LOCAL HEALTH DEPARTMENT PROFILE AND ACCREDITATION READINESS REPORT

Ohio Comprehensive Report
February 2017

THE OHIO STATE UNIVERSITY

Center for Public Health Practice

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Introduction

The Center for Public Health Practice (CPHP) and the Ohio Department of Health (ODH) are supporting local public health accreditation efforts through the Ohio Local Public Health Accreditation Readiness Project. This three-year initiative has two purposes: 1) to answer critical questions related to local health department (LHD) accreditation and service provision, and 2) to assist LHDs in achieving accreditation.

As part of this project, a multi-component assessment was conducted to provide a profile of LHD service provision, accreditation readiness and financial information. To complete this assessment, data were used from the Ohio Profile and Performance Database (OPPD), the annual financial reports (AFR), and the LHD Profile and Accreditation Readiness Assessment Survey (survey) conducted by CPHP in the fall of 2016. Of the 120 surveys distributed, 110 LHDs responded. Because this report uses data across these multiple inputs to make comparisons, this report reflects information related to these 110 LHDs.

Report Description

This report is divided into seven sections. The first section, *Survey Respondent Description*, is a general overview of the characteristics of the 110 survey respondents and 10 non-responding LDHs. This first section provides information important to understand the difference between the participating and non-participating LHDs. The second section, *Accreditation Readiness*, stages each health department along an accreditation readiness continuum based upon their responses to questions in the survey. These stages are then used throughout this report to describe how LHD resources and services are associated with each stage. The third section, *Services, Programs and Staffing*, discusses the various services provided and staffing levels within LHDs. Within this section, data are also reported related to whether selected services were provided directly or shared. Sections four and five present the *Expenditures* (section 4) and *Revenue* (section 5) data for the 110 LHDs participating in the survey. The final section, *Factors Associated with Accreditation Stage,* presents results of a logistic model using a number of different factors to predict accreditation stage. Data within each section are detailed in three ways: statewide, by accreditation stage, and by LHD population size served. Population size served subgroups (defined in section 1) are used because capacity and resources are known to be associated with population size served. A seventh section for a summary and acknowledgements is followed by an Appendix including a brief description of methods used in this report.

Several considerations in using this report should be noted. Most significantly, the data in this report differs from the January 2017 local and state Profile and Readiness Assessments reports, as this report focuses on only the 110 LHDs completing the November 2016 survey. Therefore, data related to revenue and expenditures will not match that from previous reports. Data for this assessment is also self-reported, leaving the possibility for incompleteness or error. Additionally, as both AFR and OPPD data are from 2015, they reflect a “point in time” snapshot and do not capture changes or progress made since the data were originally reported. Finally, while this report includes data related to accreditation readiness, CPHP does not represent or speak on behalf of the Public Health Accreditation Board (PHAB). PHAB’s *Standards and Measures* and additional accreditation support materials have served as foundational resources in this work, however, this in no way guarantees or imply that information and documentation reviewed will be deemed as acceptable by PHAB during the actual accreditation process.

1. Survey Respondent Description

Table 1: Comparison of LHDs Responding and Not Responding to Readiness Survey

	Number of LHDs Responding (n=110)	Number of LHDs Not Responding (n=10)
Jurisdiction Type		
City	25	7
County/Combined	85	3
Population Size Served		
Very Small (<25,000)	22	4
Small (25,000-49,999)	38	3
Medium (50,000-99,000)	23	2
Large (100,000-499,999)	23	1
Very Large (≥500,000)	4	0
Accredited		
Yes	13	1
No	97	9
County Type		
Appalachian	42	3
Rural, Non-Appalachian	30	2
Suburban	20	0
Urban	18	5
Revenue/Expenditures/Employees, Mean (Standard Deviation)		
Per Capita Revenue (with Carryover)	$59 (50)	$36 (28)
Per Capita Revenue (without Carryover)	$44 (34)	$26 (13)
Per Capita Expenditures	$41 (34)	$21 (13)
Total Full-time Equivalents	43.0 (71)	16.3 (23)
Full-time Equivalents per 10,000 People	5.4 (4.9)	3.7 (1.7)

- Non-responding health departments were more likely to be not accredited, small to very small city departments, located in urban areas, with considerably lower resources (per capita revenues, expenditures and FTEs).
- The total number of Ohioans served by non-responding LHDs was 482,605, or 4% of the state (data not shown).

Table 2: Total Revenue Quartiles, Survey Responders and All LHDs, 2015

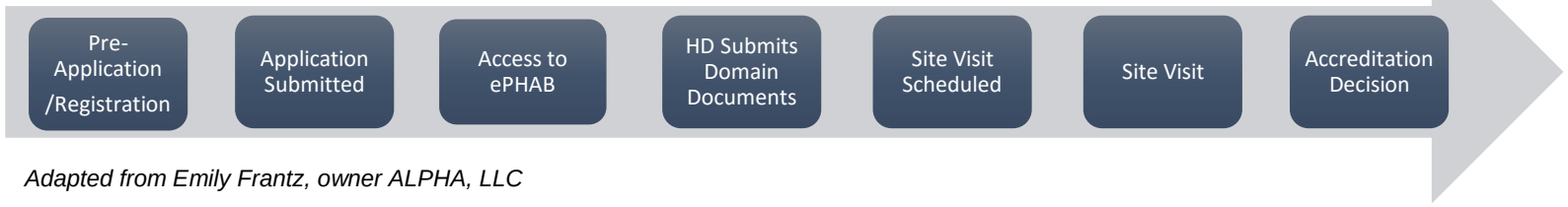
Quartile	Responding LHDs N=110	All LHDs N=121
Minimum	$18,898	$18,898
Quartile 1	$1,075,821	$931,851
Median	$2,616,360	$2,112,534
Quartile 3	$5,811,751	$5,008,635
Maximum	$51,938,836	$51,938,836

- When comparing total revenue quartiles for the 110 LHDs included in this report with the total revenue of all LHDs (n=121), a small increase in revenue is seen for the smaller sample used for this report. This is caused by overrepresentation of small and very small LHDs not responding to the survey.

2. Accreditation Readiness

LHDs were asked about their stage of accreditation in the survey. The response options coincided with the accreditation process, demonstrated below, and included: Not Yet Started, But Plan To; Pre-Application/Registration; Application Submitted (application submission, fee, and coordinator training); Access to e-PHAB/uploading documents; Documents submitted to PHAB; Site Visit Scheduled; Site Visit Completed/Awaiting Accreditation Decision; and Do Not Intend to Apply.

Accreditation Process, based on PHAB's National Guide to Accreditation, v1.5.



Adapted from Emily Frantz, owner ALPHA, LLC

We discuss accreditation readiness in several ways in this report. Table 3 reports on the survey responses by population sized served. Three stage categories were created from these responses and shown in table 4. Those not yet started and not intending to apply were collapsed into "*Not Starting"* stage (N=38). Those in the pre-application, application submitted, uploading documents, or documents submitted categories were collapsed into an "*In Process"* stage (n=55). Those in the site visit scheduled or accredited categories were collapsed into a *"Near/Accredited"* stage (N=17).

This section also contains data from the OPPD related to PHAB Domain and Standard Completion rates, as entered by individual LHDs in March of 2016. Data are presented for only those 110 LHDs responding to the November 2016 survey and include Domain completion rates (Figure 2), highest/lowest Standard completion rates (Table 6), and pre-requisite Standard completion rates (Table 7). Full Domain and Standards descriptions can be referenced at http://www.phaboard.org/accreditation-process/public-health-department-standards-and-measures/.

Table 3: Accreditation Stage by Population Size Served

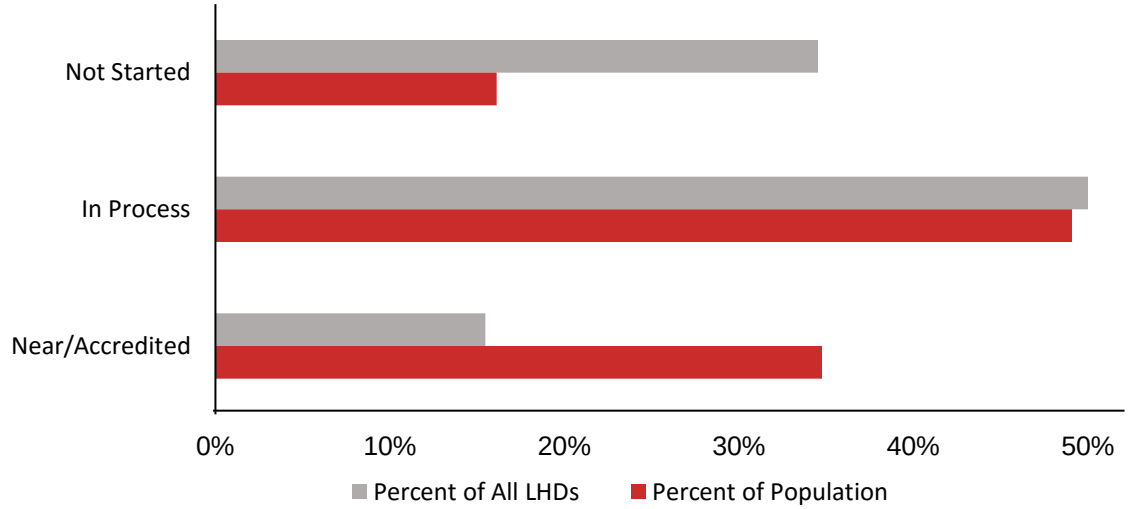
Accreditation Stage	Very Small	Small	Medium	Large	Very Large	Total Respondents
Not yet started	11	11	11	2	0	35
Pre-application	7	22	6	5	0	40
Application submitted	1	0	2	3	0	6
Uploading documents	0	2	1	4	2	9
Documents submitted	0	0	0	0	0	0
Site visit scheduled	0	1	1	2	0	4
Awaiting decision	0	0	0	0	0	0
Accredited	0	2	2	7	2	13
Do not intend to apply	3	0	0	0	0	3
Total	22	38	23	23	4	110

- Most LHDs reported in the survey as either not having started (N=35) or being in the Pre-application stage (N=40) of the accreditation process.
- Three LHDs reported they do not intend to apply, citing lack of resources as the primary reason (data not shown).
- Sixty-five percent of LHDs responding to the survey (N=72) had already begun (reporting being in at least Pre-application) or have completed the accreditation process.

