Founded in 1988, we are an interdisciplinary strategy and analysis firm providing integrated, creative, and analytically rigorous approaches to complex policy and planning decisions. Our team of strategic planners, policy and financial analysts, economists, cartographers, information designers, and facilitators work together to bring new ideas, clarity, and robust frameworks to the development of analytically-based and action-oriented plans.

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Jason Hennessy  
Emily Percival
ACKNOWLEDGEMENTS

Fiscal Assessment Participants
The Future of Public Health in Kansas Fiscal Assessment would not have been possible without the participation of 18 of Kansas’ Local Health Departments, led by the individuals named following, who volunteered significant time and effort to provide high quality, validated data on their current spending and full implementation costs related to FPHS in Kansas, which in part informed this report. We are deeply grateful to everyone who participated in this process.

▪ Jerry McNamar, Barber County Health Department
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▪ Tom Langer, City-Cowley County Health Department
▪ Marilyn Gamblin, Decatur County Health Department
▪ Cheryl Goetz, Gove County Health Department
▪ Sherry Vierthaler, Harper County Health Department
▪ Beth Brown, Jefferson County Health Department
▪ Lougene Marsh, Johnson County Department of Health and Environment
▪ Dan Partridge, Lawrence-Douglas County Health Department
▪ Ladonna Reinert, Lincoln County Health Department
▪ Kristin Watkins, Northeast Kansas (NEK) Multicounty Health Department
▪ Diedre Serene, Marion County Health Department
▪ Jennifer Green, Riley County Health Department
▪ Adrienne Byrne, Sedgwick County Health Department
▪ Martha Brown, Seward County Health Department
▪ Edith Matthews, Shawnee County Health Agency
▪ Aften Gardner, Wallace County Health Department
▪ John Werner, Wyandotte County Health Department

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▪ Gianfranco Pezzino, Kansas Health Institute
▪ Sharla Smith, University of Kansas School of Medicine – Wichita

Local Technical Assistance Team
▪ Charlie Hunt, Kansas Health Institute
▪ Carlie Houchen, Kansas Health Institute
▪ AAron Davis, Wichita State University, Center for Public Health Initiatives
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EXECUTIVE SUMMARY

The governmental public health system in Kansas is decentralized, with services being delivered by 101 governmental public health authorities, including the Kansas Department of Health and Environment (KDHE) and 100 local health departments (LHDs). LHDs have significant responsibility for delivering governmental public health services in Kansas. However, funding for local public health services, and governmental public health services more generally, has been limited and available unevenly between LHDs, creating variable availability of public health services across the state.

The Public Health Practice Program was originally developed as a three-year (2013-16) initiative of the Kansas Health Foundation, intended to strengthen the capacity and infrastructure of the Kansas public health system through identification of priority funding recommendations. It is led by the Public Health Systems Group (PHSG), a coalition of public health, government, academic, and charitable institutions that work to protect and promote the health of Kansans. The Kansas Association of Local Health Departments (KALHD) serves as the fiscal manager.

Recently, it has become clear that there is a significant opportunity to advance the PHSG agenda by leveraging national policy development efforts to modernize public health around the concept of Foundational Public Health Services (FPHS). This approach was originally put forward in 2012 by the Committee on Public Health Strategies to Improve Health, a policy committee tasked by the Institute of Medicine to develop recommendations for funding state and local public health systems that support the needs of the public after health care reform. It is now being further developed under the leadership of the Public Health National Center for Innovations (PHNCI) and implemented in several states including Ohio, Oregon, and Washington.

In 2016 the PHSG launched a multi-year effort to begin modernizing the Kansas public health system. The goals of The Future of Public Health in Kansas Project were to assess the current system of public health service delivery in Kansas, to define a basic set of public health services that should be available everywhere, and to identify future actions or recommendations for modernizing the Kansas public health system.

Kansas Foundational Public Health Services Framework

FPHS are a subset of all public health services. The intention in Kansas was that FPHS represent a suite of skills, programs, and activities that should be available in every community. Kansas’ FPHS framework defines five Foundational Areas and seven Foundational Capabilities:

**Foundational Areas** are substantive areas of public health expertise or program-specific activities:

1. Communicable Disease Control
2. Health Promotion and Chronic Disease and Injury Prevention
3. Environmental Health
4. Maternal and Child Health
5. Access to Clinical Care

**Foundational Capabilities** are crosscutting skills that support the Foundational Areas:

1. Assessment
2. All Hazards Preparedness/Response
3. Communications
4. Policy Development and Support
5. Community Partnership Development
6. Organizational Competencies
7. Addressing Health Equity and the Social Determinants of Health
Together, the Foundational Capabilities and Areas are the limited set of core public health services that must exist everywhere for services to work anywhere at a statewide, system-level. Within each Foundational Capability and Area, there is a list of components that further define what it takes to implement FPHS fully.

**Future of Public Health in Kansas Fiscal Assessment**

While the PHSG has identified the FPHS model as the key framework for modernizing public health systems in Kansas, implementation would represent a significant paradigm shift for LHDs. The Future of Public Health in Kansas project further explored how best to incorporate the FPHS concept into the state’s public health system and develop an implementation strategy. This work is intended to assess the feasibility of implementing FPHS in Kansas and meet KALHD’s vision for “[…] a system of local health departments committed to helping all Kansans achieve optimal health by providing FPHS.”

The PHSG hired BERK Consulting (BERK) to develop statewide cost estimates for the full implementation of FPHS in Kansas. BERK’s Fiscal Assessment was designed to answer two key questions:

1. What financial and staff resources do LHDs currently devote to support FPHS?
2. What financial and staff resources do LHDs estimate would be necessary to implement FPHS fully?

Kansas’ decentralized public health system presents a number of significant challenges to developing a statewide estimate. Getting all 100 LHDs to participate in an assessment is prohibitively expensive. Instead, we identified a stratified convenience sample of 19 LHDs to complete the Fiscal Assessment. This sample considered population served, geographic distribution, and population density (to include both frontier and rural counties) as described in Appendix A. As one LHD was unable to complete participation, we collected data from 18 LHDs:

1. Barber County Health Department
2. Coffey County Health Department
3. City-Cowley County Health Department
4. Decatur County Health Department
5. Gove County Health Department
6. Harper County Health Department
7. Jefferson County Health Department
8. Johnson County Department of Health and Environment
9. Lawrence-Douglas County Health Department
10. Lincoln County Health Department
11. Northeast Kansas (NEK) Multicounty Health Department
12. Marion County Health Department
13. Riley County Health Department
14. Sedgwick County Health Department
15. Seward County Health Department
16. Shawnee County Health Agency
17. Wallace County Health Department
18. Wyandotte County Health Department

While this sample includes only 18% of the LHDs in Kansas, it represents organizations that serve 61% of Kansans. After validating the data supplied by the participating LHDs, BERK estimated the current statewide spending dedicated to local FPHS and the cost to fully implement local FPHS using an ordinary least squares regression model under the current service delivery model.

---

1 FPHS was developed as a “minimum package of public health services” that all residents need access to that support population health. The rationale is that public health risks do not respect geographic boundaries, so population health activities are ineffective if they are limited to one geographic area. This is not to say that local implementation is ineffective without statewide implementation, merely that uneven local implementation can impact even those local jurisdictions that have fully implemented the activities. Furthermore, not every LHD or governmental public health authority needs to provide every service. Rather, every resident needs access to every service.

