Results of the 2017 Kansas Public Health Workforce Assessment

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Introduction

One of the goals included in *Healthy People 2020* is to ensure that every public health agency has the infrastructure required to adequately provide the ten essential public health services.[1,2]

1. Monitor Health
2. Diagnose & Investigate
3. Inform, Educate, Empower
4. Mobilize Community Partnerships
5. Develop Policies
6. Enforce Laws
7. Link to / Provide Care
8. Assure Competent Workforce
9. Evaluate
10. Research

A capable and qualified workforce is one component of the public health infrastructure and is one of the ten essential services.

Introduction

- To assure that a workforce is capable and qualified, the workforce must be assessed.

- From the assessment, effective education and training strategies can be developed in order to increase the competency of the workforce.

Introduction

How is a public health workforce assessed?

- Surveys involving a self-assessment of public health core competencies are commonly used to determine the proficiency of the workforce.

- National surveys (Public Health Workforce Interests and Needs Survey (PH WINS)) were conducted in 2014 and 2017.[3,4,5] The PH WINS is scheduled to be conducted again in fall 2020.[5]

- Regions and states also use surveys to conduct more localized public health workforce assessments.[6,7,8]

Introduction

- The Kansas Department of Health and Environment (KDHE) assessed the public health workforce in Kansas by conducting a survey of KDHE staff in 2003 and local health departments (LHDs) staff in 2005.

- A second Kansas public health workforce assessment survey was conducted in 2014 for both KDHE and LHDs. The results of the 2014 assessment were reported in 2015.

- The most recent Kansas public health workforce assessment survey was completed in 2017.

- Another survey in Kansas is scheduled to be conducted in 2020.

Introduction

- The KDHE is a state agency that is responsible for assuring public health and promoting environmental quality in Kansas.

- The KDHE consists of three divisions headquartered at the Curtis State Office Building in Topeka, Kansas.
  - Division of Public Health
  - Division of Environment
  - Division of Health Care Finance

- The agency also has several satellite locations including the Kansas Health and Environmental Laboratories and six District Offices located throughout the state.[9]

Project Description

The 2017 Kansas Public Health Workforce Assessment was conducted using a survey that was created using Qualtrics Survey Software.

The survey was mainly comprised of demographics questions and a public health core competencies self-assessment.

Core competencies self-assessment questions were organized into eight domains:[10]

- Domain 1: Analytical/Assessment Skills
- Domain 2: Policy Development/Program Planning Skills
- Domain 3: Communication Skills
- Domain 4: Cultural Competency Skills
- Domain 5: Community Dimensions of Practice Skills
- Domain 6: Public Health Science Skills
- Domain 7: Financial Planning and Management Skills
- Domain 8: Leadership and System Thinking Skills

Project Description

For each core competency, survey participants were asked to select one of the following responses:

- Not at all proficient
- Some limited proficiency
- Proficient
- Very proficient
- Does not apply to my job
- I do not understand this question

The survey was promoted to all KDHE and LHDs staff members. Incentives were offered to encourage participation.

A total of 1,652 individuals participated in the 2017 Kansas assessment survey.

- KDHE: 748 participants (45%)
- LHDs: 904 participants (55%)

Project Description

The primary focus of my project was to organize and analyze data obtained from the 2017 Kansas Public Health Workforce Assessment, compare with the 2014 Kansas assessment, and report the results.

Project Approach

1. Organize and analyze the 2017 data
2. Interpret the results of analysis and create graphs and tables
3. Compare with the results from the 2014 Kansas Public Health Workforce Assessment
4. Compare with the results from the 2017 National Public Health Workforce Interests and Needs Survey
5. Develop recommendations to address workforce needs and improve proficiency
6. Prepare a report to present the results and create a summary of that report
7. Review literature related to workforce assessments throughout project

Attainment of MPH Foundational Competencies

Competency No. 3: Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate.