Table 4: Percent LHDs in Accreditation Stages by Population Size Served, County Type, District Type

	Not Started (n=38)	In process (n=55)	Near/Accredited (n=17)
Small (<50,000)	66%	58%	18%
Medium (50,000-99,999)	29%	16%	18%
Large (≥100,000)	5%	25%	65%
Appalachian	58%	35%	6%
Urban	16%	13%	29%
Rural, Non-Appalachian	11%	38%	29%
Suburban	16%	15%	35%
City	39%	16%	6%

Figure 1: Percent of Population Size Served and LDHs by Accreditation Stage



- LHDs who either had not started or do not intend to apply are smaller, more often in Appalachian counties, most likely to be a city district.
- LHDs who were in process of becoming accredited were also smaller, but more often located in Rural, Non-Appalachian counties; 16% were city districts
- LHDs nearly or already accredited were mostly larger and located in either suburban and urban counties; Nearly all were either County or Combined districts.

- 96% of the population of Ohio is represented by the 110 LHDs responding to the survey.
- Out of the population served by these 110 LHDs, more than a third of Ohioans are already receiving services by an accredited soon to nearly accredited LHD
- Only 16 percent of Ohioans served by the LHDs included in this report received services by an LHD that has not started the accreditation process.

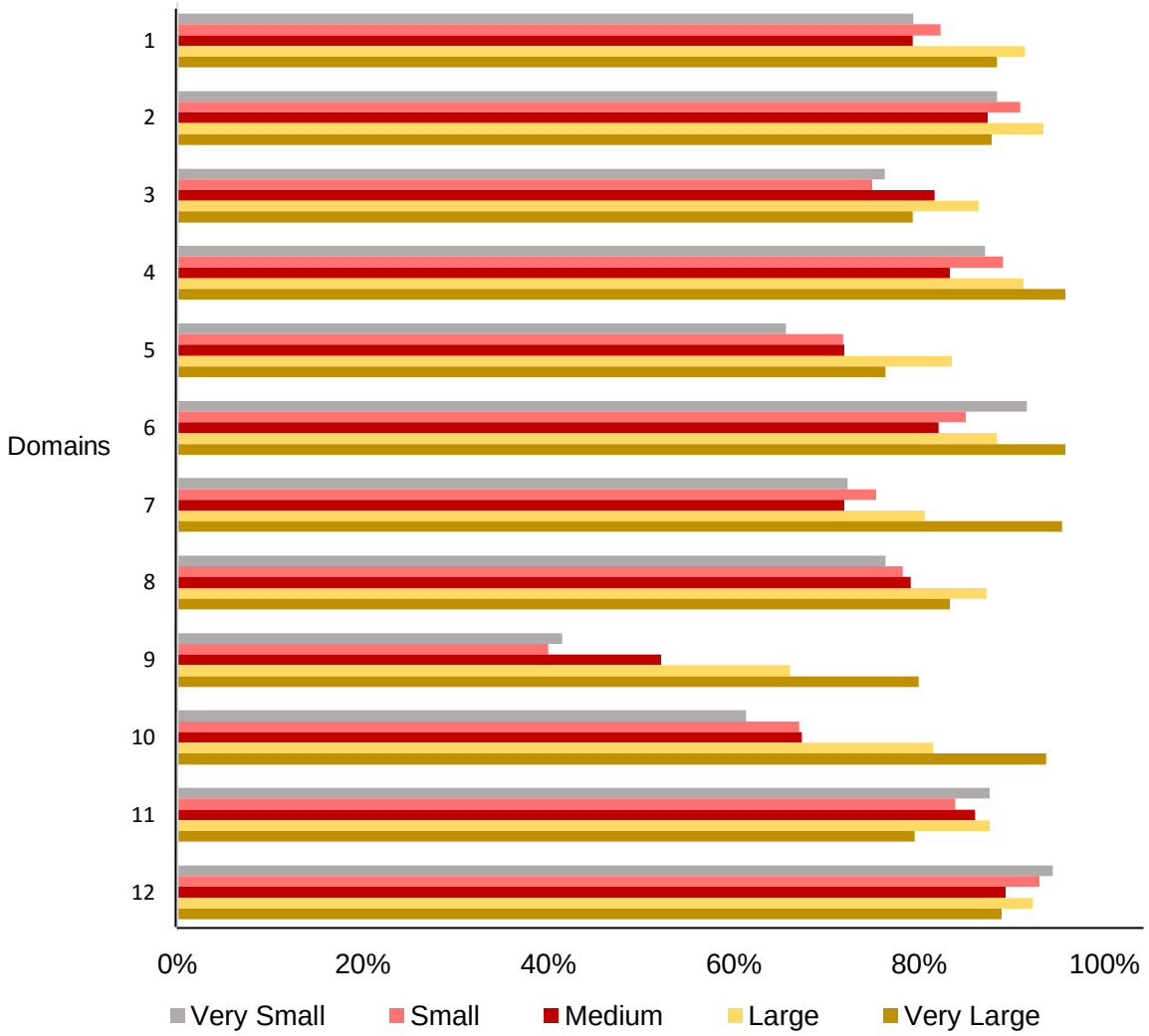
Table 5: Overview of LHD Characteristics by Accreditation Stage

	Not Started			In process			Near/Accredited		
	N	%*	Mean	N	%*	Mean	N	%*	Mean
Per Capita Revenue	38	100%	$44	55	100%	$66	17	100%	$70
Per Capita Expenditures	38	100%	$30	55	100%	$47	17	100%	$45
No. Selected Services Provided Directly	38	100%	16	55	100%	17	17	100%	19
No. Selected Services Shared *(Govt. Entity)*	19	50%	2	19	35%	2	1	5%	1
No. Selected Services Shared *(Other Entity)*	20	52%	2	26	47%	2	9	52%	2
No. Other Services Provided	38	100%	16	55	100%	19	17	100%	24
No. Additional Services Provided	13	34%	2	29	53%	2	10	59%	2
Total FTEs	37	97%	18	55	100%	47	17	100%	88
FTEs per 10,000 People	37	97%	4	55	100%	6	17	100%	5

** % = Percent of LHDs with data in each category; Not starting N=38; In process N=55; Near/Accredited N=17*

- LHDs that had not started the process had the lowest per capita revenue and spending and provided the fewest services.
- LHDs that had not started were most likely to share services with another entity.
- About half of all LHDs within each stage reported sharing services with a non-governmental entity.
- While the mean total FTE is highest in those LHDs nearly or already accredited, LHDs in process of becoming accredited had the highest FTE per 10,000 people.

Figure 2: Percent Completion of Domain by Population Size Served



N=110
Very Small: <25,000
Small; 25,000-49,999
Medium: 50,000-99,000
Large: 100,000-499,999
Very large: ≥500,000

- Overall, Very Large and Large LHDs had a higher Domain completion rate, with at least a 75% completion rate for nearly all Domains, with the exception of Domain 9, where Large LHDs had a 66% completion.
- Domain 9 had the lowest completion rate for all LHDs except for Very Large LHDs, who's lowest rate was for Domain 5.
- Domains 5, 9 and 10 were the Domains Very Small LHDs had lowest percent completed.

Table 6: Percent Completion of Standards with Highest and Lowest Performance

Standard	Ohio
2.1: Conduct timely investigations of health problems and environmental public health hazards	95%
5.4: Maintain an All Hazards Emergency Operations plan	93%
6.2: Educate individuals and organizations on the meaning, purpose and benefit of public health laws and how to comply	94%
11.2: Establish effective financial management systems	95%
12.1: Maintain current operational definitions and statements of public health roles, responsibilities, and authorities	96%
5.2: Conduct a comprehensive planning process resulting in a tribal/state/community health improvement plan	55%
5.3: Develop and implement a health department organizational strategic plan	66%
9.1: Use a performance management system to improve organizational practice, processes, programs and interventions	56%
9.2: Develop and implement quality improvement processes integrated into organizational practice, programs, processes, and interventions	54%
10.2: Promote understanding and use of research results, evaluations, and evidence-based practices with appropriate audiences	68%

N=110

- For the 110 survey respondents, community health improvement planning, strategic planning, performance management, and quality improvement represent the prerequisite Standards with the lowest completion statewide.