2 ASTHO-NORC. State Public Health Agency Classification: Understanding the Relationship Between State and Local Public Health: 2012.
Statewide Fiscal Assessment Results

The baseline costs of implementing FPHS in Kansas based on the status quo service delivery model is presented in the table below. We estimate current spending of $80.8 million on locally-delivered FPHS activities in Kansas as of Fiscal Year 2016. The funding sources supporting current spending were not specifically identified. The cost of full implementation of currently locally-delivered FPHS in Kansas is estimated at $122.4 million. This means there is an estimated systemwide need for $41.5 million in funding to support the additional increment of cost of FPHS in Kansas. It is important to keep in mind that the actual cost of FPHS implementation in Kansas may differ from this estimate which identifies the incremental difference between estimated current funding and estimated total cost of full implementation for individual Foundational Areas and Capabilities, but does not take into consideration additional potential funding complexities. These may include the degree to which current funding is maintained and whether additional funds for FPHS supplant current funding sources.

Exhibit ES-1: Baseline Cost of Implementation of FPHS Based on Status Quo Service Delivery Model, 2016

<table>
<thead>
<tr>
<th>Foundational Areas</th>
<th>Estimated Current Spending</th>
<th>Estimated Total Cost of Full Implementation</th>
<th>Additional Increment of Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal and Child Health</td>
<td>$13,092,000</td>
<td>$19,344,000</td>
<td>$6,252,000</td>
</tr>
<tr>
<td>Access to Clinical Care</td>
<td>$14,170,000</td>
<td>$18,952,000</td>
<td>$4,782,000</td>
</tr>
<tr>
<td>Communicable Disease Control</td>
<td>$12,074,000</td>
<td>$15,240,000</td>
<td>$3,166,000</td>
</tr>
<tr>
<td>Health Promotion and Chronic Disease and Injury Prevention</td>
<td>$7,540,000</td>
<td>$11,585,000</td>
<td>$4,045,000</td>
</tr>
<tr>
<td>Environmental Health</td>
<td>$5,494,000</td>
<td>$9,884,000</td>
<td>$4,390,000</td>
</tr>
<tr>
<td>Foundational Capabilities</td>
<td>$28,447,000</td>
<td>$47,349,000</td>
<td>$18,902,000</td>
</tr>
<tr>
<td>All Hazards Preparedness/Response</td>
<td>$6,086,000</td>
<td>$8,780,000</td>
<td>$2,694,000</td>
</tr>
<tr>
<td>Organizational Competencies</td>
<td>$5,140,000</td>
<td>$8,494,000</td>
<td>$3,354,000</td>
</tr>
<tr>
<td>Assessment</td>
<td>$3,947,000</td>
<td>$7,295,000</td>
<td>$3,348,000</td>
</tr>
<tr>
<td>Policy Development and Support</td>
<td>$3,557,000</td>
<td>$5,740,000</td>
<td>$2,183,000</td>
</tr>
<tr>
<td>Communications</td>
<td>$3,522,000</td>
<td>$5,722,000</td>
<td>$2,200,000</td>
</tr>
<tr>
<td>Addressing Health Equity and the Social Determinants of Health</td>
<td>$2,305,000</td>
<td>$5,719,000</td>
<td>$3,414,000</td>
</tr>
<tr>
<td>Community Partnership Development</td>
<td>$3,890,000</td>
<td>$5,599,000</td>
<td>$1,709,000</td>
</tr>
<tr>
<td>Total Cost</td>
<td>$80,817,000</td>
<td>$122,354,000</td>
<td>$41,537,000</td>
</tr>
</tbody>
</table>

Note: In some cases, current spending may be overstated because work being done as part of Foundational Areas and Capabilities is overcompensating for gaps in other Foundational Areas and Capabilities. Where that is the case, it is possible that the costs in those “overcompensating” Foundational Areas and Capabilities will go down with implementation of FPHS.

The estimated current spending and estimated total cost of full implementation are directly based on the data collected from a sample of LHDs, which was extrapolated for all LHDs in Kansas. As such, these estimates are prone to error due to self-reporting, which is discussed in “Additional Limitations” on page 6 of the full report.

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BACKGROUND AND INTRODUCTION

The governmental public health system in Kansas is decentralized, with services being delivered by 101 governmental public health authorities, including the Kansas Department of Health and Environment (KDHE) and 100 local health departments (LHDs). Governance of these LHDs vary. Most LHDs in Kansas are county departments, governed by the respective boards of county commissioners serving as local boards of health. However, there are variations, with multi-county and joint city-county health departments being governed by separate boards of health. There are also variations in service delivery models, including hospital-led health departments, county emergency medical services (EMS)-led health departments, and one federally qualified health center-led health department.

As part of this system, LHDs have a significant amount of responsibility – delegated to LHDs by the Kansas Legislature – for delivering governmental public health services in Kansas. KDHE offers guidance and technical assistance to LHDs in the delivery of these services but has limited authority over the LHDs in delivery of these delegated responsibilities. Funding for local public health services, and governmental public health services more generally, has been limited and available in varying levels LHD to LHD, such that there is uneven availability of public health services across the state.

The Public Health Practice Program was originally developed as a three-year (2013-16) initiative of the Kansas Health Foundation, intended to strengthen the capacity and infrastructure of the Kansas public health system through identification of priority funding recommendations. It is led by the Public Health Systems Group (PHSG), a coalition of public health, government, academic, and charitable institutions that work to protect and promote the health of Kansans. The Kansas Association of Local Health Departments (KALHD) serves as the fiscal manager.

Recently, it has become clear that there is a significant opportunity to advance the PHSG agenda by leveraging national policy development efforts to modernize public health around the concept of Foundational Public Health Services (FPHS). This approach was originally put forward in 2012 by the Committee on Public Health Strategies to Improve Health, a policy committee tasked by the Institute of Medicine to develop recommendations for funding state and local public health systems that support the needs of the public after health care reform. It is now being further developed under the leadership of the Public Health National Center for Innovations (PHNCI) and implemented in several states including Ohio, Oregon, and Washington.

In 2016 the PHSG launched a multi-year effort to begin modernizing the Kansas public health system. The aim of The Future of Public Health in Kansas Project was to assess the current system of public health service delivery in Kansas, to define a basic set of public health services that should...
be available everywhere and to identify future actions or recommendations for modernizing the Kansas public health system.

**Kansas’ FPHS Framework**

FPHS are a subset of all public health services. They are a suite of skills, programs, and activities that should be available in every community through delivery, or assurance of delivery, by state or local public health authorities to support population health.

Kansas’ FPHS Framework was developed by the Assessment and Performance Management Subcommittee of the PHSG in collaboration with 19 key informants (5 KDHE staff and 14 LHD staff) based on meeting at least one of the following criteria:

1. Services are **population-based** preventive health services that target specific communities defined by geography, race, ethnicity, gender, illness, or other health conditions (e.g., water fluoridation, creation of walkable communities).

2. **Governmental public health** is the only or best potential provider of services (e.g., disease surveillance and epidemiology).

3. All **mandated services** provided by the governmental public health system are included (e.g., communicating reportable disease cases to the state health department).

