

National Longitudinal Survey of Public Health Systems (NLSPHS): 2016 Comparative Report of Survey Results

Example Customized Report

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With support from:

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Systems for Action National Program Office

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INTRODUCTION

We are pleased to share with you a customized report of results from the **2016 National Longitudinal Survey of Public Health Systems**—a survey of a national cohort of local health departments conducted initially in 1998 and again in 2006, 2012, 2014, and 2016. This report compares responses received from your department with aggregate measures reported by other responding departments. This information has been prepared as a courtesy to you, and will not be disseminated to others. We hope you will find this information interesting and helpful.

Study Overview. As you may recall, the purpose of this study is to examine the availability of public health activities in communities across the nation, along with the organizations that contribute to performing these activities. The longitudinal nature of this study provides the opportunity to examine how public health systems are organized and how they change over time.

Survey Instrument. The survey instrument used in 2016, 2014, 2012, 2006, and 1998 was developed by Dr. C. Arden Miller at the University of North Carolina and Dr. Bernard Turnock at the University of Illinois-Chicago. This instrument was designed and validated as a screening tool to assess the availability of 20 recommended public health activities in the jurisdictions served by local health departments. Each of these activities reflects one of the three core public health functions as identified by the Institute of Medicine in 1988 (assessment, policy development, and assurance). See the appendix to this report for more information on the instrument.

Study Population: The study population consists of the 497 local health departments that reported serving jurisdictions of at least 100,000 residents in 1997. A total of 78% of these departments responded to the survey in 1998, 68% responded in 2006, 70% responded in 2012, 70% responded in 2014, and 73% responded in 2016.

Peer Groups: Peer groups of local health departments were identified through a statistical clustering procedure that grouped departments based on similarities in several characteristics: population size of the jurisdiction served by the department; proportion of the population that is nonwhite; per capita personal income in the jurisdiction; and involvement in providing environmental health services. Each department was placed in one of 16 peer groups for comparative analysis.

Important Limitations. It is important to recognize that the instrument does not provide a comprehensive assessment of all the important public health activities that may or may not be available at the local level. Additionally, the instrument relies on self-reported information provided by public health agency administrators and therefore is subject to common sources of measurement error associated with self-reported data. Validation studies have shown that these sources of error have relatively little effect on the accuracy of population estimates constructed from the instrument, but they can have larger effects on the accuracy of individual observations such as those provided for your individual jurisdiction in this report.

Your Report and Feedback. This report provides customized, comparative results for your jurisdiction along with an appendix that describes how measures are constructed. This report was generated using an automated program, so errors are possible. We welcome your comments and feedback regarding this information, particularly if you note any errors or inaccuracies in the data. Additionally, we would be glad to send you copies of subsequent analyses and reports from this study. Please contact our research team at NLSPHS@uky.edu.

Thank you for your invaluable assistance in making this study possible. Your contributions provide the critical knowledge and information that will enable continued improvements in public health.

Note: responses from your agency are available for the following years of the survey:
2016, 2012, 2006, 1998

AVAILABILITY OF PUBLIC HEALTH ACTIVITIES

Measures of the availability of public health activities were constructed from responses to 20 questions asking whether or not a specific public health activity was performed in your jurisdiction. **Figure 1** shows the overall proportion of these activities that were reported as available in your jurisdiction, compared to similar "peer group" jurisdictions and to all U.S. jurisdictions included in the survey. Error bars denote 95% confidence intervals that can be used to assess whether your jurisdiction is significantly above/below the peer and US benchmarks. **Table 1** provides detailed information on the availability of each of the 20 activities.

