



## Local Public Health System Assessment

The Local Public Health System Assessment (LPHSA) is used to understand the County's Local Public Health System (LPHS) overall strengths and weaknesses based on the 10 Essential Public Health Services that support the three core functions of public health (see figure 1). Health is more than not being sick, as is the local public health system is more than just the health department. The local public health system includes all public, private, and voluntary entities working together to contribute to quality of life. The assessment instrument is framed around the 10 Essential Public Health Services (EPHS) that are used in the field to describe the scope of public health. The 10 EPHS are defined as:

1. Monitor health status to identify community health problems.
2. Diagnose and investigate health problems and health hazards in the community.
3. Inform, educate, and empower people about health issues.
4. Mobilize community partnerships to identify and solve health problems.
5. Develop policies and plans that support individual and community health efforts.
6. Enforce laws and regulations that protect health and ensure safety.
7. Link people to needed personal health services and assure the provision of health services.
8. Assure a competent public and personal health care workforce.
9. Evaluate effectiveness, accessibility, and quality of personal/population-based health services.
10. Research for new insights and innovative solutions to health problems.



Figure 1: The 10 Essential Public Health Services

The Boone County Local Public Health System Assessment was conducted during the month of January, 2018. The LPHS assessment was initiated on January 12, 2018 at a Boone County Health Department All Staff Meeting. This allowed for internal public health professionals to respond to the LPHS assessment. This feedback is a vital part of the final report. The feedback that was received from these professionals allowed for changes in presentation techniques

before presenting to the community partner meetings and allowed for technological improvements.

For the LPHSA to be conducted with our community partners, the 10 Essential Public Health Services were divided up into five different days consisting of two essential services per day based on professional recommendations by National Association of County & City Health Officials (NACCHO):

- January 17: Essential Services 1 & 2, Monitor, diagnose and investigate community health problems identified by surveys.
- January 18: Essential Services 3 & 4, Mobilize community partners to empower people and solve community health problems.
- January 22: Essential Services 5 & 6, Develop policies and plans to support health efforts and discuss laws and regulations that protect health and safety.
- January 25: Essential Services 7 & 9, linking people to services and evaluates accessibility.
- January 31: Essential Services 8 & 10, ensure a competent health care workforce and research new insights and solutions to health problems.

Results from the LPHS assessment are analyzed with the key findings from the additional three assessments in the MAPP process, which include the Community Health Status Assessment (CHSA), Community Themes and Strengths Assessment (CTSA), and the Forces of Change Assessment (FOCA). From these assessments, a strategic analysis will inform the identification of prevailing strategic issues, which will be further prioritized by the Boone County MAPP Steering Committee and stakeholders from the county and the region in a five year community health improvement plan (CHIP). Boone County's CHIP will be linked to the Boone County Health Department's Strategic Plan and Workforce Development Plan as required by the Public Health Accreditation Board (PHAB). Goals and action plans will be developed for these issues. These action plans will help implement and monitor progression in improving the local public health system furthering the overall health and wellbeing of Boone County.

Utilizing the MAPP process will improve Boone County's LPHS collective performance by engaging the LPHS partners to develop a comprehensive Community Health Improvement Plan. All partners can work together to address alignment of individual and collective efforts.

## The Assessment Instrument

The National Public Health Performance Standards (NPHPS) Assessment measures the performance of the local public health system defined as the collective efforts of public, private and voluntary entities, as well as individuals and informal associations that contribute to the public's health within the county. This may include health care providers, human service organizations, local health department, other governmental agencies, schools and universities, faith institutions, economic organizations, transportation, and many others. All of these organizations and others that contribute to the health or wellbeing of a community are considered part of the local public health system. Ideally, a group that is broadly representative of these public health system partners participated in the assessment process. All participants gain a better understanding of each organization's contributions, the interconnectedness of activities, and how the public health system can be strengthened. The NPHPS does not focus specifically on the capacity or performance of any single agency or organization.

In each EPHS in the local instrument of the NPHPS, the Model Standards which represent the major components or practice areas of the Essential Services (ES) were asked to be voted on by the primary activities conducted at the local level. There are a total of 30 Model Standards in the local instrument. For each Model Standard in each EPHS, there are a number of discussion questions and performance measures that break down the Model Standard.

