



# Center for Local Health Annual Report 2016

January 8, 2018

# Center for Local Health Annual Report 2016

Bill J. Crouch  
Cabinet Secretary  
West Virginia Department of Health and Human Resources  
(DHHR)

Rahul Gupta, MD, MPH, MBA, FACP  
Commissioner, Bureau for Public Health  
State Health Officer

---

---

CENTER FOR LOCAL HEALTH **2016 ANNUAL REPORT**

---

---

Center for Local Health (CLH)  
West Virginia Department of Health and Human Resources  
Bureau for Public Health

Author/Editors

Amy D. Atkins, MPH	Director
Samantha J. Batdorf, MPH	Epidemiologist
Grace G. Kalmus	Public Health Associate
Bijal Patel, MPH	Epidemiologist
Gloria F. Thompson	Secretary
Candice Travis, MPH	Public Health Associate

Contributors:

DHHR's Office of Epidemiology & Prevention Services (OEPS)  
DHHR's Office of Environmental Health Services (OEHS)  
West Virginia Local Health Departments

DHHR's CLH would like to acknowledge the Department's Bureau for Public Health (BPH) for its support of CLH staff. This report is made possible thanks to the efforts of the CLH staff, BPH offices and centers, and West Virginia local health departments.

Suggested Citation: Center for Local Health Annual Report, 2016. West Virginia Department of Health and Human Resources, Bureau for Public Health, Center for Local Health

## TABLE OF CONTENTS

Purpose of the Annual Report .....	8
Authorities and Responsibilities of the West Virginia Department of Health and Human Resources, Bureau for Public Health and Local Boards of Health .....	8
Center for Local Health Operations .....	9
Basic Public Health Services Support for Local Boards of Health .....	9
Board of Health Emergency Fund Program .....	10
Program Plan Guidance and Reporting for Local Boards of Health .....	11
Improving the Quality, Value and Use of Statewide Data .....	11
Promoting Greater Monitoring of Local Health Fiscal Operations .....	12
Understanding and Improving State Support for Community Health Assessments.....	12
Continuity of Operations and Emergency Response .....	13
Statewide Communications.....	13
Data Collection and Methods .....	13
A Note on Boxplots .....	14
Local Board of Health Coordination, Operations, and Administration .....	14
Appointing Authorities .....	14
Appointment of Local Boards of Health .....	14
Local Board of Health Jurisdictions.....	16
Local Support for Local Boards of Health .....	17
Public Health Administration .....	18
Local Public Health Programs and Services .....	19
Basic Public Health Services.....	19
Additional Public Health Programs.....	28
Annual End of Year Financial and Fee Reports .....	29
Profit/Loss and Investments .....	29
Revenue by Source .....	31
Clinical Revenue by Program and Payer .....	35
Expenditures by Category.....	38
Expenditures by Program .....	40
Local Public Health Workforce.....	41
References .....	43

## FIGURES

Figure 1. Local boards of health by type (N=49).....	16
Figure 2. Local health department jurisdiction size and population served, West Virginia, 2016 .....	17
Figure 3. Total reported local funding source, FY 2016. Source: FY 2016 Financial Report .....	17
Figure 4. Local funding support per capita by local health department (N=49), FY 2016. Source: FY 2016 Financial Report.....	
Figure 5. Outbreak by epidemiology regions, West Virginia, 2015. Source: OEPS.....	21
Figure 6. Confirmed outbreaks by type, West Virginia (N=198), 2015 .....	21
Figure 7. Primary data sources included in community health assessments (N=45), FY 2017 .....	24
Figure 8. Types of data included in community health assessments (N=45), FY 2017 .....	24
Figure 9. Priority areas identified by local health department community health improvement plans (N=49), FY 2017 .....	25
Figure 10. Percent of local health departments utilizing community partners for community health assessment and improvement plans (N=49), FY 2017 .....	26
Figure 11. Total environmental inspections completed and permits issued, FY 2016 .....	27
Figure 12. Number of local health departments that report providing program/service (N=49), FY 2016. Source: FY 2016 Financial Report .....	28
Figure 13. Percent difference between reported revenues and expenditures by local health departments (N=49), FY 2016. Source: FY 2016 Financial Report .....	
Figure 14. Map of percent difference between revenues and expenditures by local health department (N=49), FY 2016. Source: FY 2016 Financial Report .....	30
Figure 15. Total investments reported by local health department (N=49), FY 2016. Source: FY 2016 Financial Report.....	
Figure 16. Local health department revenue by source (N=49), FY 2016. Source: FY 2016 Financial Report.....	31
Figure 17. State revenue and combined state and federal revenue as a percentage of total revenue by local health department (N=49), FY 2016 .....	
Figure 18. Map of combined state and federal revenue as a percentage of total reported revenue by local health department (N=49), FY 2016. Source: FY 2016 Financial Report.....	32
Figure 19. Clinical revenue per capita by local health department (N=49), FY 2016. Source: FY 2016 Financial Report .....	
Figure 20. Map of clinical revenue per capita by local health department (N=49), FY 2016. Source: FY 2016 Financial Report.....	33
Figure 21. Revenue from environmental fees and services by local health department, FY 2016 .....	34
Figure 22. Per capita revenue from environmental permits and services by local health department (N=49), FY 2016. Source: FY 2016 Financial Report .....	34
Figure 23. Map of environmental revenue per capita by local health department (N=49), FY 2016. Source: FY 2016 Financial Report.....	35
Figure 24. Clinical revenue by program, FY 2016. Source: FY 2016 Financial Report.....	36

Figure 25. Revenue collected and encounters from Medicare, Medicaid, private insurance, and patient pay, FY 2016. Source: FY 2016 Financial Report .....	37
Figure 26. Expenditures by category, FY 2016.....	38
Figure 27. Classified service personnel expenditures as a percentage of total expenditures by local health department (N=49), FY 2016. Source: FY 2016 Financial Report.....	
Figure 28. Map of per capita expenditures by local health department (N=49), FY 2016. Source: FY 2016 Financial Report.....	39
Figure 29. Expenditures by program as a percent of statewide expenditures, FY 2016. Source: FY 2016 Financial Report .....	40
Figure 30. Mean and median number of full-time equivalents in local health departments by population served, United States (2016) and West Virginia (FY 2016). Sources: FY 2016 Financial Report and NACCHO Profile of LHDS 2016.....	41
Figure 31. Full-time equivalents per 10,000 population by LHD (N=49), FY 2016. Source: FY 2016 Financial Report .....	42
Figure 32. Map of full-time equivalents per 10,000 population by LHD (N=49), FY 2016. Source: FY 2016 Financial Report.....	42

## TABLES

Table 1. Formula for distributing state funding _____	10
Table 2. Emergency fund applications received and amount of available funding _____	11
Table 3. Requirements for forming local boards of health _____	15
Table 4. Regional configurations _____	19
Table 5. LHDs that report billing and report tracking encounters by payer. Source: FY 2016 Financial Report _____	37

## PURPOSE OF THE ANNUAL REPORT

This report serves as the first statewide summary of the reports submitted to West Virginia Department of Health and Human Resources (DHHR), Bureau for Public Health's Center for Local Health (CLH) by West Virginia local health departments (LHDs). This report was prepared to fulfill the Bureau for Public Health's legal responsibility to monitor the operation, administration and coordination of local boards of health, to improve transparency and accountability for public funds, to inform policy makers at the local, regional and state level of the current state of the local public health system, to support projects to improve state and local public health practice and infrastructure, and to support university efforts and researchers interested in studying and understanding the operation and administration of local public health services in West Virginia.

## AUTHORITIES AND RESPONSIBILITIES OF THE WEST VIRGINIA DEPARTMENT OF HEALTH AND HUMAN RESOURCES, BUREAU FOR PUBLIC HEALTH AND LOCAL BOARDS OF HEALTH

DHHR's Bureau for Public Health serves as the statutory agency for public health program oversight and accountability (Association of State and Territorial Health Officials, 2014). Specifically, the State Health Officer and Commissioner is responsible for monitoring the operations, administration and coordination of local boards of health and health officers (W.Va. Code §16-1-6(e), 2017). Monitoring is a continuous function that uses the data collected on specific indicators to provide agency leaders, program managers, and key stakeholders with an understanding of the extent of progress toward goals and objectives (OECD, 2010). Access to information obtained through monitoring processes improves the ability of agency leaders and managers to make strategic decisions to improve operations, service delivery and ultimately the health of the citizens of West Virginia.

CLH is the operational unit within DHHR's Bureau for Public Health that coordinates monitoring processes and serves as the liaison between the Bureau for Public Health and the 49 autonomous local boards of health and LHDs. Under the direction and leadership of the Deputy Commissioner for Administration, CLH works with the Bureau for Public Health's offices and centers to:

- Provide funding to support the statewide delivery of public health services;
- Assure guidance is in place to fulfill the Bureau's obligation to monitor the operations, administration and coordination of local boards of health in the following areas in which the Commissioner has approval authority:
  - Program plan
  - Plans of combination (consolidation of local boards of health)
  - Appointment of local health officers
  - Establishment of and/or increase in fees for services and permits;
- Publish statewide data;
- Deploy training and technical assistance;
- Provide temporary staffing support when requested;



- Support statewide communications to local boards of health, health officers and health departments;
- Support public health emergency planning and response efforts; and
- Promote and support implementation of the [West Virginia Public Health Impact Task Force \(PHITF\)](#) recommendations to modernize the public health system in West Virginia.

West Virginia's local public health system was first established in the late 19th century with the formation of local boards of health responsible for directing, supervising and carrying out matters relating to the public health of their respective counties and/or municipalities (W.Va. Code §16-2-1, 2017). Today, local boards of health are required by the state to provide basic public health services in accordance with state public health performance-based standards, which are defined as community health promotion (health assessment and planning), environmental health protection (promoting and maintaining clean air, water and food), and communicable and reportable disease prevention and control (disease surveillance and outbreak investigation) (W.Va. Code §16-2-11, 2017). Local boards of health may also provide other health programs within their communities when a demonstrated need exists and as resources are available to support the delivery of those services.

As a condition for receiving state and federal funding, local boards of health submit an annual plan of operation (program plan) to the Commissioner for approval and demonstrate compliance with performance standards through routine reporting throughout the fiscal year. The program plan reporting requirements are broader than the mandated basic public health services and include the agency's projected budget, annual financial reports, service package, fee schedules and staffing structure. The agency reports are submitted to and stored in a SharePoint site established and maintained by CLH, and accessible to LHDs. LHDs submit reports and records throughout the year to comply with applicable state and federal rules and regulations and departmental policies. This report is focused primarily on the data collected on the forms in CLH SharePoint site, but also includes statewide summaries and highlights from key basic public health program areas supported by the Bureau for Public Health.

## CENTER FOR LOCAL HEALTH OPERATIONS

### BASIC PUBLIC HEALTH SERVICES SUPPORT FOR LOCAL BOARDS OF HEALTH

The West Virginia State Legislature allocates funding to local boards of health in line 184 of the state budget to support the provision of mandated basic public health services. The current funding formula became effective in April 2010 and is based on recommendations published by the Center for Business and Economic Research (CBER) at Marshall University in a report titled, *People at Risk: The Financial Crisis in West Virginia Public Health*. The formula provides funds for state support services, base funding for each local board of health, a weighted per capita rate based on four need factors and an incentive for consolidation and authorizes the Commissioner to establish an emergency fund for local boards of health. The formula for distributing state funding is established in W.Va. Code R. 64CSR67 and is outlined in Table 1.

Table 1. Formula for distributing state funding

Funding Formula Factors Calculated for FY 2016	Amount
State Funds for Support of Local Boards of Health – Total Allocation	\$16,648,328
Emergency Funds (2% of Total Allocation)	\$332,967
State Support (4.7% of Total Allocation)	\$782,471
Funds Available for Distribution to Local Boards of Health	
• Total Funds for Base Amount (22% of Total Allocation)	\$3,662,632
• Total Funds for Weighted Per Capita Distribution	\$11,870,258
Base Amount Per County	\$66,593
Weighted Per Capita Rate	\$6.22

The recommendations published by CBER were based on assuring a base was made available to support minimum staffing, incorporating factors that direct funds to areas of greatest need, and promoting economies of scale. The report called for additional funding to assure the formula is effective, to expand local public health roles in prevention and to assure sufficient state support services are in place. The report also called for legislation that would more clearly define the expectations of local boards of health and reconcile statutory inconsistencies.

#### BOARD OF HEALTH EMERGENCY FUND PROGRAM

W.Va. Code R. 64CSR67 provides the Commissioner and State Health Officer with the authority to establish an emergency fund and a process for awarding emergency funds to local boards of health. The rule requires these funds to be spent on “unanticipated financial emergencies.” Up to 2% of the total allocation for local boards of health in line 184 of the state budget may be withheld in an emergency fund. These funds are available, through CLH, to sustain local public health service delivery by a local board of health; identify and address, when applicable, the root cause of the financial emergency; and/or transition an agency to a more sustainable financial model of operations. All local boards of health in West Virginia are eligible to be considered for these funds if they can demonstrate a financial emergency and demonstrate the funds will be used to support the provision of basic public health services. The application process provides for expedited payment once a determination of eligibility for funding is made. Table 2 displays the number of emergency fund applications received and the amount of available funding for Fiscal Years 2012-2016. W.Va. Code R. 64CSR67 requires that emergency funds not used by May 15 are distributed as per the funding formula to all local boards of health.

**Table 2. Emergency fund applications received and amount of available funding**

<b>Fiscal Year</b>	<b># of Emergency Fund Applications Received</b>	<b># of Emergency Fund Applications Funded*</b>	<b>Amount of Available Funding</b>
2012	0	0	\$333,815.10
2013	2	0	\$332,850.12
2014	0	0	\$332,886.26
2015	0	0	\$333,000.80
2016	2	0	\$332,966.56

\*Applications for emergency funds in 2013 and 2016 did not meet the definition of an unanticipated financial emergency or did not meet the requirements set forth in legislative rule.

## **PROGRAM PLAN GUIDANCE AND REPORTING FOR LOCAL BOARDS OF HEALTH**

CLH oversees the LHD Program Plan Reporting Program. CLH works with the offices and centers within the Bureau for Public Health to establish and communicate guidance to support the statewide reporting processes for data regarding agency operations, administration and coordination of local boards of health. In May 2016, CLH released comprehensive reporting guidance for basic public health services and launched a SharePoint site to collect data from LHDs. Below is a summary of initiatives CLH launched to improve quality, access and the value of data reported by LHDs to CLH. The data published in this report and made available to stakeholders in the LHD Program Plan Reporting Program is provided to support agency assessments, strategic and community health planning, and to promote transparency and accountability.

## **IMPROVING THE QUALITY, VALUE AND USE OF STATEWIDE DATA**

CLH engaged LHDs in an effort to improve the quality, value and use of statewide data collected through the Program Plan reporting processes. LHDs submit the Program Plan to the Commissioner for approval and demonstrate compliance with performance standards through routine and periodic reporting. The future of public health nationally and in West Virginia requires agencies to use data to drive decisions in order to improve the quality of practice, the equitable provision of service in all communities, and to strengthen and sustain public health infrastructure.

A statewide survey of LHDs was conducted to identify ways to improve LHD reporting and the use of the data reported to improve public health practice. Thirty respondents representing 28 agencies (57%) responded to the survey, which covered two topics, Program Plan reporting and the Annual Report. Responses to questions about Program Plan reporting revealed that some agencies provided additional programs and services that were not captured on the FY 2016 and FY 2017 required reports, and respondents also reported that their agency encountered difficulties in reporting data. CLH has made efforts to address these issues for FY 2018 reporting, which includes redesigning required reports, providing guidance on how to complete forms, and changing the way data are collected (data that used

to be collected via Excel are being transitioned to a data collection tool within SharePoint). Questions about the production of an Annual Report generated feedback on topics to include in the report, and purposes that the report could serve. This feedback was used to inform the development and dissemination of this report, and will also help inform future reporting, data collection, and presentation.

## PROMOTING GREATER MONITORING OF LOCAL HEALTH FISCAL OPERATIONS

In June 2016, CLH funded an assessment of the reports used to collect financial data from LHDs. The assessment concluded that while the data collected was beneficial to inform the state about the operations within each agency at the local level, additional analysis would improve the ability to measure the financial health of the local public health system. The recommendations for improving financial reporting would promote greater monitoring of fiscal operations, proactively identify LHDs experiencing fiscal and/or operational challenges and provide LHDs with a systematic method for conducting comparative fiscal and operational analysis. The recommendations called for the use of financial indicators and ratios that would include the following data sets:

1. LHD Benchmark Report
2. Best Practice Financial Indicators Report
3. Program Efficiency Analysis and Ratios Report
4. Program Variance Analysis

CLH hosted a workshop for LHD administrators to summarize the findings from the assessment, provided training on the value and use of financial indicators and ratios and made the resources available on the LHD Quick Guide on CLH's website.