Figure 1: Proportion of Public Health Activities Available

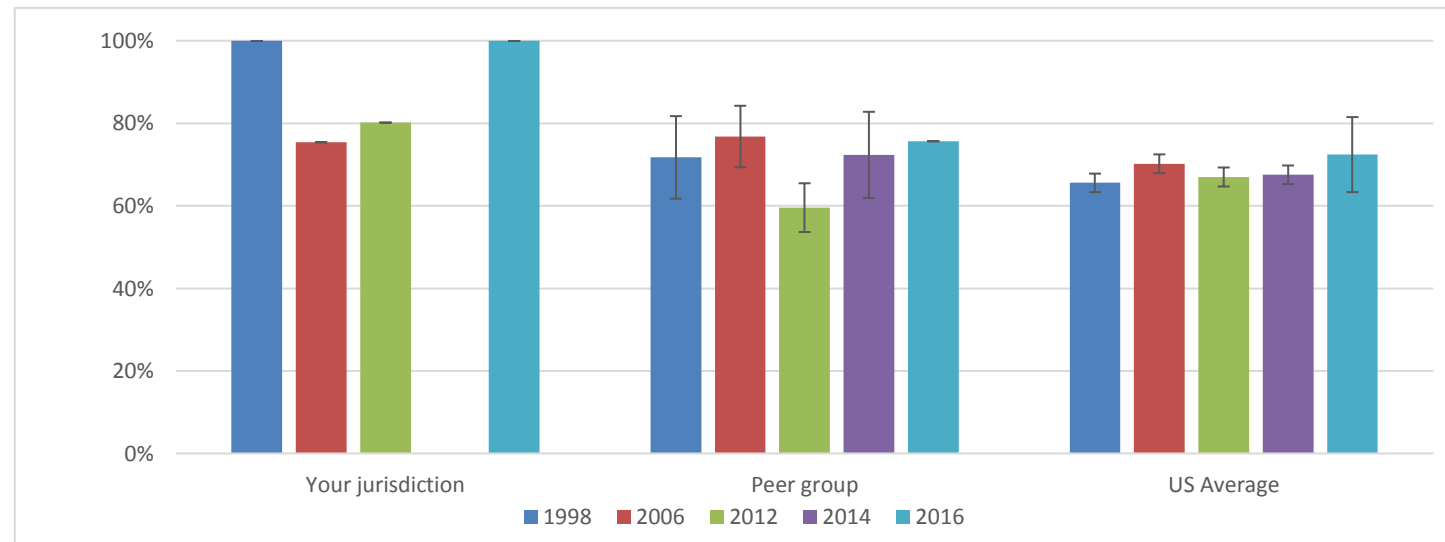


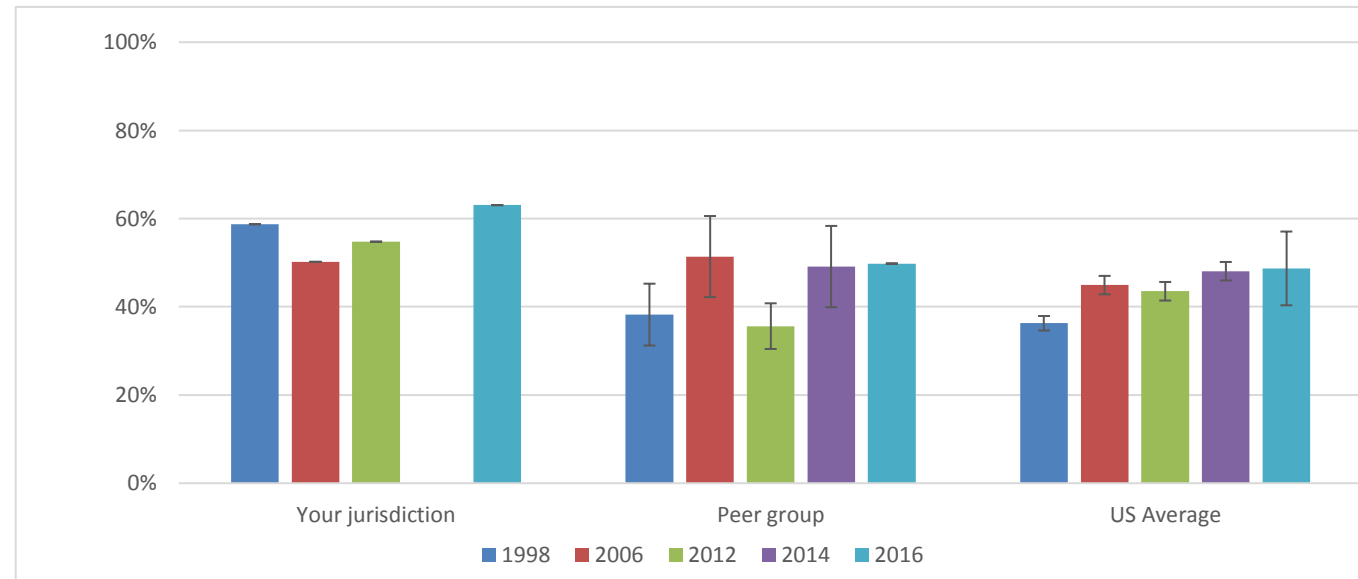
Table 1: Availability of Public Health Activities within Local Communities

Activity	Your Jurisdiction					Peer Group (Percent Yes)					US Jurisdictions (Percent Yes)				
	2016	2014	2012	2006	1998	2016	2014	2012	2006	1998	2016	2014	2012	2006	1998
1 Community needs assessment	Yes	--	Yes	Yes	Yes	100%	85%	38%	100%	85%	89%	86%	72%	78%	76%
2 Behavioral risk factor survey	Yes	--	Yes	Yes	Yes	87%	69%	38%	100%	46%	70%	70%	74%	70%	47%
3 Adverse health events investigation	Yes	--	Yes	Yes	Yes	100%	100%	100%	100%	100%	100%	100%	100%	98%	98%
4 Public health laboratory services	Yes	--	Yes	Yes	Yes	100%	100%	100%	100%	100%	96%	96%	99%	97%	96%
5 Analysis of health determinants & resources	Yes	--	Yes	Yes	Yes	80%	85%	19%	69%	77%	76%	73%	63%	73%	65%
6 Analysis of preventive services use	Yes	--	No	No	Yes	27%	46%	10%	23%	46%	36%	39%	33%	26%	30%
7 Communication network of health organizations	Yes	--	Yes	Yes	Yes	93%	92%	95%	85%	85%	84%	85%	90%	87%	81%
8 Inform elected officials about health issues	Yes	--	Yes	Yes	Yes	93%	100%	90%	100%	92%	86%	85%	87%	90%	82%
9 Prioritization of community health needs	Yes	--	Yes	Yes	Yes	93%	85%	81%	54%	69%	84%	82%	67%	72%	70%
10 Implementation of health initiatives in priority areas	Yes	--	Yes	Yes	Yes	93%	92%	81%	92%	85%	85%	86%	70%	87%	86%
11 Community participation in health planning	Yes	--	Yes	Yes	Yes	80%	77%	24%	46%	54%	65%	68%	50%	51%	44%
12 Resource allocation planning	Yes	--	Yes	No	Yes	53%	42%	19%	54%	38%	46%	43%	28%	37%	27%
13 Resource deployment consistent with plan	Yes	--	Yes	No	Yes	73%	50%	62%	46%	69%	66%	57%	49%	52%	51%
14 LHD organizational assessment	Yes	--	Yes	Yes	Yes	53%	54%	29%	69%	69%	53%	55%	55%	56%	57%
15 Provision/linkage to needed health services	Yes	--	No	Yes	Yes	53%	83%	71%	85%	85%	49%	50%	61%	69%	75%
16 Evaluation of public health services	No	--	No	No	Yes	43%	33%	5%	31%	46%	42%	39%	34%	38%	37%
17 Monitor/improve program processes and outcomes	Yes	--	Yes	No	Yes	53%	58%	71%	77%	38%	53%	49%	43%	50%	48%
18 Health information provision to the public	Yes	--	Yes	Yes	Yes	67%	92%	86%	100%	85%	83%	84%	81%	89%	77%
19 Health information provision to the media	Yes	--	Yes	Yes	Yes	73%	100%	95%	100%	92%	85%	87%	87%	88%	79%
20 Implementation of mandated PH activities	Yes	--	No	Yes	Yes	87%	17%	86%	100%	69%	93%	8%	89%	92%	91%
Percent of assessment activities available (#1-6)	100%	--	83%	83%	100%	82%	81%	51%	82%	76%	78%	78%	74%	74%	68%
Percent of policy development activities available (#7-13)	100%	--	100%	71%	100%	83%	78%	65%	68%	70%	74%	72%	63%	68%	62%
Percent of assurance activities available (#14-20)	100%	--	57%	71%	100%	62%	58%	63%	80%	69%	66%	53%	64%	69%	66%
Overall percent of activities available (weighted by function)	100%	--	80%	75%	100%	76%	72%	60%	77%	72%	72%	68%	67%	70%	66%