All performance measures are designed to be scored based on how well participants understand the local public health system to collectively meet the standard within the County. The participants of the Boone County Local Public Health System Assessment used a Keypoint Interactive system. Each participant was given a clicker and as questions were displayed via a PowerPoint presentation, they were asked to vote according to the level of activity or understanding they had of the local public health system. A 1 was counted as No Activity or no knowledge of activity, ranging to a 5 which represented Optimal Activity an example of the clicker can be seen in figure 2. Participants were continually reminded that the questions were not about the health department alone nor about their specific agency but the overall function of the system. Color coordinated cards were used during our Internal Capacity discussion with Boone County Health Department employees. There were five different colors that correspond to what level of activity the LPHS is believes they are at, red (No Activity), Orange (Minimal Activity), Yellow (Moderate Activity), Blue (Significant Activity), and green (Optimal Activity). The scoring/ color scale is as follows in table 1:

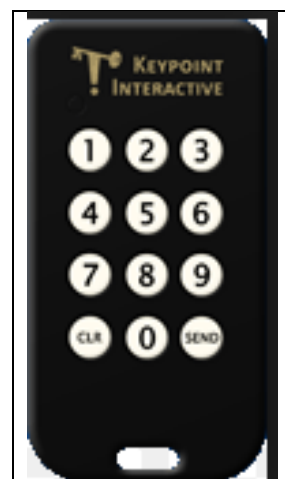


Figure 2: Example clicker all LPHSA participants used

## Color Coordinated Cards Used for LPHSA Internal Capacity Meeting:

<b>Optimal Activity</b> (76-100%)  Clicker (#5)	The public health system is doing absolutely everything possible for this activity and there is no room for improvement.
<b>Significant Activity</b> (51-75%)  Clicker (#4)	The public health system participates a great deal in this activity and there is opportunity for minor improvement.
<b>Moderate Activity</b> (26-50%)  Clicker (#3)	The public health system somewhat participates in this activity and there is opportunity for greater improvement.
<b>Minimal Activity</b> (1-25%)  Clicker (#2)	The public health system provides limited activity and there is opportunity for substantial improvement.
<b>No Activity</b> (0%)  Clicker (#1)	The public health system does not participate in this activity at all.

Table 1: NACCHO's Scoring Chart

### Assessment Participants

Participants were invited based on the recommended list in NACCHO's LPHS assessment handbook. Each list is based on the Essential Service and expertise required in each subject matter. However, participants were invited to attend any and all of the discussions if they deemed necessary. The facilitator carefully took into consideration time and balance of the discussion to ensure members could express their ideas along with creating a lively discussion.

Throughout all five days, the LPHS assessment drew 50 public health system constituents which included public and voluntary sectors. However, due to scheduling conflicts, professionals such as first responders and mental health care providers were unable to attend. The composition of attendees reflected a diverse representation of partners as seen in table 2:

Constituency Represented	# of Representatives from Boone County, IL
High School, Colleges, Universities	10
Faith Institutions	1
Employers	3
Elected Officials	4
Public Health Department	10
Hospitals/ Healthcare Providers	4
Government Entity/ City/County Planner	6
Neighborhood Organizations	12
Total	50

Table 2: Constituency Representation

**Results of the Boone County Local Public Health System Assessment Ranking  
Each EPHS:**

<b>Essential Public Health Service Ranking for Boone County:</b>	
<b>Rank</b>	
1 <sup>st</sup>	ES 2: Diagnose and Investigate
2 <sup>nd</sup>	ES 4: Mobilize Partnerships
3 <sup>rd</sup>	ES 6: Enforce Laws
4 <sup>th</sup>	ES 9: Evaluate Services
5 <sup>th</sup>	ES 8: Assure Workforce
6 <sup>th</sup>	ES 5: Develop Policies/ Plans
7 <sup>th</sup>	ES 7: Link To Health Services
8 <sup>th</sup>	ES 1: Monitor Health Status
9 <sup>th</sup>	ES 3: Educate/ Empower
10 <sup>th</sup>	ES 10: Research/ Innovations

Table 3: 10 Essential Services Ranked from LPHSA

The Essential Public Health Service Ranking as shown gives a rank of each EPHS from 1 being the highest to 10 being the lowest. These results were based on average scores of the participants during each of the LPHSA group discussion days. The results show that EPHS 2 (Diagnose and Investigate), EPHS 4 (Mobilize Partnerships), and EPHS 6 (Enforce Laws) are the top three strongest areas of performance for the LPHS. The lowest scoring EPHS areas for the LPHSA were EPHS 10 (Research/ Innovations), EPHS 3 (Educate/Empower), and EPHS 1 (Monitor Health Status). The full list and how each Essential Services ranks can be seen in table 3.