## UNDERSTANDING AND IMPROVING STATE SUPPORT FOR COMMUNITY HEALTH ASSESSMENTS

Conducting a community health assessment is a requirement of the Public Health Accreditation Board as well as a requirement to receive state funding. Community health assessments should drive planning and programming. Despite the existence of state and national standards for community health assessments, the community health assessments submitted by LHDs have not been systematically reviewed within the Bureau for Public Health against those standards. The review conducted by CLH was guided by the Public Health Accreditation Board (PHAB) standards and/or factors identified as useful in describing the current practices for conducting community health assessments in order to examine opportunities for state support. The results from this review are included in the Community Health Assessment section of this report.

As a result of the review conducted, CLH surveyed LHDs to seek input specifically around the development of a webpage of high-quality resources related to data collection, analysis, and community engagement. Ninety-seven percent (97%) of the respondents indicated interest in a community health assessment webpage. Seventy-eight percent (78%) of the respondents reported interest in performing an assessment guided by the Public Health Accreditation Board standards. Thirty-nine percent (39%) of the respondents indicated interest in partnering with a hospital or health center to perform their assessment and fifty-

eight (58%) percent indicated that they already partner with a hospital or health center or both to perform their assessment. In response to survey feedback, CLH developed a new webpage that includes links and descriptions for 19 secondary data sources and has incorporated feedback into guidance for the FY 2018 Program Plan reporting forms.

## CONTINUITY OF OPERATIONS AND EMERGENCY RESPONSE

CLH works in partnership with DHHR's Center for Threat Preparedness to ensure state level operations are performed efficiently and with minimal disruptions during emergencies such as the Elk River Chemical Spill, Derecho, Super Storm Sandy, and most recently the June floods in 2016. The functions supported by CLH include supporting LHDs participating in response efforts, conducting impact assessments of LHD operations, reporting status to state leadership, and facilitating statewide communications to LHDs.

## STATEWIDE COMMUNICATIONS

In an effort to streamline communications between local public health leadership and the Bureau for Public Health, CLH facilitates statewide calls, which take place the first Wednesday every month. During each statewide call, a variety of topics are discussed such as, information regarding timely and relevant public health topics, program guidance, and training opportunities. All materials from the statewide calls can be accessed on [CLH's website](#).

## DATA COLLECTION AND METHODS

This report focuses primarily on two end-of-year reports submitted by LHDs in June 2016, the FY 2016 Financial Report and the FY 2016 Fees for Permits and Services Report. These reports are part of the annual Program Plan described previously. All data contained in these reports are self-reported by LHD staff.

In September 2016, a review of the financial and fee reports was conducted, which revealed inconsistencies in data entry. A guidance document was created to provide feedback to LHDs on how to correctly enter information, and a deadline was established to allow for corrections to be made, at which point the reports were considered final. The data from these reports were compiled into two statewide datasets, stored on the SharePoint site, that are available to all LHDs and CLH staff.

After analyzing the data, regional meetings were conducted at seven locations throughout the state to vet the data to be included in the Annual Report. Representatives from 38 LHDs attended these meetings and provided feedback on the data presented and additional content they would like to see included in the Annual Report. This feedback was summarized and shared with LHDs via email. Additionally, members of the Bureau for Public Health leadership team attended a vetting session and were invited to provide feedback on the data for the Annual Report.

Additional analysis was then conducted, and additional data were sought, to incorporate feedback received during the regional meetings and to broaden the scope of the Annual Report beyond LHD finance and administration.

## A NOTE ON BOXPLOTS

Throughout this report, many data points are displayed in box-and-whisker plots, or boxplots. These graphs were chosen because they show how West Virginia's 49 autonomous LHDs vary and compare to each other. The "boxes" represent the middle 50% of agencies; the "whiskers" indicate the lower 25% of agencies and the upper 25% of agencies, excluding any outliers. Outliers, if there are any, are represented with dots above and/or below the whiskers. Specifically, boxplots show the following measures:

- **Minimum value:** The lowest or smallest value. Depending on how spread out the data points are, it may be represented by a dot or the end of a whisker.
- **Quartile 1:** This value can also be thought of as the 25<sup>th</sup> percentile. That is, 25% of agencies will fall below this value, and 75% of agencies will fall above this value. It is represented by the lower end of the lower box.
- **Median value or Quartile 2:** The middle value and one way to measure the average. Half of the agencies will fall above the median value and half of the agencies will fall below the median value. It is represented by the point at which the two boxes meet.
- **Quartile 3:** This value can also be thought of as the 75<sup>th</sup> percentile. That is, 75% of agencies will fall below this value and 25% of agencies will fall above this value. It is represented by the upper end of the upper box.
- **Maximum value:** The biggest or largest value. Depending on how spread out the data point are, it may be represented by a dot or the end of a whisker.
- **Interquartile range (IQR):** The difference between Quartile 3 and Quartile 1. This number is used to calculate which data points are considered to be outliers.
- **Outliers:** Outliers are represented with dots, above and/or below the whiskers. These are values that are considered to be much different than the middle 50% of values (represented by the boxes). Mathematically, a lower outlier occurs when its value is less than (**Quartile 1 - (1.5\*IQR)**). An upper outlier occurs when its value is greater than (**Quartile 3 + (1.5\*IQR)**).

## LOCAL BOARD OF HEALTH COORDINATION, OPERATIONS, AND ADMINISTRATION

### APPOINTING AUTHORITIES

County commissions and/or municipalities are the appointing authorities for local boards of health and are responsible for creating, establishing and maintaining a local board of health (single county, combined county or combined county/municipal), appointing members of the local board and providing financial support for the operation of the LHD (W.Va. Code §16-2-3-8, 2017).

---

### APPOINTMENT OF LOCAL BOARDS OF HEALTH

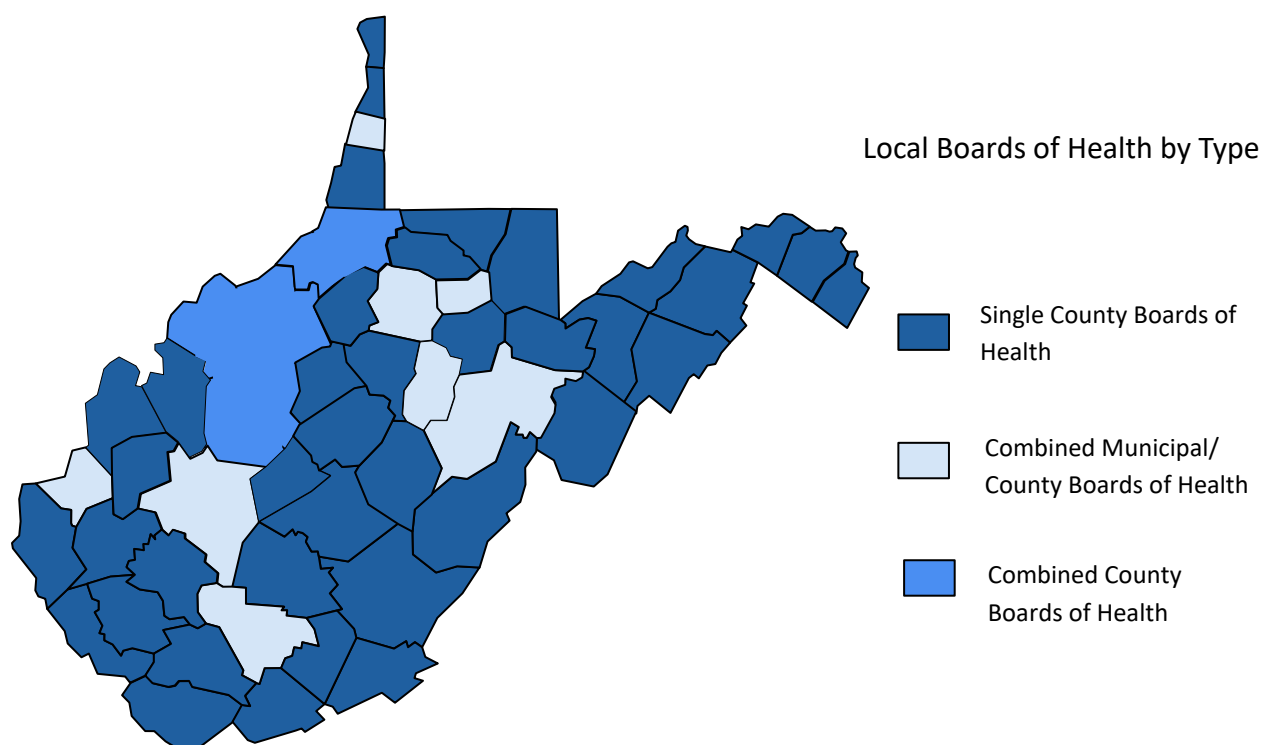
Local boards of health must be formed as a single county board, a combined county board of two or more counties, or a combined county/municipal board. The membership requirements for boards of health include balanced representation of professional expertise, political affiliation, and magisterial districts, as well as requirements for residency in the county or municipality (W.Va. Code §16-2-3-8, 2017) (Table 3).

Table 3. Requirements for forming local boards of health

Board of Health Type	Required Numbers of Members	Requirements
Single County	5 members	<ul style="list-style-type: none"> <li>• Must reside in county</li> <li>• No more than 2 representing the following: <ul style="list-style-type: none"> <li>○ Licensed, certified or engaged in, or actively participating in the same district</li> <li>○ Residing in the same magisterial district</li> </ul> </li> <li>• No more than 3 belonging to the same political party</li> </ul>
Combined County or Combined County and Municipal	Minimum of 5 members (minimum of 1 and no more than three member(s) from each participating county and/or municipality)	<ul style="list-style-type: none"> <li>• Must reside in county and/or municipality</li> <li>• No more than 2 representing the following: <ul style="list-style-type: none"> <li>○ Licensed, certified or engaged in, or actively participating in the same profession/occupation</li> <li>○ Residing in the same magisterial district</li> </ul> </li> <li>• No more than ½ the total members may be licensed, certified or engaged in, or actively practicing in the same profession/occupation</li> <li>• Same political affiliation may not exceed by more than one the number of another party</li> <li>• No member may represent more than one county of municipality</li> </ul>

West Virginia's 55 counties are served by 49 local boards of health. Currently, 39 local boards are single county, two are combined county boards and eight are combined county/municipal boards (Figure 1).

Figure 1. Local boards of health by type (N=49)

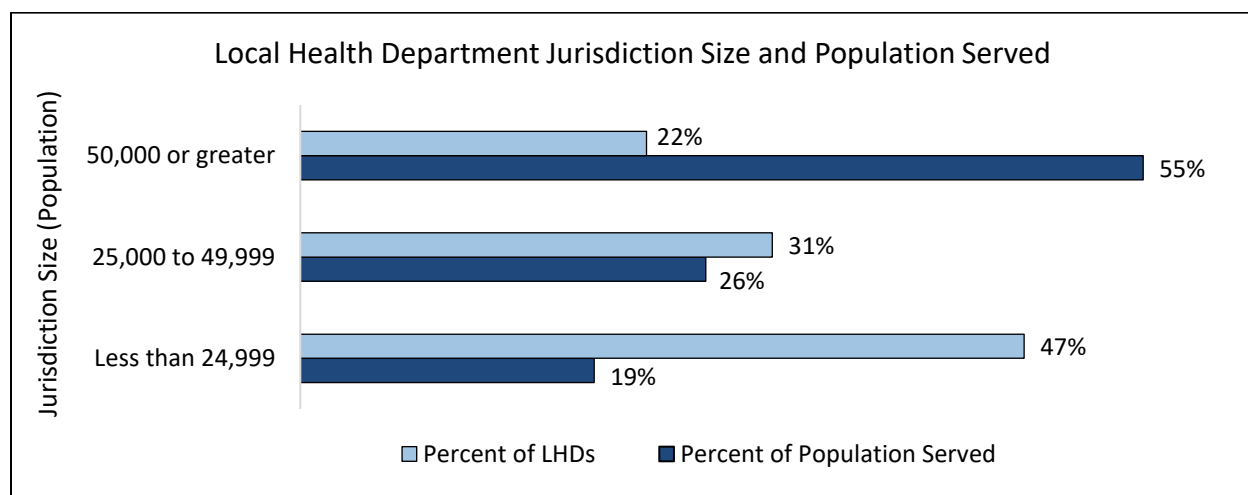


#### LOCAL BOARD OF HEALTH JURISDICTIONS

Forty-nine local boards of health assure services are provided to West Virginia residents in all 55 counties. The National Association of City and County Health Officials (NACCHO) defines small health departments as those serving populations less than 50,000, medium health departments as those serving populations of 50,000-499,999 and large health departments as those serving populations of 500,000 or more. Across the United States, 62% of LHDs serve populations of less than 50,000 people, 33% serve populations between 50,000 and 499,999 people, and 6% serve populations of 500,000 or more. In West Virginia, LHDs tend to serve smaller populations; in fact, almost half of LHDs (47%) serve populations of less than 25,000 people ("extra-small" LHDs). Thirty-one percent (31%) serve populations between 25,000 and 49,999 ("small" LHDs), and 22% of LHDs serve populations of 50,000 or more ("medium" LHDs) (Figure 2). Medium-sized LHDs serve over half of West Virginia's population (55%), while extra-small LHDs serve 19% of West Virginia's population.



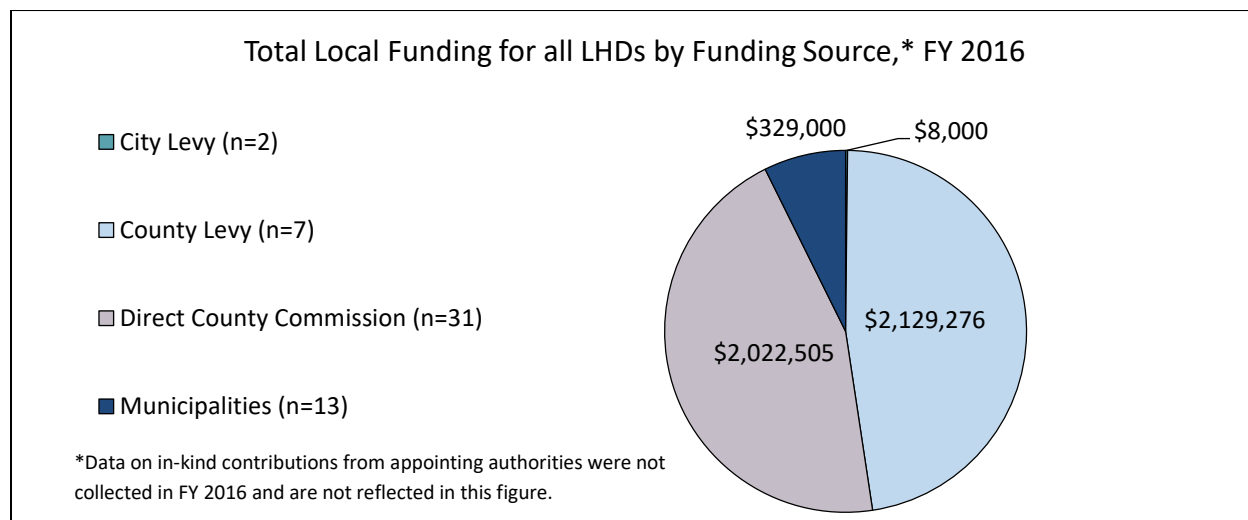
Figure 2. Local health department jurisdiction size and population served, West Virginia, 2016



#### LOCAL SUPPORT FOR LOCAL BOARDS OF HEALTH

Local appointing authorities (county commissions and municipalities) are required to provide financial support to LHDs. Funding provided by appointing authorities represents approximately 10% of the total revenue reported by LHDs in FY 2016. In the same reporting period, 31 of the 49 LHDs reported receiving direct funding from the county commission totaling \$2,022,505. In comparison, seven LHDs reported receiving funding from a county levy totaling \$2,129,276, which makes up nearly half (48%) of all reported local funding. Two LHDs reported receiving city levies, totaling \$8,000, and 13 agencies reported receiving direct funding from municipalities, totaling \$329,000 (Figure 3). Eleven LHDs did not report any local source of revenue in the FY 2016.