This competency was utilized during the organization and analysis of the 2017 workforce assessment survey data. The analyses were completed using Microsoft Excel. The graphs and tables were also created using Excel.
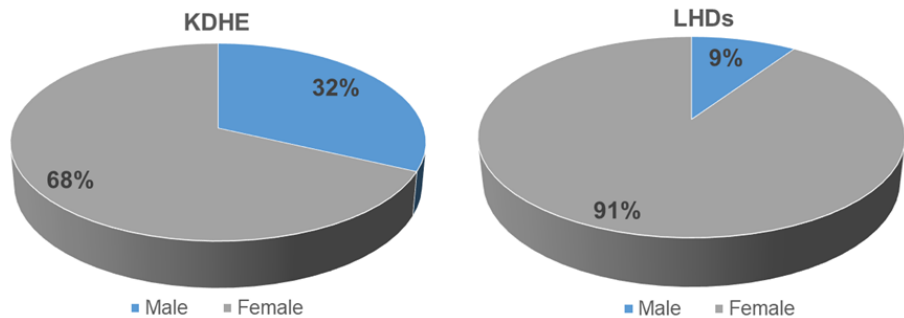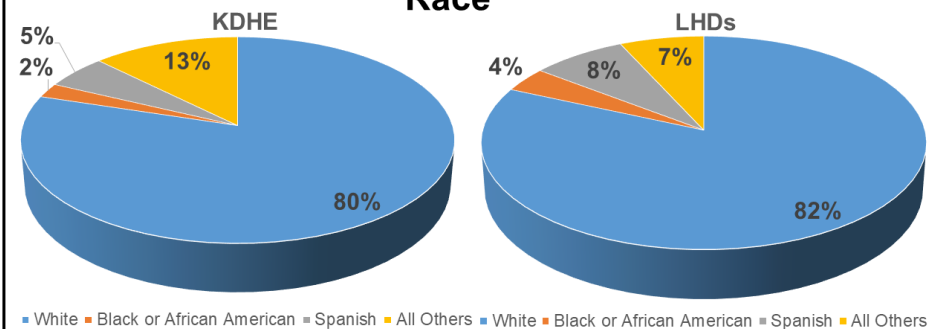
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Results

2017 Kansas Public Health Workforce Demographics

Results

2017 Kansas Public Health Workforce Demographics

Results

2017 Kansas Public Health Workforce Total Proficiency Percentage

Total Proficiency Percentage (KDHE)

- Domain 1: Analytical/Assessment Skills
- Domain 2: Policy Development/Program Planning Skills
- Domain 3: Communication Skills
- Domain 4: Cultural Competency Skills
- Domain 5: Community Dimensions of Practice Skills
- Domain 6: Public Health Science Skills
- Domain 7: Financial Planning and Management Skills
- Domain 8: Leadership and System Thinking Skills