**Cross-Cutting Themes from the Boone County Local Public Health System  
Assessment**

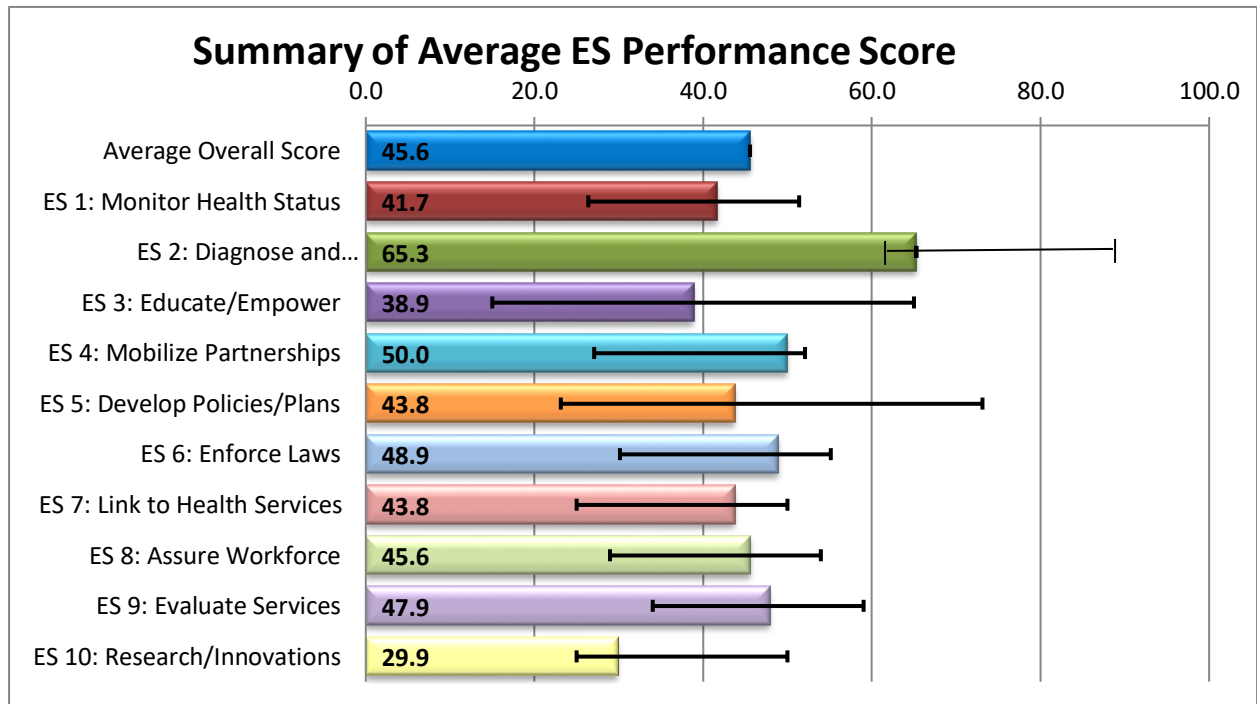
Throughout the local public health system discussions, a number of cross-cutting themes emerged. Key strengths that were noted from the local public health system in Boone County include a strong emergency response system, health department staff, bi-lingual staffing, senior living facilities, and social media/media outlets.

Some areas of weakness emerging throughout the discussions of the LPHS include partnership gaps, communication, lack of data sharing and analysis, lack of awareness of what other organizations are doing, and funding for research. Over the five days, the focus groups did identify many short and long term opportunities to address these challenges as a community.

A short-term opportunity to better the LPHS Essential Service 8 that was mentioned was to have more organizations in the County take on interns. The Boone County Health Department was recognized by staff and community members as a teaching health department. This is due to the fact that they apply and receive interns on a regular basis. If more organizations would follow suit this would potentially help Essential Service 8 move up in the performance score ranking.

A long-term opportunity that was mentioned by many of our LPHSA members was to figure out a way that we can share data quicker and easier. An initial idea of having the health department as a centralized location that all data could be sent to and sorted, this way all information can be readily available for anyone who may need to use it.