PERCEIVED EFFECTIVENESS OF PUBLIC HEALTH ACTIVITIES

Measures of the perceived effectiveness of public health activities were constructed from responses to questions asking how well each public health activity is performed within the jurisdiction, using a five-point Likert scale ranging from "fully meets needs" to "meets no needs." **Figure 2** shows the aggregate measure of perceived effectiveness across all activities that were reported as available in your jurisdiction, compared to similar "peer group" jurisdictions and to all U.S. jurisdictions included in the survey. Error bars denote 95% confidence intervals that can be used to assess whether your jurisdiction is significantly above/below the peer and US benchmarks. **Table 2** provides detailed information on the perceived effectiveness of each of the 19 activities (activity #20 was excluded from this measure).

Figure 2: Perceived Effectiveness of Public Health Activities



Note: percentages reflect percentage of maximum score

Table 2: Perceived Effectiveness of Public Health Activities

Activity	Your Jurisdiction					Peer Group (Percent Yes)					US Jurisdictions (Percent Yes)				
	2016	2014	2012	2006	1998	2016	2014	2012	2006	1998	2016	2014	2012	2006	1998
1 Community needs assessment	100%	--	75%	75%	75%	85%	71%	25%	67%	46%	72%	67%	53%	50%	39%
2 Behavioral risk factor survey	75%	--	25%	75%	25%	58%	42%	23%	63%	15%	48%	49%	49%	44%	21%
3 Adverse health events investigation	100%	--	100%	100%	75%	90%	83%	86%	85%	79%	88%	88%	86%	84%	74%
4 Public health laboratory services	75%	--	75%	75%	75%	80%	79%	90%	87%	75%	80%	79%	80%	79%	73%
5 Analysis of health determinants & resources	75%	--	50%	50%	75%	55%	60%	11%	38%	40%	51%	50%	39%	43%	32%
6 Analysis of preventive services use	50%	--	0%	0%	25%	17%	29%	5%	12%	15%	22%	23%	20%	15%	13%
7 Communication network of health organizations	50%	--	75%	75%	25%	57%	63%	79%	54%	40%	57%	60%	59%	59%	44%
8 Inform elected officials about health issues	50%	--	75%	50%	50%	59%	60%	75%	73%	35%	56%	54%	54%	57%	37%
9 Prioritization of community health needs	75%	--	75%	75%	50%	68%	63%	40%	37%	37%	63%	61%	47%	46%	36%
10 Implementation of health initiatives in priority areas	50%	--	50%	50%	50%	57%	52%	27%	63%	31%	53%	52%	39%	53%	36%
11 Community participation in health planning	50%	--	75%	75%	75%	50%	56%	12%	29%	27%	45%	46%	29%	30%	17%
12 Resource allocation planning	25%	--	50%	0%	75%	25%	21%	11%	31%	19%	23%	22%	15%	20%	11%
13 Resource deployment consistent with plan	50%	--	50%	0%	25%	38%	23%	18%	23%	31%	33%	29%	24%	27%	20%
14 LHD organizational assessment	50%	--	75%	75%	75%	35%	37%	15%	52%	38%	39%	40%	37%	37%	31%
15 Provision/linkage to needed health services	50%	--	0%	50%	50%	28%	38%	25%	46%	44%	28%	29%	35%	40%	36%
16 Evaluation of public health services	0%	--	0%	0%	50%	23%	11%	1%	19%	19%	23%	21%	18%	19%	16%
17 Monitor/improve program processes and outcomes	75%	--	75%	0%	75%	25%	29%	24%	48%	17%	29%	28%	24%	28%	22%
18 Health information provision to the public	75%	--	75%	75%	75%	43%	54%	45%	67%	35%	54%	52%	50%	56%	34%
19 Health information provision to the media	50%	--	50%	50%	50%	52%	67%	67%	75%	44%	62%	63%	61%	63%	42%
Average for assessment activities (#1-6)	79%	--	54%	63%	58%	64%	61%	40%	59%	45%	60%	59%	55%	52%	42%
Average for policy development activities (#7-13)	50%	--	64%	46%	50%	50%	50%	37%	44%	31%	47%	47%	38%	42%	29%
Average for assurance activities (#14-19)	60%	--	46%	42%	68%	35%	37%	30%	51%	38%	39%	38%	38%	41%	38%
Overall average - all activities (weighted by IOM function)	63%	--	55%	50%	59%	50%	49%	36%	51%	38%	49%	48%	44%	45%	36%

Likert rating scale: 100%=activity fully meets needs; 75%=meets most need; 25%=meets some needs; 0%=Meets no needs or not available

LOCAL HEALTH DEPARTMENT CONTRIBUTION TO PUBLIC HEALTH ACTIVITIES

Measures of the local health department's contribution to public health activities were constructed from responses to questions asking how much of the total community effort for each public health activity is contributed by the local department, using a five-point Likert scale ranging from "all effort" to "no effort." **Figure 3** shows the aggregate contribution measure across all activities that were reported as available in your jurisdiction, compared to similar "peer group" jurisdictions and to all U.S. jurisdictions included in the survey. Error bars denote 95% confidence intervals that can be used to assess whether your jurisdiction is significantly above/below the peer and US benchmarks. **Table 3** provides detailed information on contributions to each of the 19 activities (activity #20 was excluded from this measure).