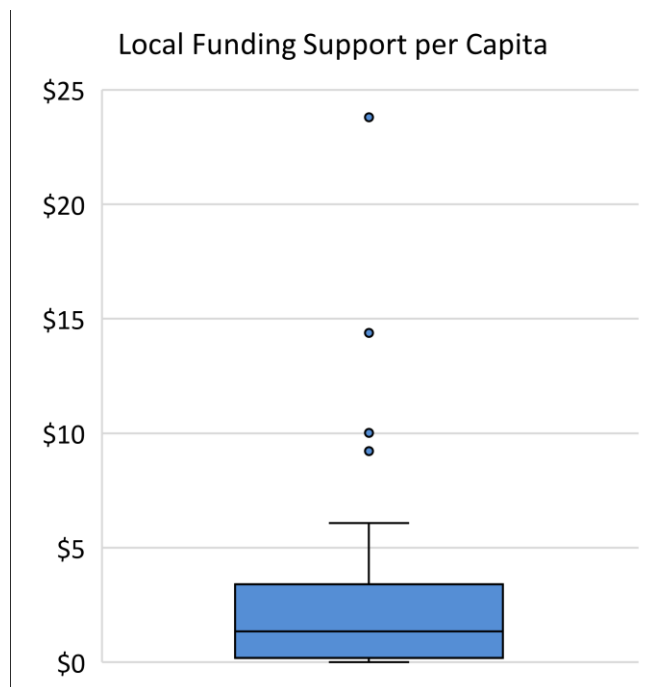
Figure 3. Total reported local funding source, FY 2016. Source: FY 2016 Financial Report



Per capita, funding collected via county levies provided significantly more funding to LHDs than any other source of local revenue in West Virginia. For FY 2016, the mean per capita revenue from county levies was \$8.47; in comparison, the second-highest mean per capita local revenue source was from direct county commissions at \$2.14.

The total amount of local support per capita for all LHDs in West Virginia ranged from \$0 to \$23.80, with a median of \$1.30 and a mean of \$2.60 (Figure 4). Among all LHDs, 75% receive less than \$2.80 of local support per capita, and one quarter of LHDs receive less than \$0.20 of local support per capita. West Virginia's mean per capita local support is almost five times lower than the U.S. Southern Region (\$2.60 vs. \$12), which includes West Virginia, and almost six times lower than the local support per capita nationwide (\$15) (NACCHO, 2016).

Figure 4. Local funding support per capita by local health department (N=49), FY 2016. Source: FY 2016 Financial Report



While not collected on the FY 2016 End of Year Financial Report, regional meetings with LHDs revealed that some LHDs also receive varying degrees of and in some cases, significant in-kind donations from appointing authorities. Data on in-kind donations has historically been difficult to report on consistently but includes facilities, staffing, supplies and/or support services.

## PUBLIC HEALTH ADMINISTRATION

Local boards of health may provide services by employing staff or contracting with individuals and/or organizations to deliver services and/or programs. Eligible staff employed by the board of health shall be covered by the rules of the West Virginia Division of Personnel unless the local board of health establishes and adopts an alternative merit system with the approval and consent of the appointing authority. Currently, all local boards of health with eligible employees have adopted the rules of the West Virginia Division of Personnel. Of the 49 local boards of health serving 55 counties, 47 employ staff covered by the West Virginia Division of Personnel. Two local boards of health do not employ staff. The local public health services for these two agencies are provided via contracts.

Several public health programs are administered regionally. However, regional configurations differ between programs. The number of regions, geographic area, and population size served also differs too. The table below describes various regional configurations that facilitate public health program and service delivery in West Virginia (Table 4). These programs include DHHR's Preparedness and Response; DHHR's Epidemiology; DHHR's Disease Intervention Specialists; DHHR's District Sanitarians; and DHHR's Women,

Infants, and Children (WIC). The Preparedness and Response regions support mutual aid during emergency response efforts, as well as coordinate exercises and drills through the Public Health Emergency Program. The Regional Epidemiology Program ensures epidemiological capacity is readily available to all LHDs to support disease surveillance, prevention, and control. District Sanitarians work in assigned geographic regions to provide on-the-job training for sanitarians in LHDs and provide assistance to LHDs in conducting epidemiologic investigations and performing environmental health activities related to disasters. Disease Intervention Specialists (DIS) work through regions to prevent disease transmission by using investigative techniques to locate infected patients, their partners, and others suspected of having an STD or HIV and referring them for testing and/or treatment. DIS also educate patients and partners to decrease the chance of spreading or acquiring HIV and STDs. WIC, a program that provides participants with nutrition education, breastfeeding support, free supplemental healthy food, immunization screenings, and referrals for other health and social service needs, is administered through eight regional health care entities, known as local agencies (LAs), three of which are LHDs. Each LA has a director and a central office and operates the client service component of the WIC program.

**Table 4. Regional configurations**

<b>Program</b>	<b>Number of Regions</b>	<b>Range of Populations Served by Region</b>	<b>Range of Square Miles within Region</b>	<b>Range of Number of Participating LHDs</b>
Preparedness and Response	8	131,904 to 316,360	911 to 4,959	1 to 10
Epidemiology	6	300,712 to 316,480	2,585 to 5,903	6 to 11
Disease Intervention Specialists	9	84,788 to 303,577	911 to 5,835	1 to 10
District Sanitarians	5	267,705 to 556,646	3,190 to 6,754	6 to 13
Women, Infants, and Children	8	102,177 to 430,499	1,224 to 4,457	4 to 9

## LOCAL PUBLIC HEALTH PROGRAMS AND SERVICES

### BASIC PUBLIC HEALTH SERVICES

Chapter 16, Article 2 of the West Virginia Code defines the services that must be provided by local boards of health as Basic Public Health Services. Basic Public Health Services are those services that are necessary to protect the health of the public and that a local board of health must provide. The three areas of basic public health services are defined below.

---

## COMMUNICABLE AND REPORTABLE DISEASE PREVENTION AND CONTROL

Infectious diseases remain a major cause of illness, disability, and death (Healthy People 2020). Federal, state, and local public health agencies perform disease surveillance to identify, control, and prevent the spread of infectious diseases, including emerging and re-emerging diseases, such as Zika and Ebola. Surveillance can facilitate rapid information sharing and identify people in need of immediate treatment. These efforts protect people in West Virginia, the nation, and the world (Immunization and Infectious Diseases, 2014).

Vaccines are an extremely cost-effective service that saves lives. The increase in life expectancy during the 20<sup>th</sup> century can be attributed largely to immunizations, which greatly reduced infectious disease mortality in children. For each birth cohort vaccinated with the routine immunization schedule, society prevents 14 million cases of disease and saves 33,000 lives. But even today, approximately 42,000 adults and 300 children in the United States die from vaccine-preventable diseases each year (Immunization and Infectious Diseases, 2014). In West Virginia, LHDs administered 87,767 vaccines in 2016 (West Virginia Statewide Immunization Information System).

LHDs provide services to prevent and control the spread of communicable and reportable diseases, including disease surveillance, case investigation and follow-up, outbreak investigation, response to epidemics, and prevention and control of rabies, sexually transmitted diseases, vaccine preventable diseases, HIV/AIDS, tuberculosis, and other communicable and reportable diseases.

With support from six regional epidemiologists and the Bureau for Public Health Division of Infectious Disease Epidemiology (DIDE), LHDs identified 210 outbreaks throughout the state in 2015, 198 of which were confirmed as clusters or outbreaks of disease (Office of Epidemiology and Prevention Services, 2015). The state is divided into six reporting regions, each with a regional epidemiologist who serves to support investigation of outbreaks and reporting of disease (Figure 5). In 2015, 71% of confirmed outbreak investigations were led by LHDs, 23% were led by a regional epidemiologist, 3% were led by the Centers for Disease Control and Prevention (CDC), and 3% were led by DIDE (Office of Epidemiology and Prevention Services, 2015). Confirmed outbreaks for 2015 are shown by type (Figure 6) and by region of incident (Figure 5).

Figure 5. Outbreak by epidemiology regions, West Virginia, 2015. Source: OEPS

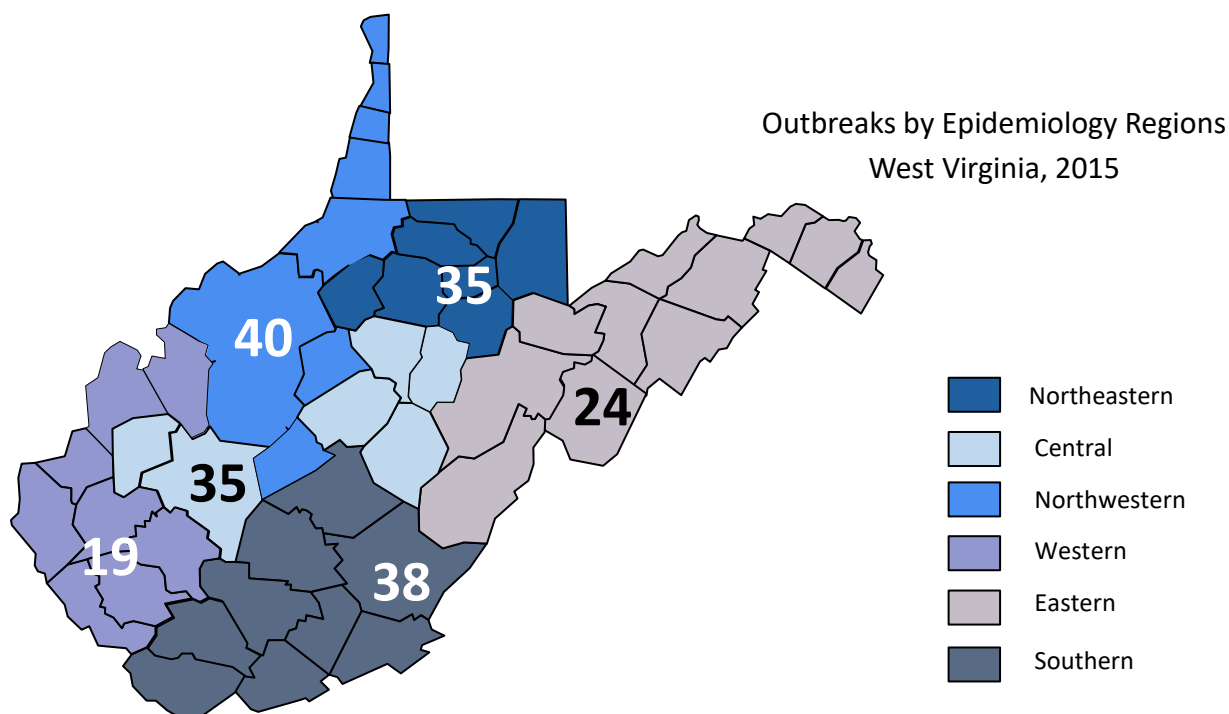
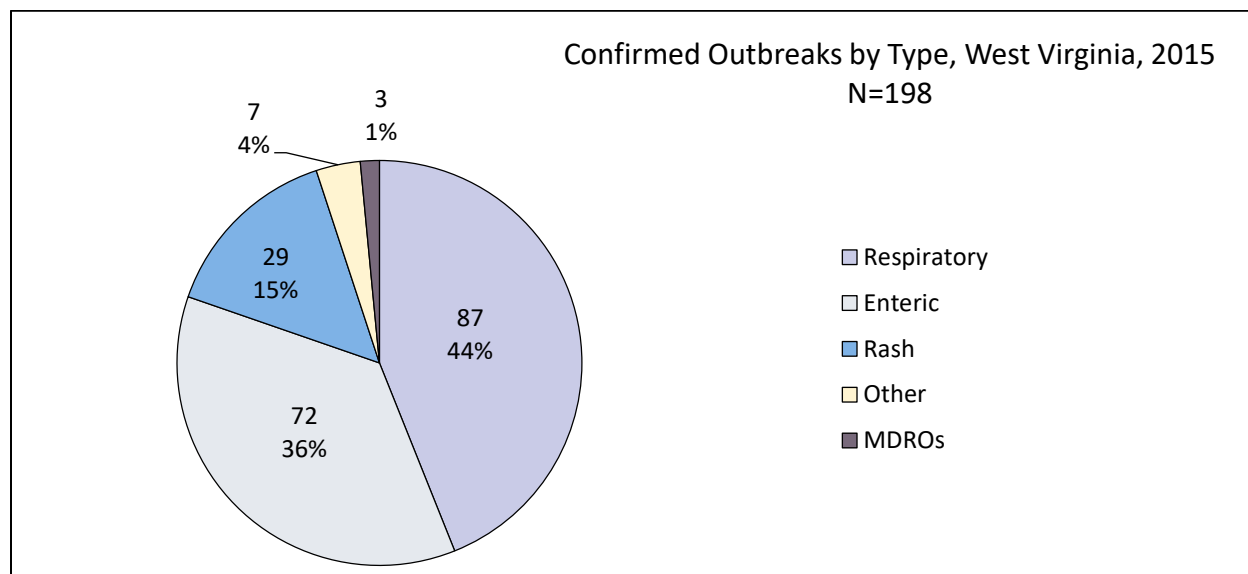


Figure 6. Confirmed outbreaks by type, West Virginia (N=198), 2015



With support from all 49 LHDs, the West Virginia Division of Tuberculosis Elimination works to achieve the absence of indigenous transmission of tuberculosis (TB) in West Virginia. In addition to receiving reports of TB from healthcare providers and reporting cases of TB to the state health department, LHDs perform testing, follow up with suspected cases and case contacts, and implement directly observed therapy (DOT) for persons infected with TB.

While there were only 14 newly diagnosed cases of active TB disease in 2016 (Office of Epidemiology and Prevention Services, 2016), each case of active TB requires extensive follow up with potential case contacts (sometimes 100 or more) and directly observed therapy, where a public health nurse, on a daily basis, observes the patient when he or she takes medication to treat their TB. Treatment for active TB disease typically lasts between six and 12 months. Additionally, while those with latent TB infection cannot spread TB, treating latent infections is crucial to achieve TB elimination, as it may develop into active TB which can then be transmitted to others. In 2016, 11,773 people were tested for TB infection by LHDs statewide (Office of Epidemiology and Prevention Services, 2017). This led to the identification of 189 latent tuberculosis infections (LTBIs), most of which were treated prophylactically. Treatment for LTBIs typically lasts three or four months depending on the medication used.

The Reportable Disease Rule, 64CSR7, mandates that specific diseases and conditions be reported to public health authorities. Based on the disease or condition, healthcare facilities, healthcare providers, and laboratories must report cases and suspects to either the LHD or the state health department (WV Reportable Disease Manual, n.d.). LHDs are responsible for entering information into the appropriate West Virginia Electronic Disease Surveillance System (WVEDSS) reporting form and performing case investigations. In 2015, LHDs participated in 5,902 disease investigations related to vaccine-preventable diseases, viral hepatitis (excluding chronic hepatitis C which are generally investigated by the state), food and waterborne diseases and selected zoonotic diseases.

All LHDs are expected to provide testing for HIV/AIDS, chlamydia, gonorrhea, and syphilis. West Virginia's 49 LHDs provide testing services for HIV/AIDS, chlamydia, gonorrhea, and syphilis. In 2016, LHDs submitted 59,904 specimens to DHHR's West Virginia Office of Laboratory Services for HIV screening tests. Health departments also submitted 12,008 specimens for gonorrhea and chlamydia testing, and 2,620 specimens for syphilis testing.

---

## COMMUNITY HEALTH PROMOTION

Community health promotion services include assessing and reporting community health needs to improve health status, facilitating community partnerships including identifying the community's priority health needs, mobilizing communities around identified priorities, and monitoring the progress of community health education services.

W.Va. Code §16-2-11 requires local boards of health to establish and provide a community health promotion program. This requirement is also a prerequisite for state and local public health agency accreditation (Public Health Accreditation Board, 2015). Local boards of health submit their most recent community health assessment (CHA) as part of the annual Program Plan reporting requirements.

In addition to meeting statewide requirements and compiling information on the health of communities, CHAs and community health improvement plans (CHIPs) can provide additional value to agencies and communities. The CHA/CHIP process can produce positive community engagement and partnerships and motivate policymakers (Wetta, Dong, LaClair, Pezzino, & Orr, 2015).