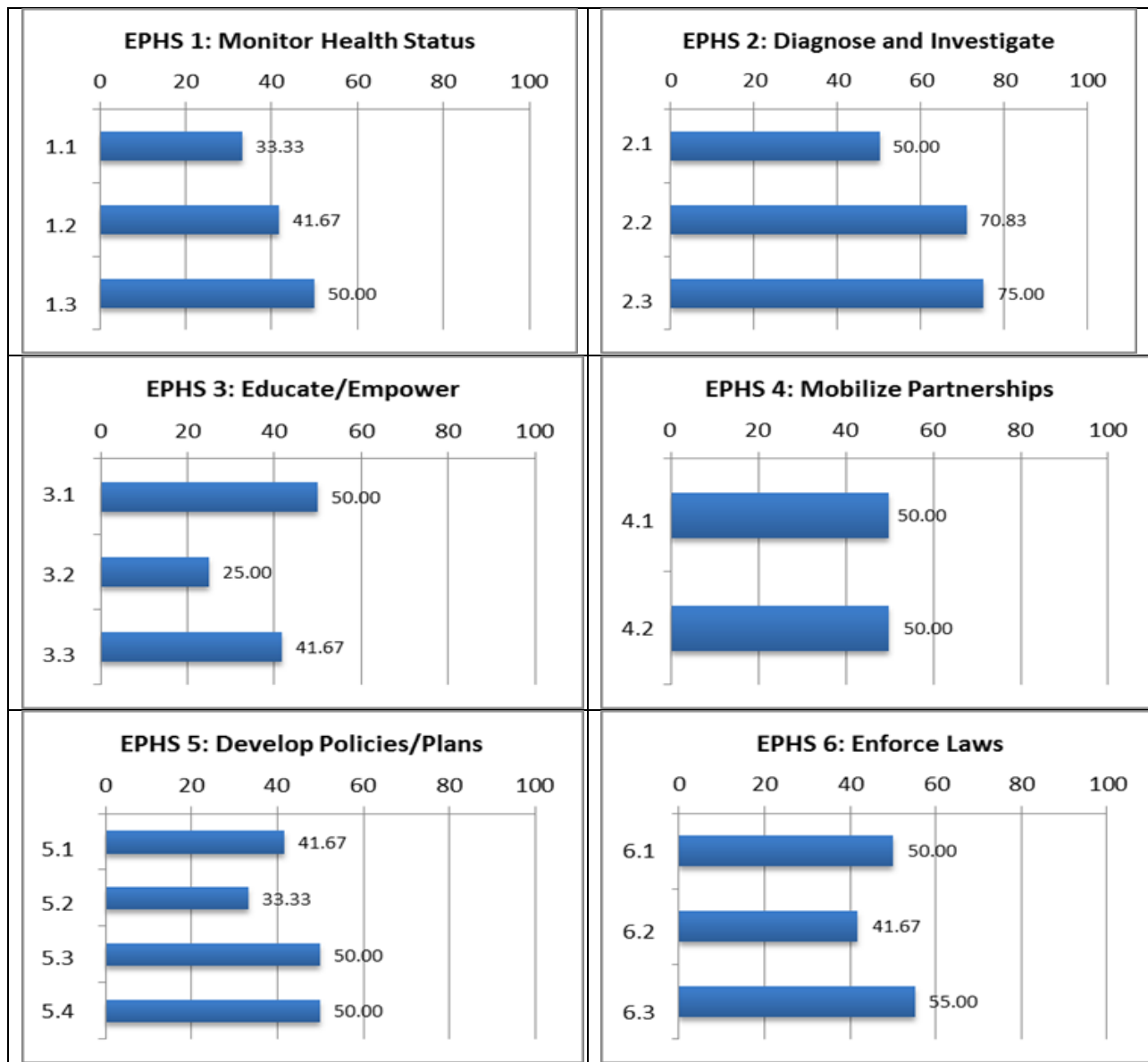
Utilizing the MAPP process will improve Boone County’s LPHS collective performance by engaging the LPHS partners to develop a comprehensive Community Health Improvement Plan. All partners can work together to address alignment of individual and collective efforts. All performance averages are as follows (graph 1); these averages are the final numbers from our LPHSA members.