The draft list was then shared broadly with stakeholders and refined into a working version published in October 2016. Kansas’ FPHS Framework is shown in Exhibit 1.

**Exhibit 1: Kansas FPHS Framework**

![Exhibit 1: Kansas FPHS Framework](source: Kansas Public Health Systems Group, 2017.)

---


As shown in Exhibit 1, Kansas’ FPHS framework defines five Foundational Areas and seven Foundational Capabilities:

**Foundational Areas** are substantive areas of public health expertise or program-specific activities:
1. Communicable Disease Control
2. Health Promotion and Chronic Disease and Injury Prevention
3. Environmental Health
4. Maternal and Child Health
5. Access to Clinical Care

**Foundational Capabilities** are crosscutting skills that support the Foundational Areas:
1. Assessment
2. All Hazards Preparedness/Response
3. Communications
4. Policy Development and Support
5. Community Partnership Development
6. Organizational Competencies
7. Addressing Health Equity and the Social Determinants of Health

Together, the Foundational Areas and Foundational Capabilities are the statewide set of core public health services. Within each Foundational Area and Capability, there is a list of components that further define what it means to fully implement them. When reviewing these components, it is important to remember that they constitute what should be provided by the governmental public health system in Kansas, not what is currently being provided. Further, these components have been developed to be agnostic to government public health authority provider; that is, it does not matter which governmental public health provider provides them.

While FPHS provide a strong foundation from which the state and local communities can deliver public health services, they are a subset of the overall public health services that might be needed in any particular area. Also important are Additional Important Services (AIS). These are services that are critical locally and do not necessarily need to be provided by the governmental public health system statewide because they are a shared responsibility of local, state, and federal public health, and other partners. AIS often respond to or are local community priorities. They can also be driven by state initiatives to address disparities across the state. This does not preclude the governmental public health system from delivering these services but does exclude them from consideration when evaluating FPHS. As of this report, AIS have not been defined in Kansas.
Future of Public Health in Kansas Effort

While the PHSG has identified the FPHS model as a key framework for modernizing public health systems in Kansas, implementation would represent a significant paradigm shift for LHDs. To further explore how best to incorporate the FPHS concept into the state’s public health system and develop an implementation strategy, the Future of Public Health in Kansas project was developed to:

- Define FPHS for LHDs in Kansas.
- Develop and implement an outreach program to inform all local health departments about FPHS.
- Conduct assessments of what local health departments in Kansas are currently providing related to FPHS, as well as other services that are presently provided.
- Develop cost estimates for fully implemented FPHS in Kansas.
- Engage a broader group of stakeholders in the public health system around the opportunity and challenges of implanting FPHS in Kansas.
- Identify the necessary policy, statutory, and operational changes necessary to support implementation.
- Develop communications tools and materials to support policy discussions at the state and local level.

This work is intended to assess the feasibility of and pathway for implementing FPHS in Kansas and meet KALHD’s vision for “[…] a system of local health departments committed to helping all Kansans achieve optimal health by providing Foundational Public Health Services.”

Future of Public Health in Kansas Fiscal Assessment

One of the key components of the 2016-17 roadmap was the development of statewide cost estimates for the full implementation of FPHS in Kansas. Toward this end, KALHD sought a cost estimation process that, at a minimum:

- Built a shared understanding of the FPHS model and existing FPHS definitions.
- Provided data to estimate the costs to implement each Foundational Area and Capability, including the cost to LHDs based on the current funding and service delivery.

Additionally, the process was designed to naturally connect to and support the robust planning process already being undertaken by local partners. To the extent possible, this process was designed to:

- Advance and operationalize existing FPHS definitions.
- Support discussion around alignment of funding sources to FPHS priorities and funding options.
- Support service delivery conversations.

To meet these outcomes, the PHSG hired BERK Consulting to administer a Fiscal Assessment intended to collect two key subsets of information from a sample of 20 to 25 LHDs:

1. Current spending and Full Time Equivalent (FTE) staff supporting FPHS.
2. Estimates of the cost of fully implementing FPHS, including the FTE required.

This information was collected using a standardized Fiscal Assessment tool, and participating LHDs received significant support in generating both the current actuals and FPHS estimates. The collected information was then used to provide a statewide cost estimate for FPHS.

It was also expected that Kansas’ current service delivery paradigm may not be the most efficient and effective option for delivering FPHS and that, because of this, expected system costs for full implementation of FPHS might be significantly greater than what the governmental public health system in Kansas can successfully implement based on a status quo service delivery model.
METHODOLOGY

Data Sources

The analysis presented in this Report was generated using data from four primary sources:

1. **The Future of Public Health in Kansas Fiscal Assessment Data Collection Process.** BERK collected a substantial amount of data from a stratified, convenience sample of 18 LHDs, which was then analyzed as described in Appendix A.

2. **Kansas State Fiscal Year 2018 Aid to Local Survey.** As part of the requirements related to eligibility for state funding for governmental public health services awarded through a funding formula, LHDs are required to participate in an annual survey known as the “Aid to Local Survey.” The survey is distributed annually based on a state fiscal year schedule (July 1st to June 30th), and questions vary depending on the year. Data collected through the survey is used by KDHE to inform statewide public health systems efforts, including workforce development and accreditation readiness and to assist in identification of system needs. This data source is further described in Appendix B.

3. **Kansas LHD’s Capacity for Delivering FPHS.** In 2017, Kansas Health Institute completed an assessment of Kansas LHDs’ ability to deliver the FPHS framework. Data collected was published in a final report, known as the Kansas LHD Capacity Assessment. This data source is further described in Appendix B.

4. **2016 County Tax Rates for 2017, Kansas Counties.** Every March, the League of Kansas Municipalities publishes a Tax Rate and Fiscal Data Book that examines the total tax landscape for Kansas counties and cities. This includes a full accounting of 2016 county assessed valuation and overall county levy rates. This data is generated based on publicly available data provided on a county basis through Kansas County Tax Levy Sheets collected by the Kansas Department of Administration. This data source is further described in Appendix B.

Major Limitations

1. **Role of KDHE.** The Fiscal Assessment is intended to assess the cost of implementing FPHS within the Kansas governmental public health system. However, the assessment was also specifically focused on the ability of local governmental public health authorities to implement FPHS. It was not in this project’s scope to consider the role of KDHE in implementing FPHS, which we acknowledge as a significant limitation. KDHE provides services in Environmental Health across the state, as well as a level of investigation capacity for Communicable Disease Control and Disease Intervention Specialists out into the field who are paid through KDHE directly.

2. **FPHS Framework as Defined by KHI.** Further, the Fiscal Assessment is based on the FPHS framework, as defined by KHI in October 2016. KHI outlined a few key limitations to the FPHS framework which are considered limitations to Fiscal Assessment as well. They include:

   a. *The components in this model constitute what SHOULD be provided by state or local public health agencies when KALHD’s vision is achieved, not what currently IS provided.*

   b. *Only services and capabilities that should be available in EVERY community in Kansas are included.*

   c. *Functions are not always exclusive to an individual health department (i.e., some services may be shared between the state and local public health agencies or between local agencies in multiple jurisdictions).*

   d. *Services and capabilities that are not found on this list may still be important to individual communities (and therefore be provided by some public health departments) based on identified needs for their communities but may not be available statewide.*

---

3. **Additional Important Services.** As mentioned above, there may be locally-important services and capabilities outside of the FPHS framework. These services and capabilities are known as Additional Important Services (AIS) and, as of this report, AIS have not been defined for Kansas. As such, we make no attempt to generate the full cost of delivering all needed public health services in Kansas, focusing instead on only the full cost of implementing FPHS per our scope and project focus.