Table 7: Percent Completion of Prerequisite Standards by Population Size Served

Standard Requirement	Very Small	Small	Medium	Large	Very Large	Statewide
1.1: Participate in or lead a collaborative process resulting in a comprehensive community health assessment	79%	81%	87%	92%	97%	87%
3.2: Provide information on public health issues and public health functions through multiple methods to a variety of audiences	74%	77%	88%	89%	79%	80%
5.2: Conduct a comprehensive planning process resulting in a tribal/state/community health improvement plan	43%	50%	55%	70%	54%	55%
5.3: Develop and implement a health department organizational strategic plan	35%	56%	61%	86%	92%	59%
5.4: Maintain an all hazards emergency operations plan	95%	95%	87%	96%	92%	93%
8.2: Ensure a competent workforce through assessment of staff competencies, the provision of individual training and professional development, and the provision of a supportive work environment	75%	77%	78%	86%	84%	79%
9.1: Use a performance management system to monitor achievement of organizational objectives	45%	41%	52%	65%	79%	50%
9.2: Develop and implement quality improvement processes integrated into organizational practice, programs, and interventions	27%	37%	52%	70%	83%	46%

Very Small: <25,000; Small; 25,000-49,999; Medium: 50,000-99,000; Large: 100,000-499,999; Very large: ≥500,000. N=110

- For the eight Standards that correspond to the PHAB prerequisites, Standards 9.1 (performance management system) and 9.2 (quality improvement processes) had the lowest completion across all 110 LHDs.
- Very Small and Small LHDs were much less likely to have completed prerequisites involving strategic planning and quality improvement.
- All LHD size categories had high completion rates related to community health assessments, branding and marketing (Standard 3.2) and emergency operations plan development (Standard 5.4).

3. Services, Programs and Staffing

LHDs were asked in the survey whether they provided three sets of services in 2015. The first set (Selected Services) included 20 services chosen by ODH, with four response options: provided the service directly; shared provision with another government entity; shared provision with a non-governmental entity; or did not provide at all. The second set of services (Other Services) was a list of 38 general services requested by ODH, with LHDs noting only whether the services were provided or not. The final set (Additional Services) came from services manually entered by LHDs, and were included if they were not already captured in one of the other sets. These three sets of services are listed below. A description of how manually entered services were combined can be found in Appendix: Methods.

Selected Services (N=20)	Other Services (N=38)		Additional Services (N=7)
Food safety program	Children with Medical Handicap services	Hospice care	Health Promotion Chronic Disease Prev.
Sewage treatment program	Breast and Cervical Cancer Program	Car seat program	EHS Other
Swimming pools	Maternal and Child Health services	Cribs for Kids program	Personal Health Services Other
Campgrounds/ combined parks	School nursing	Project DAWN	Health promotion Other
Resident day camps	Adolescent clinics	Drug and alcohol prevention	Other Gen Administration
School inspections	Help Me Grow services	Other injury prevention program	Accreditation
Animal bites/rabies control	Primary care clinic	Blood borne pathogen prevention	Laboratory Services
Body art	Dental services	Local health coalition (incl. CHA/CHIP)	
Private water systems	Ryan White services	Housing/mobile home inspections	
Tobacco enforcement	Reproductive/sexual health testing/services	Nuisance complaints/inspections	
Infectious disease surveillance	Lead screening	Radon	
Epi/Bio, non PHEP	Pediculosis checks	Lead abatement	
Immunizations adult	Smoking cessation services	Mold	
Immunizations pediatric	Tuberculosis testing/PPD	Construction demolition and debris	
Immunizations travel	Breast feeding support services	Lot splits	
Immunizations flu	Home visiting services	Tires	
WIC	Drug testing	Vector control	
Public health preparedness	Behavioral health	Solid waste landfills	
Child fatality review	Home health	Plumbing	
Vital statistics			

Statewide Overview

Table 8: Mean and Median Number of Services Provided, Statewide

	N	Percent of LHDs	Mean	Standard Deviation	Median
Provision of All Services	110	100%	38	7	39
Provision of Selected Services	110	100%	19	1	19
Direct Provision of Selected Services	110	100%	17	3	18
Shared Provision of Selected Services (Govt. Entity)	39	35%	2	2	1
Shared Provision of Selected Services (Other Entity)	55	50%	2	1	1
Direct Provision of Selected Services, (percent)	110	100%	91%	12%	95%
Provision of Other Services	110	100%	19	6	19
Provision of Additional Services	52	47%	2	1	2

Table 9: Mean and Median Full-time Equivalents, Statewide

	N	Mean	Standard Deviation	Median
Total FTE	109	44	71	25
FTE Per 10,000 People	109	5	5	4
Accreditation Coordinator Full-time Equivalents	48	0.63 FTE	0.36 FTE	0.50 FTE

- Overall, the average LHD provides 38 services, divided evenly between Selected and Other services.
- LHDs provide 19 of the 20 Selected Services, nearly all (91%) being provided directly.
- Thirty-five percent of LHDs shared services with another governmental entity, while half of LHDs received shared service from another non-governmental entity.
- Fifty-two LHDs (47%) reported providing an average of two additional services.

- The average number of FTEs for LHDs statewide is 44, with a median of 25.
- Less than half of LHDs had any FTEs for an accreditation coordinator, and within these LHDs, the average FTE for this purpose was 0.63 FTEs.

Accreditation Stage

Table 10: Mean Number of Services Provided by Accreditation Stage

	Not Started		In Process		Near/ Accredited	
	N	Mean	N	Mean	N	Mean
Provision of All Services	38	35	55	39	17	44
Provision of Selected Services	38	18	55	19	17	20
Direct Provision of Selected Services	38	16	55	17	17	19
Shared Provision of Selected Services (Govt. Entity)	19	2	19	2	1	1
Shared Provision of Selected Services (Other Entity)	20	2	26	2	9	2
Percent of Selected Services Provided Directly	38	87%	55	92%	17	95%
Provision of Other Services	38	16	55	19	17	24
Provision of Additional Services	13	2	29	2	10	2

- Those LHDs near accreditation or already accredited provided more services than either of the other two categories.
- LHDs not starting were least likely to be providing Selected Services directly.
- LHDs near or already accredited provided a larger range of services (Selected, Other and Additional) than either category.

Table 11: Number of Fulltime Equivalents by Accreditation Stage

	Not Started		In Process		Near/ Accredited	
	N	Mean	N	Mean	N	Mean
Total FTE	37	18	55	47	17	88
FTE Per 10,000 People	37	4	55	6	17	5
Accreditation Coordinator Full-time Equivalents	10	0.44 FTE	27	0.65 FTE	11	0.75 FTE

- Ten of the 38 LHDs (27%) not starting accreditation dedicated any FTE time to an accreditation coordinator; with an average of 0.44 FTEs.
- Those near or already accredited were most likely to have FTEs dedicated for an accreditation coordinator (65% of LHDs), with an average of 0.75 FTEs.

Population Size Served

Table 12: Mean Number of Services Provided by LHD Population Size Served

	Very Small		Small		Medium		Large		Very Large	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Provision of All Services	22	33	38	37	23	39	23	42	4	47
Provision of Selected Services	22	18	38	19	23	19	23	19	4	20
Direct Provision of Selected Services	22	15	38	17	23	18	23	18	4	19
Shared Provision of Selected Services (Govt. Entity)	12	4	14	2	8	2	5	1	0	0
Shared Provision of Selected Services (Other Entity)	12	2	21	1	8	1	11	2	3	2
Percent of Selected Services Provided Directly	22	82%	38	92%	23	94%	23	94%	4	94%
Provision of Other Services	22	15	38	18	23	20	23	22	4	25
Provision of Additional Services	8	2	16	2	11	2	15	2	2	4

Very Small: <25,000; Small: 25,000-49,999; Medium: 50,000-99,000; Large: 100,000-499,999; Very large: ≥500,000.

- The average number of services provided increases with increasing population size served, and much of this difference is explained by larger LHDs providing more Other services.
- Very Small LHDs were least likely to provide all 20 Selected Services, and most likely to receive Selected Services from another entity.
- More than half of Very Small LHDs (12 out of 22) share services, and share an average of 6 services with either governmental or non-governmental entities.

Table 13: Mean Number of Fulltime Equivalents by Population Size Served

	Very Small		Small		Medium		Large		Very Large	
	N	Mean	N	Mean	N	Mean	N	Mean	N	Mean
Total FTE	22	13	37	20	23	33	23	83	4	271
FTE Per 10,000 People	22	8	37	5	23	5	23	4	4	4
Accreditation Coordinator Full-time Equivalents	5	0.23 FTE	14	0.60 FTE	11	0.54 FTE	16	0.80 FTE	2	1.0 FTE

Very Small: <25,000; Small: 25,000-49,999; Medium: 50,000-99,000; Large: 100,000-499,999; Very large: ≥500,000.