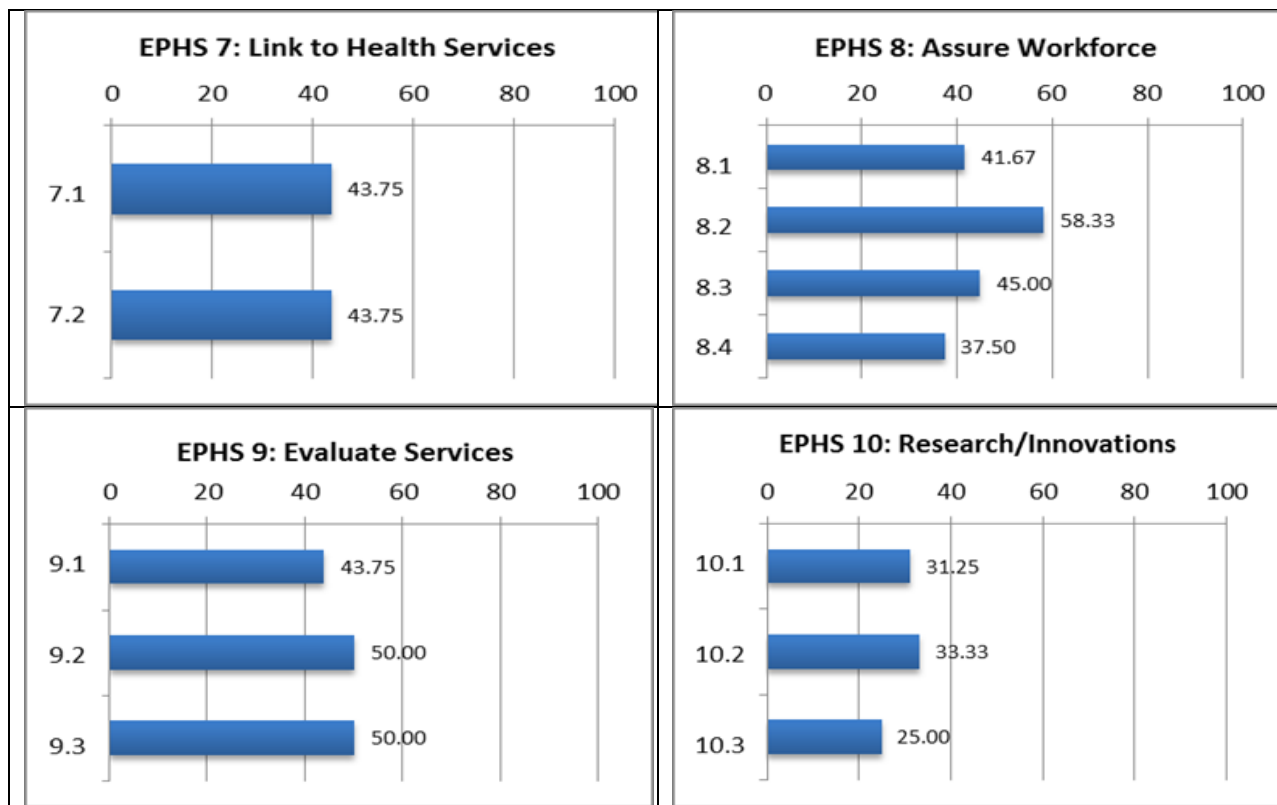
Graph 1: Essential Services average performance scores

## Performance Scores by Essential Public Health Service for Each Model Standard

The following graph (2) represents the average performance scores for each of the Model Standards within each of the Essential Services. This allows for an analysis that identifies specific activities that contributed to a high or low performance within each Essential Service.







Graph 2: Break down of Model Standards by Essential Services

### Prioritization Questionnaire

The MAPP Steering Committee decided to incorporate a Prioritization Questionnaire. This questionnaire is considered optional (see appendix A). All LPHS assessment respondents were given the opportunity to rate all essential services in the community. This survey was created electronically through configuring a survey in the Survey Monkey and sending it out via email. The survey was available for approximately two weeks. Two email reminders were sent out throughout these two weeks to all members. Twenty-seven Boone County community members, or just over 50% of those who participated in the focus groups, participated in this survey. The purpose of the questionnaire was to determine how important it is to work on each Model Standard to improve the overall performance of the local public health system. The results from this questionnaire were compiled with the performance rankings and will help drive performance improvement throughout the local public health system.

