

National Health Security Preparedness Index

What is the National Health Security Preparedness Index?

The National Health Security Preparedness Index (NHSPI) is an annual measure of health security and preparedness at the national and state levels. The Index is designed to give objective information about how well communities, states and the nation are prepared for public health and other emergency situations. Development of the Index was initially led by the Association of State and Territorial Health Officials (ASTHO) and the Centers for Disease Control and Prevention (CDC). Ownership of the Index will transition to the Robert Wood Johnson (RWJ) Foundation in December 2014.

Why was the Index developed?

With input from many stakeholders, including the Association of Public Health Laboratories (APHL), ASTHO, in partnership with CDC, developed the Index to simplify many existing health security and preparedness measures into visualizations that people can understand.

Five Guiding Principles for Developing the NHSPI:

1. Creates no new administrative burden
2. Should be owned and embraced by practice community
3. Must be better than what is currently available
4. Cannot be a one-time effort — must continuously improve
5. Avoid unintended consequences, as much as possible

The Index is not intended to be a grants measurement tool. Therefore, a state's score will not impact its funding now, or in the future.

Mission Statement

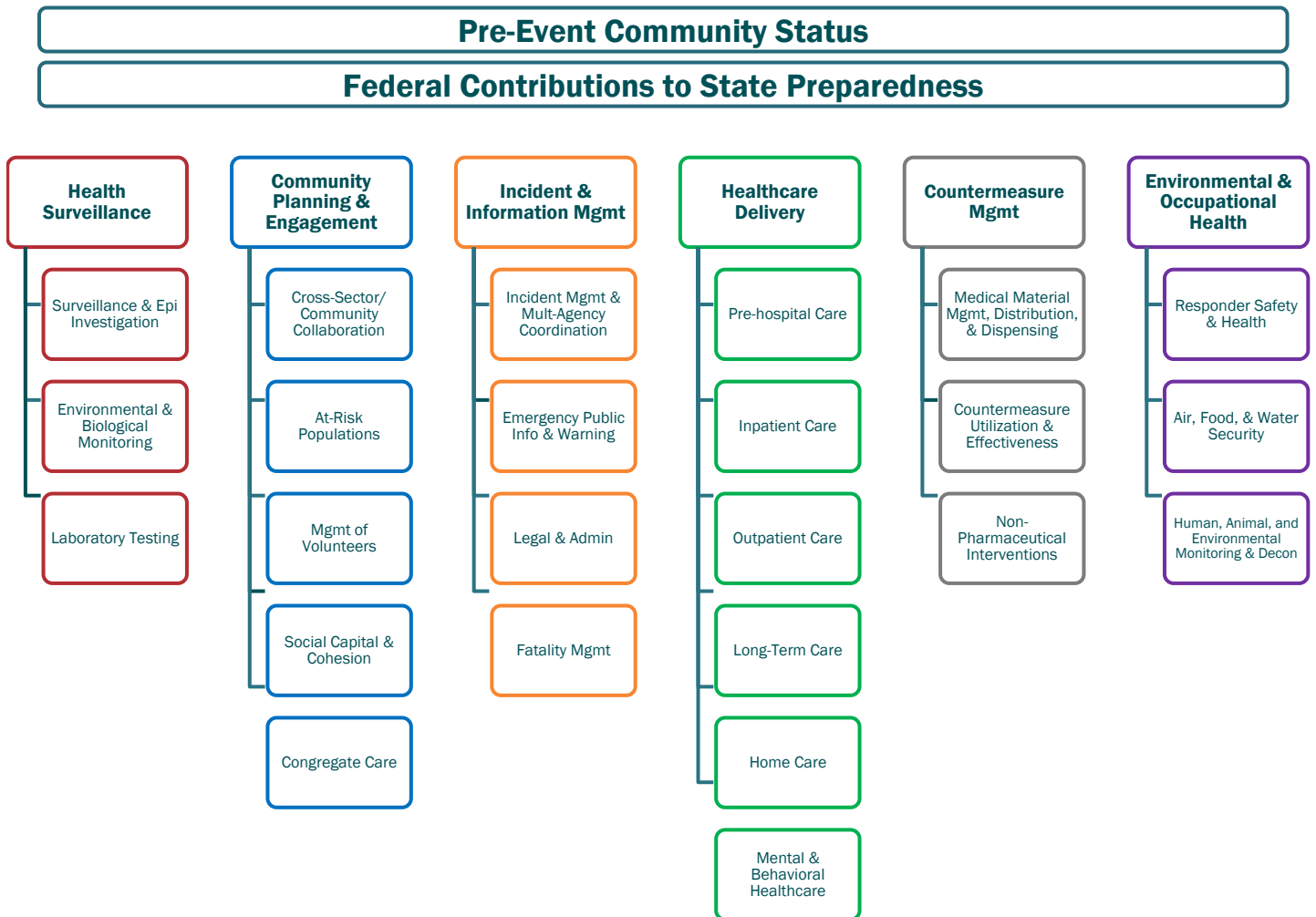
The mission of the NHSPI is to provide an accurate portrayal of our nation's health security using relevant, actionable information.