Non-Supervisor: 66, 63, 70, 67, 69, 60, 46, 55
Supervisor: 75, 80, 77, 74, 82, 71, 70, 75
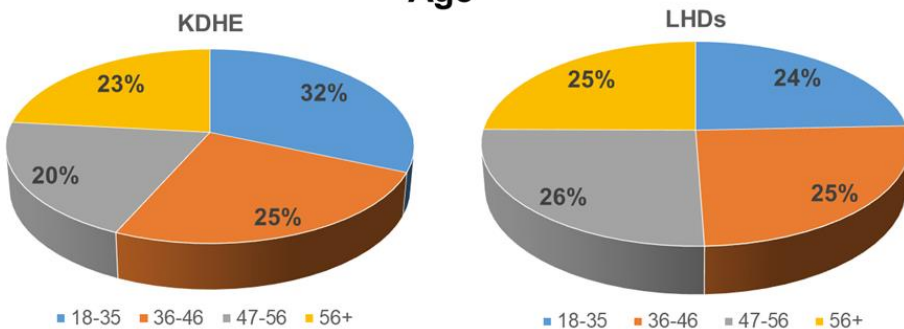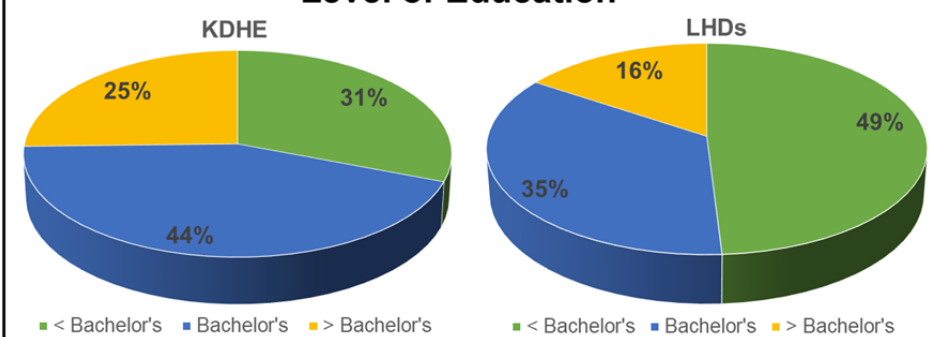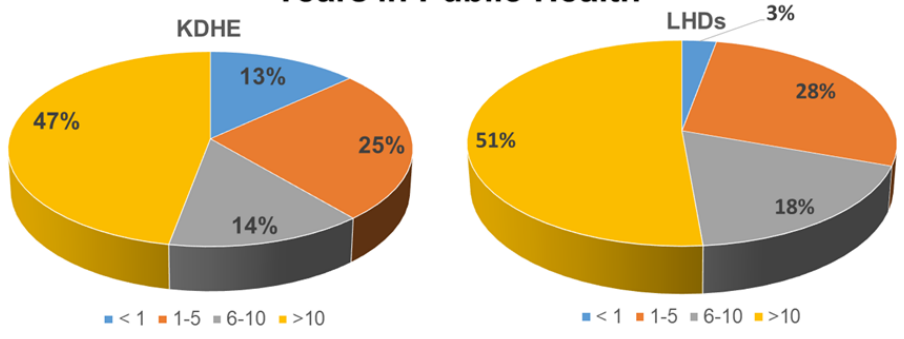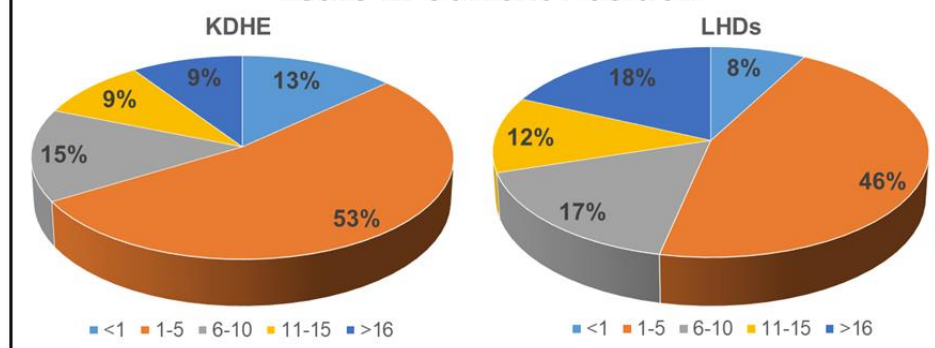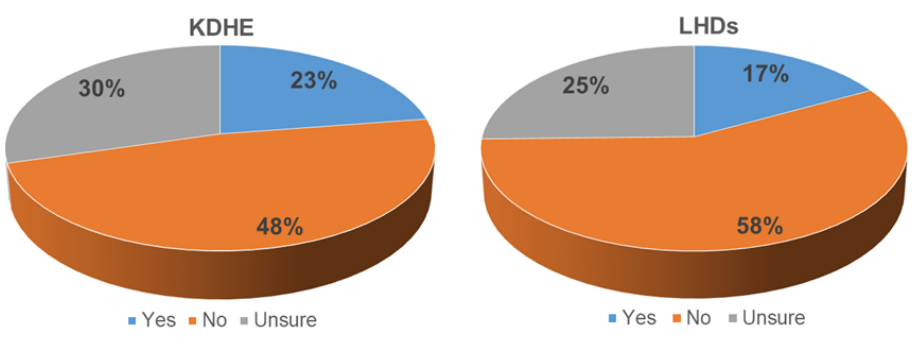