Moving to fully implement FPHS may have an impact on what AIS are necessary. Unable to predict what those impacts may be, we have not attempted to estimate costs associated with AIS.

4. **Assurance Services.** Finally, several of the components identified within the Kansas FPHS framework are “assurance” services, which means that governmental public health authorities retain responsibility for strategically working with community partners to ensure that those who need a service have access to it and that there is a sustainable and reliable plan in place to provide the service. Governmental public health authorities only provide the service as a “provider of last resort” – i.e., when no other community partner or organization is available.

For the purposes of this Fiscal Assessment, we asked LHDs to use their best judgement in determining when they (or governmental public health more generally) would need to act as the provider of last resort for any specific assurance activity in their communities. Guidance was that in most cases, medium and large LHDs would only act as the provider of last resort where direction from KDHE required them to do so. For example, the Women, Infant, and Children (WIC) program was one area where it was assumed all LHDs would need to act as the provider of the service.

**Additional Limitations**

1. It is possible that by not considering KDHE in this Fiscal Assessment, some costs related to the interdependencies between the work of state and local governmental public health authorities have not been included. It is expected that those costs would be paid by the state for services to support local governmental public health authorities’ work, and therefore outside of the purview of this Assessment.

2. The mixed stratified, convenience sample from which data was collected (as described in Appendix A) limits the reliability of inference from the sample. However, it was not used as a probability sample. Rather, it was used to extrapolate local data to a statewide cost estimate using an existing cost model.

3. The sample of 18 respondents (out of 100 LHDs) represents almost one-fifth of the total LHDs in Kansas and cover 61% of the state population. While care must be taken when extrapolating the results of this analysis given the sample size, this approach is reasonable to provide decision-makers with initial information on funding and policy decisions as an order-of-magnitude estimate.

4. Our estimates are dependent on the quality of underlying data that could be affected by a number of factors:
   a. As with all self-reported data, the information collected through the Assessment Process has certain inherent limitations. These include respondent biases and an uneven understanding of Kansas’ FPHS framework.
   b. It is possible that attitudes about FPHS, the Future of Public Health in Kansas project in general, and the Fiscal Assessment process specifically are reflected in the data collected. This is especially possible as all Fiscal Assessment respondents participated voluntarily.
   c. Respondents have differing levels of cost estimation backgrounds; the respondents of this Assessment are generally experts in public health. While some LHDs likely have staff with specialized expertise in cost estimation, the majority of LHD respondents were public health professionals.
   d. For some respondents, the Fiscal Assessment may have represented their first exposure to Kansas’ FPHS framework. Further, it is likely that some of the FPHS framework represents new activities for governmental public health or for some Kansas LHDs, so some cost estimates had to be generated by LHDs without access to comparable data beyond the initial estimates provided. As these service areas are implemented and LHDs work out service provision relationships, it is expected that these estimates will be refined.
e. The Assessment Tool is a complicated form, and completing the Tool was a challenge for some respondents. It was also a significant investment of resources for LHDs that already feel resource constrained.

**Mitigation of Above Limitations**

BERK was aware of these issues before releasing the Assessment Tool and designed the Tool to mitigate potential issues wherever possible. In addition to those efforts, there are several mitigation factors, including:

- **Level of Estimation.** Estimates were generated to support order-of-magnitude-level accuracy for planning.
- **Generation of Statewide Estimates.** This process was designed to generate an estimate of the statewide cost of locally-delivered FPHS activities, rather than LHD-specific estimates for the cost of delivering local FPHS in Kansas. As such, minor, individual variation in individual LHD results was dampened by the overall magnitude of statewide estimates.
- **Standardization.** We standardized individual input using the data set as a whole and external data sources to correct individual inconsistencies.

**Presentation of Data and Results**

The results presented in this report represent point-in-time estimates for the cost of implementing FPHS in Kansas. Quantitative findings are presented as order-of-magnitude estimates based on the assumptions outlined previously. They do not represent exact or actual costs.
STATEWIDE FISCAL ASSESSMENT RESULTS

Baseline Costs

The baseline costs of implementing FPHS in Kansas based on the status quo service delivery model is presented in the table below. We estimate current spending of $80.8 million on locally-delivered FPHS activities in Kansas as of Fiscal Year 2016. The funding sources supporting current spending were not specifically identified. The cost of full implementation of currently locally-delivered FPHS in Kansas is estimated at $122.4 million. This means there is an estimated systemwide need for $41.5 million in funding to support the additional increment of cost of FPHS in Kansas. It is important to keep in mind that the actual cost of FPHS implementation in Kansas may differ from this estimate which identifies the incremental difference between estimated current funding and estimated total cost of full implementation for individual Foundational Areas and Capabilities but does not take into consideration additional potential funding complexities. These may include the degree to which current funding is maintained and whether additional funds for FPHS supplant current funding sources.

Exhibit 2: Baseline Cost of Implementation of FPHS Based on Status Quo Service Delivery Model

<table>
<thead>
<tr>
<th>Foundational Areas</th>
<th>Estimated Current Spending</th>
<th>Estimated Total Cost of Full Implementation</th>
<th>Additional Increment of Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal and Child Health</td>
<td>$52,370,000</td>
<td>$75,005,000</td>
<td>$22,635,000</td>
</tr>
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<td>$12,074,000</td>
<td>$15,240,000</td>
<td>$3,166,000</td>
</tr>
<tr>
<td>Environmental Health</td>
<td>$7,540,000</td>
<td>$11,585,000</td>
<td>$4,045,000</td>
</tr>
<tr>
<td></td>
<td>$5,494,000</td>
<td>$9,884,000</td>
<td>$4,390,000</td>
</tr>
<tr>
<td>Foundational Capabilities</td>
<td>$28,447,000</td>
<td>$47,349,000</td>
<td>$18,902,000</td>
</tr>
<tr>
<td>All Hazards Preparedness/Response</td>
<td>$6,086,000</td>
<td>$8,780,000</td>
<td>$2,694,000</td>
</tr>
<tr>
<td>Organizational Competencies</td>
<td>$5,140,000</td>
<td>$8,494,000</td>
<td>$3,354,000</td>
</tr>
<tr>
<td>Assessment</td>
<td>$3,347,000</td>
<td>$7,295,000</td>
<td>$3,384,000</td>
</tr>
<tr>
<td>Policy Development and Support</td>
<td>$3,557,000</td>
<td>$5,740,000</td>
<td>$2,183,000</td>
</tr>
<tr>
<td>Communications</td>
<td>$3,522,000</td>
<td>$5,722,000</td>
<td>$2,200,000</td>
</tr>
<tr>
<td>Addressing Health Equity and the Social Determinants of Health</td>
<td>$2,305,000</td>
<td>$5,719,000</td>
<td>$3,414,000</td>
</tr>
<tr>
<td>Community Partnership Development</td>
<td>$3,890,000</td>
<td>$5,599,000</td>
<td>$1,709,000</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td><strong>$80,817,000</strong></td>
<td><strong>$122,354,000</strong></td>
<td><strong>$41,537,000</strong></td>
</tr>
</tbody>
</table>

Note: In some cases, current spending may be overstated because work being done as part of Foundational Areas and Capabilities is overcompensating for gaps in other Foundational Areas and Capabilities. Where that is the case, it is possible that the costs in those “overcompensating” Foundational Areas and Capabilities will go down with implementation of FPHS.