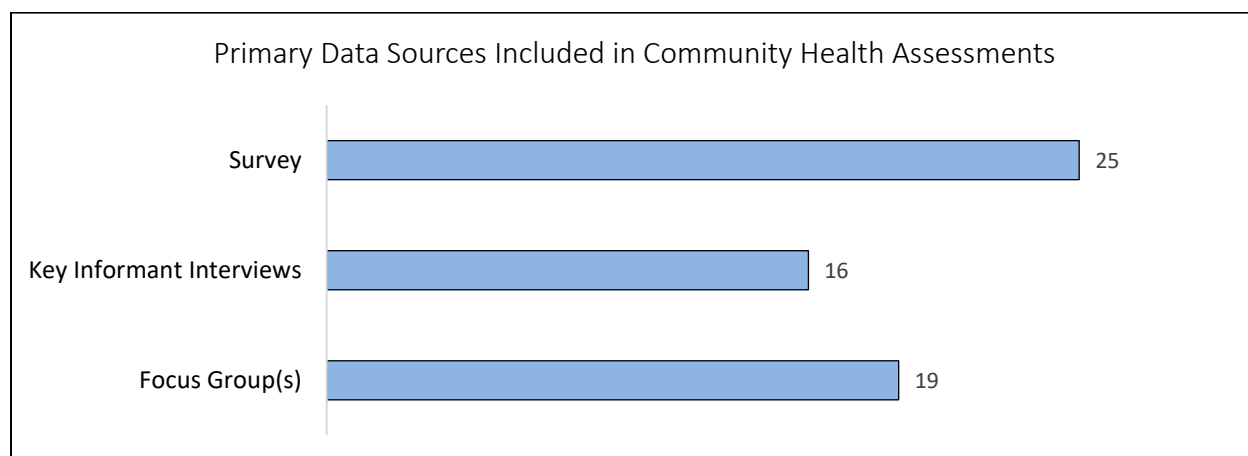
All 49 LHDs submitted CHAs as part of the FY 2016 Program Plan; there were 45 unique CHAs. Most CHAs (28) were facilitated by LHD staff. Fifteen CHAs were facilitated by third parties, including consultants and community coalitions; seven of these were hospital CHAs performed to fulfill the requirement of the Patient Protection and Affordable Care Act for all not-for-profit 501(c)(3) hospitals. One additional CHA was performed by the hospital itself. While LHDs are not required to facilitate the CHA process themselves, recognizing the facilitating organization or agency of the CHA is important for several reasons. The use of external consultants to compile the CHA and facilitate the prioritization process may contribute to reduced community ownership and community engagement (Wetta, Dong, LaClair, Pezzino, & Orr, 2015). Additionally, hospital CHAs may focus more on medically oriented information rather than a more holistic community health perspective (Wetta, Dong, LaClair, Pezzino, & Orr, 2015), a hallmark of public health.

Nonprofit hospitals are required to perform CHAs every three years, while the requirements established in West Virginia and by PHAB require that the CHA is completed or updated every five years. While collaboration between LHDs and hospitals allows participating organizations to pool resources, and can improve the quality of health assessments (Singh & Carlton, 2016), the different timing cycles between hospitals and LHDs may present an obstacle to collaboration between these two entities that are both required to assess their communities (Wetta, Dong, LaClair, Pezzino, & Orr, 2015). Another potential challenge to collaboration between hospitals and LHDs is the geographic scope of the assessment. In the CHAs submitted in 2016, some counties were assessed more than once by different entities. Because hospital CHAs address the hospital service area, which may cover multiple counties, and LHD CHAs tend to be focused on a specific health department jurisdiction or jurisdictions, there was some overlap in assessing certain communities, and eight CHAs included data on more than one county. The hospital CHAs submitted to CLH differed from LHD CHAs in that they tended to focus on utilization rates and indicators of hospital performance, rather than public health indicators. Additionally, hospitals tend to define their community based on market factors, in contrast to LHDs, which focus on specific legal or regulatory jurisdictions (Singh & Carlton, 2016). Per IRS requirements, nonprofit hospital facilities must solicit and consider input from at least one state, local, tribal, or regional governmental public health department; if the hospital claims it could not obtain such input, it must document its efforts to obtain that input (79 Fed. Reg. 78953, 2017). This requirement provides an opportunity for cross-sector collaboration in assessing and addressing community health needs.

Three CHAs documented the use of a model and/or framework to conduct the assessment; two of these were multi-county assessments and one was a single county. All three agencies used the Mobilization for Action through Planning and Partnerships framework to guide the assessment process. According to PHAB standards, LHDs may choose to use an existing model for health assessment; otherwise, health departments must document the key steps undertaken that outline the process for identifying and collecting data and information, identifying health issues, and identifying existing assets and resources to address those issues (Public Health Accreditation Board, 2013).

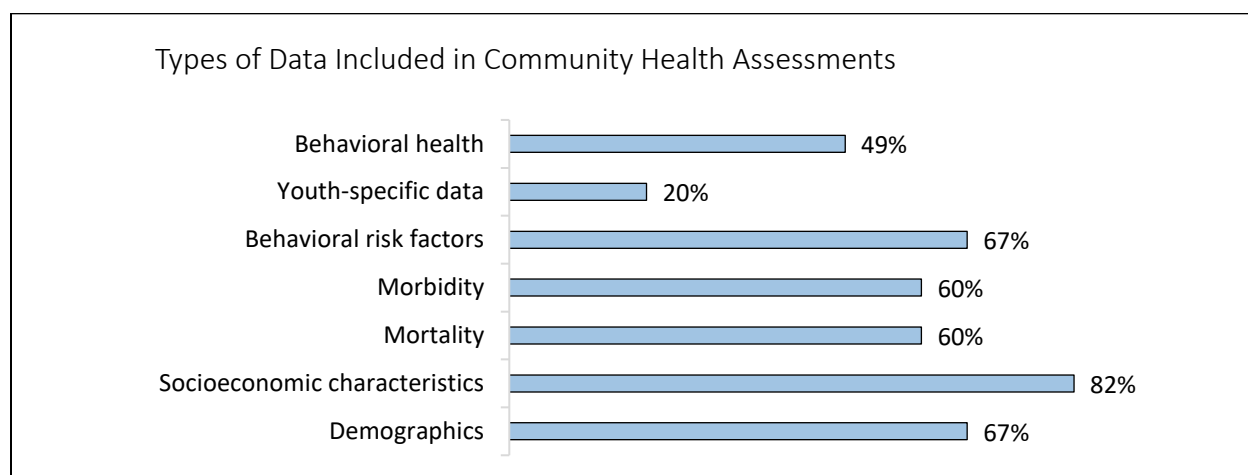
CHAs submitted as part of the Program Plan incorporated a variety of data sources. Thirty-nine CHAs contained at least one source of primary data. Community surveys were the most frequently documented method for primary data collection (25; 56%), 19 CHAs (42%) documented the use of focus groups; 16 CHAs (36%) documented key informant interviews (Figure 7).

**Figure 7. Primary data sources included in community health assessments (N=45), FY 2017**



Thirty-five CHAs (78%) included at least one source of secondary data. Thirty-eight CHAs (84%) included quantitative data, and 32 (71%) included qualitative data. Twenty-five CHAs (56%) documented the use of primary data, secondary data, qualitative data and quantitative data, all of which must be included in the CHA to adhere to PHAB standards (Public Health Accreditation Board, 2013). CHAs included data on a variety of topics (Figure 8).

**Figure 8. Types of data included in community health assessments (N=45), FY 2017**



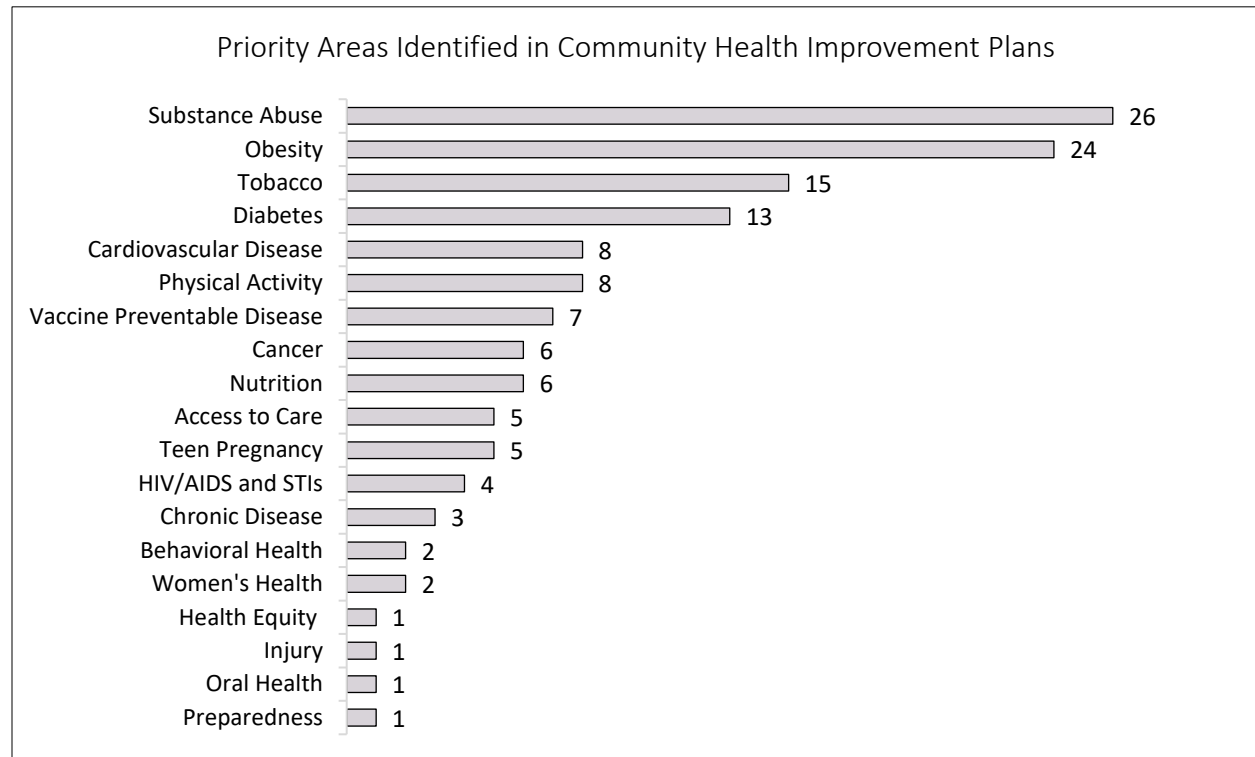
CLH recognizes that CHAs are the product of much time and effort. To better understand the processes, efforts, challenges, and resources that CHAs require, CLH has changed the reporting requirements related to CHAs and CHIPs. For FY 2018 Program Plan reporting, each LHD will submit a CHA documentation form, developed to align with PHAB standards for CHA, in addition to each agency's CHA. The data collected on this form will be used to improve and target state support to LHDs for CHA, improvement, and planning.

LHDs also submitted CHIP forms as part of the FY 2017 Program Plan documentation. A CHIP, like a CHA, is a prerequisite to PHAB accreditation. The CHIP form collected information on engagement and collaboration with community partners and health priorities identified during the CHA process.



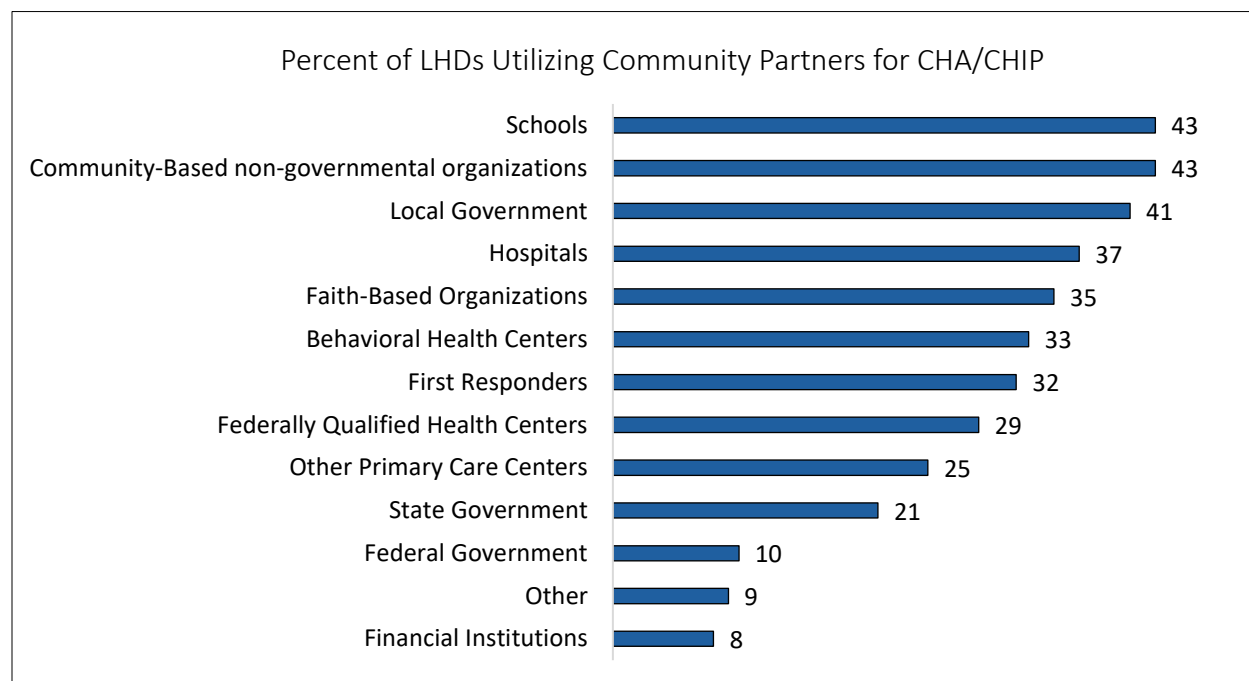
LHDs ranked between one and three health priority areas. Identified priority areas are shown in Figure 9. Substance abuse was the most cited priority area across health departments, and was closely followed by obesity. The third most frequently cited priority was tobacco.

Figure 9. Priority areas identified by local health department community health improvement plans (N=49), FY 2017



As shown in Figure 10, LHDs report a high level of engagement with community partners. More than two-thirds of LHDs report engaging community partners from schools, community-based nongovernmental organizations, local government, hospitals, faith-based organizations and behavioral health centers in the CHA and implementation planning process, closely followed by first responders (65%). Twenty-nine (59%) LHDs engaged federally qualified health centers, 25 (51%) engaged other primary care centers, and 21 (43%) engaged state government in the CHA/CHIP process. Ten (20%) or fewer health departments reported engagement from the federal government, financial institutions, and other areas.

**Figure 10. Percent of local health departments utilizing community partners for community health assessment and improvement plans (N=49), FY 2017**

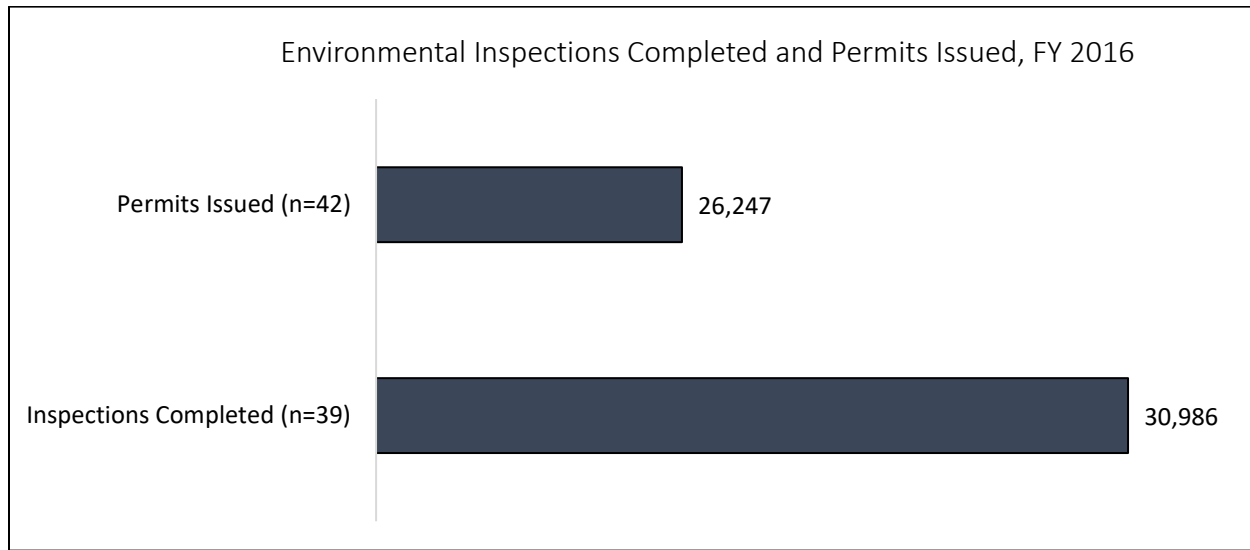


## ENVIRONMENTAL HEALTH PROTECTION

A safe and healthy environment is critical to human health. Outdoor air quality, surface and ground water quality, toxic substances and hazardous wastes, and the condition of homes and communities can impact health and safety (Environmental Health, n.d.). Globally, 23% of all deaths are due to preventable environmental factors (Environmental Health, n.d.).

In West Virginia, environmental health staff in LHDs work to protect communities from environmental health risks by inspecting food establishments, lodging facilities, institutions, recreational facilities, sewage and wastewater systems; inspecting and sampling private drinking water supplies; and responding to disease outbreaks, public health complaints, or disasters. In FY 2016, 39 LHDs reported performing 30,986 required inspections, and 42 LHDs reported issuing 26,247 environmental permits statewide; not all LHDs tracked inspections and permits in FY 2016 (Figure 11). Quarterly environmental health reports were implemented for FY 2017, and all health departments track detailed activities, including inspections and permits, using these forms.

