

A Comparison between Kansas and the Pacific Northwest:

Perceived competency of environmental health service providers in delivering the ten essential public health services

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Learning Objectives

1. List the ten essential public health services.
2. Explain the difference in findings between the two geographical regions.
3. Describe the two implications of the study's findings for workforce development education and training.

Introduction

- The EH workforce has become increasingly isolated from public health agencies, reducing capacity to respond to new and emerging threats.
- Training and education for EH workers does not adequately address the science and principles of public health.
- EH units have not incorporated the Essential Services model into their practice to the extent PH has.
- EH agencies are unable to attract workers possessing prerequisite skills.
- Trainings are typically technical in nature.
- < 50% of the EH workforce surveyed understood or practiced the 10 essential services.

Ten Essential *Environmental* Public Health Services

1. Monitor environmental and health status to identify community environmental health problems.
2. Diagnose and investigate environmental health problems and hazards in the community.
3. Inform, educate, and empower people about environmental health issues.
4. Mobilize community partnerships to identify and solve environmental health problems.
5. Develop policies and plans that support individual and community environmental health efforts.

Ten Essential Env. Public Health Services (cont.)

6. Enforce laws and regulations that protect health and ensure safety.
7. Link people to needed environmental health services and assure the provision of environmental health services when otherwise unavailable.
8. Assure a competent environmental health workforce.
9. Evaluate effectiveness, accessibility, and quality of environmental health services.
10. Research for new insights and innovative solutions to environmental health problems.

Methods

- Purpose: Describe perceptions of EH service providers about the competency of their agency to provide the 10 Essential Public Health Services
- Design: cross-sectional, convenience sample survey conducted by Osaki and colleagues in 2004 was duplicated in Kansas in 2006.
- Statistical analysis: SPSS and Excel. χ^2 test used to identify potential differences in study group responses

The Survey Instrument

- Original survey developed by Carl Osaki MSPH, RS Associate Professor with the Northwest Center for Public Health Practice at the University of Washington School of Public Health and Community Medicine through a grant from CDC.
- Assessment consists of a forty-question survey instrument with four questions for each of the ten essential services.
- Each questions allows for a response of Yes / No / Unsure

Table 4: Regional Characteristics N = 240

	NW		KS		χ^2	df	p
	Ct	%	Ct	%			
Sex							
Male	100	(64.5)	41	(53.2)	2.74	1	NS
Female	55	(35.5)	36	(46.8)			
Race							
Minority	11	(6.9)	5	(6.7)	0.003	1	NS
Non-minority	149	(93.1)	70	(93.3)			
Yrs Experience							
0-9	76	(47.2)	38	(52.0)	0.47	1	NS
>9	85	(52.8)	35	(48.8)			
Job class							
Front line	76	(49.4)	48	(64.0)	4.36	1	0.04
Supervisory	78	(50.6)	27	(36.0)			

Table 4: Regional Characteristics (cont.) N = 240

	NW		KS		χ^2	df	p
	Ct	%	Ct	%			
Agency Type							
Local	112	(69.1)	47	(61.0)	1.54	1	NS
State	50	(30.9)	30	(39.0)			
Number of Employees							
1- 6.5	68	(43.0)	45	(64.3)	8.76	1	<0.01
>6.5	90	(57.0)	25	(35.7)			
Performance Standard							
Yes	116	(80.0)	55	(83.3)	0.33	1	NS
No	29	(20.0)	11	(16.7)			

Table 5: Perceptions of Competency by Region.

Essential Service		NW	KS	χ^2	df	p
	% Y % N					
1. Monitor environmental and health status to identify community EH problems?	% Y 28.4 % N 41.6	15.6	14.4	8.46	1	<0.01
2. Diagnose and investigate EH problems and hazards in the community?	% Y 39.3 % N 30.7	17.0	13.0			
3. Inform, educate and empower people about EH issues?	% Y 42.5 % N 27.0	18.9	11.6	0.05	1	NS
4. Mobilize community partnerships to identify and solve EH problems?	% Y 26.6 % N 44.5	13.4	15.5			
5. Develop policies and plans that support individual and community EH efforts?	% Y 34.1 % N 36.9	16.4	12.6	4.55	1	0.03

Table 5: Perceptions of Competency between Regions.

Essential Service		NW	KS	χ^2	df	p
	% Y % N					
6. Enforce laws and regulations that protect health and ensure safety?	% Y 43.6 % N 27.0	21.1	8.3	7.73	1	<0.01
7. Link people to needed EH services and assure the provision of EH services when otherwise unavailable?	% Y 31.1 % N 38.8	13.7	16.4			
8. Assure a competent EH workforce?	% Y 51.9 % N 17.7	24.5	5.8	4.01	1	0.05
9. Evaluate effectiveness, accessibility and quality of EH services?	% Y 29.8 % N 41.8	15.3	13.1			
10. Research for new insights and innovative solutions to EH problems?	% Y 23.7 % N 47.5	10.7	18.1	1.06	1	NS

Discussion

- Job Class—front line workers reported they practiced the essential services more frequently than by supervisors or directors
- Pacific NW respondents were more likely to have negative responses for 6 of the 10 essential services (ES 1, 4, 5, 6, 8, 9)
- May be explained partially by group characteristics

Discussion

The causes for these perceptions include:

- Fragmentation and privatization of EH services over time.
- Loss of experienced practitioners and leaders.
- The separation of EH from Public Health.
- Limited funding for EH.
- Lack of a State and national consensus regarding EH credentialing.
- Lack of undergraduate EH degree programs.

Limitations

- Fixed response bias possible
- Recall bias possible between credentialed and not credentialed.
- Use of Yes/No/Unsure response choices led to ambiguity in coding compared to use of a 4 point Likert scale.
- Different methods used between regions for participant selection.

Conclusions

- Insufficient data to determine the cause of differences between regions. Further research to stimulate national dialogue on EH capacity.
- A set of performance measures related to essential public health standards be implemented
- More training in the 10 Essential Services needed.
- Increase undergraduate EH education programs
- Work to establish a credential requirement for EH practitioners.

Recommendations

- Further support for A National Strategy to Revitalize EPH goals:
 1. Build capacity
 2. Support research
 3. Foster leadership
 4. Communicate & market to policy makers & the community.
 5. Develop the EH workforce
 6. Create strategic partnerships