The estimated current spending and estimated total cost of full implementation are directly based on the data collected from a sample of LHDs, which was extrapolated for all LHDs in Kansas. As such, these estimates are prone to error due to self-reporting, which is discussed in “Additional Limitations” on page 6 of the full report.

FUNDING

Funding for local governmental public health in Kansas comes from a variety of sources, many of which are insecure and potentially unsustainable, including:

- **Direct federal sources** (any funds received directly from the federal government without passing through the state). Common sources might include direct or competitive grant sources.

- **State sources** (regardless of origin and including federal and other pass through funds). Common sources might include state general fund appropriations, federal pass through funds, and state aid-to-local distributions. Tobacco settlement funds are also one specific example of a state source.

- **Local sources.** Common sources might include county property taxes or county appropriations. In some cases, special districts, like hospital districts, are also able to levy local taxes, a share of the funds of which might be distributed to local governmental public health.

  Kansas counties rely heavily on property taxes to support public services, including public health. Ad Valorem taxes can be collected at the county level and allocated to Local Health Departments one of two ways:

  1. As part of county general property tax levies.

  2. Through a county health fund funded by a county public health levy as authorized by KSA 65-2046.

  As of 2014, 87 counties used a public health fund or had one identified in their accounting system7. See text box on next page for additional information.

- **Fee-for-service collections.** Most fees are collected at the local level, so some may consider these to be local funds. Beyond LHD-set fees, LHD’s might also receive reimbursements through private health insurance, Medicare, and/or Medicaid. In addition, some LHDs may collect fines and forfeitures as part of their enforcement activities.

- **Private foundations, donations, and gifts.** In some cases, LHD’s might receive additional revenues from 501(c)3 and other private foundations and individual donations and gifts.

- **Other sources.** Common sources might include interest on investments, distributed fund balance, sale of capital assets, etc.

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6 Local property tax levies are restricted by a “levy lid” based on the prior year’s collection escalated by inflation based on the consumer price index, as codified in KSA 79-2925c.

County Public Health Funds

KSA 65-204 authorizes Boards of County Commissioners to levy a tax (up to $2 per $1000 of assessed value) upon taxable property within their county to support County Public Health activities. This tax can be levied by council ordinance but is subject to referendum. Proceeds must be placed into a separate fund, designated the “county health fund” which can be used for the following:

1. Assisting in the carrying out of the health laws and rules and regulations of the state within such county;
2. Paying the salary of the local health officer;
3. Any contract entered into with the governing body of any hospital located in a county having a population of less than 15,000 as provided by KSA 65-201 and amendments thereto;
4. The employment of additional personnel to assist the local health officer and other health authorities within such counties.

Fund dollars that are not used by the end of the county fiscal year may be transferred to the county health capital outlay fund, to support capital expenditures for county health purposes.

In 2017, funding for local governmental public health in Kansas came from a variety of sources, as shown in Exhibit 3. Almost 40% of funding for local governmental public health came from local sources, with an additional 19% from fee-for-service collections, often considered local sources. Less than 25% of overall funding came from state sources.

Exhibit 3: Distribution of Funding for Local Governmental Public Health in Kansas by Source, 2017

NEXT STEPS: IMPLEMENTATION CONSIDERATIONS

To implement FPHS, the governmental public health system will need to:

▪ Establish preferred service delivery paradigms.
▪ Identify cross-jurisdictional sharing models based on the preferred service delivery paradigms.
▪ Refine expectations around the share of funding responsibility between state and local governments.
▪ Establish preferred approaches for apportioning costs at the state and/or local level depending on the share of funding responsibility between state and local governments.
▪ Create phasing options for implementation of FPHS and set a timeline.
▪ Refine planning-level costs to provide a higher level of detail to support implementation, considering potential short-term or one-time costs associated with implementation itself.
  ▪ For example, these costs might include capital equipment for new staff members and the additional costs to finance, contracting, human resources, and other staff involved in scaling up the organization through purchasing, hiring, etc.

As part of the Fiscal Assessment, we asked LHDs and other public health professional at the 2017 annual KALHD Mid-year Meeting to rank the importance of eight pre-identified potential priorities around implementation of FPHS. The results of this exercise are provided in Exhibit 4.

Exhibit 4: Participants’ Priorities for Implementation of FPHS (n=41)

<table>
<thead>
<tr>
<th>Priority</th>
<th>Responses</th>
<th>0</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement FPHS as efficiently as possible</td>
<td>29%</td>
<td>17%</td>
<td>20%</td>
<td>7%</td>
<td>17%</td>
<td>7%</td>
<td>2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintain service equity throughout implementation</td>
<td>7%</td>
<td>24%</td>
<td>15%</td>
<td>24%</td>
<td>7%</td>
<td>15%</td>
<td>5%</td>
<td>2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fund the largest or most critical gaps in implementation first</td>
<td>17%</td>
<td>17%</td>
<td>22%</td>
<td>12%</td>
<td>15%</td>
<td>7%</td>
<td>7%</td>
<td>2%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allow LHDs to implement FPHS based on local priorities</td>
<td>38%</td>
<td>5%</td>
<td>18%</td>
<td>8%</td>
<td>10%</td>
<td>5%</td>
<td>5%</td>
<td>13%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provide equitable and even funding for LHDs</td>
<td>10%</td>
<td>24%</td>
<td>12%</td>
<td>12%</td>
<td>17%</td>
<td>12%</td>
<td>5%</td>
<td>7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase FPHS service level as quickly as possible</td>
<td>7%</td>
<td>10%</td>
<td>15%</td>
<td>20%</td>
<td>22%</td>
<td>24%</td>
<td>2%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increase FPHS implement. level as quickly as possible</td>
<td>5%</td>
<td>3%</td>
<td>15%</td>
<td>8%</td>
<td>28%</td>
<td>38%</td>
<td>5%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fully implement FPHS as quickly as possible</td>
<td>3%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>10%</td>
<td>65%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Legend: Rated 1st | Rated 2nd | Rated 3rd | Rated 4th | Rated 5th | Rated 6th | Rated 7th | Rated 8th]

Notes: Sorted based on the highest cumulative ranking of 4 or higher. Wording of priorities condensed from version presented at the 2017 KALHD Mid-year Meeting. “Allow LHDs to implement FPHS based on local priorities,” “Increase FPHS implement. level as quickly as possible,” and “Fully implement FPHS as quickly as possible” n=40.

Participants’ top five rated priorities for implementation (based on the percentage of respondents who ranked the priority in the top four) include:

1. Implementing FPHS as efficiently as possible.
2. Maintaining service equity (equal services across the state) throughout implementation.
3. Funding the largest or most critical gaps in implementation first.
4. Allowing flexibility to implement FPHS at individual LHDs based on local priorities.
5. Providing equitable and even funding for LHDs.

There are inherent tensions among the top-rated priorities for implementation. However, these principles may still provide useful insight into several of the most important considerations around implementing FPHS, like governance, service delivery models, cost apportionment and phasing.