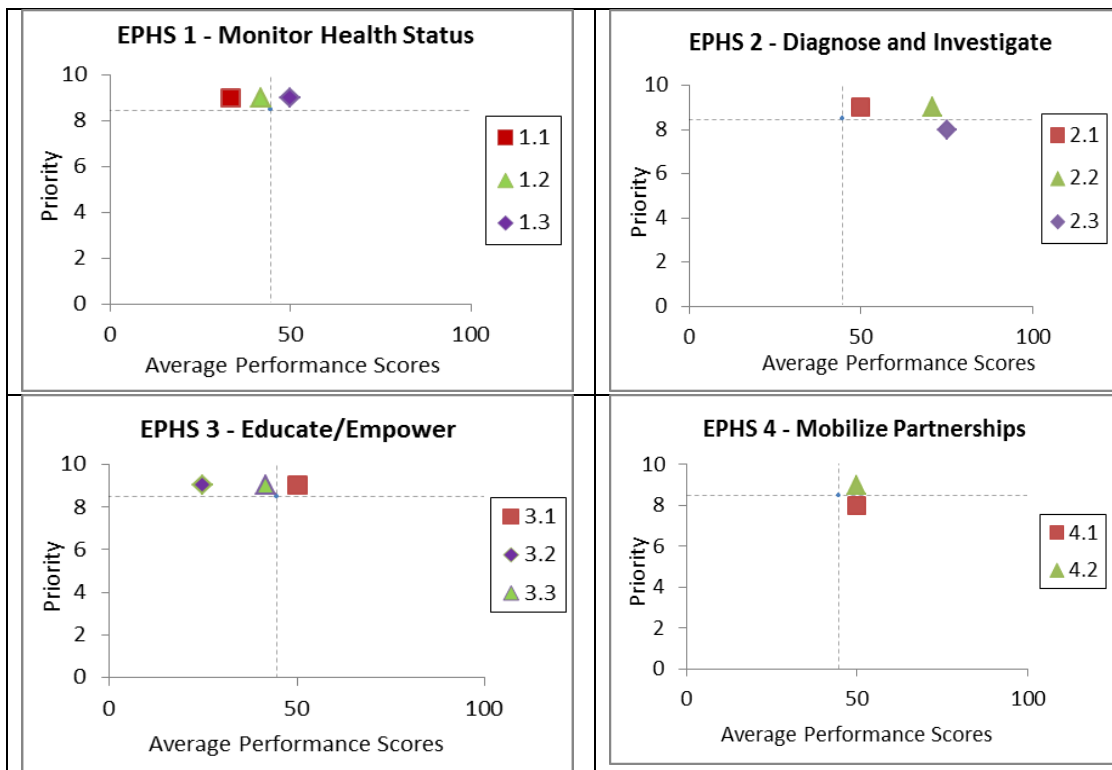
### Priority of Model Standards Questionnaire (Optional Survey)

