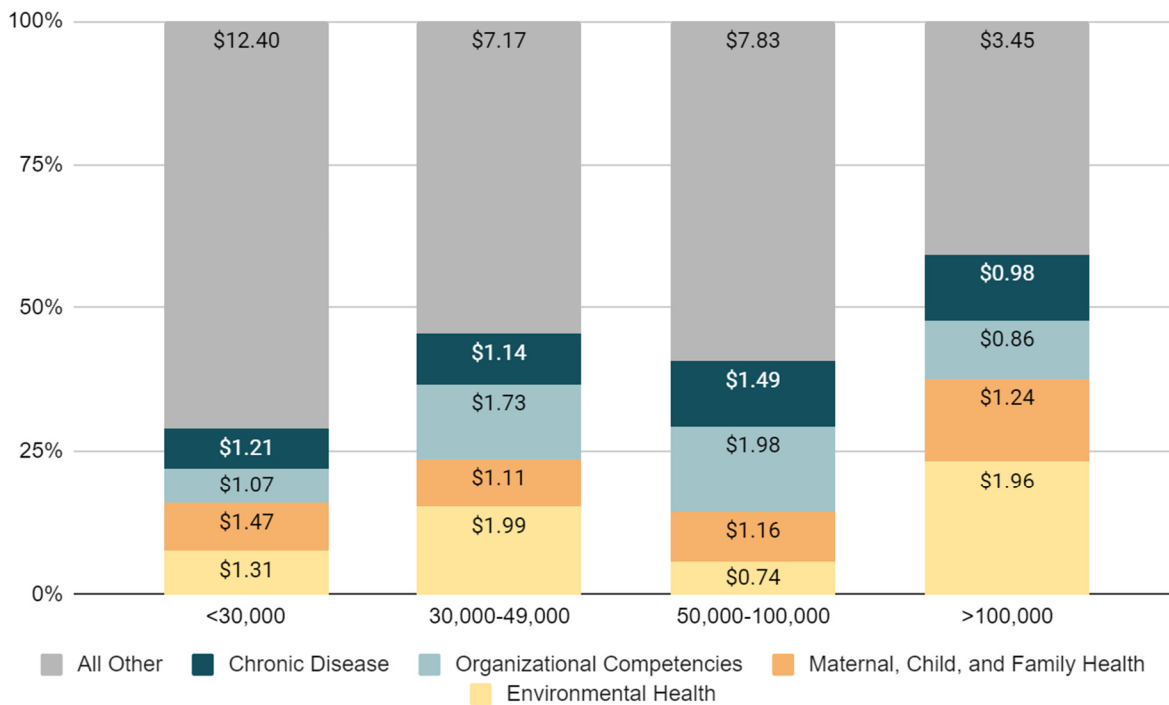


Table 8: Per capita investment needed to fully attain the Foundational Public Health Services by jurisdiction size, FY 2022