Figure 3: Proportion of Effort Contributed by Local Health Department

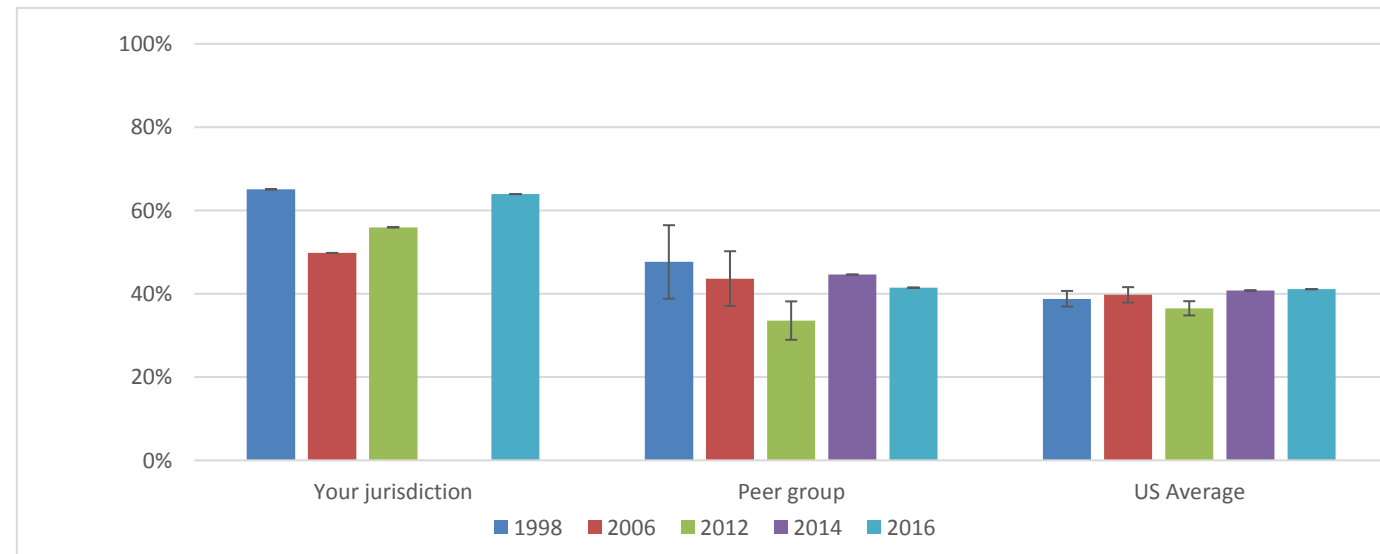


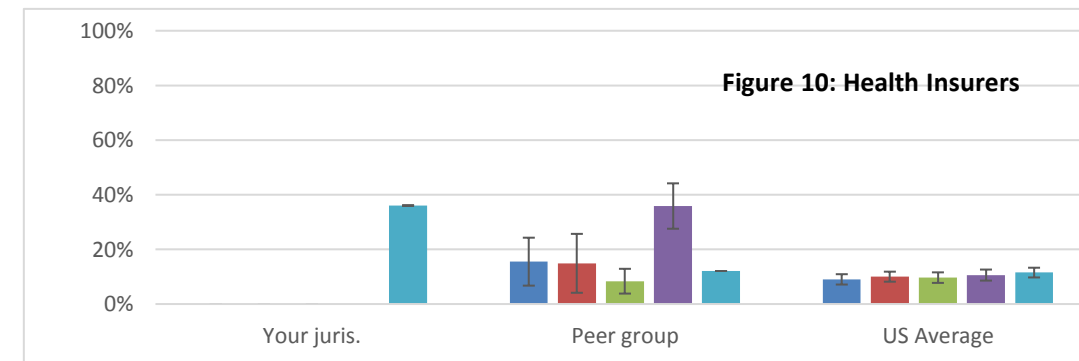
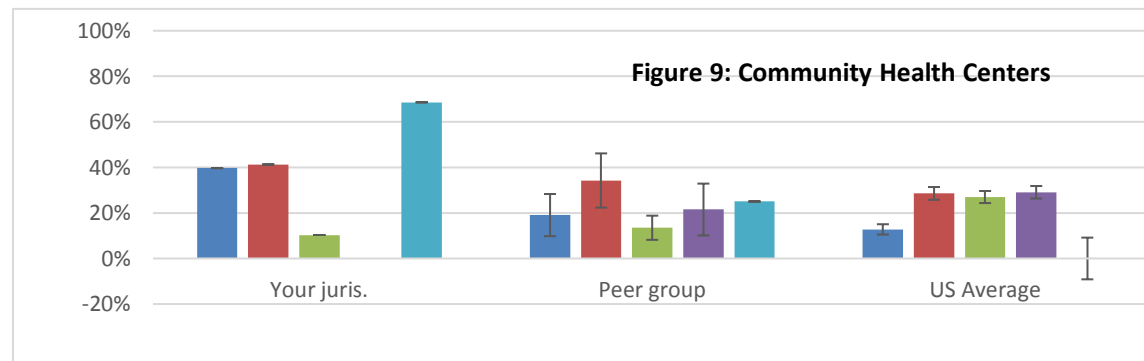
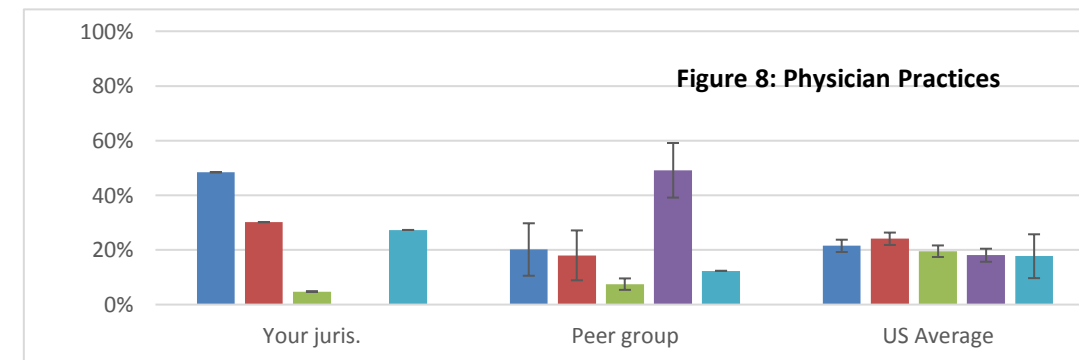