The ranked implementation priorities provided above are considered only illustrative, as they were generated based on a sample of local governmental public health authorities at an event. More analysis, engagement, and discussion will be needed to establish the best path forward for validating these implementation priorities or establishing a better sense of the system wide priorities.

The entire Kansas governmental public health system, including all participating LHDs, should be involved in this decision-making process to ensure that the priorities for implementation are shared across the system and that there is the necessary consensus for success.
APPENDICES
APPENDIX A: FISCAL ASSESSMENT METHODOLOGY

BERK took a three-step process to generate a high-quality dataset for statewide cost estimates:

1. **Data Collection.** Collecting local information used to support modeling to generate statewide cost estimates.
2. **Validation.** Identifying and explaining potential outliers.
3. **Standardization.** Smoothing values that will interfere with generating the statewide cost estimation.

**Data Collection**

Developing estimates of the current spending on and cost of full implementation of FPHS in Kansas is a complex process that requires understanding the costs of delivering these services at the local level. However, Kansas’ decentralized governmental public health model presents a number of significant challenges. The number of LHDs makes a full population survey prohibitive. As such, it was determined that the Fiscal Assessment should be distributed and completed by a target sample of 20 to 25 LHDs.

**Sampling**

To identify an appropriate sample of LHDs to include, we proposed a hybrid convenience and stratified sampling method. The key criteria considered as part of sampling design was population served, density, and geography. When applying these criteria, we tried to select counties that were significantly different from their peers. In addition, we identified a preference for including the five largest LHDs, by population served, because together, they serve more than half of the total population in Kansas. Based on these criteria, we outlined the following desired sample of LHDs for participation in the Fiscal Assessment:

<table>
<thead>
<tr>
<th>1 of</th>
<th>Leavenworth</th>
<th>Riley</th>
<th>Butler</th>
<th>Reno</th>
<th>Saline</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1 of</th>
<th>Crawford</th>
<th>Geary</th>
<th>Cowley</th>
<th>Harvey</th>
<th>Montgomery</th>
<th>Lyon</th>
<th>Miami</th>
</tr>
</thead>
<tbody>
<tr>
<td>NEK</td>
<td>SEK</td>
<td>Ford</td>
<td>Finney</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1 of</th>
<th>McPherson</th>
<th>Ellis</th>
<th>Barton</th>
<th>Franklin</th>
<th>Sumner</th>
<th>Pottawatomie</th>
<th>Labette</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dickinson</td>
<td>Jefferson</td>
<td>Neosho</td>
<td>Osage</td>
<td>Seward</td>
<td>Cherokee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### d. 2 of
- Marion
- Rice
- Pratt
- Linn
- Cloud
- Wilson
- Coffey
- Clay
- Nemaha

### e. 3 of
- Ellsworth
- Greenwood
- Mitchell
- Gray
- Sherman
- Ottawa
- Harper
- Stevens

### f. 3 of
- Meade
- Stafford
- Haskell
- Kearny
- Osborne
- Smith
- Rush
- Lincoln

### g. 2 of
- Cheyenne
- Graham
- Hamilton
- Rawlins
- Sheridan
- Wichita
- Stanton
- Clark
- Comanche

- Thomas
- Doniphan
- Grant
- Kingman
- Wabaunsee
- Russell
- Pawnee
- Marshall
- Morris
- Washington
- Norton
- Phillips
- Rooks
- Scott
- Republic
- Barber
- Morton
- Ness
- Jewell
- Edwards
- Trego
- Decatur
- Logan
- Chautauqua
- Hodgeman
- Lane
- Wallace
- Greeley
- Gove
- Chase
- Elk
- Kiowa
BERK identified 19 LHDs to complete the Fiscal Assessment. As one of these LHDs was unable to participate, we collected data from 18 LHDs:

1. Barber County Health Department  
2. Coffey County Health Department  
3. City-Cowley County Health Department  
4. Decatur County Health Department  
5. Gove County Health Department  
6. Harper County Health Department  
7. Jefferson County Health Department  
8. Johnson County Department of Health and Environment  
9. Lawrence-Douglas County Health Department  
10. Lincoln County Health Department  
11. Northeast Kansas (NEK) Multicounty Health Department  
12. Marion County Health Department  
13. Riley County Health Department  
14. Sedgwick County Health Department  
15. Seward County Health Department  
16. Shawnee County Health Agency  
17. Wallace County Health Department  
18. Wyandotte County Health Department

While this sample includes 18% of the LHDs in Kansas, it represents organizations that serve 61% of Kansans.

**Fiscal Assessment Key Questions, Process, Tool, and Technical Assistance**

To standardize the assessment process, and support LHDs in providing consistent financial and qualitative data, the Fiscal Assessment was developed as an Excel-based assessment tool designed to be as intuitive for the user as possible. The assessment tool and other project components were hosted on the Future of Public Health in Kansas SharePoint Site. LHDs were encouraged to complete this tool live on the site using Excel Online to prevent any compatibility issues and to maximize their ability to collaborate. Excel Online allows numerous LHD staff members to work in the assessment tool at the same time down to the cell-level, with real-time updating. In addition, the site allowed LHDs to complete the Fiscal Assessment on their own schedule, starting and stopping as necessary without losing work.

The workbook included eight tabs, as shown below.

**Exhibit 5. Fiscal Assessment Tool Structure Overview**

Within the assessment tool, LHDs were asked to estimate how much resources they currently spend on FPHS activities and to create cost estimates for the full implementation of each Foundational Area and Capability. These estimates included values for:

- **Full Time Equivalent (FTE):** Total staff (based on full-time hours of 2,080 per year) directly supporting Foundational Public Health Services.
- **Labor Costs**: Direct labor costs, including the salaries and benefits of staff who are employed within or directly support each Foundational Area or Capability.

- **Non-Labor Costs**: All costs not related to labor for supporting Foundational Capabilities and Foundational Areas. Example costs include materials, supplies, equipment, professional services, contracted services, and facility-related costs such as rent, utilities, and maintenance.

These cost estimates were intended to be *planning-level estimates* that provide an order-of-magnitude understanding of resource needs for full implementation of the Kansas FPHS, not exact costs.

BERK has previous experience with this type of cost estimation, having worked with the Washington State Department of Health to estimate the feasibility and high-level cost of implementing Washington’s version of public health system transformation through FPHS and with Oregon State on a 2016 Public Health Modernization Assessment. This previous work, while not directly comparable to the Kansas context because of differences in FPHS frameworks implemented in each state, was incorporated into initial estimates provided to LHDs and useful as a high-level estimate check.

Recognizing that the data collection portion of the Fiscal Assessment was an ambitious effort, the process included robust technical assistance for participants. The overall process/schedule for the Fiscal Assessment is outlined below.