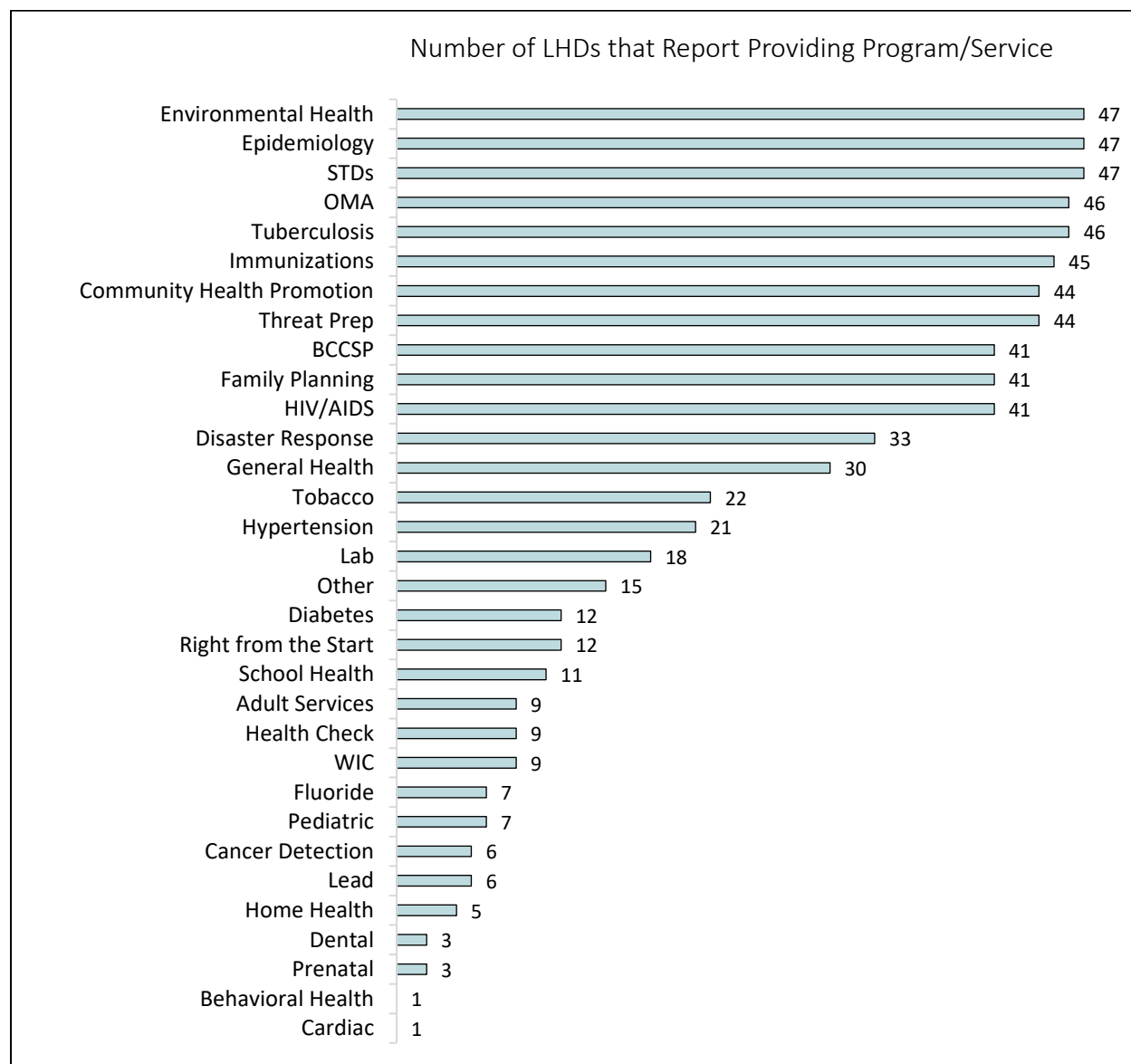
Figure 11. Total environmental inspections completed and permits issued, FY 2016



## ADDITIONAL PUBLIC HEALTH PROGRAMS

Local boards of health may provide other categorical and clinical programs when community need exists, and resources and capacity are available to support the programs. Figure 12 displays the number of LHDs in West Virginia that reported providing each program and/or service.

Figure 12. Number of local health departments that report providing program/service (N=49), FY 2016. Source: FY 2016 Financial Report



CLH conducted regional vetting sessions in the spring of 2017 to solicit feedback from LHDs regarding the validity and utility of data submitted to CLH. Discussions around programs and services provided by LHDs revealed limitations of the related data that should be considered.

First, the program categories and program definitions contained within the end-of-year reports were established many years ago and have not been updated to reflect current LHDs' activities and modern

expectations related to PHAB, the Affordable Care Act, or chronic disease programs. This has led to inconsistencies in reporting revenue, expenditures, and personnel by program, the lack of a valid statewide dataset of all the services that LHDs provide, and limited understanding of the specific activities performed within each program area. To address this, CLH is seeking information from state- and local-level partners to update and modernize program definitions and reduce inconsistencies in program-level reporting. Developing program categories that accurately reflect LHD programs and services will also help to address the PHITF recommendation to “conduct an assessment of the current system (state and local) responsible for the provision of statewide basic public health services including funding and revenue sources” (West Virginia Public Health Impact Task Force Final Report, 2015).

Second, regional meeting attendees expressed concerns that the data collected by CLH is not comprehensive enough to fully describe the activities performed by the local public health system. Specifically, infectious disease investigations, immunization programming, clinical services related to chronic disease, and encounters for family planning and breast and cervical cancer screenings are not well described by the financial and administrative data collected by CLH. CLH is currently working with offices within the Bureau for Public Health to identify and/or modify internal reporting capabilities that capture statewide data on clinical encounters, communicable and reportable disease prevention and control efforts and environmental health program activities.

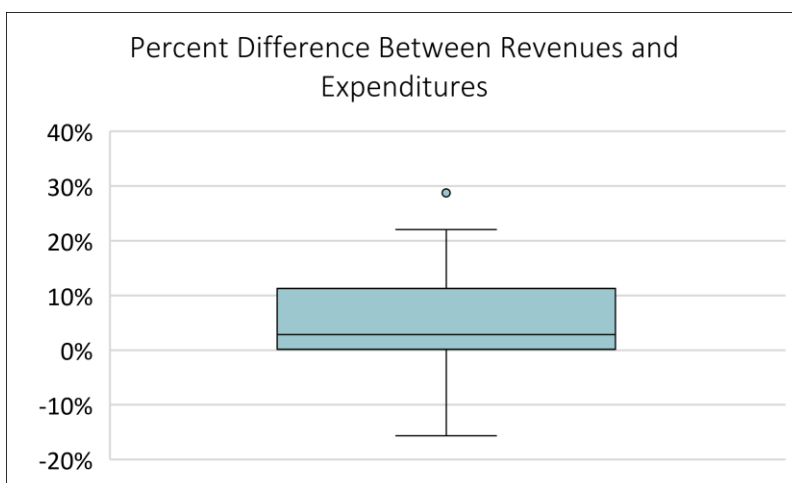
#### ANNUAL END OF YEAR FINANCIAL AND FEE REPORTS

All LHDs submit end-of-year financial reports annually to CLH. The data contained within the FY 2016 End of Year Financial Report and the FY 2016 End of Year Fees for Permits and Services Report, like all reports collected in the Program Plan, are self-reported by staff at each LHD. These reports collected information on revenue, expenditures, investments, programs and services provided, workforce, and billing in FY 2016.

#### PROFIT/LOSS AND INVESTMENTS

Figure 13 shows the percent difference between total reported revenue and combined personnel and operating expenditures for all 49 LHDs for FY 2016. Negative values indicate that expenditures exceeded revenues; positive values indicate that revenues exceeded expenditures. Forty-one local health departments reported revenue greater than expenditures. Of the eight agencies who reported expenditures greater than revenue, two reported expenditures that

**Figure 13. Percent difference between reported revenues and expenditures by local health departments (N=49), FY 2016. Source: FY 2016 Financial Report**



were more than 6% higher than revenues.

Figure 14 shows categories of the percent difference between expenditures and revenues (expenditures exceed revenues, expenditures equal revenues, and two equal categories for agencies whose revenues exceed expenditures: revenues exceed expenditures by 6% or less, and revenues exceed expenditures by more than 6%).

**Figure 14. Map of percent difference between revenues and expenditures by local health department (N=49), FY 2016. Source: FY 2016 Financial Report**

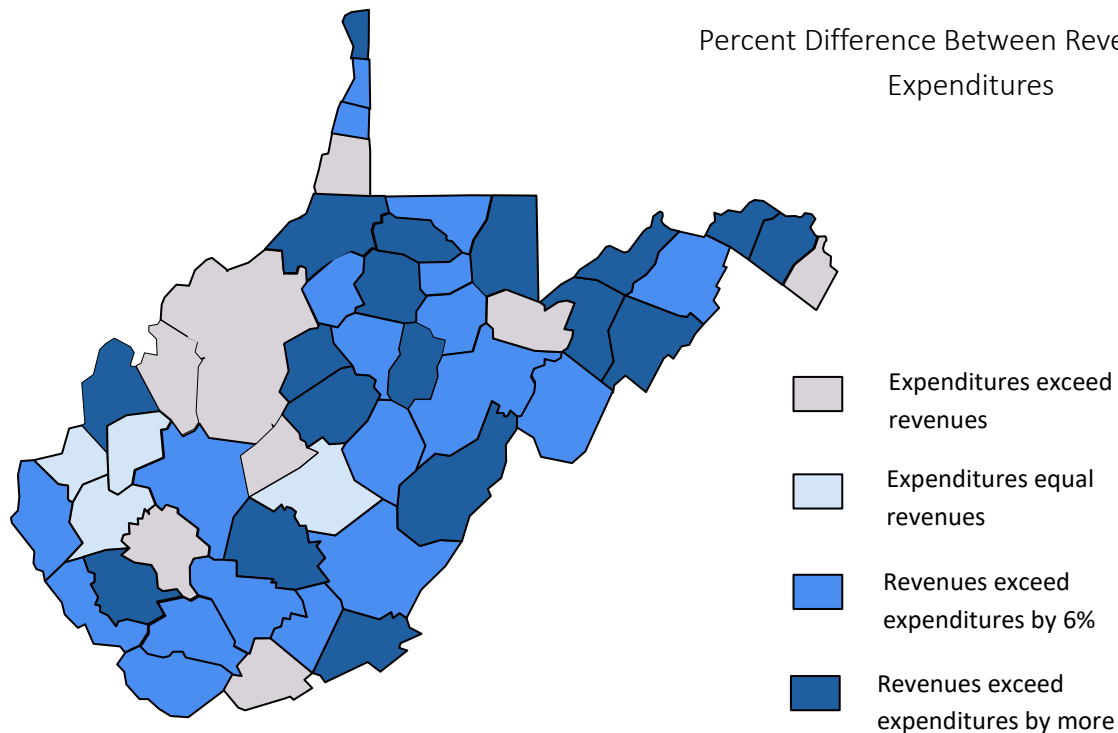
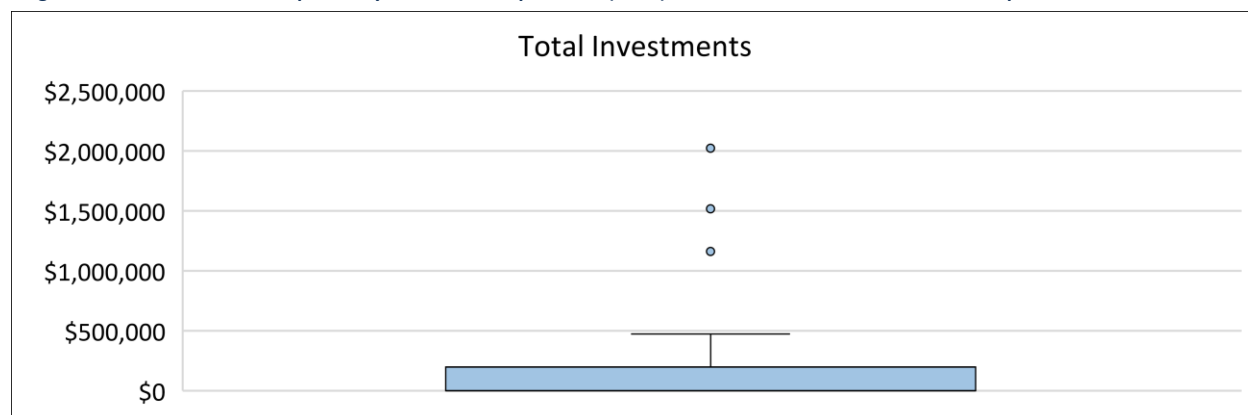


Figure 15 shows the total investments reported by LHDs, which is a sum of short- and long-term investments. Thirty agencies reported \$0 in total investments; the remaining 19 agencies reported having between \$41,497 and \$2,022,216 in total investments

**Figure 15. Total investments reported by local health department (N=49), FY 2016. Source: FY 2016 Financial Report**



## REVENUE BY SOURCE

The statewide total revenue reported by LHDs is provided in Figure 16. The funding allocated by the West Virginia State Legislature and administered by CLH represents approximately 39% of the total funding reported for FY 2016. LHDs report approximately 18% in federal funding, most of which is passed through the Bureau for Public Health. Funding provided by appointing authorities represents approximately 10% of the total revenue reported by LHDs. LHDs are permitted by West Virginia Code to establish and charge fees for services and report approximately 16% of their total revenue in clinical fees and 8% of their total revenue in environmental health fees for service and permits.

Figure 16. Local health department revenue by source (N=49), FY 2016. Source: FY 2016 Financial Report

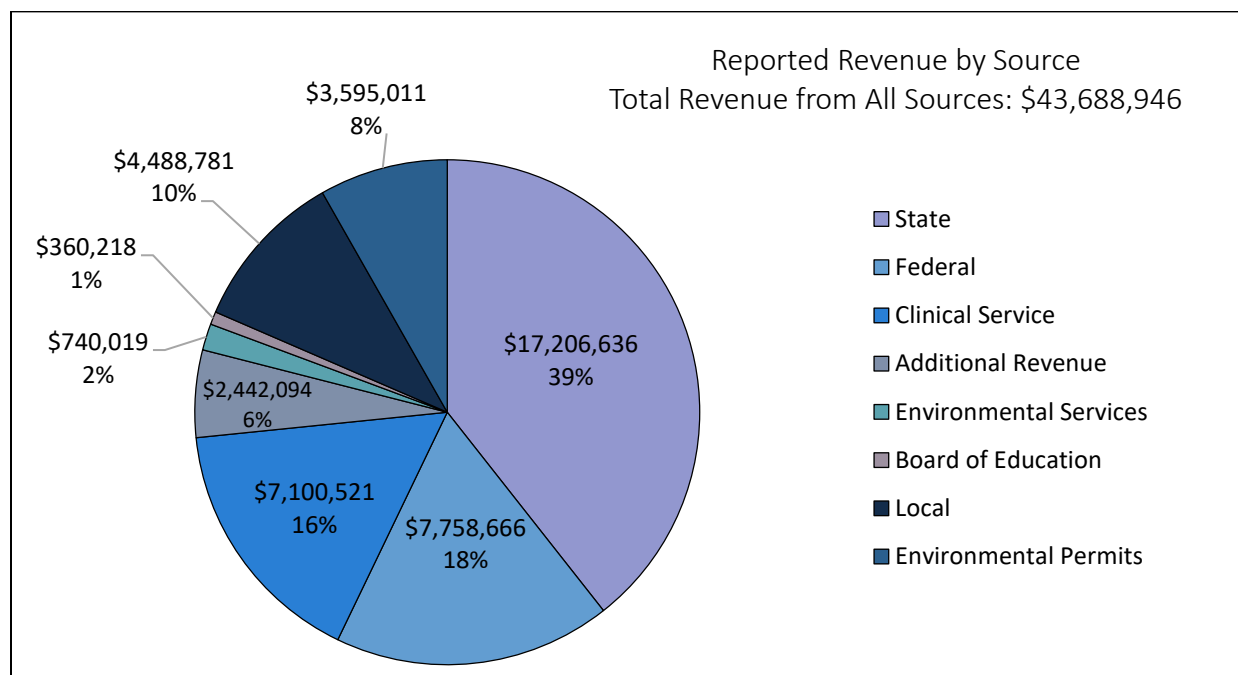
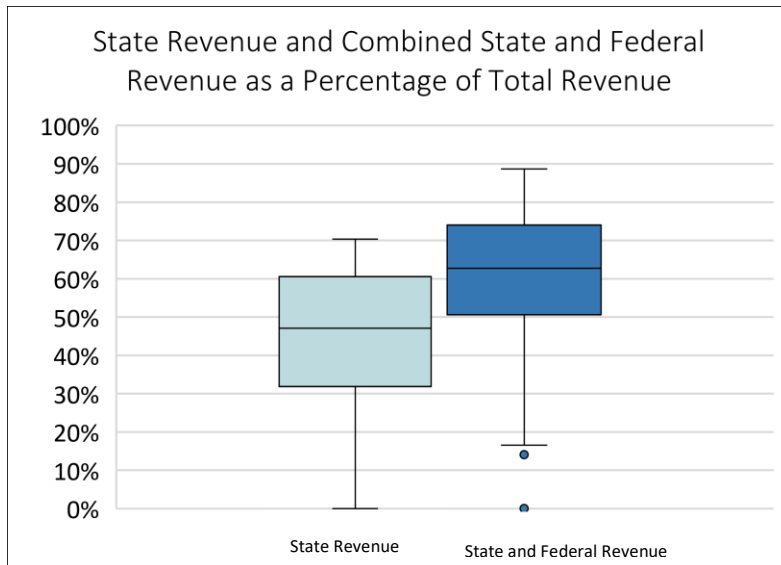


Figure 17 displays state revenue and combined state and federal revenue as a percentage of total revenue, by health department. While statewide, 40% of all reported LHD revenue comes from the state, one quarter of health departments reported that more than 60% of their total revenue is made up of state dollars. In contrast, another quarter of health departments reported that state dollars made up less than 32% of their total revenue. While the median percentage of LHDs' revenues that come from the state is 47%, it ranges from 14% to 70% (excluding the agency that reported receiving zero dollars in state funding), reflecting variation in the composition of LHD revenues across West Virginia. There is even greater variation when federal dollars are considered along with state revenue.