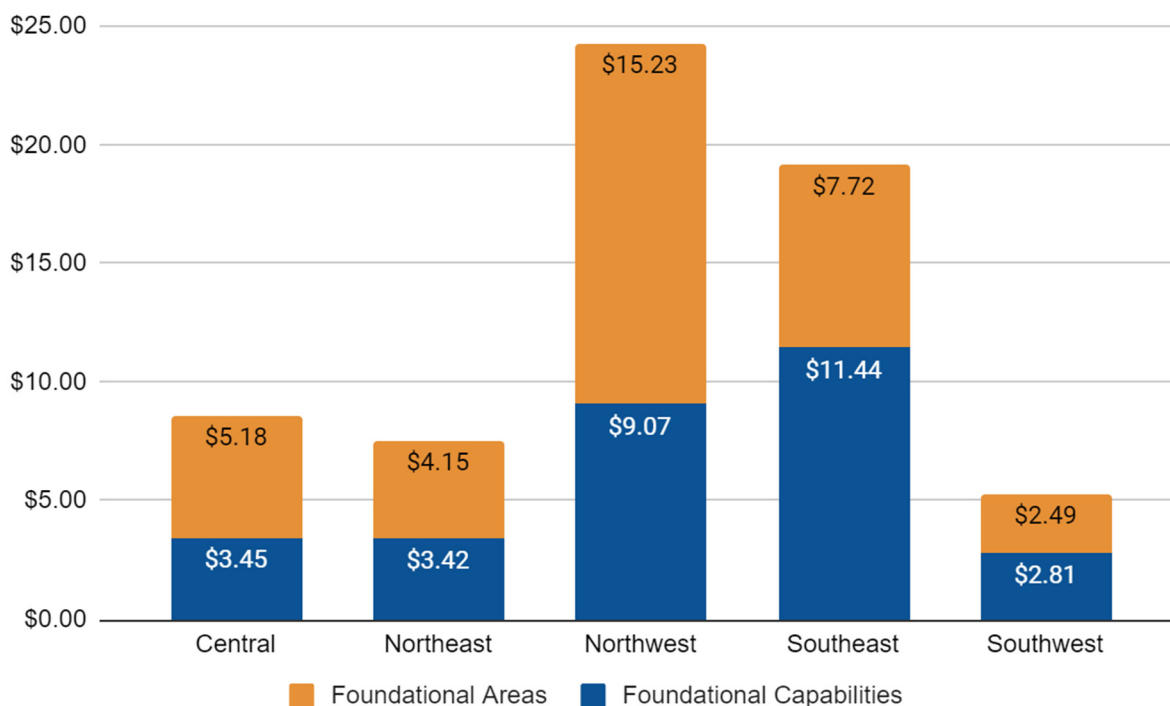
	<30,000	30,000-49,000	50,000-100,000	>100,000
<i>Foundational Capabilities</i>				
Assessment	\$2.12	\$0.63	\$1.30	\$0.36
Emergency Preparedness	\$0.90	\$0.81	\$0.64	\$0.45
Communication	\$0.71	\$0.91	\$0.96	\$0.49
Policy Development	\$1.08	\$0.58	\$0.58	\$0.37
Community Partnerships	\$1.42	\$0.85	\$0.48	\$0.24
Organizational Competencies	\$1.07	\$1.73	\$1.98	\$0.86
Accountability and Performance Management	\$0.91	\$1.12	\$0.52	\$0.19
Equity	\$2.73	\$0.82	\$0.59	\$0.15
<i>Total Foundational Capabilities</i>	<i>\$10.94</i>	<i>\$7.45</i>	<i>\$7.05</i>	<i>\$3.11</i>
<i>Foundational Areas</i>				
Communicable Disease	\$0.86	\$0.82	\$1.91	\$0.56
Chronic Disease	\$1.21	\$1.14	\$1.49	\$0.98
Environmental Health	\$1.31	\$1.99	\$0.74	\$1.96
Maternal, Child, and Family Health	\$1.47	\$1.11	\$1.16	\$1.24
Access to Care	\$1.67	\$0.63	\$0.85	\$0.64
<i>Total Foundational Areas</i>	<i>\$6.52</i>	<i>\$5.69</i>	<i>\$6.15</i>	<i>\$5.38</i>
<i>Total Foundational Public Health Services</i>	<i>\$17.46</i>	<i>\$13.14</i>	<i>\$13.20</i>	<i>\$8.49</i>

Investment Need by Geographic Location

The additional investment required to fully implement the FPHS in Ohio also showed considerable variation depending on the geographic location of the LHD (see Figure 15 and Table 9). Specifically, LHDs in the Northwest district would require the highest per capita investment, amounting to \$24.30 per person. This is followed by LHDs in the Southeast district, which would need \$19.16 per capita. In contrast, LHDs in the Central, Northeast, and Southwest districts would require significantly lower investments, with per capita amounts ranging from \$5.30 to \$8.63.

The nature of the investment needs also varied across districts. LHDs in the Central, Northeast, and Northwest districts displayed a proportionally higher need for additional funding in the Foundational Areas. On the other hand, LHDs in the Southeast and Southwest districts showed a relatively higher demand for funding in the Foundational Capabilities. This geographic variation underscores the need for a tailored approach to public health funding to address the specific needs of each district.

Figure 15: Per capita investment needed to fully attain the Foundational Capabilities and Foundational Areas by district, FY 2022



For the four services with per capita investment needs exceeding \$1 (Environmental Health, Maternal, Child, and Family Health, Organizational Competencies, and Chronic Disease), Figure 16 illustrates how these services contribute to the total investment needs of LHDs across the five districts. For LHDs located in the Northwest district, these four services account for over 60 percent of investment need. For LHDs located in the Central, Northeast, and Southwest districts, the same four services account for approximately half of their total investment needs. Finally, for LHDs in the Southeast, these four services make up only around 40 percent of the district's total additional investment needs, indicating that other public health areas may require more substantial investment in this region. This geographic variability highlights how local public health priorities can differ across Ohio, necessitating customized funding strategies to address both common and region-specific needs.