**Exhibit 6: Kansas Fiscal Assessment Schedule**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment Tool Development, Technical Assistance and Completion</td>
<td></td>
<td>Throughout the Fiscal Assessment, BERK Consulting worked with the Future of Public Health in Kansas Fiscal Assessment Local Technical Assistance Team to provide technical assistance resources to ensure that LHDs could complete their Fiscal Assessments as easily and efficiently as possible.</td>
</tr>
<tr>
<td>BERK managed the overall technical assistance process and provided training to the Future of Public Health in Kansas Fiscal Assessment Local Technical Assistance Team (Local Technical Assistance Team) on the Fiscal Assessment process and tool. BERK also supported the Local Team with technical assistance work related to response validation.</td>
<td></td>
<td>The Local Technical Assistance Team provided direct technical assistance to LHDs to complete the Fiscal Assessment.</td>
</tr>
<tr>
<td>The Local Technical Assistance Team provided direct technical assistance to LHDs to complete the Fiscal Assessment.</td>
<td>Comprehensive and ongoing communication about the Fiscal Assessment process.</td>
<td></td>
</tr>
</tbody>
</table>
Orientation webinars, which were recorded for further reference.

Instruction guides and tool-related technical assistance resources.

Process-related technical assistance materials (for instance, resources outlining the technical assistance process, schedule, and resources).

A technical assistance frequently asked questions digest providing answers to frequently asked questions related to the Fiscal Assessment.

Ongoing facilitation of the Fiscal Assessment, including comprehensive technical assistance (through hosted webinars, and, individually, by phone and email).

Some of these technical assistance activities occurred throughout the entire project. Other activities occurred at specific times during the Fiscal Assessment.

Assessment Tools were due to BERK Consulting by July 31, 2017; however, some LHDs needed additional time to finalize their responses. The last Assessment Tool was collected on August 16, 2017.

Validation

Data validation is the process of identifying and explaining potential outliers in collected data. Data were validated through several methods, some built into the Assessment Tool and some through post-collection analysis.

Internal validity (the degree to which individual LHDs results make sense in context of LHD-specific data and characteristics) checks included, but were not limited to:

- Do the results make sense in the context of the LHD’s characteristics?
- Do the results make sense across all Foundational Areas and Capabilities?
- Do the results make sense given other LHD-specific data we have (Aid to Local Survey, FPHS Capacity Assessment, KALHD 2014 County Support for Local Health Departments report, etc.)?

External validity (the degree to which LHD results make sense in the context their peers and the overall system) checks included:

- Do individual LHD results make sense relative to one another?
- How do LHD results compare to initial estimates?
- How do LHD results compare to BERK’s experience in other states?
- Do individual results make sense in the context broader of national results?

Validation was anticipated to be completed by the end of August 2017, however, this deadline was pushed back to allow for flexibility for LHDs who needed additional time to complete their assessments. Validation also took significantly more time than expected. There are many possible explanations for this schedule expansion, including the decentralized technical assistance model, LHDs’ lack of familiarity with FPHS, and the difficulty of the assessment itself.

Standardization

After working with respondents to validate data, BERK implemented standardization to correct for non-validated outliers. The order-of-magnitude level used for the total resource estimates largely negated any outliers and standardization provided only an additional check against respondent estimates.

While the Fiscal Assessment data collected from a sample of 18 LHDs was the primary data source used to generate statewide FPHS current spending and full implementation cost estimates, additional data sources were leveraged as well. These data sources are discussed following.
Statewide Cost Analysis

After validating the data supplied by the 18 participating LHDs, BERK estimated the statewide current spending dedicated to local FPHS and the cost to fully implementing the local FPHS.

The populations served by Kansas’ LHDs have an asymmetric distribution, with 80% of LHDs serving fewer than 40,000 Kansans each. As discussed in Sampling above, BERK designed a sampling methodology to focus on collecting data from LHDs serving smaller populations.

Exhibit 7 shows the distribution of Kansas Counties by population in 2015 and the two gaps in county population at 40,000-55,000 and 175,000-500,000. Specifically, the data were collected into three groupings: smaller population LHDs (those 80 LHDs serving populations of less than 40,000), medium population LHDs (18 LHDs serving 55,000 to 175,000 Kansans), and larger population LHDs (2 LHDs serving 500,000 to 550,000 Kansans).


BERK used stepwise regression to match the specific distribution of LHD population. Ordinary least squares regression was used for two of these groupings: smaller population and medium population. Both LHDs in the larger population grouping participated in the Fiscal Assessment and so no estimates were necessary for these LHDs.
Exhibit 8. Histogram: Kansas LHDs by Population Served and Stepwise Regression Grouping, 2015 (N = 100)


Exhibit 9. Stepwise Regression Regions, Population 0-200,000 and 500,000-600,000

Note: The y-axis consists of dummy data to show that each stepwise grouping was allowed to have its own slope estimation.

The underlying factors that cause costs to vary between LHDs are multiple, complicated, and interconnected, but for the purposes of this assessment, predictive power is more important than causal relationships. From previous work, BERK has found that population and poverty rate are predictive in estimating the costs of FPHS. With the limited sample size and the study goal of producing a statewide estimate, a simplified regression model using population was expected to be most appropriate. This expectation is supported by the adjusted coefficient of determination (adjusted-$R^2$), a measure of the variance accounted for by the regression model that ranges from 0.0 to 1.0, and 1.0 defined as every observation point equaling the predicted value. For the estimates presented in this report, adjusted-$R^2$ values ranged from 0.80-0.99, with an average of 0.92 across Foundational Areas and Capabilities.

BERK conducted limited testing of fit beyond comparing adjusted-$R^2$ values, including functional form. BERK analyzed non-linear relationships between population and costs, an approach that provided greater predictive power in BERK’s previous FPHS work. Non-linear relationships between cost and population were explored up to third degree (i.e., population cubed). This was important because non-linear relationships between costs and predictive variables such as population help model cost savings from economies of scale. For example, if an area population were to double in size, that does not necessarily mean that a local health district would need to conduct twice the number of public outreach campaigns. However, because of the limited sample and stepwise regression, polynomial regressors over-emphasized variance at the ends of each population size grouping and distorted estimates, which was apparent when the stepwise regression estimates negative spending at the edges of the population range.
APPENDIX B: OTHER DATA SOURCES

Kansas State Fiscal Year 2018 Aid to Local Survey
As part of the requirements related to eligibility for state funding for governmental public health services awarded through a funding formula, LHDs are required to participate in an annual survey known as the “Aid to Local Survey.” The survey is distributed annually based on a state fiscal year schedule (July 1st to June 30th), and questions vary depending on the year. Data collected through the survey is used by KDHE to inform statewide public health systems efforts including workforce development and accreditation readiness and to assist in identification of system needs.

In state fiscal year 2018, questions touched on several topics, including:
- Operations
- Kansas Health Matters
- Disease investigation
- Billing/health information
- Accreditation readiness
- Quality improvement
- Cross-jurisdictional sharing and FPHS

Data from questions related to the operations and cross-jurisdictional sharing topics were relevant to this work. KDHE does minimal validation of the data collected through the Aid-to-Local survey and provided raw survey data to BERK Consulting to support the Fiscal Assessment.

Kansas LHD’s Capacity Assessment
In 2017, Kansas Health Institute completed an assessment of Kansas LHDs’ ability to deliver the FPHS framework. This assessment was designed based on a programmatic self-assessment delivered by BERK Consulting as part of the 2016 Public Health Modernization Assessment in Oregon. The assessment asked LHD’s to self-assess their organizations’:
- Capability to deliver FPHS, with capability defined as “a measure of whether or how well something can be done. In other words, are the skills, knowledge and expertise in place that are needed to perform the task?”; not to be confused with the Foundational Capabilities.
- Capacity to deliver FPHS, defined as “a measure of how much something can be done. In other words, does the health department have the appropriate amount of staff, time, and funding to fulfill the level of need for this service in the community?”