**Figure 17. State revenue and combined state and federal revenue as a percentage of total revenue by local health department (N=49), FY 2016**



Combined state and federal revenue as a percentage of total revenue ranges from 14% to 89% (again, excluding the agency that reported receiving zero dollars from both sources). For half of LHDs, 63% or more of their budget comes from state and federal sources. The impact of this variation may result in those agencies with a higher reliance on state and federal funding having less flexibility in programming and experiencing greater challenges with reducing state and federal dollars. Quartiles of these data are shown in the map below (Figure 18).

**Figure 18. Map of combined state and federal revenue as a percentage of total reported revenue by local health department (N=49), FY 2016.**  
Source: FY 2016 Financial Report

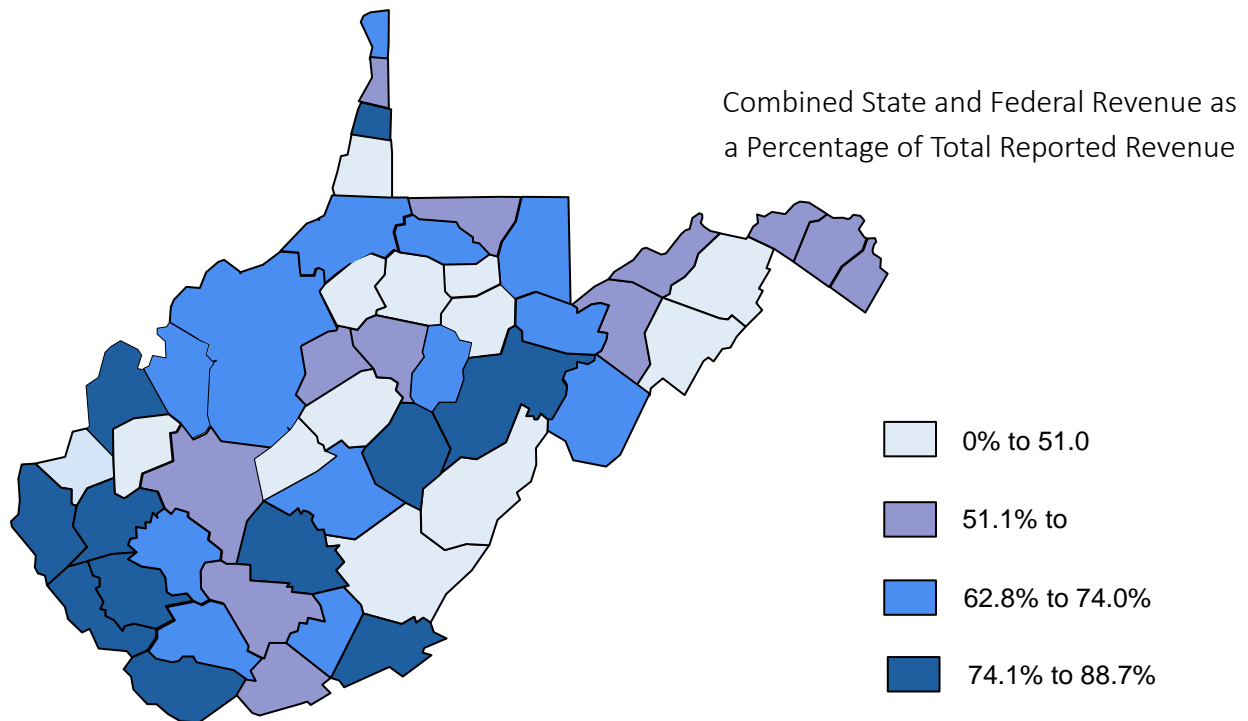
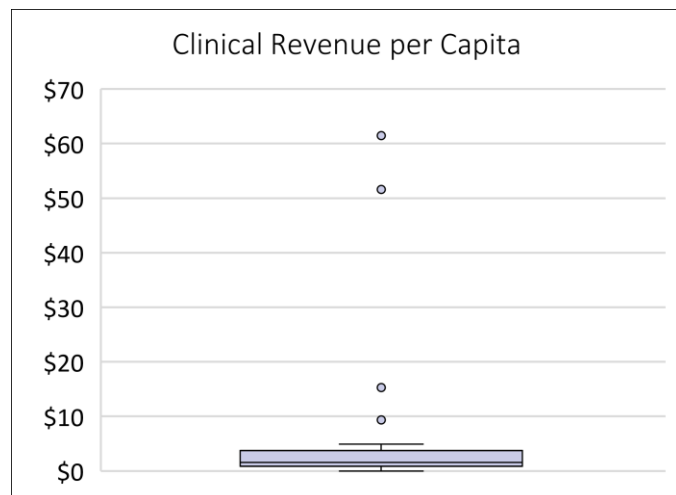


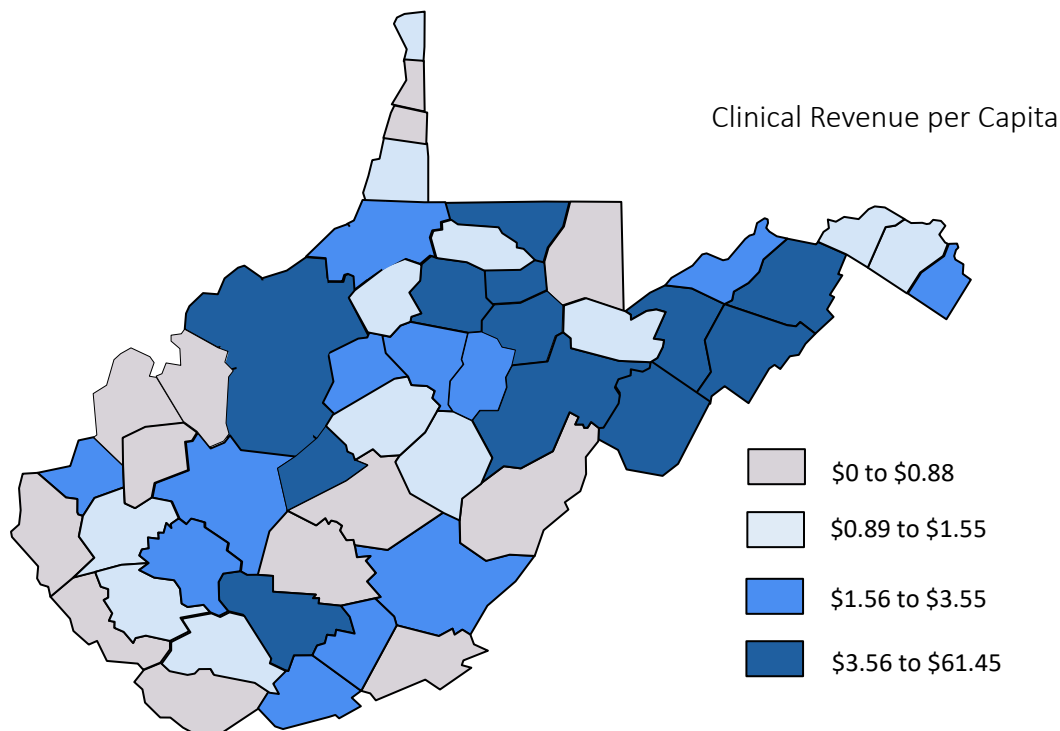


Figure 19. Clinical revenue per capita by local health department (N=49), FY 2016. Source: FY 2016 Financial Report



W.Va. Code R. 64CSR51 permits the Commissioner of DHHR's Bureau for Public Health and local boards of health to assess and collect reasonable fees for the provision of services, such as professional health services, screenings, injections, assessments, and counseling. The median per capita clinical revenue reported by LHDs is \$1.55 (Figure 19), less than half the national median in per capita clinical revenue of \$4 (NACCHO, 2016). Statewide, LHDs reported a total of \$7,100,521 collected from clinical fees in FY 2016. Quartiles of clinical revenue per capita are shown in Figure 20.

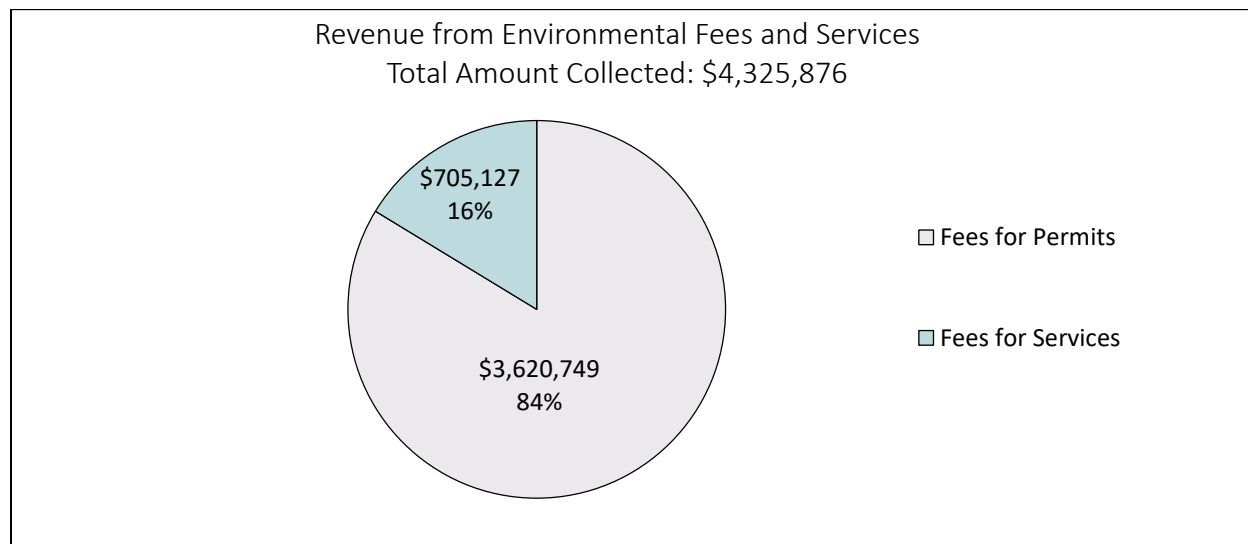
Figure 20. Map of clinical revenue per capita by local health department (N=49), FY 2016. Source: FY 2016 Financial Report



W.Va. Code R. 64CSR30 allows for local boards of health to charge fees for the issuance of environmental health permits covered under that rule, and each local board of health may charge any dollar amount up to the maximum established in the rule. Based on self-reported data from 2016, 29 (59%) LHDs charged the maximum fees permitted by law. When establishing a new fee for service, the fee cannot exceed 25% of the maximum amount. While fees may be increased with approval from the Commissioner, the increase

may not exceed 25% of the current fee, which may be a barrier to LHDs collecting additional revenue from environmental fees. In FY 2016, LHDs reported collecting \$705,127 in environmental fees for service and \$3,620,749 in environmental fees for permits (Figure 21). This results in a median of \$2.48 per capita in environmental fees from permits and services combined (Figure 22). Revenue from environmental fees (permits and services) are displayed by quartile in the map below (Figure 23).

**Figure 21. Revenue from environmental fees and services by local health department, FY 2016**



**Figure 22. Per capita revenue from environmental permits and services by local health department (N=49), FY 2016. Source: FY 2016 Financial Report**

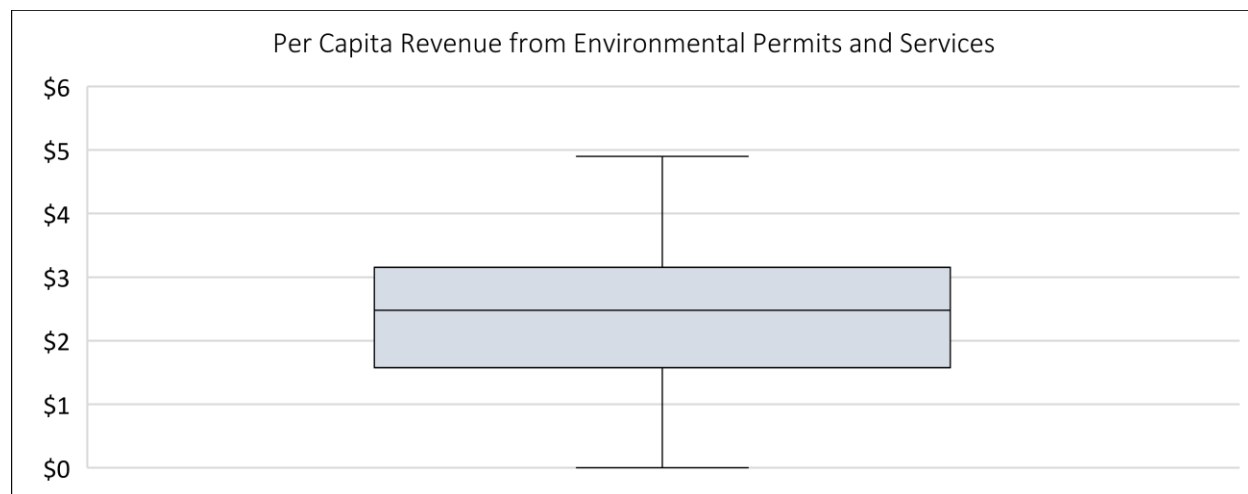
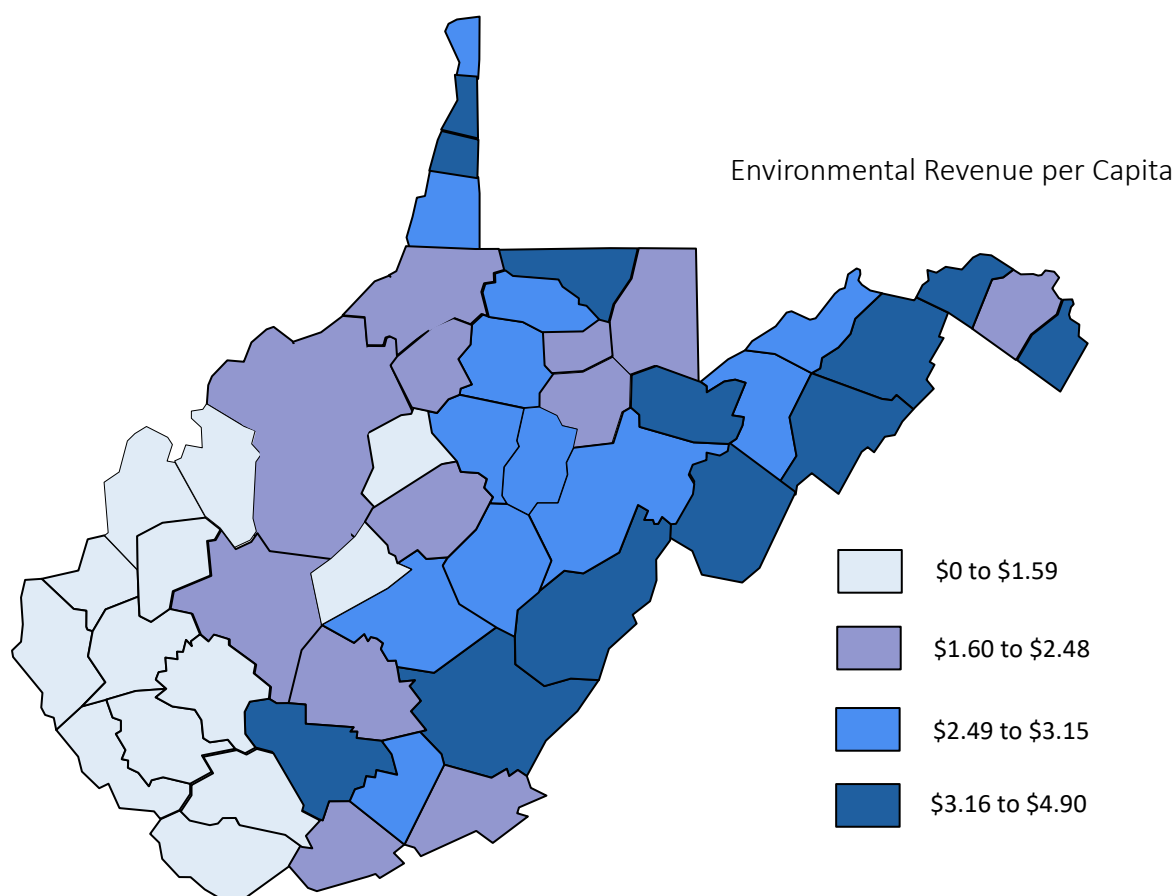