Figure 16: Per capita investment needed to fully attain the Foundational Public Health Services by district, FY 2022

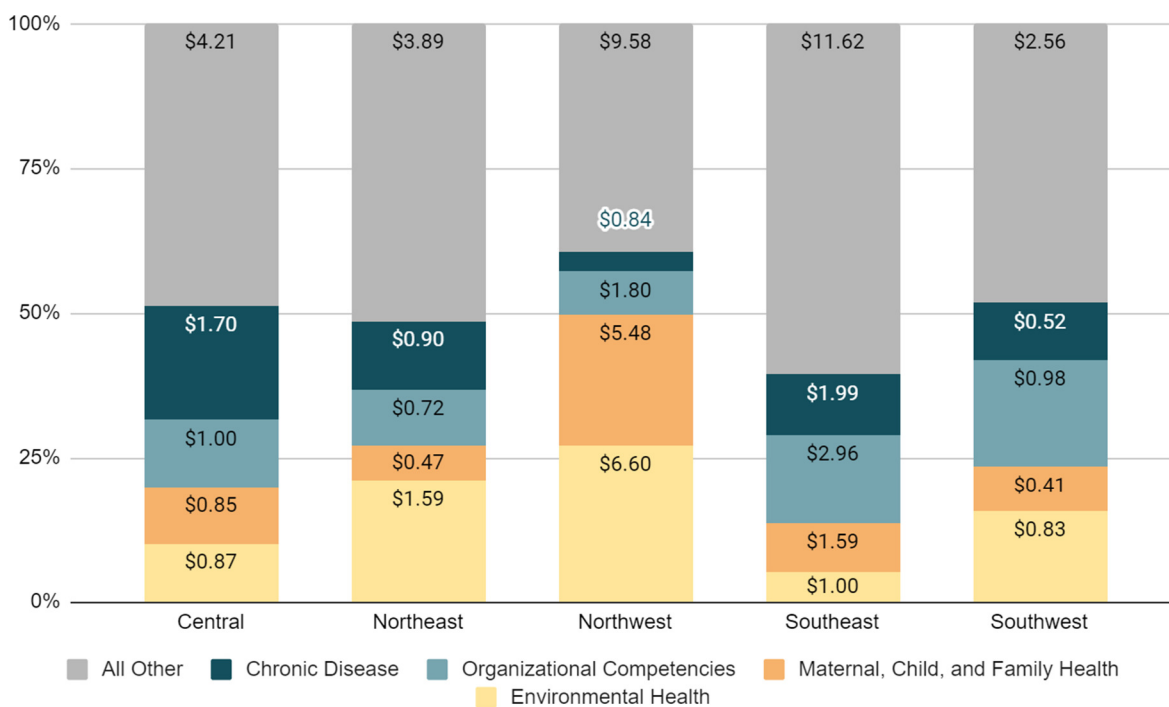


Table 9: Per capita investment needed to fully attain the Foundational Public Health Services by district, FY 2022

	Central	Northeast	Northwest	Southeast	Southwest
<i>Foundational Capabilities</i>					
Assessment	\$0.44	\$0.54	\$1.61	\$1.83	\$0.12
Emergency Preparedness	\$0.70	\$0.47	\$0.94	\$1.02	\$0.19
Communication	\$0.45	\$0.36	\$1.29	\$0.93	\$0.58
Policy Development	\$0.27	\$0.55	\$0.56	\$1.09	\$0.23
Community Partnerships	\$0.37	\$0.26	\$1.05	\$0.90	\$0.18
Organizational Competencies	\$1.00	\$0.72	\$1.80	\$2.96	\$0.98
Accountability and Performance Management	\$0.14	\$0.24	\$1.27	\$0.90	\$0.23
Equity	\$0.08	\$0.28	\$0.55	\$1.81	\$0.30
<i>Total Foundational Capabilities</i>	\$3.45	\$3.42	\$9.07	\$11.44	\$2.81
<i>Foundational Areas</i>					
Communicable Disease	\$0.79	\$0.94	\$0.85	\$1.65	\$0.29
Chronic Disease	\$1.70	\$0.90	\$0.84	\$1.99	\$0.52
Environmental Health	\$0.87	\$1.59	\$6.60	\$1.00	\$0.83
Maternal, Child, and Family Health	\$0.85	\$0.47	\$5.48	\$1.59	\$0.41
Access to Care	\$0.97	\$0.25	\$1.46	\$1.49	\$0.44
<i>Total Foundational Areas</i>	\$5.18	\$4.15	\$15.23	\$7.72	\$2.49
<i>Total Foundational Public Health Services</i>	\$8.63	\$7.57	\$24.30	\$19.16	\$5.30

DISCUSSION

Spending on the Foundational Public Health Services

Since 2019, LHDs in the United States have faced unprecedented public health challenges, particularly due to the COVID-19 pandemic. Shifting public health priorities and the need to strengthen infrastructure and workforce capacity have significantly altered the spending levels and patterns for many LHDs. Additional federal funding for pandemic response has led to higher overall spending by LHDs with particularly large increases in the areas of communicable diseases, infection control, and related public health infrastructure. In contrast, services like public health education, chronic disease prevention, and environmental health have seen stagnation or even reductions, as resources have been reallocated to prioritize the pandemic response.