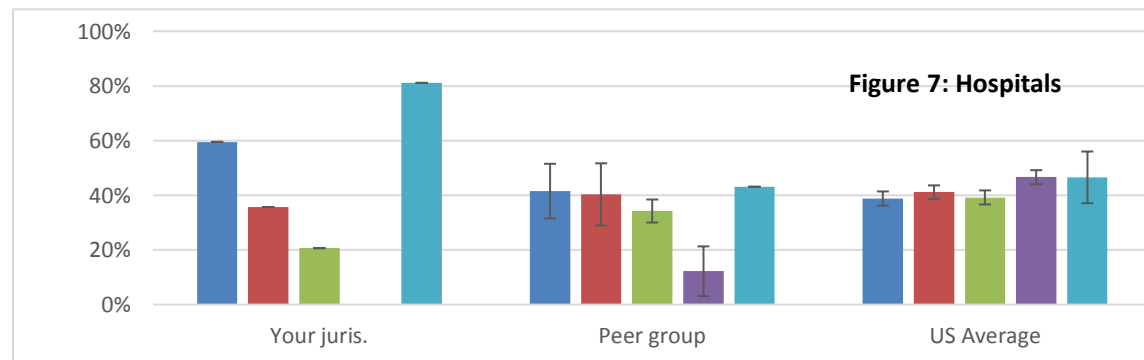
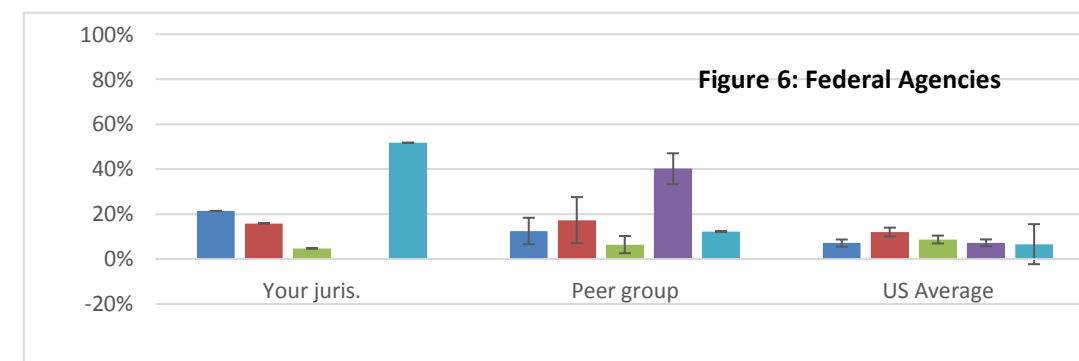
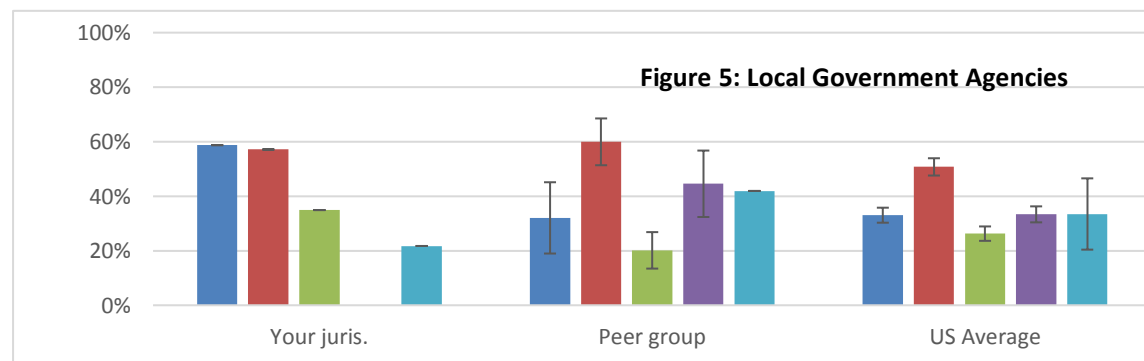
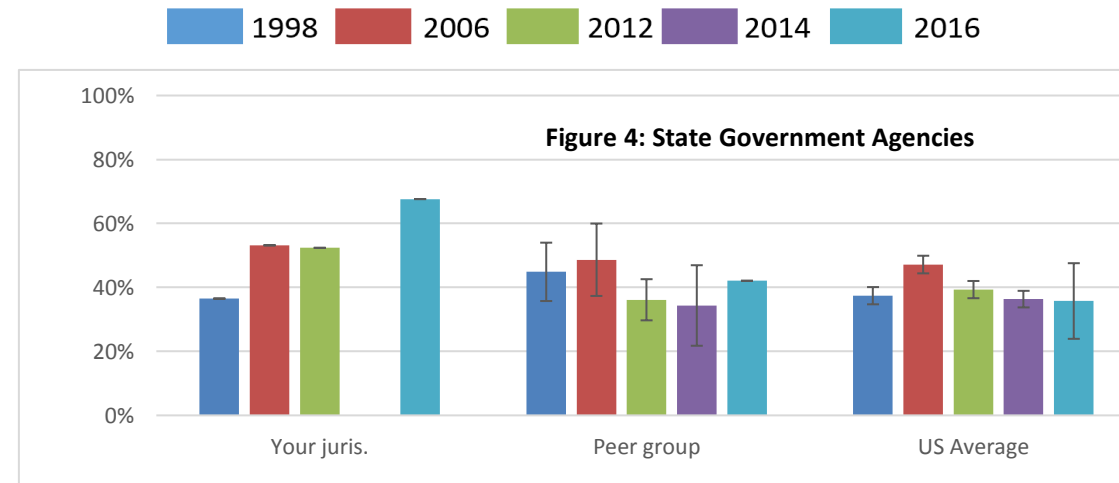
Table 3: Proportion of Effort Contributed by the Local Health Department