- Mean FTEs increase significantly between Medium and Large LHDs, and from Large to Very Large.
- Mean FTEs per 10,000 people however, are highest for Very Small LHDs, and nearly twice that of Large and Very Large LHDs.
- Average FTEs dedicated for an accreditation coordinator was lowest for Very Small LHDs (0.23 FTEs) and only about 20% of Very Small LHDs dedicated any FTE for an accreditation coordinator.
- Large LHDs were most likely to dedicate FTE for an accreditation coordinator (69% of LHDs) with an average of 0.8 FTEs.

4. Expenditures

This section reviews information from the AFR submitted to ODH in March of 2016 for the 110 survey responders. Financial data for calendar year 2015 is presented here, focusing on expenditures. These data are presented for comparison for all responding LHDs, across the accreditation stages and for the five population size served categories. Per capita expenditures was also calculated as total expenditures divided by population size served. Health departments expend their funds across several service lines, and for adequate comparison, some of the data within service lines were aggregated into categories. Expenditure categories are listed below.

Categories with combined service lines:

- Administration – General administration, accreditation expenses, capital equipment, and other general administration.
- Environmental Health Services (EHS) – Activities include campgrounds, food service, mobile park inspection, marinas, plumbing, private water, sewage, solid waste, swimming pools, other environmental services.
- Health Promotion Services – Prevention and education, including tobacco control, injury prevention and other health promotion expenses.
- Personal Health Services (PHS) – Activities include adult primary care, BCMH, behavioral health dental clinics, drug and alcohol prevention, HIV care HIV prevention, Help Me Grow program, non-home visits, immunizations-pediatric, adult, travel, perinatal care STD prevention, reproductive health services, WIC, well child care, vision and hearing services, TB prevention and medication service, other services.

Categories as reported on AFR:

- Communicable Disease and Control
- Vital Statistics
- Epidemiology and Assessment
- Emergency Preparation
- Home Health Services
- Laboratory
- Other

Statewide Overview

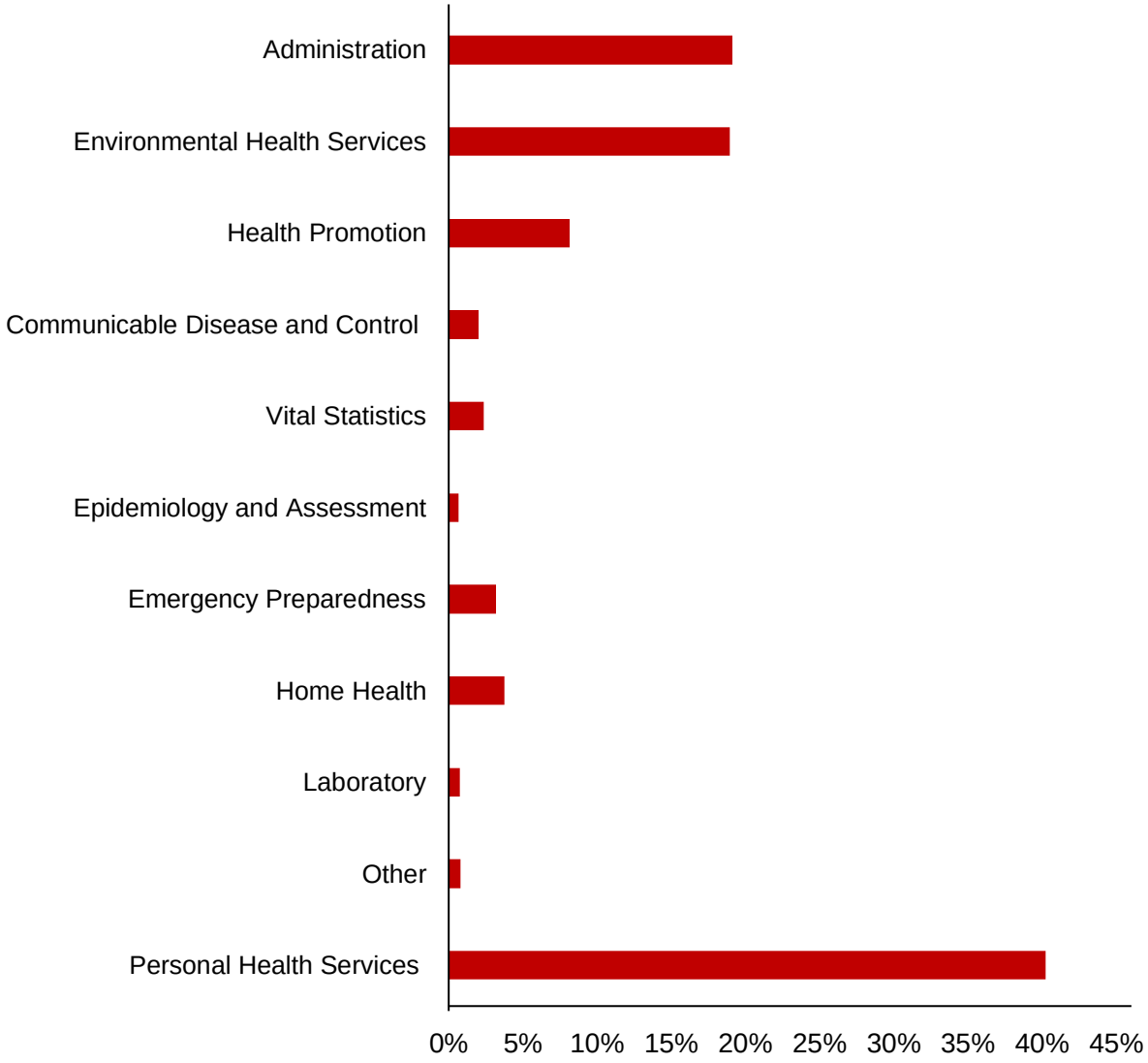
Table 14: Expenditures by Category, Statewide

	N	% of LHDs*	Mean	Standard Deviation	Median
Administration	108	98%	$764,732	$1,183,066	$391,335
Environmental Health Services	106	96%	$772,766	$1,276,767	$297,116
Health Promotion	84	76%	$418,480	$1,085,186	$111,253
Communicable Disease and Control	66	60%	$130,849	$238,161	$40,876
Vital Statistics	98	89%	$104,356	$199,810	$51,269
Epidemiology and Assessment	64	58%	$45,921	$78,616	$17,010
Emergency Preparedness	92	84%	$149,200	$223,031	$89,919
Home Health	16	15%	$1,015,029	$973,249	$763,710
Laboratory	61	55%	$52,297	$164,724	$5,455
Other	25	23%	$138,108	$240,535	$36,854
Personal Health Services	102	93%	$1,704,709	$4,292,406	$539,380
Total Expenditures	110	-	$3,926,805	$7,623,763	$1,683,220
Per Capita Spending	110	-	$41	$34	$31

** % of LHDs is the percent of LHDs with spending in each category.*
Means are calculated from expenditures by those LHDs with spending within each category.

- The average expenditure for the 110 LHDs was just under $4 million, with a mean per capita expenditure of $41. There is wide variation as indicated by the large standard deviations. The median expenditure was approximately $1.7 million, with a median per capita expenditure of $31.
- Home health was offered by 15% of the departments, but for those departments the mean amount spent was approximately $1million.
- Aside from Administration, LHDs were most likely to spend money on Personal Health Services and Environmental Health Services.
- 76% of the LHDs spent money on the provision of Health Promotion Services.

Figure 3: Percent of Total Expenditures in Each Category, Statewide



- The figure displays the percent of total expenditures statewide within each of the categories across the 110 health departments.
- Three service lines account for the majority of the spending statewide: Personal Health Services, Environmental Health Services, and Administration.
- The remaining categories represent less than 10% of spending, with most under 5%.