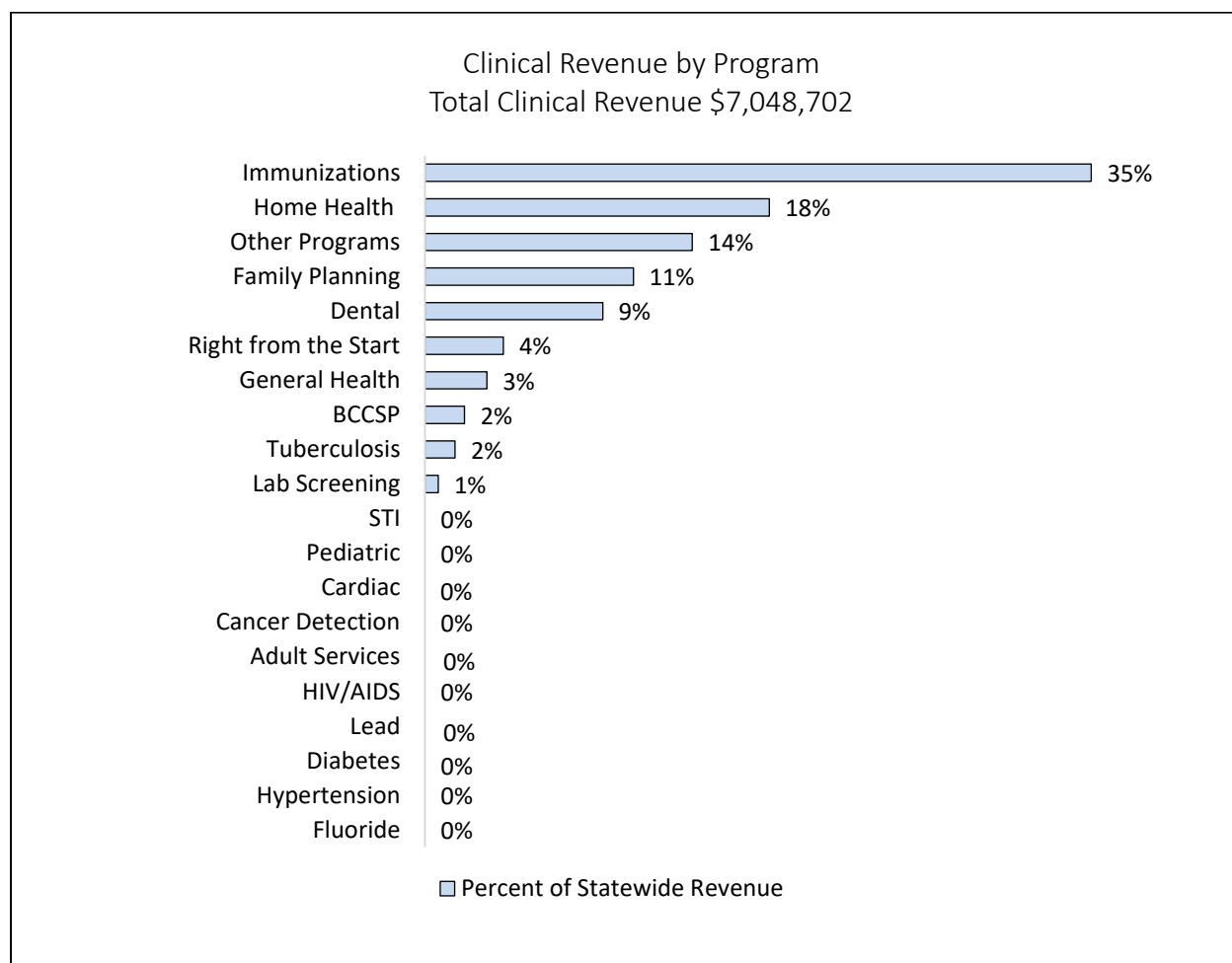
Figure 23. Map of environmental revenue per capita by local health department (N=49), FY 2016. Source: FY 2016 Financial Report



#### CLINICAL REVENUE BY PROGRAM AND PAYER

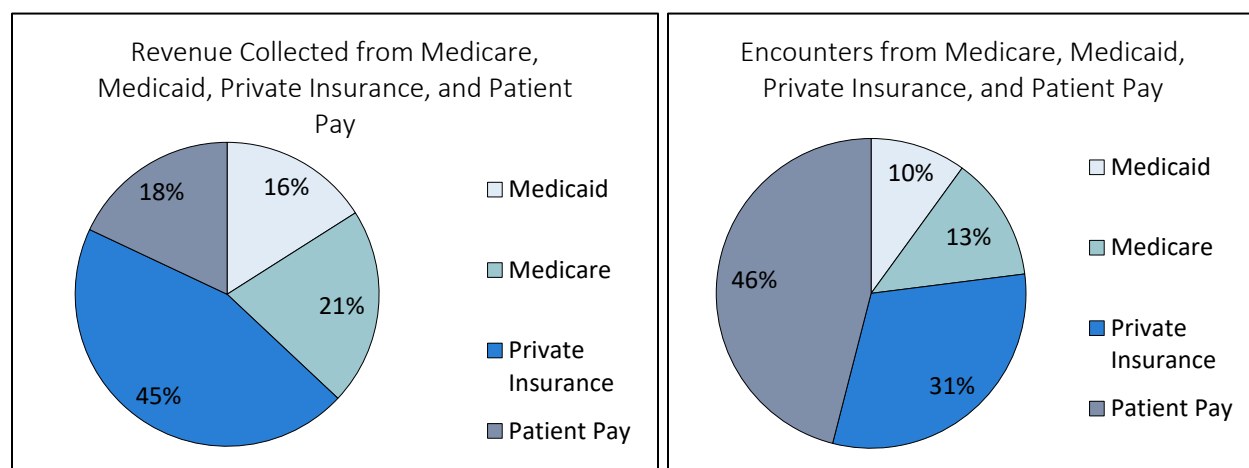
LHDs are permitted to bill for health services and reported \$7,048,702 in revenue generated by clinical fees in FY 2016. The top five revenue generating programs generate 87% of the total revenue from clinical services. Of the top five programs, 43% LHDs report revenue in immunizations and 41% report revenue in family planning. For the home health program, dental program and other programs, the revenue was reported by ten or fewer agencies (Figure 24). The remaining programs generate less than 5% of the total revenue collected in fees.

Figure 24. Clinical revenue by program, FY 2016. Source: FY 2016 Financial Report



LHDs may bill payers for clinical services. Figure 25 provides a summary of the revenue collected by payer and a summary of the encounters reported by payer. Revenue from payers was reported by LHDs on the FY 2016 End of Year Fee Report. Revenue collected from Medicare, Medicaid, private insurance, patient pay, and other payers was self-reported, as were encounters by payer. However, revenue and encounters for “other payer” were inconsistently reported across agencies and, therefore, are excluded from the figures; efforts to address these reporting inconsistencies are underway. Revenue from Medicare, Medicaid, private insurance, and patient pay totaled \$5,324,239. Similarly, encounters from Medicare, Medicaid, private insurance, and patient pay total 28,783. However, it should be noted that these numbers likely underestimate the revenue collected and encounters by payer.

**Figure 25. Revenue collected and encounters from Medicare, Medicaid, private insurance, and patient pay, FY 2016. Source: FY 2016 Financial Report**



Most, but not all, LHDs report billing or collecting revenue from payers, and fewer track encounters by payer (Table 6). Patient pay makes up a small proportion (18%) of reported statewide revenue from payers, but represents almost half (46%) of reported encounters at LHDs across the state. Revenue collected from private insurance represents almost half (45%) of identifiable clinical revenue, but only 31% of reported encounters statewide. The percentage of revenue from Medicaid and Medicare together make up about a third of statewide revenue from payers, but only 23% of encounters.

**Table 5. LHDs that report billing and report tracking encounters by payer. Source: FY 2016 Financial Report**

Payer	LHDs That Report Billing n (%)	LHDs That Report Tracking Encounters by Payer n (%)
Medicaid	41 (84%)	21 (43%)
Medicare	43 (88%)	24 (49%)
Private insurance	43 (88%)	20 (41%)
Patient self-pay	47 (96%)	21 (43%)

The implementation of the Affordable Care Act and the resulting expansion of the insured population in West Virginia has created new opportunities for revenue generation. Recently, funding streams from CDC have decreased, and funding streams from the Health Resources and Services Administration (HRSA) have increased. This requires public health agencies to adapt to these funding changes and challenges and to strategically address population health while ensuring that public health agencies are good stewards of public funds (West Virginia Public Health Impact Task Force Final Report, 2015). During the 2015 Legislative Session, two pieces of legislation were passed that removed barriers for LHDs related to billing. Senate Bill 404 authorized the Bureau for Public Health and LHDs to bill patients, either directly or through their medical health insurance providers, for the reasonable costs of HIV and STD testing except in cases where the individual requests anonymity and for individuals without insurance or the ability to pay. House

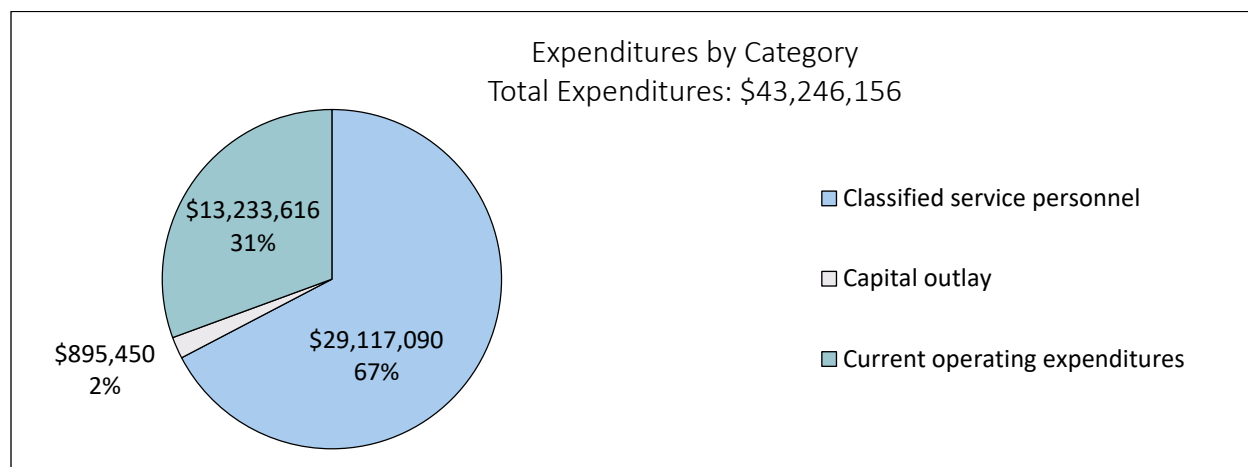
Bill 4659 provided an exception from the current requirement that fees for services charged by LHDs must be first subject to public comment and approval of the local board of health before being submitted and approved by the Commissioner. House Bill 4659 also enabled LHDs to bill payers at the maximum allowable rate. While these recent legislative changes are removing barriers that prevented LHDs from recouping payment for services provided, it is too soon to tell exactly how these changes have affected billing practices.

---

## EXPENDITURES BY CATEGORY

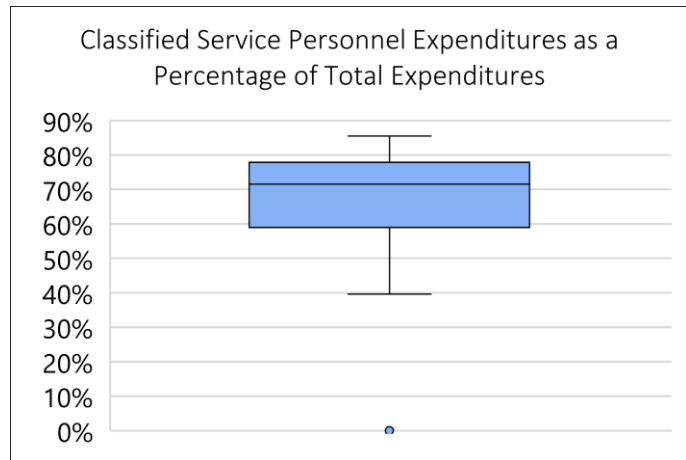
LHDs report expenditures by category as part of the end of year financial report, detailed in Figure 26. Classified service personnel expenditures include all expenditures for classified personnel, such as salaries and employee benefits. Capital outlay includes expenditures intended to add or expand property and equipment and benefit the agency over a long period of time. Current operating expenditures include expenditures other than personnel services, employee benefits, and capital outlay. Statewide, two-thirds of reported expenditures are attributed to classified service personnel; when examined by agency, the percentage of classified service personnel expenditures varies widely.

Figure 26. Expenditures by category, FY 2016

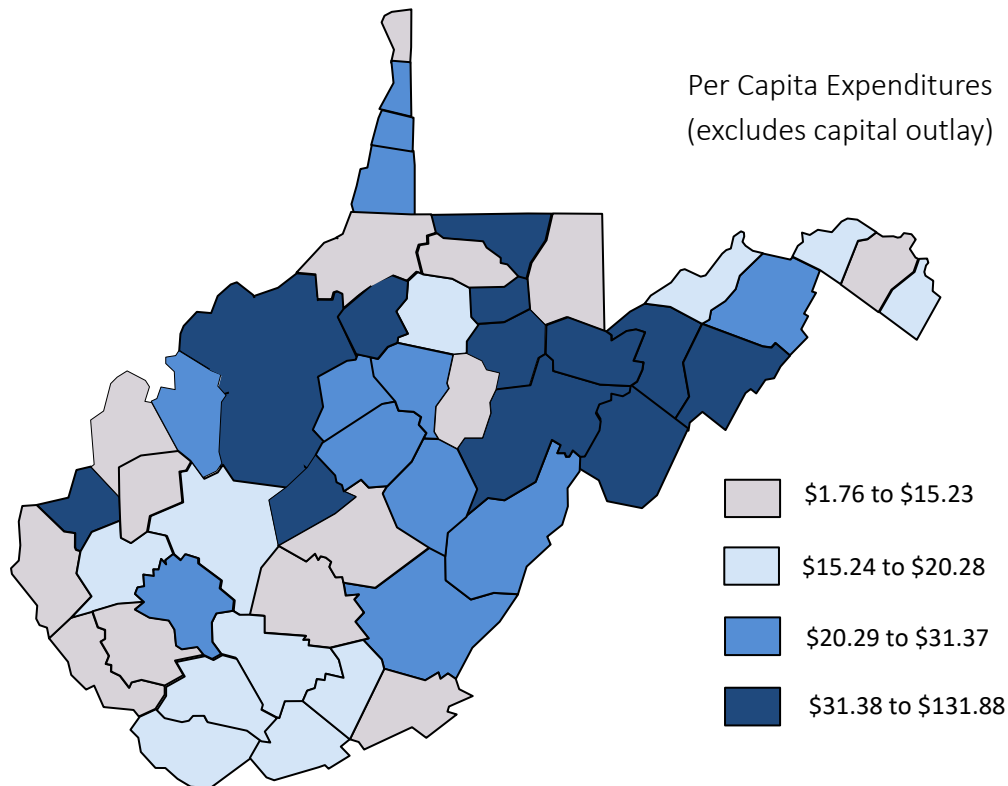


Reported expenditures from classified service personnel as a percentage of total reported expenditures are shown in Figure 27. Half of agencies report between 60% and 78% of their expenditures as classified service personnel expenditures, though one quarter of agencies attribute less than 60% of their expenditures to personnel. Excluding agencies that do not employ staff, the classified service personnel expenditures as a percentage of total expenditures range from 40% to 86%. Quartiles of combined personnel and operating expenditures per capita are shown in Figure 28.