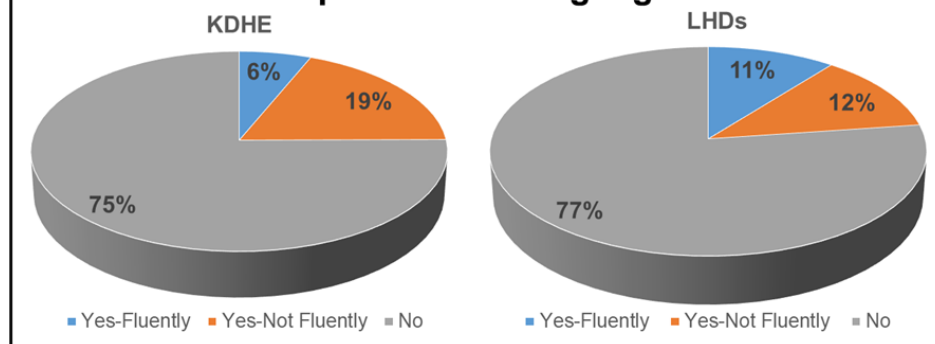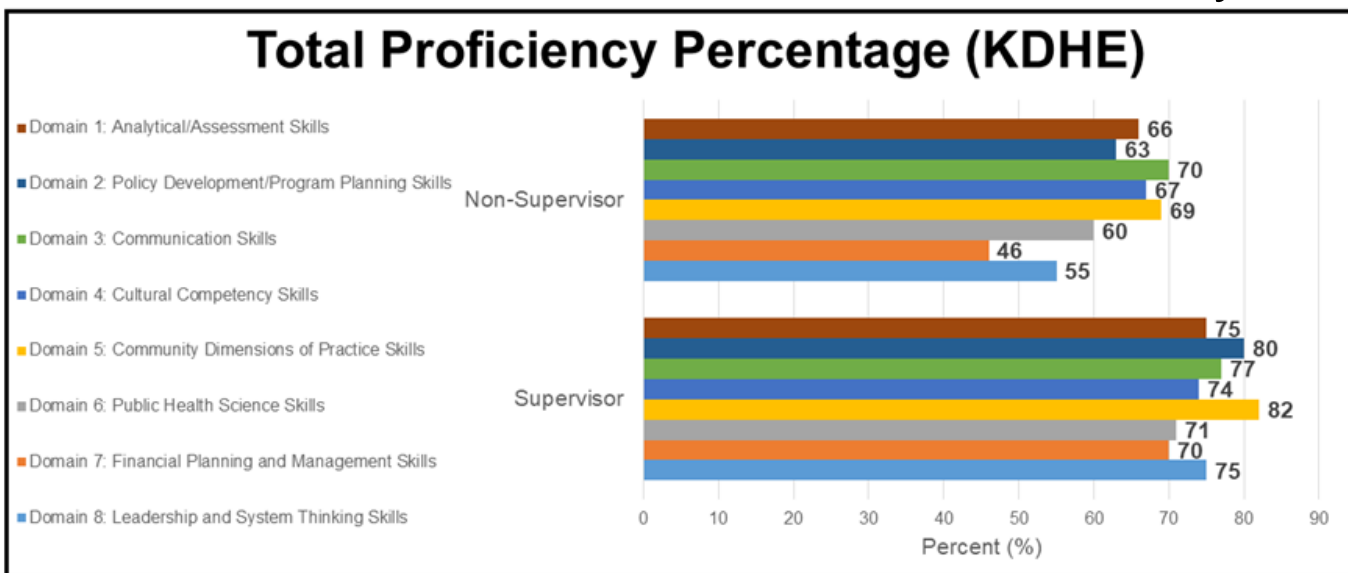
Rank	Top 3 Highest – KDHE Non-Supervisor
1	Domain 3: Communication Skills (70%)
2	Domain 5: Community Dimensions of Practice Skills (69%)
3	Domain 4: Cultural Competency Skills (67%)