The experiences of LHDs in Ohio largely reflect those of LHDs nationwide. In FY 2022, Ohio LHDs spent an average of \$34.57 per capita on the Foundational Public Health Services (FPHS). This figure represents a notable increase in per capita spending compared to previous years. Spending on the FPHS averaged \$26.89 per capita in FY 2019, \$27.83 per capita in FY 2020, and \$29.81 per capita in FY 2021. As in prior years, average per capita spending on the foundational services that comprise the FPHS, varied widely. This wide disparity in per capita spending reflects the varying levels of funding availability, prioritization, and resource allocation among these essential services. While certain areas such as Environmental Health (\$7.48 per capita), Organizational Competencies (\$6.30 per capita), and Communicable Disease (\$4.76 per capita) receive robust support, other areas like Equity (\$0.60 per capita), Accountability and Performance Management (\$0.87 per capita), and Communication (\$0.94 per capita) may be potentially underfunded. These variations highlight the complexities and challenges faced by Ohio LHDs in responding to public health challenges, balancing their budgets, and making strategic decisions to effectively address the diverse needs of the communities they serve.

Spending levels varied noticeably across different jurisdiction sizes with the smallest LHDs spending the most per capita on the FPHS. Despite these variations in total per capita spending, the proportional distribution of funds across various foundational services was relatively consistent across most LHDs. The three services with the largest per capita spending—Environmental Health, Organizational Competencies, and Communicable Disease Control—comprised more than 50 percent of the total spending among Ohio LHDs, with the exception of the smallest agencies. This consistent proportional allocation across different population sizes highlights a uniform prioritization of key services among Ohio’s LHDs, despite differing total budgets.

Spending levels also varied significantly by geographic location, reflecting differences in community health needs, public health priorities, and funding streams across regions. For the three foundational services with the highest per capita spending—Environmental Health, Organizational Competencies, and Communicable Disease Control—combined spending also exhibited marked regional differences. For example, in the Northeast district, these three

services accounted for 63 percent of total spending among LHDs, whereas, in the Southeast district, they composed only 42 percent of total spending. This geographic variation underscores how regional needs and available resources shape budgetary priorities. LHDs in regions with lower overall spending per capita appear to emphasize immediate health protection measures. Conversely, those in regions with higher per capita spending are focusing on enhancing their public health infrastructure to better meet future challenges.

The spending patterns highlighted in this report indicate a nuanced approach to public health funding across Ohio's LHDs. The consistent proportional allocation to key services across different jurisdiction sizes suggests an underlying consensus on the importance of certain foundational public health services. However, the regional differences in total spending and priorities reflect adaptive strategies to meet specific local needs, acknowledging that one-size-fits-all funding models may not be optimal. This analysis demonstrates the importance of tailored public health strategies that consider both the immediate and future needs of diverse communities across the state. By examining these patterns, public health officials can better understand the dynamics of health department funding and possibly advocate for more equitable resource distribution that considers varying local needs while maintaining essential service standards.

Attainment of the Foundational Public Health Services

As in prior years, agency-level attainment rates for the FPHS varied widely, ranging from an average of 54 percent for Access to Care to 78 percent for Organizational Competencies. LHDs frequently rely on community partners to provide these essential services, yet even with the support of partners, many LHDs struggle to fully implement the FPHS in their communities. Despite ongoing efforts to allocate resources effectively, many LHDs faced significant gaps in their ability to meet essential community needs, indicating a pressing need for additional funding.

Recent years have seen an increased focus and funding directed toward assessment, emergency preparedness, and infectious disease control, largely in response to the COVID-19 pandemic. This targeted investment has noticeably reduced attainment gaps for Communicable Disease (10 percent), Assessment (11 percent), and Emergency Preparedness (11 percent). However, other critical services continue to experience significant gaps. Among the services with the largest average gaps in attainment are several areas vital to both immediate health needs and long-term community well-being. These include Access to Care (23 percent), Communication (23 percent), Chronic Disease (21 percent), Maternal, Child, and Family Health (21 percent), and Equity (21 percent). These figures highlight the continued need for a more balanced funding strategy to ensure all aspects of public health, not just those in immediate crisis, receive adequate support.