The intended uses include strengthening preparedness, informing decision making, guiding quality improvement, and advancing the science behind community resilience.

What is included in the Index?

The 2014, NHSPI will include six domains and 19 sub-domains with 199 active measures. See Figure 1 below for the complete structure for the 2014 version. Laboratory measures can be found in the following sub-domains: Health Security Surveillance & Epidemiological Investigation, Biological Monitoring, & Laboratory Testing, Incident Management & Multi-Agency Coordination, Cross-Sector/Community Collaboration, Environmental Monitoring, Responder Safety & Health and Food & Water Security.

Figure 1



The next version of the Index (2015) will include the following additions:

- Congregate Care and Fatality Management sub-domains under the Community Planning & Engagement domain
- Outpatient Care sub-domain under the Healthcare Delivery domain
- Non-Pharmaceutical Interventions sub-domain under the Countermeasure Management domain
- Hazardous Materials & Waste Management sub-domain under the Environmental & Occupational Health domain

How was the Index developed?

Based on the input from academic and policy experts, the NHSPI Model Workgroup reviewed hundreds of data sources for potential measures to populate the conceptual framework and initial model. Through a methodical and statistically based system, stakeholders, including state preparedness directors, NHSPI project members, and representatives from over 48 national associations, reviewed the developmental draft and measures. For the 2014 version, all measures are unweighted and contribute equally to their subdomain, all sub-domains contribute equally to their domain, and all domains contribute equally to the Index.

When will the Index be available?

The 2014 version of the Index will be made available to state preparedness directors in November and the public in December. State preparedness directors will be provided login information so that they can view their own state's measures. Laboratory directors are encouraged to contact the State Preparedness Director to obtain this login information and become familiar with the information at www.nhspi.org.

How is APHL's membership affected/involved?

APHL's member, Bonnie Rubin, MBA, MHA, State Hygienic Laboratory at the University of Iowa, serves on the Steering Committee for the NHSPI and provides leadership for this initiative. Maureen Sullivan, MPH, Minnesota Department of Health, Public Health Laboratory serves on the Stakeholder Communications Workgroup and Paul Moyer, also with the Minnesota Department of Health, serves on the Environmental and Occupational Health Task Force.

APHL shared data from its Comprehensive Laboratory Services Survey (CLSS) and its All-Hazards Laboratory Preparedness Survey to populate the Index with laboratory measures. Additional laboratory measures are taken from the CDC Public Health Emergency Preparedness (PHEP) Cooperative Agreement, the U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS), and the Bureau of Labor Occupational Employment Statistics (OES).

Laboratory measures and their sources included in this version:

HEALTH SURVEILLANCE DOMAIN	
Health Security Surveillance & Epidemiologic Investigation Sub-Domain	
Has your {State Public Health} laboratory implemented the Laboratory Information Management System (LIMS) capability to electronically receive and report laboratory information (e.g., electronic test order and report with hospitals and clinical labs, surveillance data from Public Health Laboratory to Epidemiology)?	APHL CLSS
Does your state have any legal requirement for nongovernmental (e.g., clinical, hospital-based) laboratories within your state to send clinical isolates or specimens associated with reportable foodborne diseases to the state public health laboratory?	APHL CLSS
{In what proportion} of the following federal surveillance, information, or grant programs does your {State Public Health} laboratory participate? [Foodborne Diseases Active Surveillance Network (FoodNet), Influenza Centers for Disease Control and Prevention (CDC) / World Health Organization (WHO) Surveillance Network]	APHL CLSS