Accreditation Stage

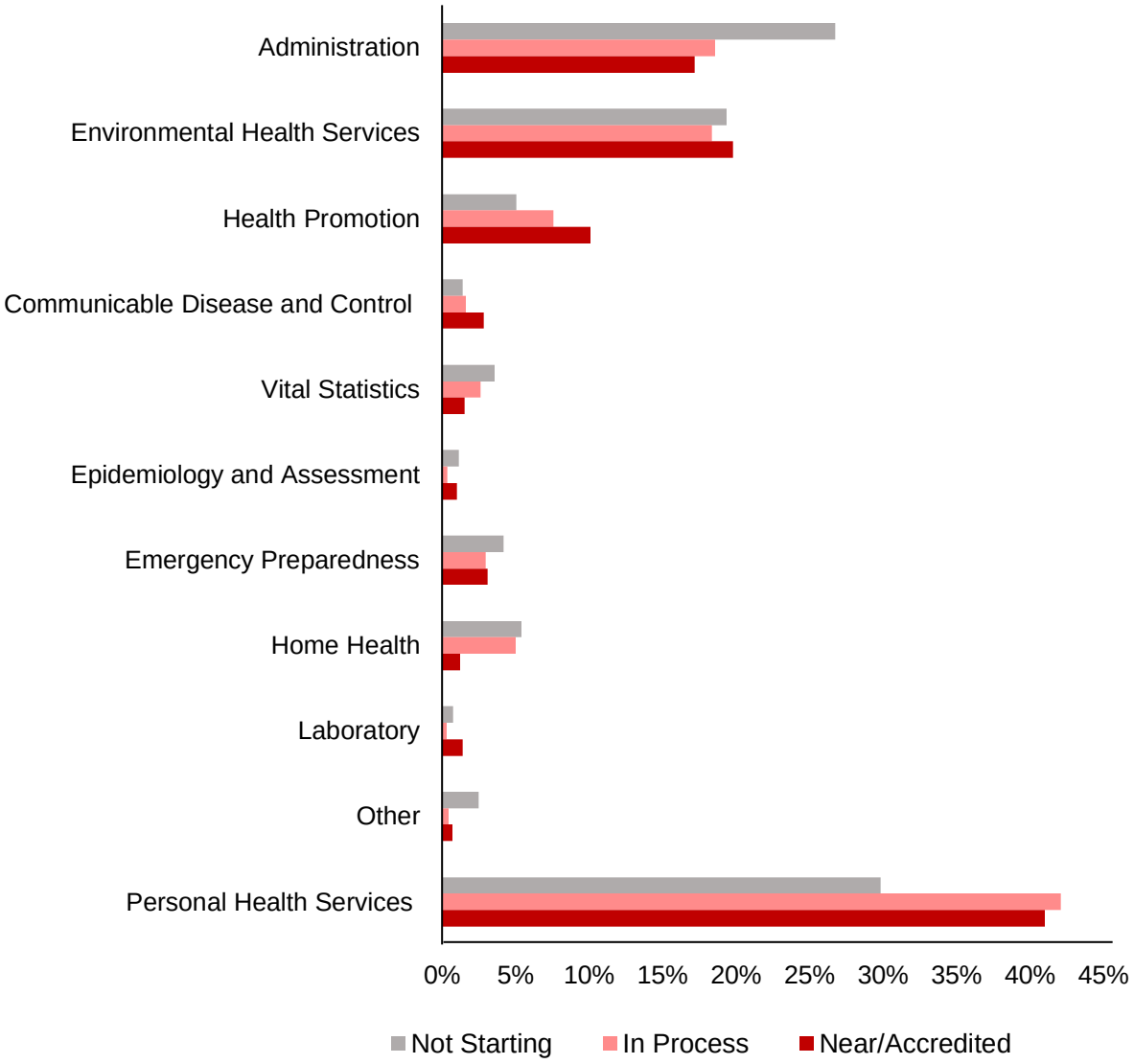
Table 15: Median Expenditures by Accreditation Stage

	Not Started			In Process			Near/Accredited		
	N	%	Median	N	%	Median	N	%	Median
Administration	36	95%	$169,857	55	100%	$379,012	17	100%	$885,552
Environmental Health Services	35	92%	$176,111	54	98%	$280,013	17	100%	$1,240,817
Health Promotion	26	68%	$50,175	42	76%	$122,055	16	94%	$306,565
Communicable Disease and Control	15	39%	$25,096	36	65%	$40,876	15	88%	$94,354
Vital Statistics	31	82%	$46,873	52	95%	$47,614	15	88%	$70,492
Epidemiology and Assessment	22	58%	$12,119	28	51%	$11,572	14	82%	$56,590
Emergency Preparedness	29	76%	$75,119	46	84%	$90,639	17	100%	$122,278
Home Health	3	8%	$73,747	11	20%	$678,201	2	12%	$899,005
Laboratory	21	55%	$3,090	28	51%	$5,769	12	71%	$18,088
Other	8	21%	$15,102	14	25%	$41,169	3	18%	$269,114
Personal Health Services	35	92%	$286,123	50	91%	$554,124	17	100%	$1,591,843
Total Expenditures	38	-	$766,740	55	-	$1,825,189	17	-	$5,176,205
Per Capita Spending	38	-	$26	55	-	$35	17	-	$33

% = Percent of LHDs with any expenditure per category.

- Median spending increases as accreditation stage progresses.
- Median total expenditures increased as stage of accreditation progresses, though median per capita spending is highest in those LHDs in process.
- Accreditation stage is related to the capacity of a health department to offer diverse service lines. For example, 94% of LHDs nearly or already accredited are expending funds for Health Promotion, compared to 68% of those not starting, and 76% of those in process. This trend can be seen across most areas of expenditures.

Figure 4: Percent Expenditures within Category by Accreditation Stage



- LHDs not starting the accreditation process had a higher percent of spending on administration than LHDs further along in the accreditation process.
- LHD in process or already accredited spent more than 40% of total expenditures on providing Personal Health Services, compared to 30% for LHDs that had not started.
- LHDs that had not started spent a lower percent on Health Promotion than other LHDs.

Population Size Served

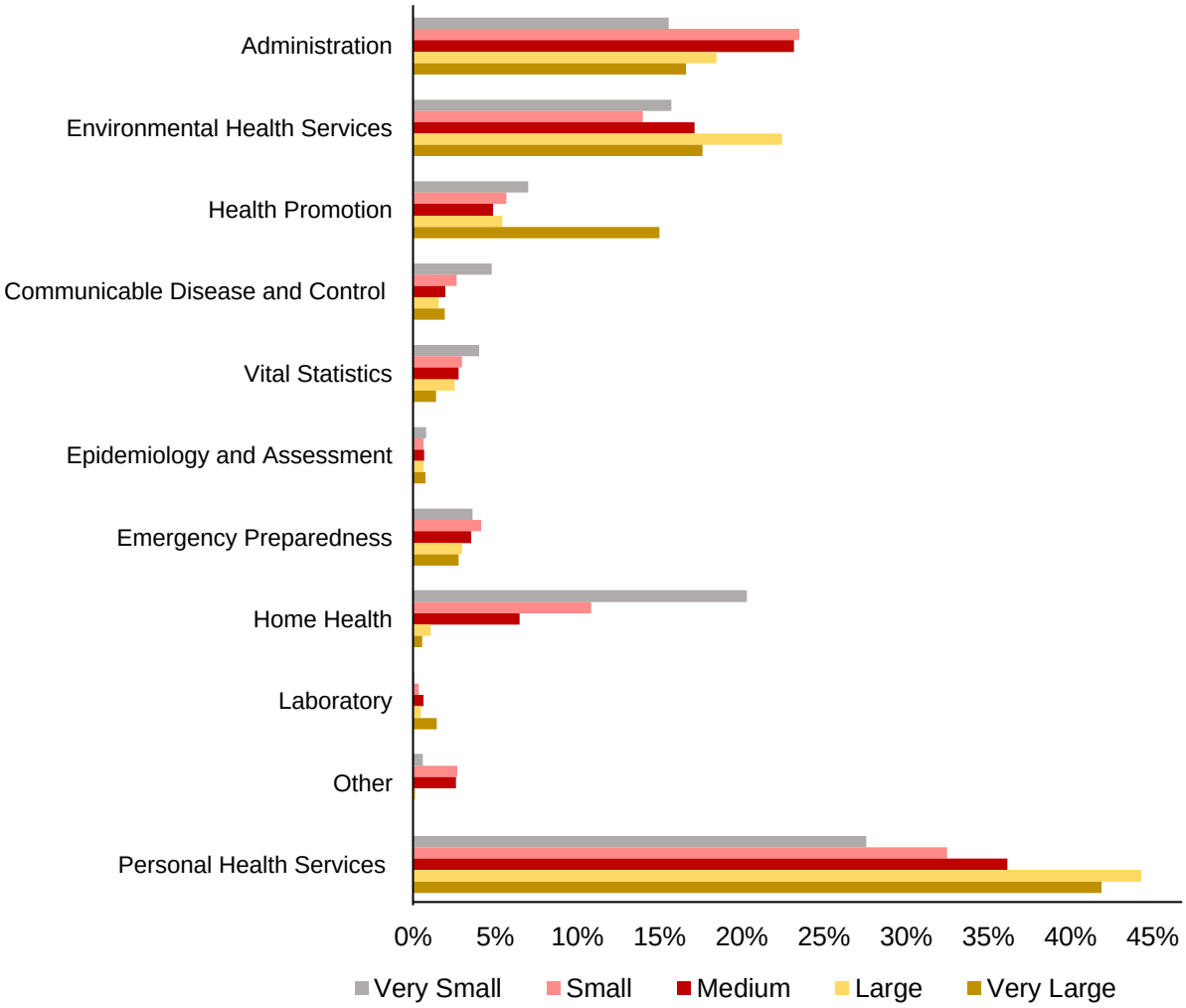
Table 16: Median Expenditures by Population Size Served

	Very small		Small		Medium		Large		Very Large	
	N	Median	N	Median	N	Median	N	Median	N	Median
Administration	21	$98,072	37	$320,562	23	$424,419	23	$1,116,714	4	$5,155,151
Environmental Health Services	21	$93,377	36	$200,390	22	$386,222	23	$1,106,219	4	$5,214,973
Health Promotion	11	$20,839	30	$74,971	18	$83,680	21	$200,000	4	$3,766,064
Communicable Disease and Control	6	$15,194	25	$33,363	13	$27,311	18	$63,736	4	$564,753
Vital Statistics	19	$26,000	36	$34,943	21	$62,757	19	$91,949	3	$539,848
Epidemiology and Assessment	13	$6,289	20	$9,197	14	$23,013	13	$79,963	4	$199,351
Emergency Preparedness	14	$53,313	29	$80,941	22	$94,550	23	$137,703	4	$826,668
Home Health	6	$675,336	5	$651,404	3	$870,581	1	$1,929,553	1	$678,201
Laboratory	5	$3,000	26	$3,603	13	$5,953	13	$23,367	4	$269,485
Other	5	$15,621	11	$36,854	7	$128,753	2	$140,902	0	.
Personal Health Services	19	$166,612	34	$390,497	22	$629,406	23	$1,584,407	4	$8,706,861
Total expenditures	22	$480,216	38	$1,306,372	23	$2,012,194	23	$5,176,205	4	$24,228,099
Per capita Spending	22	$30	38	$35	23	$29	23	$28	4	$45

Very Small: <25,000; Small: 25,000-49,999; Medium: 50,000-99,000; Large: 100,000-499,999; Very large: ≥500,000.