Rank	Top 3 Highest – KDHE Supervisor
1	Domain 5: Community Dimensions of Practice Skills (82%)
2	Domain 2: Policy Development/Program Planning Skills (80%)
3	Domain 3: Communication Skills (77%)

Rank	Top 3 Lowest – KDHE Non-Supervisor
1	Domain 7: Financial Planning and Management Skills (46%)
2	Domain 8: Leadership and System Thinking Skills (55%)
3	Domain 6: Public Health Science Skills (60%)

Rank	Top 3 Lowest – KDHE Supervisor
1	Domain 7: Financial Planning and Management Skills (70%)
2	Domain 6: Public Health Science Skills (71%)
3	Domain 4: Cultural Competency Skills (74%)

Results

2017 Kansas Public Health Workforce Total Proficiency Percentage

Total Proficiency Percentage (LHDs)

- Domain 1: Analytical/Assessment Skills
- Domain 2: Policy Development/Program Planning Skills
- Domain 3: Communication Skills
- Domain 4: Cultural Competency Skills
- Domain 5: Community Dimensions of Practice Skills
- Domain 6: Public Health Science Skills
- Domain 7: Financial Planning and Management Skills
- Domain 8: Leadership and System Thinking Skills

Non-Supervisor: 52, 59, 67, 69, 68, 55, 42, 62
Supervisor: 54, 72, 70, 72, 75, 63, 64, 75

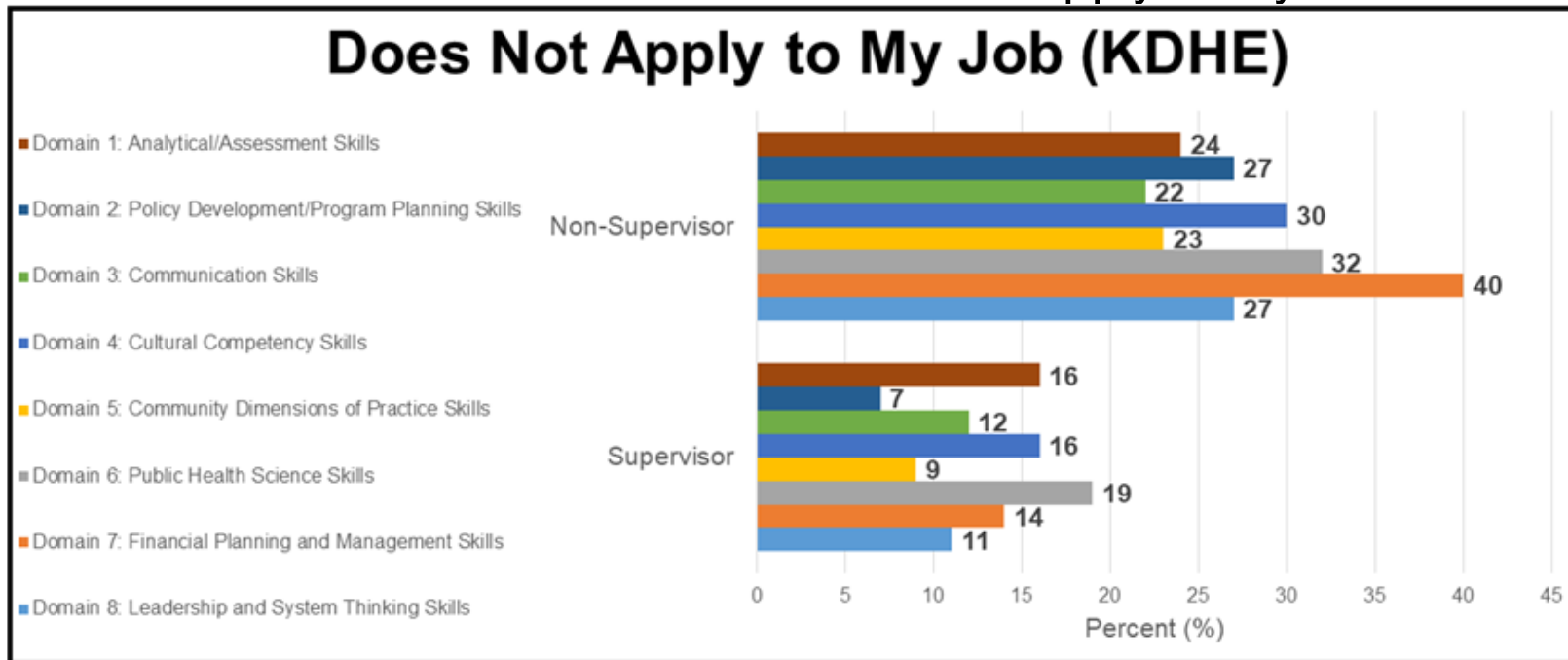| Rank	Top 3 Highest – LHDs Non-Supervisor
1	Domain 4: Cultural Competency Skills (69%)
2	Domain 5: Community Dimensions of Practice Skills (68%)
3	Domain 3: Communication Skills (67%)