Biological Monitoring & Laboratory Testing Sub-Domain	
{Total number of} Chemical Threat and Multi-Hazards Preparedness exercises or drills your State Public Health Laboratory conducted or participated in {annually}	APHL All-Hazards
Has your Chemical Terrorism/Threat (CT) laboratory been certified or accredited by any of the following? [Clinical Laboratory Improvement Amendments (CLIA), College of American Pathologists (CAP), or International Organization for Standardization (ISO)]	APHL All-Hazards
Has your Radiological Terrorism/Threat (RT) laboratory been certified or accredited by any of the following? [Nuclear Regulatory Commission (NRC), Clinical Laboratory Improvement Amendments (CLIA), College of American Pathologists (CAP), or International Organization for Standardization (ISO)]	APHL All-Hazards
Does your state public health laboratory have enough staffing capacity to work five, 12-hour days for six to eight weeks in response to infectious disease outbreaks, such as novel influenza A (H1N1)?	APHL All-Hazards
Does your {state public health} laboratory have a document Continuity of Operations Plan (COOP) consistent with National Incident Management System (NIMS) guidelines?	APHL All-Hazards
Does your {state public health} laboratory have a plan in place to receive samples from a sentinel clinical laboratory during non-business hours?	APHL All-Hazards
Does your state public health laboratory currently have the capacity in place to assure the timely transportation (pick-up and delivery) of samples 24/7/365 days to the appropriate public health Laboratory Response Network (LRN) Reference Laboratory?	APHL All-Hazards
Does your {state public health} laboratory have a written plan for coordination and communication with any other agency in your jurisdiction in the event of a foodborne disease emergency?	APHL CLSS
Does your state public health laboratory have a USDA/APHIS (US Department of Agriculture/ Animal and Plant Health Inspection Service) permit for the importation and transportation of controlled materials, and organisms and vectors?	APHL CLSS
{To what proportion} does your {State Public Health} laboratory provide or assure the following laboratory tests? [Arbovirus serology, hepatitis C serology, <i>Legionella</i> serology, Measles serology, Mumps serology, <i>N. meningitidis</i> serotyping, <i>Plasmodium</i> identification, <i>Salmonella</i> serotyping, <i>Shigella</i> serotyping, Varicella serology]	APHL CLSS
{To what proportion} does your {state public health} laboratory provide or assure the following laboratory tests? [Antimicrobial susceptibility testing confirmation for vancomycin resistant <i>Staphylococcus aureus</i> , Anaplasmosis (<i>Anaplasma phagocytophilum</i>), Babesiosis (<i>Babesia</i> sp.), Botulinum toxin – mouse toxicity assay, dengue Fever, Hantavirus serology, Identification of unusual bacterial isolates, identification of fungal isolates, Identification of parasites, <i>Klebsiella pneumoniae</i> Carbapenemase (blaKPC) by PCR, <i>Legionella</i> by culture or PCR, Malaria by PCR, Norovirus by PCR, Powassan Virus, Rabies]	APHL CLSS
Does your state license, certify and/or accredit clinical laboratories – under federal (CMS) regulations?	APHL CLSS
{What proportion} of the following {organizations} provide certification or accreditation of your state public health laboratory? [American Association for Laboratory Accreditation (A2LA), Clinical Laboratory Improvement Amendments (CLIA), College of American Pathologists (CAP)]	APHL CLSS
Ability of Public Health Emergency Preparedness Cooperative Agreement funded Laboratory Response Network for Chemical Threats (LRN-C) laboratories to collect, package and ship samples properly during an LRN exercise.	CDC PHEP