Discussion on following page.

Figure 5: Percent Expenditures within Category by Population Size Served



Very Small: <25,000
Small: 25,000-49,999
Medium: 50,000-99,000
Large: 100,000-499,999
Very Large: ≥500,000

- From the above table, median total expenditures increase consistently as population size served increases. However, mean per capita spending does not follow the same pattern.
- For LHDs in all size categories, Personal Health Services spending is the highest percentage of total expenditures.
- Very Small LHDs had a higher percentage of spending on Home Health, but less on Administration.
- Very Large LHDs had the highest percent of spending on Health Promotion.

5. Revenue

This section reviews information from the AFR submitted to ODH in March of 2016 for the 110 survey responders, and includes revenue amounts and services for calendar year 2015. These data are presented for comparison across the 110 LHDs, accreditation stages, and the five population size served categories.

Funding for local public health departments is received from local, state and federal sources. There are multiple ways in which the data can be examined. For comparison purposes, we followed the model used in the Public Health Futures Report (2012) to aggregate line items from the AFR into the categories as described below.

- Local: Government – inside millage, public health levy, local general revenue, local city/county contract, local county tuberculosis (TB) contract, local pass-through, local government entity, and Family and Children First Council (FCFC).
- Local: Earned healthcare reimbursement (EHR) – Personal health, health promotion, and home health (Medicaid, Medicare, private insurance and fees).
- Local: Fees and contracts for environmental health (EHS) – Campgrounds, food, parks, marina, private water, sewage, waste, pools, plumbing inspections, other.
- Local: Other – Vital statistics, clinical and environmental laboratory, special projects, donations, miscellaneous, and local carryover.
- State Subsidy – State subsidies.
- Other State Funds – Grants from ODH and other agencies and state carryover (not including federal pass-through).
- Federal Pass Through – ODH grants and grants from federal sources.
- Federal Direct – Grants and contracts directly from federal government and federal carry-over.

Statewide Overview

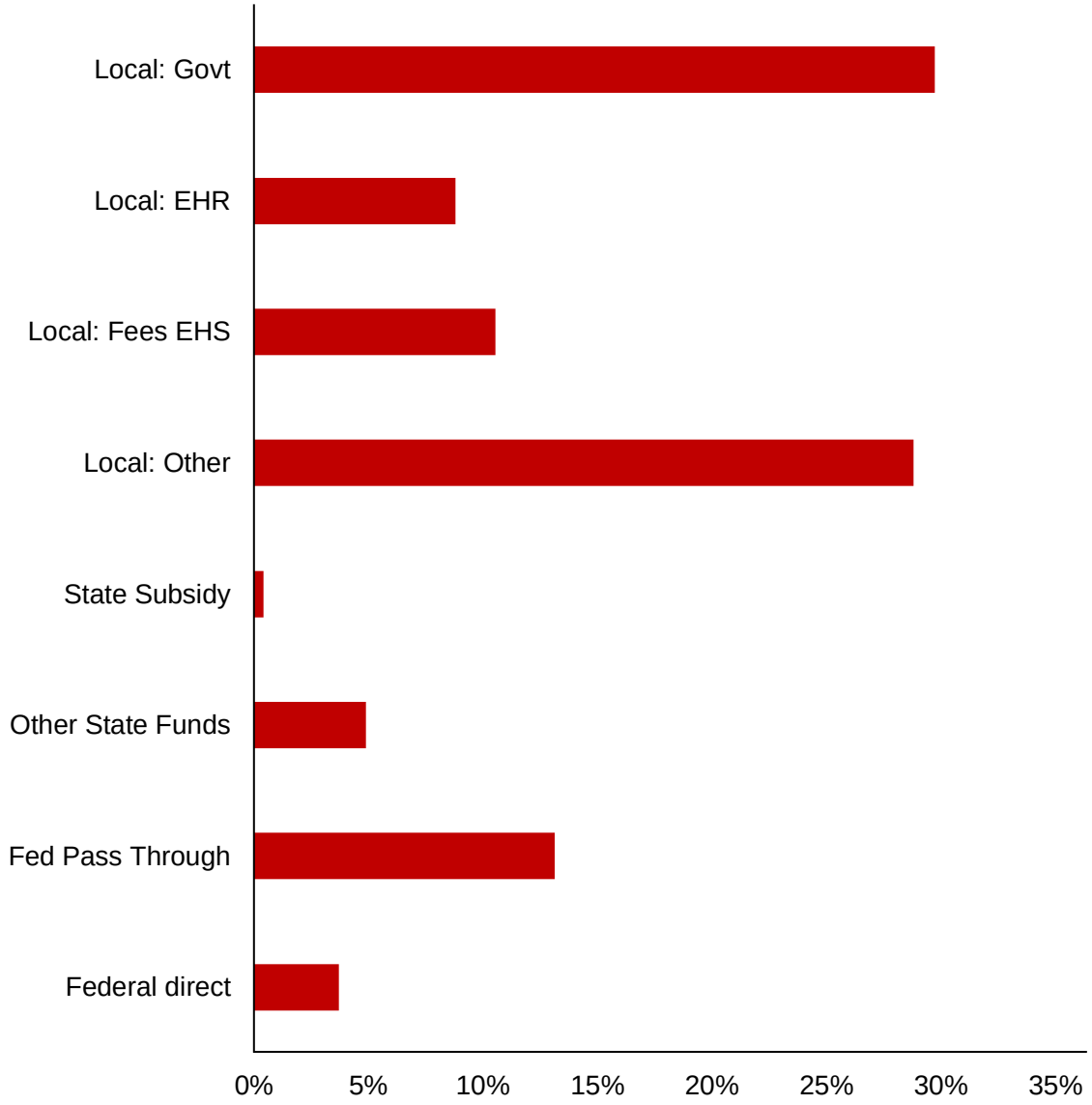
Table 17: Total Revenue by Source, Statewide

	N	Percent of LHDs*	Mean	Standard Deviation	Median
Local: Govt.	109	99%	$1,627,790	$3,566,204	$612,932
Local: EHR	106	96%	$494,899	$1,407,948	$107,622
Local: Fees EHS	110	100%	$572,261	$818,148	$209,653
Local: Other	109	99%	$1,577,161	$2,145,222	$586,928
State Subsidy	105	95%	$23,023	$35,395	$9,333
Other State Funds	108	98%	270,687	$516,018	$104,339
Fed Pass Through	99	90%	$791,624	$1,384,667	$371,504
Federal Direct	27	25%	$818,792	$1,454,676	$129,122
Per Capita with Carryover	110	-	$59	$50	$46
Per Capita no Carryover	110	-	$44	$34	$35

**Percent of LHDs refers to the percent of LHDs with any revenue in a category.*

- Because nearly all LHDs maintain carryover funding, per capita revenue is shown both with and without carryover.
- Without carryover, LHDs generate an average of $44 per person and median per capita revenue of $35.
- Not all LHDs generate revenue in each category. While all LHDs generate revenue through fees and contract for Environmental Health Services, only about 25% of the 110 survey respondents receive revenue directly from federal sources.

Figure 6: Percent of Total LHD Revenue by Source



- Local revenues accounted for 77.9% of all revenue generated by local health departments.
- Only about 5% of total LHD revenue came from State sources, whereas about 20% of total revenue came from federal sources.