Rank	Top 3 Highest – LHDs Supervisor
1	Domain 5: Community Dimensions of Practice Skills (75%)
2	Domain 8: Leadership and System Thinking Skills (75%)
3	Domain 2: Policy Development/Program Planning Skills (72%)

Rank	Top 3 Lowest – LHDs Non-Supervisor
1	Domain 7: Financial Planning and Management Skills (42%)
2	Domain 1: Analytical/Assessment Skills (52%)
3	Domain 6: Public Health Science Skills (55%)

Rank	Top 3 Lowest – LHDs Supervisor
1	Domain 1: Analytical/Assessment Skills (54%)
2	Domain 6: Public Health Science Skills (63%)
3	Domain 7: Financial Planning and Management Skills (64%)

Results

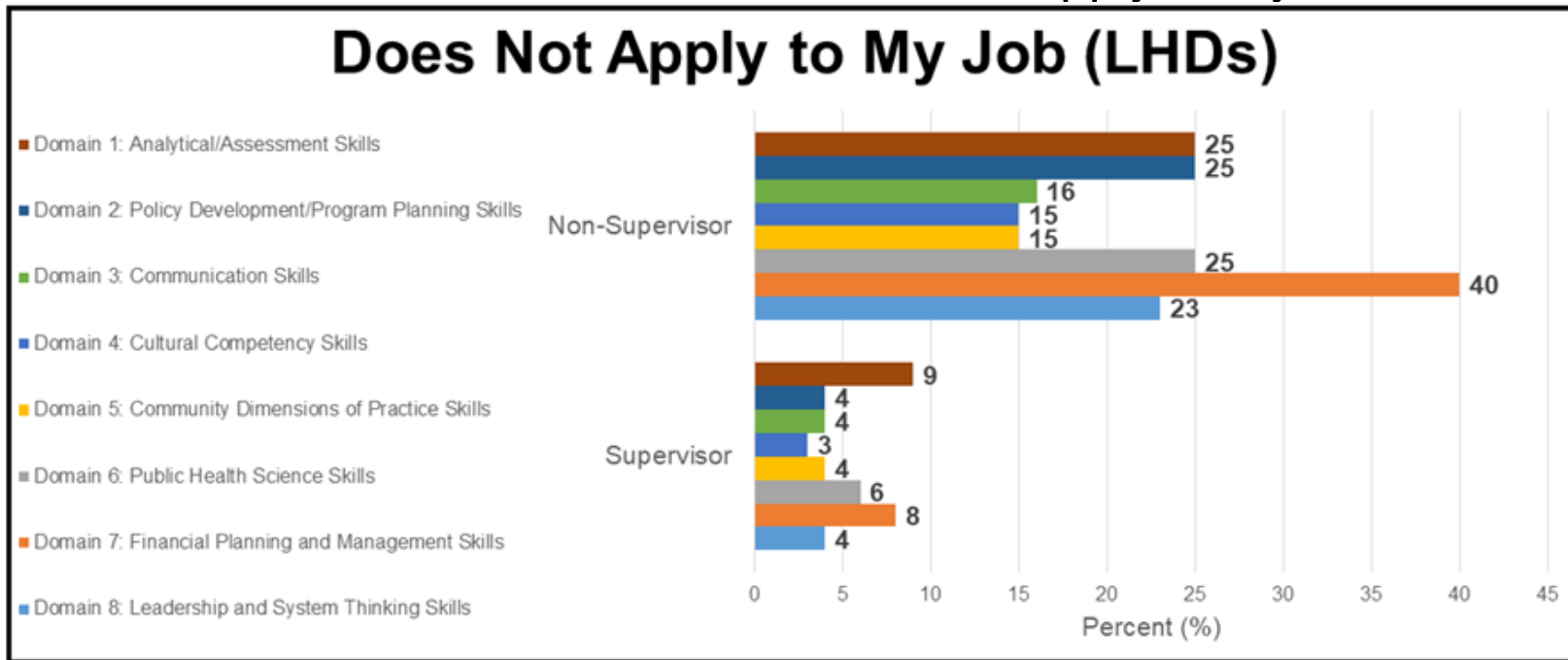## 2017 Kansas Public Health Workforce Does Not Apply to My Job Percentage