Activity	Your Jurisdiction					Peer Group (Percent Yes)					US Jurisdictions (Percent Yes)				
	2016	2014	2012	2006	1998	2016	2014	2012	2006	1998	2016	2014	2012	2006	1998
1 Community needs assessment	50%	--	75%	75%	75%	55%	62%	45%	58%	48%	51%	50%	43%	46%	41%
2 Behavioral risk factor survey	100%	--	0%	50%	100%	38%	25%	14%	46%	31%	27%	24%	23%	26%	23%
3 Adverse health events investigation	75%	--	75%	75%	75%	77%	77%	74%	67%	79%	78%	79%	76%	73%	75%
4 Public health laboratory services	25%	--	25%	0%	25%	53%	58%	57%	48%	56%	42%	41%	39%	43%	47%
5 Analysis of health determinants & resources	75%	--	100%	75%	75%	43%	52%	12%	33%	46%	42%	41%	34%	39%	33%
6 Analysis of preventive services use	50%	--	0%	0%	75%	12%	23%	2%	10%	35%	18%	17%	14%	14%	17%
7 Communication network of health organizations	50%	--	75%	75%	50%	50%	56%	45%	50%	46%	42%	46%	45%	46%	37%
8 Inform elected officials about health issues	75%	--	50%	100%	50%	66%	69%	58%	63%	65%	58%	57%	56%	60%	60%
9 Prioritization of community health needs	75%	--	75%	75%	50%	53%	46%	54%	31%	42%	49%	48%	39%	42%	39%
10 Implementation of health initiatives in priority areas	50%	--	50%	50%	50%	39%	48%	26%	46%	54%	42%	41%	35%	49%	49%
11 Community participation in health planning	75%	--	75%	75%	75%	38%	44%	12%	25%	33%	37%	39%	27%	27%	21%
12 Resource allocation planning	75%	--	75%	0%	75%	25%	21%	12%	38%	29%	24%	22%	14%	23%	16%
13 Resource deployment consistent with plan	50%	--	75%	0%	25%	32%	23%	31%	21%	42%	32%	29%	24%	28%	25%