**Figure 27. Classified service personnel expenditures as a percentage of total expenditures by local health department (N=49), FY 2016. Source: FY 2016 Financial Report**

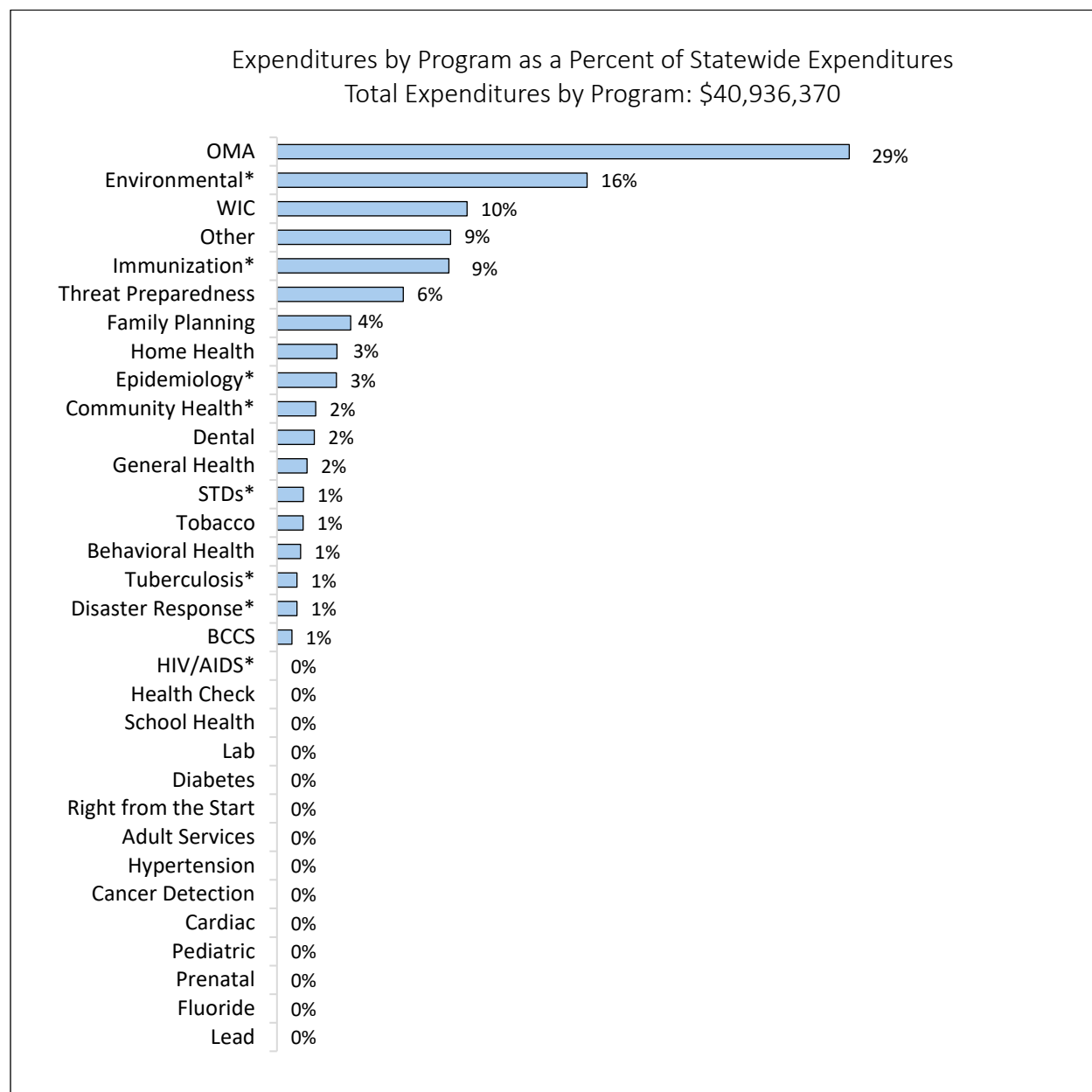


**Figure 28. Map of per capita expenditures by local health department (N=49), FY 2016. Source: FY 2016 Financial Report**



## EXPENDITURES BY PROGRAM

Figure 29. Expenditures by program as a percent of statewide expenditures, FY 2016. Source: FY 2016 Financial Report



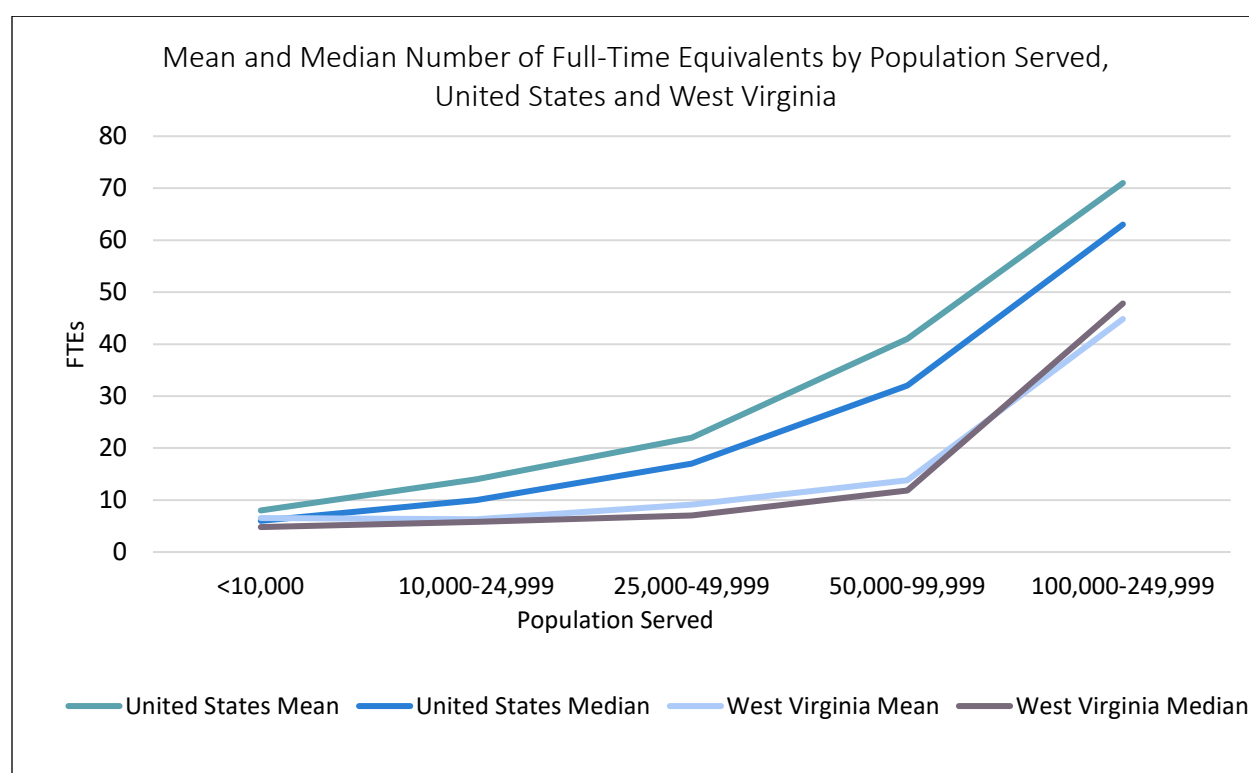
LHDs reported expenditures by program totaled \$40,936,370 in FY 2016 (Figure 29). Office management and administration (OMA) accounts for the greatest percentage (29%) of expenditures attributed to a single expenditure category. Basic public health services (indicated with an asterisk in the figure above), which in the FY 2016 financial reporting form included community health promotion, disaster response, environmental health, epidemiology, HIV/AIDS, immunizations, STDs, and tuberculosis, account for 32% of program expenditures. Cancer detection, cardiac, diabetes, tobacco, and hypertension programs account for a combined 1% of expenditures (percentages in the figure are rounded).



## LOCAL PUBLIC HEALTH WORKFORCE

Compared to the United States, health departments in West Virginia have smaller workforces (NACCHO, 2016). Over one quarter (27%) of LHDs in West Virginia have less than five FTEs, in comparison to 16% of LHDs in the United States overall. Forty-three (43%) percent of West Virginia LHDs have between five and 9.9 FTEs; this is approximately double the percentage of United States LHDs with the same range of FTEs (21%) (NACCHO, 2016). While West Virginia does have a higher proportion of small agencies (population served is less than 50,000 people) compared to the United States, this pattern of smaller public health agency workforces in West Virginia holds true for all sizes of population served compared to the United States, as shown in Figure 30.

**Figure 30. Mean and median number of full-time equivalents in local health departments by population served, United States (2016) and West Virginia (FY 2016).** Sources: FY 2016 Financial Report and NACCHO Profile of LHDS 2016



The number of LHD staff per 10,000 population served by the LHD is a useful way to measure overall workforce capacity and facilitates comparisons across LHDs serving different jurisdiction sizes. In the United States, the overall workforce capacity is 4.2 FTEs per 10,000 population (NACCHO, 2016). In West Virginia, the overall workforce capacity is slightly lower, at 3.0 FTEs per 10,000. Half of West Virginia's LHDs have a workforce capacity of 2.8 or fewer FTEs per 10,000 population, and across all agencies, this value ranges from 0 to 21.2 FTEs (Figure 31). FTEs per 10,000 population are shown by LHD in Figure 32.

Figure 31. Full-time equivalents per 10,000 population by LHD (N=49), FY 2016. Source: FY 2016 Financial Report

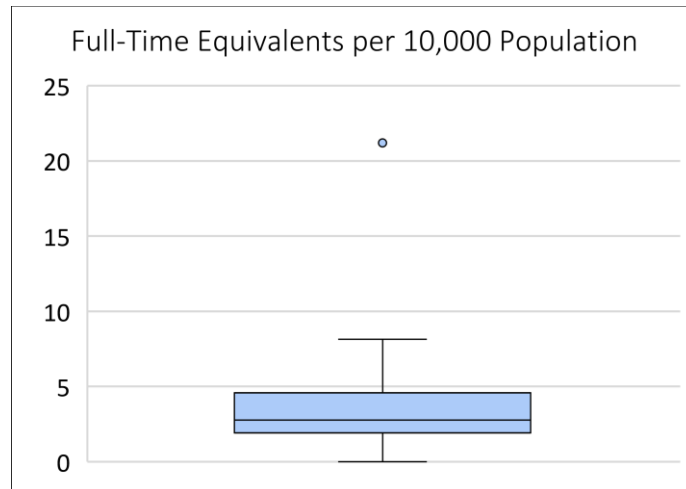
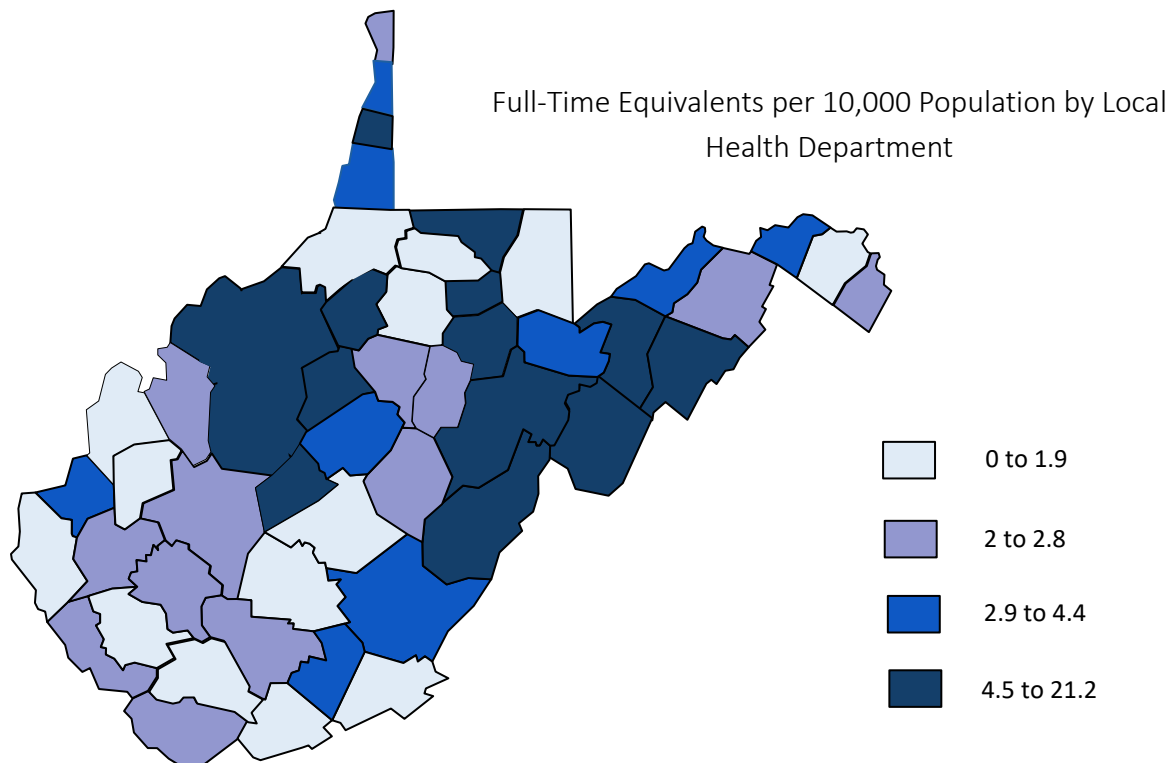


Figure 32. Map of full-time equivalents per 10,000 population by LHD (N=49), FY 2016. Source: FY 2016 Financial Report



## REFERENCES

- 79 Fed. Reg. 78953. (2017, August 30). *Community Health Needs Assessments for Charitable Hospitals*. Retrieved from Federal Register: <https://www.federalregister.gov/documents/2014/12/31/2014-30525/additional-requirements-for-charitable-hospitals-community-health-needs-assessments-for-charitable>
- Association of State and Territorial Health Officials. (2014, December). *Policy and Position Statements: Performance Policy Statement*. Retrieved from Association of State and Territorial Health Officials: <http://www.astho.org/Policy-and-Position-Statements/Policy-Statement-on-Performance/>
- Environmental Health*. (n.d.). Retrieved from Healthy People 2020: <https://www.healthypeople.gov/2020/topics-objectives/topic/environmental-health>
- Immunization and Infectious Diseases*. (2014). Retrieved from Healthy People 2020: <https://www.healthypeople.gov/2020/topics-objectives/topic/immunization-and-infectious-diseases>
- NACCHO. (2016). *National Profile of Local Health Departments*.
- OECD. (2010). *Glossary of Key Terms in Evaluation and Results Based Management*. Retrieved from <http://www.oecd.org/development/peer-reviews/2754804.pdf>
- Office of Epidemiology and Prevention Services. (2015). *West Virginia Annual Outbreak Report*.
- Office of Epidemiology and Prevention Services. (2016). *West Virginia TB Profile Annual Report*.
- Office of Epidemiology and Prevention Services. (2017). Tuberculosis: We Can't Let Our Guard Down! *West Virginia Epi-Log*.
- Public Health Accreditation Board. (2013). *Standards and Measures Version 1.5*. Retrieved from Public Health Accreditation Board: <http://www.phaboard.org/wp-content/uploads/SM-Version-1.5-Board-adopted-FINAL-01-24-2014.docx.pdf>
- Public Health Accreditation Board. (2015). *Public Health Accreditation Board: Guide to National Public Health Department Initial Accreditation*. Alexandria, Virginia: Public Health Accreditation Board.
- Singh, S. R., & Carlton, E. L. (2016). Exploring the Link Between Completion of Accreditation Prerequisites and Local Health Departments' Decision to Collaborate with Tax-Exempt Hospitals Around the Community Health Assessment. *Journal of Public Health Management and Practice*, 00(00), 1-10.
- W.Va. Code §16-1-6(e). (2017, August 25). *West Virginia Code*. Retrieved from West Virginia State Legislature: <http://www.legis.state.wv.us/WVCODE/ChapterEntire.cfm?chap=16&art=1&section=6#01>
- W.Va. Code §16-2-1. (2017, August 28). *West Virginia Code*. Retrieved from West Virginia State Legislature: <http://www.legis.state.wv.us/WVCODE/Code.cfm?chap=16&art=2#02>
- W.Va. Code §16-2-11. (2017, August 28). *West Virginia Code*. Retrieved from West Virginia State Legislature: <http://www.legis.state.wv.us/WVCODE/Code.cfm?chap=16&art=2#02>
- W.Va. Code §16-2-3-8. (2017, 08 28). *West Virginia Code*. Retrieved from West Virginia State Legislature: <http://www.legis.state.wv.us/WVCODE/Code.cfm?chap=16&art=2#02>

(2015). *West Virginia Public Health Impact Task Force Final Report*.

Wetta, R. E., Dong, F., LaClair, B., Pezzino, G., & Orr, S. A. (2015). Factors Affecting the Progress of Community Health Assessment and Improvement Activities in Kansas. *Journal of Public Health Management and Practice*, 21(4), E1-E9.

*WV Reportable Disease Manual*. (n.d.). Retrieved from Office of Epidemiology and Prevention Services:  
<http://www.dhhr.wv.gov/oeps/disease/Manual/Pages/default.aspx>