Rank	Top 3 Highest – KDHE Non-Supervisor
1	Domain 7: Financial Planning and Management Skills (40%)
2	Domain 6: Public Health Science Skills (32%)
3	Domain 4: Cultural Competency Skills (30%)

Rank	Top 3 Highest – KDHE Supervisor
1	Domain 6: Public Health Science Skills (19%)
2	Domain 1: Analytical/Assessment Skills (16%)
3	Domain 4: Cultural Competency Skills (16%)

Results

2017 Kansas Public Health Workforce Does Not Apply to My Job Percentage

Rank	Top 3 Highest – LHDs Non-Supervisor
1	Domain 7: Financial Planning and Management Skills (40%)
2	Domain 6: Public Health Science Skills (25%)
3	Domain 1: Analytical/Assessment Skills (25%)

Rank	Top 3 Highest – LHDs Supervisor
1	Domain 1: Analytical/Assessment Skills (9%)
2	Domain 7: Financial Planning and Management Skills (8%)
3	Domain 6: Public Health Science Skills (6%)

Competency No. 4: Interpret results of data analysis for public health research, policy or practice.

This competency was used while reviewing the results of the data analyses. Since I was inexperienced with interpreting workforce assessment results at the start of this project, the literature review was very helpful.

Competency No. 7: Assess population needs, assets and capacities that affect communities' health.

From the interpretation of the results, the Kansas public health workforce education and training needs were assessed and determined. For reporting the education and training needs, it was decided to use the three domains with the lowest proficiency percentage and highest "Does not apply to my job" response percentage.

Discussion

Comparison with 2014 Kansas Public Health Workforce Assessment

- Difficult to directly compare the 2017 results with the 2014 assessment results because the participant responses were separated differently.

- In 2014, responses were separated into four tiers:
  - Tier A: Administrative and facilities support staff
  - Tier 1: Staff who carry out day-to-day tasks
  - Tier 2: Supervisory and/or program management level staff
  - Tier 3: Senior management and leaders of a public health organization

- In 2017, responses were separated into two workforce categories
  - Supervisor
  - Non-Supervisor

Discussion

Comparison with 2014 Kansas Public Health Workforce Assessment

- In 2017, 57% of the KDHE workforce was 46 years of age or younger (32% were 35 or younger).

- In 2014, 57% of the KDHE workforce was 46 years of age or older (30% were 56 or older).

- Loss of professional work experience.