14 LHD organizational assessment	100%	--	75%	100%	100%	45%	44%	25%	60%	63%	45%	47%	44%	46%	50%
15 Provision/linkage to needed health services	50%	--	0%	75%	50%	27%	33%	31%	42%	46%	23%	23%	28%	33%	36%
16 Evaluation of public health services	0%	--	0%	0%	75%	25%	20%	1%	21%	29%	27%	26%	21%	23%	25%
17 Monitor/improve program processes and outcomes	75%	--	100%	0%	75%	25%	40%	64%	58%	27%	36%	35%	29%	33%	33%
18 Health information provision to the public	50%	--	75%	50%	75%	40%	48%	42%	52%	58%	51%	51%	48%	49%	45%
19 Health information provision to the media	50%	--	75%	75%	50%	50%	65%	51%	56%	73%	57%	57%	53%	53%	60%
Average for assessment activities (#1-6)	63%	--	46%	46%	71%	46%	49%	31%	44%	49%	43%	42%	38%	40%	39%
Average for policy development activities (#7-13)	64%	--	68%	54%	54%	43%	45%	34%	39%	45%	40%	40%	34%	39%	35%
Average for assurance activities (#14-19)	65%	--	54%	50%	71%	36%	39%	36%	48%	49%	40%	39%	37%	40%	42%
Overall average - all activities (weighted by IOM function)	64%	--	56%	50%	65%	41%	45%	34%	44%	48%	41%	41%	37%	40%	39%

Likert rating scale: 100%=LHD contributes all effort; 75%=most effort; 50%--25%=some effort; 0%=no effort or not available

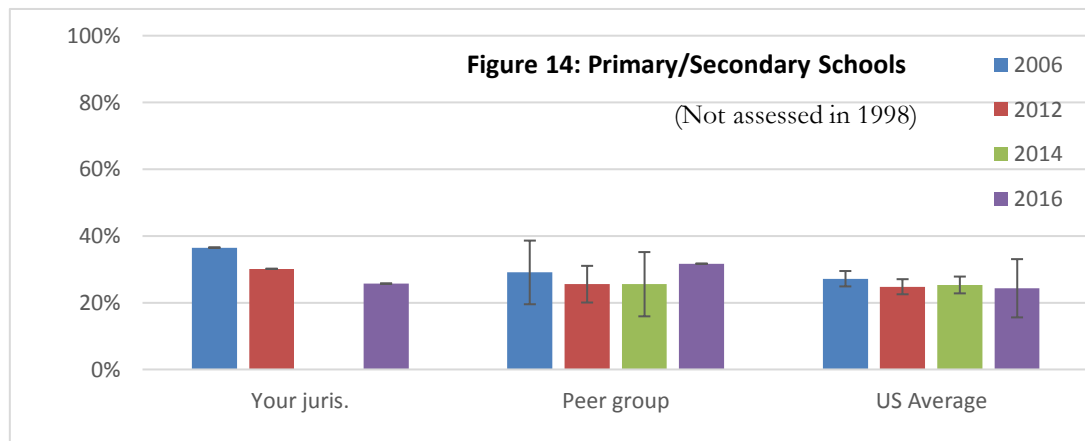
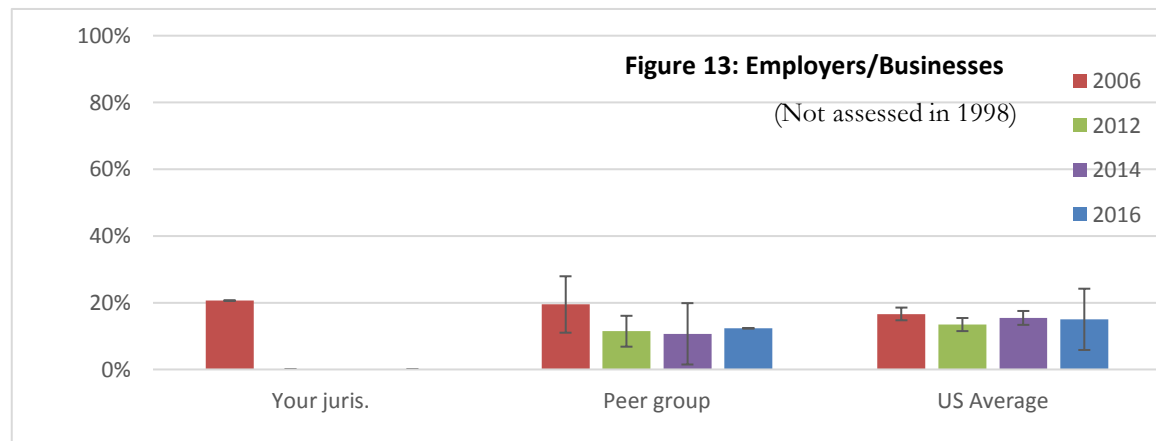
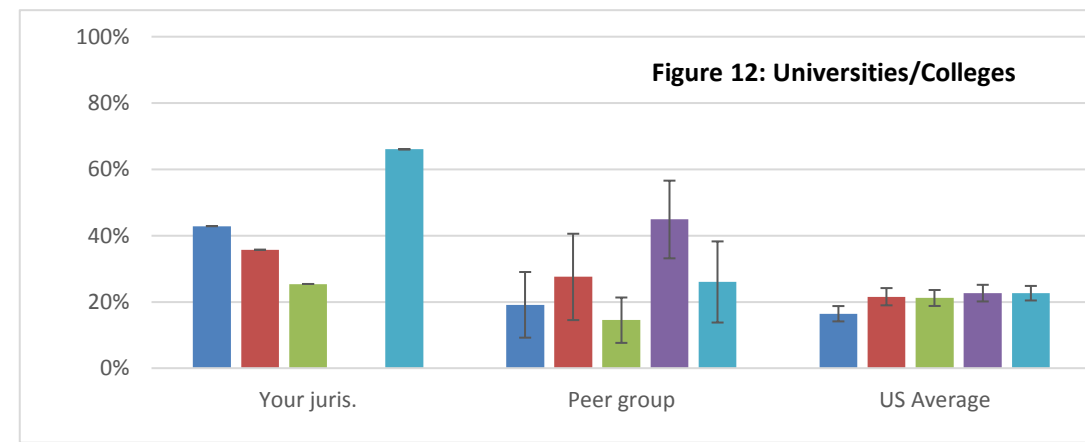
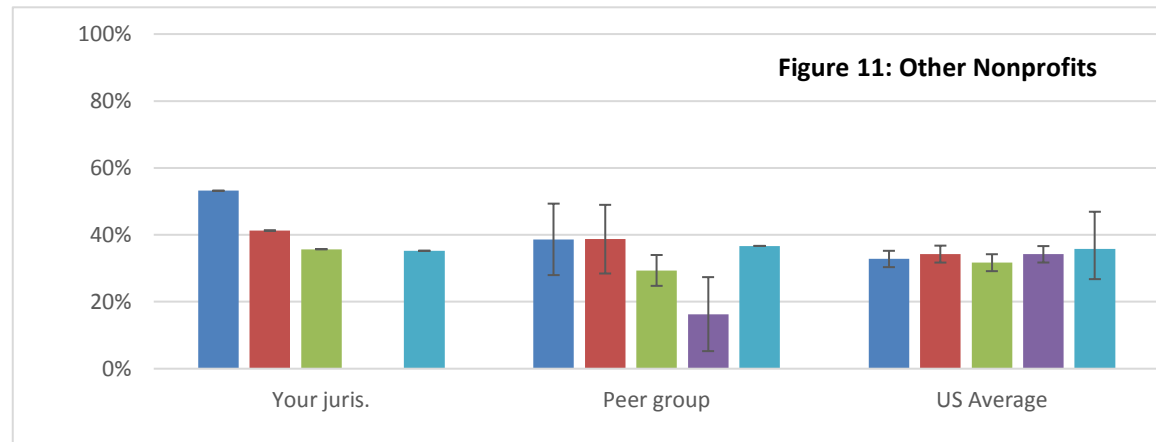
SCOPE OF PARTICIPATION BY OTHER ORGANIZATIONS