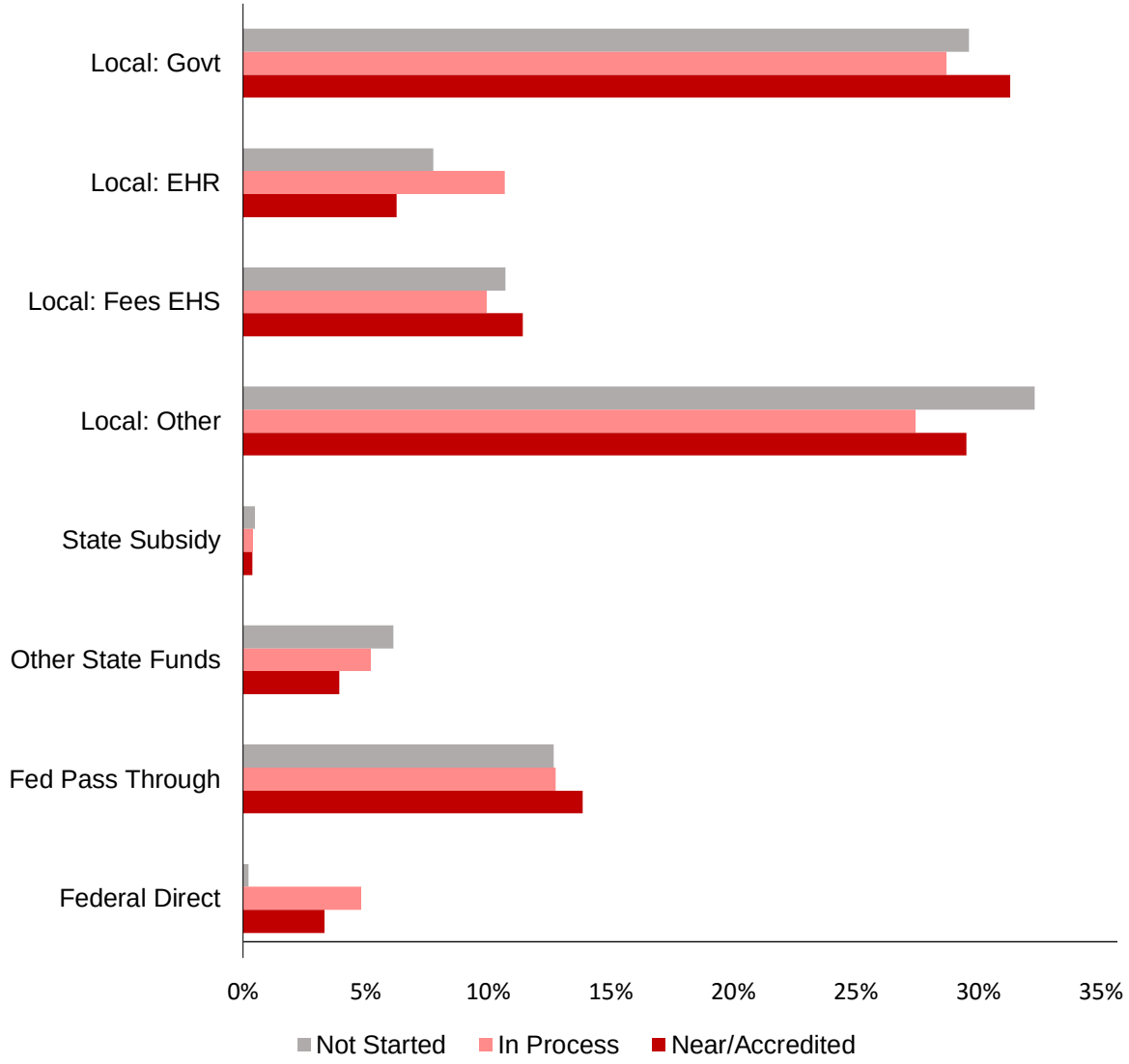
Accreditation Stage

Table 18: Median LHD Revenue by Source and Accreditation Stage, 2015

	Not Started		In Process		Near/Accredited	
	N	Median	N	Median	N	Median
Local: Govt.	37	$384,675.31	55	$593,438.88	17	$2,027,818.67
Local: EHR	35	$51,392.44	54	$179,810.21	17	$297,666.00
Local: Fees EHS	38	$94,775.06	55	$232,624.00	17	$1,077,821.85
Local: Other	37	$267,400.12	55	$580,042.52	17	$2,815,602.92
State Subsidy	37	$7,507.97	53	$9,333.21	15	$45,771.00
Other State Funds	37	$66,682.01	54	$134,466.48	17	$222,035.17
Fed Pass Through	31	$237,584.24	51	$429,671.72	17	$682,489.98
Federal Direct	4	$4,009.00	14	$117,665.78	9	$456,098.00
Per Capita with Carryover	38	$35.57	55	$49.53	17	$52.79
Per Capita no Carryover	38	$27.34	55	$39.63	17	$48.62

- Median revenue from all sources increases with progress through accreditation stages.
- The most substantial difference in median revenue between LHDs not starting accreditation and those in process or already accredited is seen with direct federal revenue.
- Per capita revenue increases as accreditation stages progress both with and without carryover.

Figure 7: Percent Total Revenue by Source and Accreditation Stage



- The percent of total revenue from all sources was similar across accreditation stages, except with direct federal sources. LHDs not yet starting generated less than 1% of their total revenues, compared to 5% for LHDs in process.
- LHDs near or already accredited received less revenue from state sources than other LHDs.
- LHDs earlier in the accreditation process were more likely to generate revenue from healthcare reimbursable services (Local: EHR).

Population Size Served

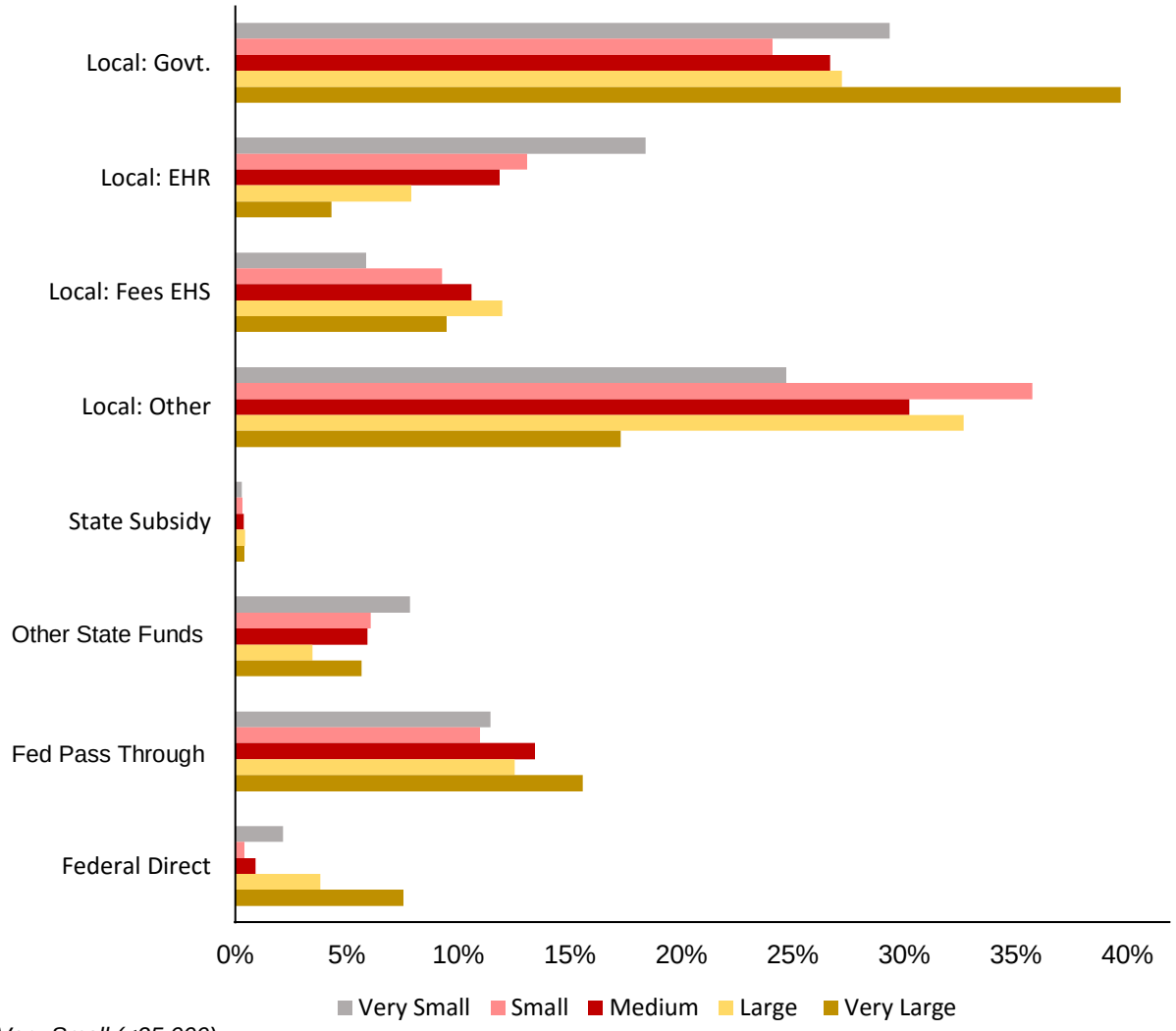
Table 19: Median Revenue by Source and Population Size Served

	Very Small		Small		Medium		Large		Very Large	
	N	Median	N	Median	N	Median	N	Median	N	Median
Local: Govt.	21	$227,410	38	$446,477	23	$725,000	23	$2,221,645	4	$12,519,803
Local: EHR	19	$37,651	37	$104,833	23	$82,486	23	$242,687	4	$1,440,440
Local: Fees EHS	22	$52,205	38	$181,894	23	$346,494	23	$1,149,645	4	$3,433,422
Other: Local	21	$159,660	38	$447,823	23	$667,213	23	$3,140,488	4	$6,389,339
St Subsidy	20	$3,340	37	$7,726	23	$13,092	21	$46,125	4	$125,830
Other State Funds	21	$13,125	37	$95,015	23	$96,671	23	$274,129	4	$2,233,316
Fed Pass Through	14	$138,229	35	$284,086	23	$430,339	23	$879,694	4	$4,795,021
Federal Direct	1	$474,528	8	$15,951	6	$81,789	8	$822,798	4	$2,133,165
Per Capita with carryover	22	$38	38	$47	23	$43	23	$45	4	$58
Per Capital Revenue no carryover	22	$30	38	$40	23	$32	23	$32	4	$52

Very Small: <25,000; Small: 25,000-49,999; Medium: 50,000-99,000; Large: 100,000-499,999; Very large: ≥500,000.