- One of the reported recommendations for the 2014 assessment was to attract a younger workforce by increasing awareness and creating interest in the public health field among high school and college students.

Discussion

Comparison with 2014 Kansas Public Health Workforce Assessment

- The 2017 assessment shows that the lower proficiency domains that are common among KDHE and LHDs supervisors and non-supervisors are:
  - Domain 7: Financial Planning and Management Skills
  - Domain 6: Public Health Science Skills
  - Domain 1: Analytical/Assessment Skills
- These three domains also had a high "Does Not Apply to My Job" response percentage in 2017.
- For 2014, the domain with the lowest proficiency percentage for both KDHE and LHDs was Domain 6: Public Health Science Skills (includes competencies related to the 10 essential public health services).
- For 2014, significant percentages of KDHE and LHDs participants reported that competencies within Domain 7: Financial Planning and Management Skills do not apply to their job.
- One of the reported recommendations for the 2014 assessment was an online training focusing on the 10 essential services.

Discussion

Comparison with 2017 National Public Health Workforce Interests and Needs Survey

- The 2017 Kansas assessment showed that the public health workforce is predominately female (KDHE: 68%, LHDs: 91%)
- The 2017 national assessment showed that the national public health workforce is 79% female and 21% male.[11]
- The 2017 Kansas assessment showed that the public health workforce is well educated (KDHE: 69% having at least a bachelor's degree, LHDs: 51% having at least a bachelor's degree).
- The national public health workforce is also well educated with 62% having at least a bachelor's degree.[11]
- The 2017 Kansas assessment showed that only 23% of the KDHE workforce has plans to leave their position within 2-3 years (LHDs: 17%).
- In the 2017 national assessment, almost half (47%) of the national workforce reported plans to leave their position within the next five years.[11]

Discussion

Comparison with 2017 National Public Health Workforce Interests and Needs Survey

- The 2017 Kansas assessment shows that the lower proficiency domains that are common among KDHE and LHDS supervisors and non-supervisors are:
  - Domain 7: Financial Planning and Management Skills
  - Domain 6: Public Health Science Skills
  - Domain 1: Analytical/Assessment Skills
- The top training need identified in the 2017 national assessment was budgeting and financial management.[11]

Conclusion/Recommendations

- Since the current Kansas public health workforce is younger, effective education and training is important. Retainment strategies should be explored.

- The following domains are recommended to be the primary focus areas for education and training in Kansas:
  - Domain 7: Financial Planning and Management Skills
  - Domain 6: Public Health Science Skills
  - Domain 1: Analytical/Assessment Skills

- The two workforce categories of supervisors and non-supervisors should be used for future survey response separation.

- Spatial components should be added to the survey so more specific recommendations can be developed.

Competency No. 18: Select communication strategies for different audiences and sectors.

Several different audiences would be interested in viewing the results of the project. Therefore, a communication strategy of creating a short summary of the report was selected. The summary encourages interested parties to review the assessment report for more information and results.

Competency No. 19: Communicate audience-appropriate public health content, both in writing and through oral presentation.

The report was written in a way that different audiences and sectors would be able to understand the purpose and results of the project. Theses slides for the oral presentation were developed in the same way, keeping in mind appropriate communication with the audience.

MPH Emphasis Area: Infectious Diseases/Zoonoses

Number and Competency		Description
1	Pathogens/pathogenic mechanisms	DMP 710 – One Health, DMP 705 – Vet Immunology, DMP 814 – Vet Bacteriology
2	Host response to pathogens/immunology	DMP 705 – Vet Immunology
3	Environmental/ecological influences	DMP 710 – One Health, MPH 802 – Environmental Health
4	Disease surveillance	MPH 754 – Intro to Epidemiology, DMP 844 – Global Health, DMP 888 – Globalization, Cooperation, and the Food Trade
5	Disease vectors	DMP 710 – One Health, DMP 705 – Vet Immunology, DMP 814 – Vet Bacteriology

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  - Dr. Hsu
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