Measures of the extent to which other organizations participate in performing public health activities were constructed from responses to questions asking about the types of other organizations that contribute to each public health activity. For each type of organization, we computed the proportion of the 19 public health activities to which they contribute (activity #20 was excluded from this measure). **Figures 4-14** show these participation measures for the most prevalent organizational categories (not all categories are shown). Error bars denote 95% confidence intervals that can be used to assess whether your jurisdiction is significantly above/below the peer and US benchmarks.



SCOPE OF PARTICIPATION BY OTHER ORGANIZATIONS (CONTINUED)

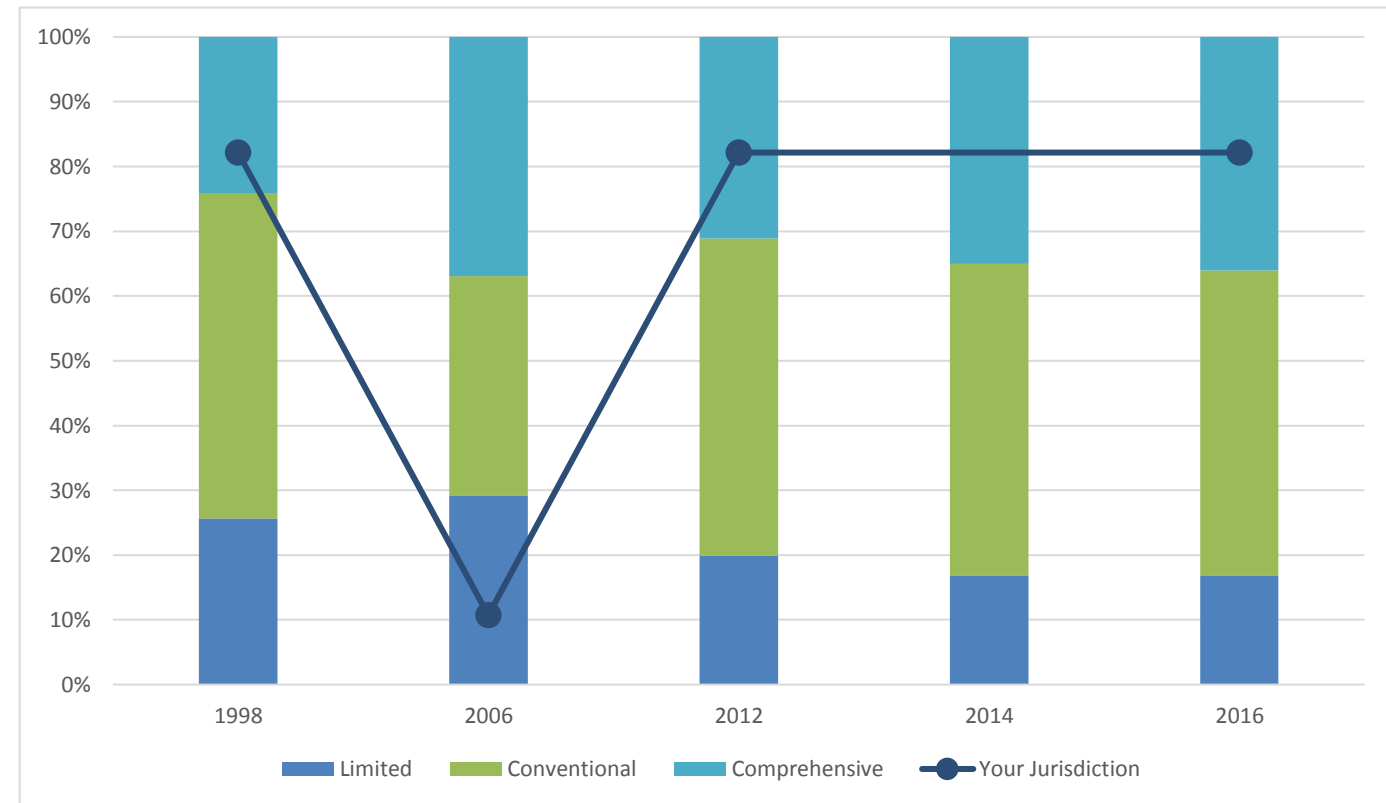
1998 2006 2012 2014 2016



TYPE OF PUBLIC HEALTH DELIVERY SYSTEMS

Comprehensive Public Health Systems are defined as those communities in which a broad array of the recommended public health activities are available in the community, AND in which a relatively broad range of organizations contribute to implementing these activities, AND/OR in which the local public health agency contributes relatively large share of the effort to implement these activities. The numeric thresholds used in defining comprehensive systems (i.e. thresholds for defining high **availability**, high **organizational contributions**, and high **agency effort**) were identified based on a cluster analysis performed with the original wave of survey data collected in 1998. The cluster analysis identified seven distinct “clusters” or configurations of public health delivery systems based on the first three system attributes described above (availability, organizational contributions, and local agency effort). Duncan and Wardian range tests and multinomial logistic regression models were used to identify threshold values of these attributes that accurately predict assignment of communities to one of the seven configurations identified in the cluster analysis. Three of the seven system configurations were defined as **comprehensive** systems because they exceed the threshold value for **availability** and they also exceed threshold values for **organizational contributions** and/or **agency effort**. The remaining four system configurations that did not meet criteria for comprehensive systems were subdivided into **conventional** systems and limited systems based on the availability measures. The estimated prevalence of comprehensive, conventional, and **limited** public health systems are among U.S. metropolitan communities during 1998-2016. In **Figure 15**, the stacked bar graphs show the prevalence of each type of public health system in the U.S. each year, while the line and plotted points show the type of system in your jurisdiction each year.

Figure 15: Prevalence of Three Public Health System Configurations, 1998-2016



Source: Mays GP, Scutchfield FD, Bhandari MW, Smith SA. Understanding the organization of public health delivery systems: an empirical typology. *Milbank Q.* 2010 Mar;88(1):81-111.

APPENDIX: SURVEY INSTRUMENT

The survey instrument used in this study was developed through a series of studies on local public health practice sponsored by the U.S. Centers for Disease Control and Prevention. For a description, see [Core function-related local public health practice effectiveness by BJ Turnock](#). The 20 primary questions used on the survey instrument are:

1. In your jurisdiction, is there a community needs assessment process that systematically describes the prevailing health status in the community?
2. In the past three years in your jurisdiction, has a survey of the population for behavioral risk factors been conducted?
3. In your jurisdiction, are timely investigations of adverse health events conducted on an ongoing basis—including communicable disease outbreaks and environmental health hazards?
4. Are the necessary laboratory services available to the local public health agency to support investigations of adverse health events and meet routine diagnostic and surveillance needs?
5. In your jurisdiction, has an analysis been completed of the determinants of and contributing factors to priority health needs, the adequacy of existing health resources, and the population groups most effected?
6. In the past three years in your jurisdiction, has an analysis of age-specific participation in preventive and screening services been conducted?
7. In your jurisdiction, is there a network of support and communication relationships that includes health-related organizations, the media, and the general public?
8. In the past year in your jurisdiction, has there been a formal attempt to inform officials about the potential public health impact of decisions under their consideration?
9. In your jurisdiction, has there been a prioritization of community health needs that have been identified from a community needs assessment?
10. In the past three years in your jurisdiction, have community health initiatives been implemented consistent with priorities established in the community needs assessment?
11. In your jurisdiction, has a community health action plan been developed with community participation to address priority community health needs?
12. In the past three years in your jurisdiction, were plans developed to allocate resources in a manner consistent with the community health action plan?
13. In your jurisdiction, have resources been deployed as necessary to address priority health needs identified in a community health needs assessment?
14. In the past three years in your jurisdiction, has the local public health agency conducted an organizational self-assessment?
15. In your jurisdiction, are age-specific priority health needs effectively addressed through the provision of or linkage to appropriate services?
16. In your jurisdiction, have there been regular evaluations of the effects of public health services on community health status?
17. In the past three years in your jurisdiction, has the local public health agency used professionally recognized process and outcome measures to monitor programs and to redirect resources as appropriate?
18. In your jurisdiction, is the public regularly provided with information about current health status, health care needs, positive health behaviors, and health care policy issues?
19. In the past year in your jurisdiction, have reports on public health issues been provided to the media on a regular basis?
20. In the past three years in your jurisdiction, has there been an instance in which the local public health agency has failed to implement a mandated program or service?

Each question includes a series of 3 subquestions. Download a full copy of the survey instrument at:
http://works.bepress.com/glen_mays/38/

ABOUT THIS REPORT

The 2016 National Longitudinal Survey of Public Health Systems is funded by the Robert Wood Johnson Foundation through the Systems for Action research program. Systems for Action studies strategies for aligning medical, social, and public health delivery systems in ways that build a Culture of Health. The Systems for Action National Program Office is based at the Center for Public Health Systems and Services Research at the University of Kentucky. For more information on our research, visit the S4A program website at: www.systemsfraction.org.

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Lizeth Fowler, M.S., M.A. - Deputy Director

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Glen Mays, Ph.D., M.P.H - Director

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Contact Us

Stay connected with the S4A community via email, meetings, and social media updates. Consider joining the S4A community and visiting the Social Media page to stay informed about the latest news from the Coordinating Center.

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