Discussion on following page.

Figure 8: Percent of Revenue Within Source Categories by Population Size Served



Very Small (<25,000)
Small (25,000-49,999)
Medium (50,000-99,000)
Large (100,000-499,999)
Very Large (≥500,000)

- Table 19 shows per capita revenue both with and without carryover did not constantly increase as LHD population size served increased; in fact, Small LHDs had a higher per capita revenue than all LHDs other than Very Large LHDs.
- Very Large LHDs had a higher percentage of revenue from local government, while Small, Medium and Large LHDs generated a higher percentage of revenue from Local: Other sources.
- Very Small LHDs had the highest percentage of revenue generated from earned healthcare reimbursements.

Other Revenue: Medicaid Administrative Claiming

Table 20: Mean Revenue from Medicaid Administrative Claiming by Accreditation Stage

Accreditation Stage	N	% LHD	Mean	SD
Not Started	20	91%	$50,049	$38,062
In Process	48	87%	$85,284	$111,901
Near/Accredited	17	100%	$158,362	$294,789

Table 21: Mean Revenue from Medicaid Administrative Claiming by Population Size Served

Accreditation Stage	N	% LHD	Mean	SD
Very Small (<25,000)	13	59%	$32,584	$25,859
Small (25,000-49,999)	28	74%	$45,893	$32,219
Medium (50,000-99,000)	18	78%	$64,168	$41,157
Large (100,000-499,999)	22	96%	$127,369	$134,734
Very Large (≥500,000)	4	100%	$530,255	$502,486

- LHDs can generate additional revenue by billing for Medicaid administrative activities, known as Medicaid Administrative Claiming (MAC).
- All LHDs near or already accredited received MAC revenue, though most LHDs across all accreditation stages received MAC revenue.

- All Very Large and nearly all Large LHDs received MAC revenue.
- Less than two-thirds of Very Small LHDs received MAC revenue.

6. Factors Associated with Accreditation Stage

Patterns have emerged from the descriptive analysis regarding which departments were further along in the accreditation process. For example, total resources, either FTEs or revenue, were important. However, when FTEs were determined by population size the relationship was less clear.

To examine these relationships, we estimate a logistic regression with the dependent measure of accreditation stage. To do this, two new categories for accreditation stage were developed: those LHDs that were uploading documents, had a site visit scheduled, or were accredited were called Early Stage and scored as a 1; all others were called Late Stage and scored as a 0. The purpose of estimating the logistic model was to determine what factors were associated with being in the later stages of accreditation. Because of the results of the descriptive analyses presented in this report, a set of newly defined variables were used in the model, as defined below:

Description of measures used in the model:

- LHD Population Size Served – Two categories of size were used in the model: Small LHD included the Very Small and Small categories (population size served of <50,000 people); and Mid-size LHD included the Medium population size served category (50,000 and 100,000 people). Larger LHDs (≥100,000 people) were omitted from this model.
- Financial Measure – Per capita spending was included in the model. Because there was high correlation between revenues and expenditures, only expenditures were included.
- FTE Measure – Total FTEs was selected for inclusion in the model.
- Services Provided – Total services, which included Selected, Other and Additional services, was used as a comprehensive marker of service provision.
- Interaction terms – The model interacted the two LHD population size served categories with total FTEs, again omitted LHDs serving ≥100,0000 people.

Table 22 shows the likelihood that these variables predict whether an LHD will be in the early or later stages of accreditation. When reading the table, it is important to remember two points. First, the larger the point estimate (odds ratio), the more likely the variable is associated with an LHD being in the late stages of accreditation. Second, 95% confidence intervals are included. If the confidence interval includes 1, the result is not considered significant.

Table 22: Factors Associated with Early versus Late Accreditation Stage

Variable	Point Estimate (Odds Ratio)	95% Confidence Interval
Small LHD	<0.001	(<0.001-0.051)
Mid-Size LHD	0.033	(0.002-0.697)
Per Capita Spending	0.943	(0.904-0.984)
Total FTE	1.009	(0.996-1.022)
Total Number of Services Provided	1.252	(1.092-1.435)
Small LHD* Total FTE	1.317	(1.094-1.584)
Mid-size LHD* Total FTE	1.037	(0.990-1.151)

Model Fit statistics: Hosmer-Lemeshow Goodness-of-Fit Test: Chi-square-6.29, DF=8, Pr=0.615; C statistic=0.91

- LHD population size served clearly matters, as both Small and Mid-size LHDs were less likely to be in the late stages of accreditation.
- Total Number of Services Provided also was related to stage, with health departments providing more services are more likely to be further in the later stages of the process.
- When analyzing the interaction between Small and Mid-size LHDs and Total FTE, data show that Total FTE for Mid-size or Large LHDs were not associated with being in the later stages of accreditation.
- However, for Small LHDs, higher FTEs were associated with being further along in the accreditation process.

7. Summary and Acknowledgements

This report shows data from a variety of sources, focusing on comparing the characteristics of local public health in Ohio across different accreditation stage and sizes of population served. While many LHDs have considerable work remaining to meet state requirements for accreditation, most are committed to becoming accredited and have begun the process. Most importantly, most Ohioans are already receiving a variety of public health services by an LHD working to become or already having achieved accreditation.

Designation of staff as an accreditation coordinator and allowing a large portion of that person's role to focus on accreditation remains a difficult task for LHDs not starting or in the early stages of the process. It is clear, however, that smaller LHDs with more total FTEs are more likely to be in the later stages of accreditation, as did the total number of services provided. These two factors may be related, and may influence the ability of LHDs to allocate staff for accreditation specific tasks. Furthermore, while financial resources are clearly important to beginning and successfully complete the full process, per capita spending did not predict accreditation stage. More analysis is needed to determine the correct efficiency model (or models) for smaller LHDs to meet state expectations for both public health service provision and accreditation.

For more information about this project, please see our project website: https://u.osu.edu/cphpaccreditationproject/. Or, contact Andrew Wapner, Principal Investigator (Wapner.1@osu.edu).

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The following OSU staff and faculty contributed to this report:

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Appendix: Methods

The primary data collection tool (LHD Profile and Accreditation Survey) was administered through Qualtrics software. The survey instrument consisted of three sections. The first section consisted of general information questions, including accreditation intent and process status, and selected questions adapted from the PHAB Accreditation Readiness Checklists (available at http://www.phaboard.org/wp-content/uploads/National-Public-Health-Department-Readiness-Checklists.pdf). The second section included questions pertaining to LHD training and technical assistance needs related to PHAB accreditation prerequisite documentation and shared service arrangements. The final section consisted of questions about LHD program and service provision, both for 20 select services identified by the Ohio Department of Health (ODH), as well as a more general list of 38 services. LHDs were encouraged to add additional services or programming as open ended responses. Any services added were combined into categories of Additional Services as follows:

- EHS Other – Combined specific types of facility inspections (jail, barber shops, etc.), bathing beaches, and air quality;
- Personal Health Services Other – Combined specific clinics (E.g. chest), CPR Trainings, Medication Assistance;
- Health Promotion Other – Combined health education programs not related to chronic disease (teen pregnancy, substance abuse education in schools)
- Health Promotion Chronic Disease Prevention – Combined Creating Health Communities, farmer's markets, Veggie SNAPS, Worksite Wellness, etc.
- General Administration – Combined entries related to development/downtown beautification, fiscal agency for program, etc.
- Accreditation – Combined all entries noting accreditation services.
- Laboratory Services – Combined entries noting laboratory services

The survey was distributed to 120 Health Commissioners via a link embedded into an explanatory e-mail from the CPHP. Two reminder e-mails were distributed during the fielding period (November 3 through November 18, 2016). A total of 110 responses were received (92% response rate). Data was downloaded on December 5, 2016 and analyzed using Microsoft Excel. Data for each LHD completing the survey prior to the data download were compared to averages for both total respondents and LHD population size served. The survey received Exempt status by the OSU Institutional Review Board.

Secondary data was obtained primarily from Ohio's Health Department Profile and Performance Database housed at the Ohio Department of Health. 2015 Annual Financial Reports and LHD full-time equivalent data was downloaded from OPPD in October 2016 for 110 LHDs. Additional financial data included 2015 Medicaid Administrative Claiming Program payment data obtained directly from ODH in October 2016. Statistical analysis was performed in SAS and Microsoft Excel.

Specific data for Improvement Standards were downloaded for 110 LHDs participating in the survey from the OPPD in November 2016, reflecting data self-reported by LHDs in March 2016. Data used for this report included progress on all 12 PHAB Domains, as listed in the PHAB *Standards and Measures*, Version 1.5 (2013) available at http://www.phaboard.org/wp-content/uploads/PHABSM_WEB_LR1.pdf. Additional data used includes progress on specific Standards with both the highest and lowest statewide percent completion, as well as for those Standards related to PHAB perquisites.