

Tracking Laboratory Infrastructure in Support of Public Health

APHA Annual Meeting
November 5, 2007

Burton Wilcke, PhD, Stan L Inhorn, MD,
Vanessa A White, MPH, J Rex Astles, PhD

University of Vermont, Wisconsin State Laboratory of Hygiene,
Association of Public Health Laboratories,
Centers for Disease Control and Prevention

ASSOCIATION OF
PUBLIC HEALTH LABORATORIES



Healthy People 2000

- No focus area on public health infrastructure

Healthy People 2010

Focus Area 23 – Public Health Infrastructure

“Ensure that Federal, Tribal, State, and local health agencies have the **infrastructure** to provide essential public health services effectively.”

Objective 23-13

“Increase the proportion of Tribal, State, and local health agencies that provide or assure **comprehensive laboratory services** to support essential public health services.”

Developmental Objectives

- Objectives for which there are no current data
- Potential data sources for Objective 23-13
 - **Association of Public Health Laboratories (APHL)**
 - Association of State and Territorial Health Officials (ASTHO)
 - Centers for Disease Control and Prevention (CDC)
 - National Association of County and City Health Officials (NACCHO)

Steps Taken

- Through its Laboratory Systems and Standards Committee, APHL determined that there was no known metric that could be used to measure **“comprehensive laboratory services to support essential public health services”** at the Tribal, State and local levels

A State-based Approach

- Core functions for state public health laboratories had been established (2002)
- The degree to which states were fulfilling those core functions could be a measure of “comprehensive laboratory services to support essential public health services.”

Core Function of SPHLs

- Disease prevention, control, and surveillance
- Integrated data management
- Reference and specialized testing
- Environmental health and protection
- Food safety
- Laboratory improvement and regulation

Core Function of SPHLs cont.

- Policy development
- Emergency response
- Public health-related research
- Training and education
- Partnerships and communication

Revision of Objective 23-13

- The local component of the objective was deleted because there was no equivalent consensus document on core laboratory functions at the local level
- Eleven sub-objectives were created to reflect the eleven core functions

Core Functions vs. Essential Services

- To determine the relationship between core functions of state public health laboratories and the ten essential public health services, a crosswalk was carried out.

Essential Services Vs. Lab Core Functions

Essential Services	Laboratory Core Functions
1. Monitor Health Status to Identify Community Health Problems	1. Disease prevention, control, and surveillance
2. Diagnose and Investigate Health Problems and Health Hazards in the Community	2. Integrated data management 4. Environmental health and protection 5. Food safety 8. Emergency response
3. Inform Educate and Empower People About Health Issues	
4. Mobilize Partnerships to Identify and Solve Health Problems	11. Partnerships and communication
5. Develop Policies and Plans that Support Individual and Community Health Efforts	7. Policy development

Essential Services Vs. Lab Core Functions

Essential Service	Lab Core Function
6. Enforce laws and regulations that protect health & safety	6. Laboratory improvement and regulation
7. Link people to needed personal health services & assure provision of health care when unavailable	3. Reference and specialized testing
8. Assure a competent public and personal health care workforce	10. Training and education
9. Evaluate effectiveness, accessibility, & quality of personnel & population-based services	3. Reference and specialized testing
10. Research for new insights and innovative solutions to health problems	9. Public health-related research

Survey Methodology

- Using best practice guidelines wherever possible, indicator questions were created for each of the eleven sub-objectives
- Selected questions from other survey sources, e.g. food safety and emergency preparedness were also included

Survey Methodology cont.

- Survey included 89 questions
- Distributed to all states and territories
- A scoring system was devised to reflect that a single state's score of 70% within a single sub-objective was deemed as having adequately fulfilled that function

Survey Methodology cont.

- The survey was distributed in 2004 with a response rate of 86%
- The data from 2004 became the baseline data

Survey Methodology cont.

- Prior to redistribution in 2006 the following occurred:
 - Questions were reviewed for clarity
 - A glossary of terms was added
 - A distinction was made between “provide” and “assure”

Survey Methodology cont.

- The survey was again distributed in 2006, with a response rate of 88%
- The data from 2006 could be compared with 2004 where the survey tool had not been substantially modified (7 out of 11 sub-objectives)

Findings

- The data indicate that:
 - State public health laboratories are a part of state laboratory systems that provide a varying degree of “comprehensive laboratory service to support essential public health services.’
 - Some identified core function areas appear strong whereas others appear weak

Conclusions

- The comprehensive laboratory services survey is a valid means of measuring HP 2010 Objective 23-13
- It will be used for two more cycles in 2008 and 2010.
- At the end of the decade, it should be possible to ascertain whether the proportion of state agencies that **provide or assure comprehensive laboratory services to support essential public health services** has increased

References

- Witt-Kushner, J, et al. Core functions and capabilities of state public health laboratories: A report of the Association of Public Health Laboratories. *Morbidity and Mortality Weekly Report* 2002; 51(RR14):1-8.
- Inhorn, S, et al. Comprehensive Laboratory Services Survey of State Public Health Laboratories. *Journal of Public Health Management and Practice* 2006; 12(6):514-521.

For additional information...

APHL

www.aphl.org

**Go to: Programs/
Laboratory Systems and Standards**

ASSOCIATION OF
PUBLIC HEALTH LABORATORIES