Proportion of Laboratory Response Network (LRN) — Biological Threat proficiency tests successfully passed by Public Health Emergency Preparedness (PHEP) Cooperative Agreement-funded laboratories.	CDC PHEP
{Proportion of} pulsed field gel electrophoresis (PFGE) subtyping data results for E. coli O157:H7 submitted to the PulseNet (PN) national database within four working days of receiving isolate at the PFGE laboratory.	CDC PHEP
Ability of PHEP(Public Health Emergency Preparedness)-funded LRN-C Level 1 and/or Level 2 laboratories to detect and quantify biomarkers of chemical agents in clinical samples during the LRN (Laboratory Response Network) Emergency Response Pop Proficiency Test (PopPT) Exercise.	CDC PHEP
Number of reference labs, other labs, or national labs in the Laboratory Response Network (LRN) that could test for biological agents	CDC PHEP
Number of core methods (agents) demonstrated by Level 1/Level 2 labs	CDC PHEP
Number of additional methods (agents) demonstrated by Level 1/Level 2 labs	CDC PHEP
{Number of} Medical and Clinical Laboratory Technicians {per 100,000 population}	OES
{State has a} US Department of Agriculture (USDA) National Animal Health Laboratory Network laboratory	USDA APHIS
INCIDENT & INFORMATION MANAGEMENT DOMAIN	
Incident Management & Multi-Agency Coordination Sub-Domain	
Have you utilized a rapid method (Health Alert Network (HAN), blast email or fax) to send messages to your sentinel clinical laboratories and other partners?	APHL All-Hazards
Does your {state public health} laboratory have ready access to current contact information as well as the capabilities of all sentinel clinical laboratories in your state?	APHL CLSS
In case of an emergency, does your {state public health} laboratory have any of the following in place? [A 24/7/365 contact system]	APHL CLSS
COMMUNITY PLANNING & ENGAGEMENT DOMAIN	
Cross-Sector/Community Collaboration Sub-Domain	
Does your {state public health} laboratory employ an individual whose sole responsibility is to promote partnerships between public laboratories and private laboratories within your state?	APHL CLSS
ENVIRONMENTAL & OCCUPATIONAL HEALTH DOMAIN	
Environmental Monitoring Sub-Domain	
Does your {state public health} laboratory provide or assure testing for radiologic agents in environmental samples?	APHL CLSS
Does your {state public health} laboratory provide or assure testing for environmental samples in the event of suspected chemical terrorism?	APHL CLSS
Does your {state public health} laboratory provide or assure testing for the following environmental matrices? [Air]	APHL CLSS

{What proportion} of the following {organizations} provide certification or accreditation of your state public health laboratory? [American Industrial Hygiene Association (AIHA), Environmental Protection Agency (EPA), National Environmental Laboratory Accreditation Conference (NELAC)]	APHL CLSS
Does your {state public health} laboratory test for contaminants: asbestos, lead, metals, pesticides, inorganic compounds, organic compounds, metals, microbials, persistent organic pollutants, pharmaceuticals, radon, radiologic agents, volatile organic compounds?	APHL CLSS
Does your {state public health} laboratory provide or assure testing for the following environmental matrices? [Hazardous Waste]	APHL CLSS
Responder Safety & Health Sub-Domain	
{State public health} laboratory performs industrial hygiene or occupational health testing	APHL CLSS
Food & Water Security Sub-Domain	
{What proportion} of the following {organizations} provide certification or accreditation of your state public health laboratory? [Food & Drug Administration (FDA), United States Department of Agriculture (USDA)]	APHL CLSS
Does your {state public health} laboratory test for {types of} water: drinking, well-water, recreational, surface, underground, or waste?	APHL CLSS
For which of the following organisms or their toxins does your {state public health} laboratory provide or assure testing for food and/or water samples to assist with foodborne disease outbreak investigations: <i>Bacillus cereus</i> , <i>Brucella</i> sp, <i>Campylobacter</i> sp, <i>Clostridium botulinum</i> , <i>Clostridium perfringens</i> , <i>Cryptosporidium</i> sp, <i>Cyclospora cayatanensis</i> , <i>Listeria monocytogenes</i> , Norovirus, <i>Salmonella</i> , <i>Shigella</i> , <i>Staphylococcus aureus</i> , STEC non-O157, STEC O157, <i>Vibrio</i> sp, <i>Yersinia enterocolitica</i>	APHL CLSS

APHL encourages members to visit <http://www.nhspl.org> to learn more about the index. Contact APHL's Public Health Preparedness and Response Staff at emergency.preparedness@aphl.org with any questions pertaining to the APHL-provided data.