Irrespective of jurisdiction size and geographic location, Ohio's LHDs exhibited similar patterns of attainment gaps in the FPHS. However, distinct subgroups of LHDs, particularly smaller

departments serving fewer than 50,000 residents and those situated in the Northwest and Southeast districts, faced more pronounced resource and attainment gaps compared to their larger counterparts and those in other districts. These disparities are indicative of the unique challenges faced by smaller LHDs and those in specific geographic regions. Smaller LHDs often lack the economies of scale that larger departments benefit from, making it more difficult to allocate sufficient resources across the wide array of public health services. Additionally, LHDs in the Northwest and Southeast districts may contend with geographical, economic, and demographic factors that exacerbate their resource constraints, complicating their efforts to fully implement and sustain FPHS.

The commonality in gaps—particularly in areas such as Communication, Equity, Chronic Disease, and Access to Care—suggests a systemic issue that transcends size and location. These are critical areas where consistent service delivery is essential for overall community health and well-being. High gaps in these services can lead to significant public health vulnerabilities, impacting the effectiveness of health interventions and the overall resiliency of communities. These challenges underscore the necessity for strategic investments and tailored support to ensure equitable public health outcomes across all LHDs in the state. Strategic investments could include targeted funding models that account for the specific needs and limitations of smaller and geographically disadvantaged LHDs. Tailored support might encompass capacity-building initiatives, technical assistance, and enhanced collaboration with community partners to leverage additional resources.

Investment Need to Fully Attain the Foundational Public Health Services

Based on FY 2022 data, an additional annual investment of \$9.94 per capita is needed to address funding gaps and fully implement the FPHS across all communities in Ohio. This investment need reflects a return to pre-COVID levels of around \$10 per capita, contrasting with FY 2021, when the additional investment need was an estimated \$7.11 per capita. While it remains uncertain whether the funding need will stabilize around \$10 per capita in the near future, the observed reduction in FY 2021 investment requirements was likely due to a temporary surge in funding directed towards communicable diseases and related public health responses during the COVID-19 pandemic. For Ohio's 11.76 million residents in 2022, the total additional annual investment needed to fully implement the FPHS statewide was estimated at \$116.9 million. This funding would close existing gaps and ensure comprehensive public health coverage, equipping Ohio's public health infrastructure to meet both current and future needs.

Additional investment needs varied by jurisdiction size and geographic location. Smaller LHDs departments and those situated in the Northwest and Southeast districts had greater additional investment needs compared to their larger counterparts and those in other districts. Variations in additional investment needs are largely the result of variations in current spending and attainment rates and reflect the need for tailored support to ensure that all LHDs in Ohio have the resources needed to provide the full set of the FPHS in the communities they serve.

APPENDIX

List of Ohio local health departments included in this report

1. Adams County
2. Allen County
3. Alliance City
4. Ashland County
5. Ashtabula City
6. Ashtabula County
7. Athens City County
8. Auglaize County
9. Belmont County
10. Brown County
11. Butler County
12. Canton City
13. Carroll County
14. Champaign County
15. Cincinnati City
16. Clark County
17. Cleveland City
18. Columbiana County
19. Columbus City
20. Conneaut City
21. Coshocton County
22. Crawford County
23. Darke County
24. Defiance County
25. Delaware County
26. East Liverpool City
27. Erie County
28. Fairfield County
29. Fayette County
30. Franklin County
31. Fulton County
32. Gallia County
33. Geauga County
34. Greene County
35. Guernsey County
36. Hamilton City
37. Hamilton County
38. Harrison County
39. Henry County
40. Highland County
41. Hocking County
42. Holmes County
43. Jackson County
44. Jefferson County
45. Kent City
46. Knox County
47. Lake County
48. Licking County
49. Logan County
50. Lorain County
51. Lucas County
52. Madison County
53. Mahoning County
54. Marietta Belpre City
55. Marion County
56. Massillon City
57. Medina County
58. Meigs County
59. Mercer County
60. Middletown City
61. Monroe County
62. Montgomery County
63. Morgan County
64. Morrow County
65. New Philadelphia City
66. Noble County
67. Ottawa County
68. Perry County
69. Pike County
70. Portage County
71. Portsmouth City
72. Putnam County
73. Richland County
74. Ross County
75. Salem City
76. Sandusky County
77. Scioto County
78. Seneca County
79. Sidney Shelby County
80. Stark County
81. Summit County
82. Trumbull County
83. Tuscarawas County
84. Union County
85. Van Wert County
86. Vinton County
87. Warren County
88. Wayne County
89. Williams County
90. Wood County
91. Wyandot County
92. Youngstown City
93. Zanesville County