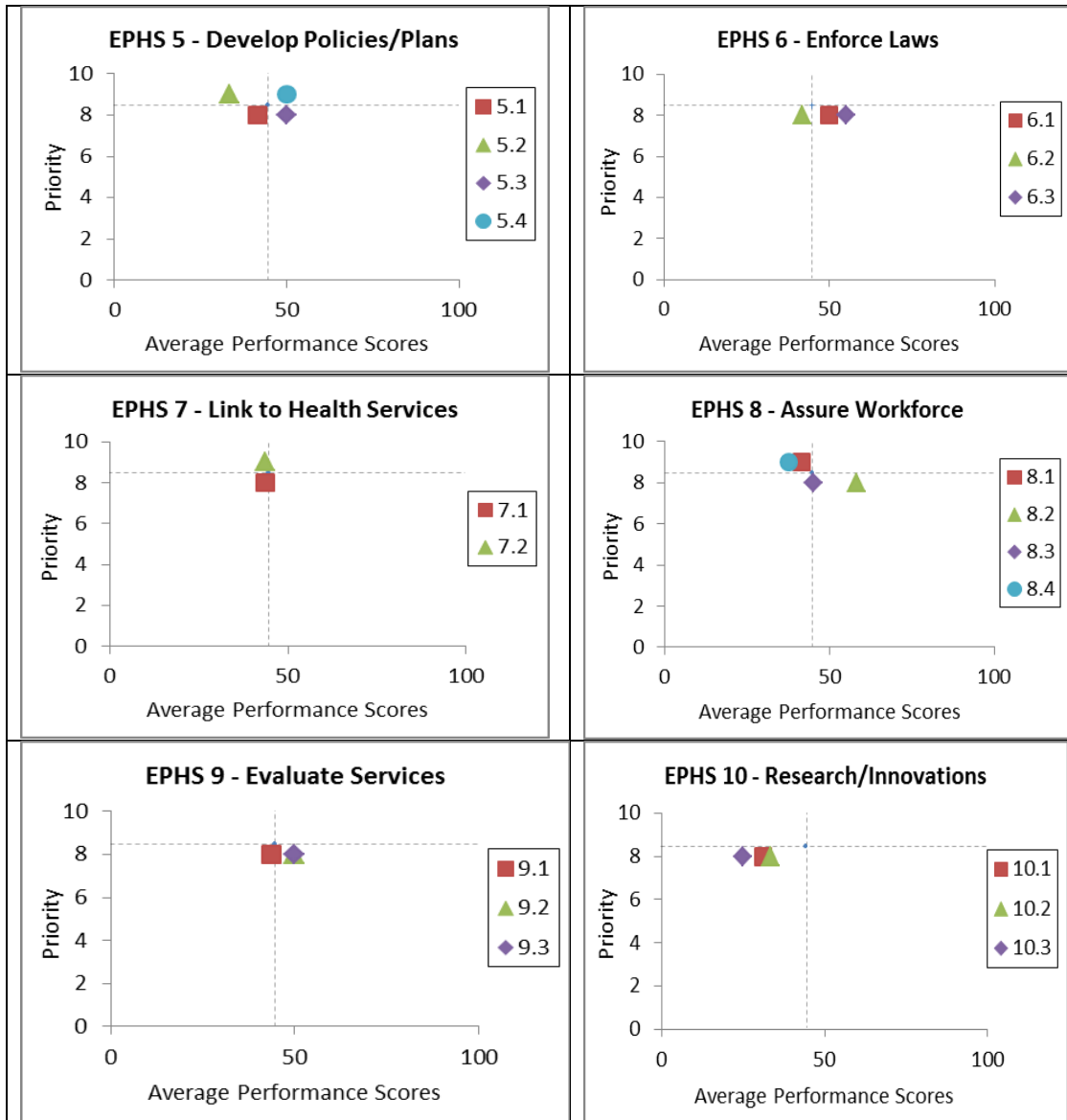
The matrix designed for this survey contains four quadrants, each with a different balance of priority/performance. Quadrants ranged from High priority/High performance to Low Priority and Low Performance. The placement of the score within the quadrants provides guidance in considering areas for attention and next steps for improvement. The following table 4 defines

what each quadrant means if a model standard falls in to that quadrant. Graph 3 represents where each Model Standard falls into a quadrant.

<b>Quadrant A</b> (Upper left quadrant)	(High Priority and Low Performance) – These activities may need increased attention.
<b>Quadrant B</b> (Upper right quadrant)	(High Priority and High Performance) – These activities are being done well, and it is important to maintain efforts.
<b>Quadrant C</b> (Bottom right quadrant)	(Low Priority and High Performance) – These activities are being done well; consideration may be given to reducing effort in these areas.
<b>Quadrant D</b> (Bottom left quadrant)	(Low Priority and Low Performance) – These activities could be improved, but are of low priority. They may need little or no attention at this time.

Table 4: Priority Survey Matrix





Graph 3: Average Performance Scores and Priority Rating Matrix

### Model Standards by Priority and Performance Score

Participants were invited to score each model standard on a scale of 1 through 10, with 10 being the highest priority and 1 as the lowest priority. Table 5 below is another representation of the information you see in the quadrants above summarized with performance scores for each Model Standard.

Quadrant	Model Standard	Performance Score (%)	Priority Rating
Quadrant A	8.4 Leadership Development	37.5	9
Quadrant A	8.1 Workforce Assessment	41.7	9
Quadrant A	7.2 Assure Linkage	43.8	9
Quadrant A	5.2 Policy Development	33.3	9
Quadrant A	3.3 Risk Communication	41.7	9
Quadrant A	3.2 Health Communication	25.0	9
Quadrant A	1.2 Current Technology	41.7	9
Quadrant A	1.1 Community Health Assessment	33.3	9
Quadrant B	5.4 Emergency Plan	50.0	9
Quadrant B	4.2 Community Partnerships	50.0	9
Quadrant B	3.1 Health Education/Promotion	50.0	9
Quadrant B	2.2 Emergency Response	70.8	9
Quadrant B	2.1 Identification/Surveillance	50.0	9
Quadrant B	1.3 Registries	50.0	9
Quadrant C	9.3 Evaluation of LPHS	50.0	8
Quadrant C	9.2 Evaluation of Personal Health	50.0	8
Quadrant C	8.2 Workforce Standards	58.3	8
Quadrant C	6.3 Enforce Laws	55.0	8
Quadrant C	6.1 Review Laws	50.0	8
Quadrant C	5.3 CHIP/Strategic Planning	50.0	8
Quadrant C	4.1 Constituency Development	50.0	8
Quadrant C	2.3 Laboratories	75.0	8
Quadrant D	10.3 Research Capacity	25.0	8
Quadrant D	10.2 Academic Linkages	33.3	8
Quadrant D	10.1 Foster Innovation	31.3	8
Quadrant D	9.1 Evaluation of Population Health	43.8	8
Quadrant D	8.3 Continuing Education	45.0	8
Quadrant D	7.1 Personal Health Services Needs	43.8	8
Quadrant D	6.2 Improve Laws	41.7	8
Quadrant D	5.1 Governmental Presence	41.7	8