This was done through a five-point scoring scale for both capability and capacity, wherein:
- 0 indicated none
- 1 indicated minimal
- 2 indicated some
- 3 indicated sufficient
- 4 indicated full

Further, the capacity assessment provided an opportunity for LHD’s to provide a roll-up reporting of their ability to perform the components within each Foundational Area and Capability by assessing their agreement with the statement “My health department is currently able to perform the components within this Foundational Capability/Area.”
To support the Fiscal Assessment, the Capacity Assessment included a secondary set of questions focused on the LHD’s financial position. These questions were developed in collaboration with BERK Consulting and included:

- What is your total operating budget for 2017?
- If your local health department operating budget does not include environmental public health services—like inspections—please provide your county’s operating budget for 2017.
- How many total full-time equivalents (FTE; equal to approximately 2,080 hours per year) are included in your operating budget for 2017?
- If possible, please provide the number of FTE you have on staff by job title.
- Approximately what percentage of your total 2017 operating costs/expenditures went to overhead costs (i.e., facility costs such as rent, maintenance, utilities, or other overhead costs like a car fleet)?
- Does your local health department have access to general county support services (i.e., finance, HR, communications, IT) that are not included in these numbers? If so, please describe.
- Are your budgeted expenditures in 2017 representative of your normal annual costs? In other words, are your 2017 costs in line with your costs in previous years? If not, why?

Results from these questions were not validated as part of the data collection process, and only raw data was provided to BERK Consulting.

The Capacity Assessment study author reports several limitations to the Capacity Assessment data, including:

- Reliance on self-reported data, which implies potential differences in interpretation of the scoring rubric, impacting reliability of the quantitative results.
- Response bias due to self-reporters’ potential self-interest in responding with what they perceive to be a “correct” response, or one that puts their organization in a relatively better light.
- Responses from only a sample (81 of 100) local health departments, who self-selected to participate in the assessment, meaning that results may not be representative of the full system.

**Kansas Counties 2016 Tax Rates for 2017**

Every March, the League of Kansas Municipalities publishes a Tax Rate and Fiscal Data Book that examines the total tax landscape for Kansas counties and cities. This includes a full accounting of 2016 county assessed valuation and overall county levy rates. This data is generated based on publicly available data provided on a county basis through Kansas County Tax Levy Sheets collected by the Kansas Department of Administration⁸.

Unfortunately, the summary provided by the League of Kansas Municipalities includes only general county property tax levies — not the individual levy rates for specific taxes, such as the levy that can be used to support the County Health Fund. Despite this limitation, the summary provides valuable information that can be used to generate the expected levy rates needed to support public health activities statewide and at the county level.

Because this data is provided as actuals — that is the actual assessments and tax rates implemented for the purposes of levying property taxes for the year in question — it is considered fully validated.

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## APPENDIX C: ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FTE</td>
<td>Full Time Equivalents</td>
</tr>
<tr>
<td>KALHD</td>
<td>Kansas Association of Local Health Departments</td>
</tr>
<tr>
<td>KDHE</td>
<td>Kansas Department of Health and Environment</td>
</tr>
<tr>
<td>KSA</td>
<td>Kansas Statutes Annotated</td>
</tr>
<tr>
<td>LHDs</td>
<td>Local Health Departments</td>
</tr>
</tbody>
</table>
APPENDIX D: DEFINITIONS

- **Ability to**: Capacity and capability to implement an activity, element and/or Foundational Capability or Area, as needed.

- **Additional Important Services (AIS)**: These are services that are critical locally and do not necessarily need to be provided by governmental public health statewide because they are a shared responsibility of local, state and federal governmental public health and other partners.

- **Additional Increment of Cost**: The difference between the resources currently supporting existing FPHS activities and the amount of resources needed to support full implementation of FPHS activities.

- **Assure**: Governmental public health authorities retain responsibility for strategically working with community partners to ensure that those who need a service have access to it and that there is a sustainable and reliable plan in place to provide the service, but where governmental public health authorities only provide the service as a “provider of last resort,” that is, when no other community partner or organization is available to do so.

- **Capability**: A measure of whether or how well something can be done. In other words, are the skills, knowledge and expertise in place that are needed to perform the task?”; not to be confused with the Foundational Capabilities.

- **Capacity**: A measure of how much something can be done. In other words, does the health department have the appropriate amount of staff, time, and funding to fulfill the level of need for this service in the community?

- **Component**: A definitional unit, assigned on a one-to-one basis with individual Foundational Areas and Capabilities, that further defines those Foundational Areas and Capabilities.

- **Cost Apportionment**: The process of determining how partners will share the full costs of the services being delivered.

- **Cross-Jurisdictional Sharing**: The deliberate exercise of public authority to realign service delivery to new jurisdictional boundaries and solve problems that cannot be easily solved by existing jurisdictions. (Center for Sharing Public Health Services).

- **Current Spending**: The amount of resources supporting existing FPHS activities.

- **Foundational Area**: The substantive areas of public health expertise or program-specific activities.

- **Foundational Capability**: The crosscutting skills that need to be present everywhere for the system to work anywhere. They are the essential skills and capacities needed to support the Foundational Areas.

- **Foundational Public Health Services**: A subset of all public health services, which represent the services needed everywhere to work anywhere and can be costed.

- **Full Implementation**: The amount of resources needed to support full implementation of FPHS activities.

- **Full Time Equivalent (FTE)**: Total staff (based on full-time hours of 2,080 per year) directly supporting Foundational Public Health Services.

- **Governmental Public Health System**: For the purposes of this Report, state and local governmental public health authorities.
Kansas Foundational Public Health Services Framework: Kansas-specific FPHS framework, which is intended to represent a suite of skills, programs, and activities that should be available in every community through delivery by state or local public health authorities, to support population health. The Kansas FPHS Framework was developed by the Assessment and Performance Management Subcommittee of the Kansas Public Health Systems Group in collaboration with 19 key informants (including 5 KDHE staff and 14 LHD staff) meeting at least one of the following criteria:

- Services are population-based preventive health services that target specific communities defined by geography, race, ethnicity, gender, illness, or other health conditions (e.g., water fluoridation, creation of walkable communities).
- Governmental public health is the only or best potential provider of service (e.g., disease surveillance and epidemiology).
- All mandated services provided by the governmental public health system are included (e.g., communicating reportable disease cases to the state health department).

Kansas Governmental Public Health System: A decentralized statewide public health system led by government, with services being delivered by 101 governmental public health authorities, including the Kansas Department of Health and Environment (KDHE) and 100 local health departments (LHDs).

Labor Costs: Direct labor costs, the salaries and benefits of staff who are employed within or directly support each Foundational Area or Capability.

Non-Labor Costs: All costs not related to labor; generally, the costs of supporting Foundational Capabilities and Foundational Areas. Example costs include materials, supplies, equipment, professional services, contracted services, and facility-related costs such as rent, utilities, and maintenance.

Public Health System: All public, private, and voluntary entities that contribute to the delivery of essential public health services within a jurisdiction. These systems are a network of entities with differing roles, relationships, and interactions that contribute to the health and well-being of the community or state.

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APPENDIX E: SOURCES AND RESOURCES