Table 5: Performance Scores and Priority Rating from LPHSA

Each Essential Services Model Standard was ranked based on Model Standard score and priority ratings recorded by LPHS assessment community leaders. Those that ranked in the first quadrant, Quadrant A, represent high priority and low performance. This quadrant included the following Model Standards: 8.4 Leadership Development, 8.1 Workforce Assessment, 7.2 Assure people are linked to needed services, 5.2 Policy Development, 3.3 Risk Communication, 3.2 Health Communication, 1.2 Current Technology, and 1.1 Community Health Assessment. The activities involved in these Model Standards need increased attention. A solution to

increase performance in this quadrant would be to examine if any Model Standards are in the same Essential Services show up together, such as 8.4 & 8.1. LPHS partners discussed that there is information but communicating this information could be improved. A possible solution is to utilize the health department as a centralized location where all data is compiled. Focusing more on increasing performance measures in this quadrant could inevitably increase performance in other quadrants as well.

Quadrant B had many Model Standards that were ranked as high priority and high performance. Model Standards: 5.4 Emergency Plan, 4.2 Community Partnerships, 3.1 Health Education/Promotion, 2.2 Emergency Response, 2.1 Identification/Surveillance, and 1.3 Registries all rank in Quadrant B. This means, Boone County community leaders are doing well in the activities of these Model Standards and it is important to maintain efforts in them. Boone County's community representatives revealed that it continues to strive in emergency planning, emergency response, and identifying and surveillance of public health threats. The LPHS also noted that Boone County is aware of the health department's flu tracking and communicable disease programs, while also being aware of the impact of food establishments in case of an outbreak. Working well together as the Model Standards have shown is necessary to keep the health and wellness of Boone County.

The third quadrant, Quadrant C, represents the low priority and high performance section. The following Model Standards fell into this quadrant: 9.3 Evaluation of LPHS, 9.2 Evaluation of Personal Health, 8.2 Workforce Standards, 6.3 Enforce Laws, 6.1 Review Laws, 5.3 CHIP/Strategic Planning, 4.1 Constituency Development, and 2.3 Laboratories. The Model Standard's activities in this quadrant were rated as being done well and consideration should be given to reduce some effort in these areas. While it is good that the LPHS is performing high in these Model Standards, more focus could be taken from them and distributed throughout high priority quadrants. Shifting efforts from these Model Standards to where the LPHS shows weakness in its performance measures could contribute to increasing performance in low performance quadrants such as Quadrant A. The LPHS members noted that they are working on revising ordinances in Boone County. With the County law enforcement receiving unnecessary phone calls because of the old ordinances, official's short-term goals of reviewing laws could shift their focus to long-term goals in areas in Quadrant A. Focus from these individuals could shift to better policy development and leadership development.

The final quadrant, Quadrant D, represents low priority and low performance. Model Standards 10.3 Research Capacity, 10.2 Academic Linkages, 10.1 Foster Innovation, 9.1 Evaluation of Population Health, 8.3 Continuing Education, 7.1 Personal Health Services Needs, 6.2 Improve Laws, and 5.1 Governmental Presence fell in to Quadrant D. This means that

activities in these Model Standards could be improved, but are a low priority and need little or no attention at this time.

It is important to sustain performance levels in all high priority quadrants as well as increasing low performance ratings. Quadrant A's Model Standard activities need increased efforts and focus to increase performance in other areas. Quadrant C has many Model Standards that are being done well, therefore, shifting some of the focus from these Model Standards to Quadrant A's Model Standards could improve overall performance and priority ratings. Meanwhile, while shifting efforts/ focus to these needed areas, maintaining Quadrant B Model Standard Activities which are high priority and high performance is a necessity.