



GLOBAL HEALTH SECURITY— VISION AND OVERARCHING TARGET

VISION: *Our vision is a world safe and secure from global health threats posed by infectious diseases—where we can prevent or mitigate the impact of naturally occurring outbreaks and intentional or accidental releases of dangerous pathogens, rapidly detect and transparently report outbreaks when they occur, and employ an interconnected global network that can respond effectively to limit the spread of infectious disease outbreaks in humans and animals, mitigate human suffering and the loss of human life, and reduce economic impact.*

U.S. OVERARCHING TARGET: Over the next five years the United States commits to working with at least 30 partner countries (containing at least 4 billion people) to prevent, detect and effectively respond to infectious disease threats, whether naturally-occurring or caused by accidental or intentional releases of dangerous pathogens. We call on other countries to join in this effort to realize the vision of a world where all 7 billion people are effectively protected against infectious disease threats.

We will work with partner countries on specific objectives to prevent, detect and effectively respond to infectious disease threats, and will measure our own progress through the following metrics and milestones. We invite partner countries to use metrics appropriate to their own situations, including these and others:

Prevent: Countries will have systems, policies and procedures in place to prevent or mitigate avoidable outbreaks. Considering their own vulnerabilities, countries should prioritize and implement the following:

- ▶ Surveillance to monitor and slow **antimicrobial resistance**, with at least one reference laboratory capable of identifying at least three of the seven WHO priority AMR pathogens¹ using standardized, reliable detection assays, and reporting these results when appropriate to international or IHR focal points.
- ▶ A whole-of-government **national biosecurity system** is in place that ensures collections of especially dangerous pathogens are identified, held, secured and monitored in a minimal number of facilities with biosafety and biosecurity best practices in place; biorisk management training and educational outreach is conducted to promote a shared culture of responsibility, reduce dual use biological risks, and ensure safe transfer of biological agents; and country-specific biosecurity legislation, laboratory certification, and pathogen control measures are in place as appropriate.
- ▶ Adopted behaviors, policies and/or practices that minimize the spillover of **zoonotic diseases** into human populations²
- ▶ **Immunization** of at least 90% of the country's one-year-old population with at least one dose of measles-containing vaccine as measured by coverage surveys or administrative data.

Detect: Countries will have real-time biosurveillance and effective modern diagnostics in place that are able to reliably conduct³ at least five of the 10 core tests⁴ (including point-of-care and laboratory-based diagnostics) on appropriately identified and collected outbreak specimens transported safely and securely to accredited laboratories⁵ from at least 80% of districts in the country). The United States will also support countries in substantially accomplishing:

- ▶ Surveillance for 3 core syndromes indicative of potential public health emergencies conducted according to international standards.

- ▶ Country and regional capacity to analyze and link data toward real-time biosurveillance systems, including interoperable, interconnected electronic reporting systems within the country, which can include clinical, laboratory, environmental testing, product safety and quality, and bioinformatics data.
- ▶ Timely and accurate disease reporting according to WHO, OIE, and FAO requirements.
- ▶ A workforce including physicians, veterinarians, biostatisticians, laboratory scientists, and at least 1 trained field epidemiologist per 200,000 population, who can systematically cooperate to meet relevant IHR and PVS core competencies.

Respond: Countries will have a public health Emergency Operation Center functioning according to minimum common standards⁶; maintaining trained, functioning, multi-sectoral rapid response teams⁷ and “real-time” biosurveillance laboratory networks and information systems⁸; and trained EOC staff capable of activating a coordinated emergency response⁹ within 120 minutes of the identification of a public health emergency. The United States will also support countries in substantially accomplishing:

- ▶ In the event of a suspected or confirmed biological attack, have the capacity to link public health and law enforcement for the purpose of attribution.
- ▶ A national framework for sending and receiving medical countermeasures and public health and medical personnel from and to international partners during public health emergencies.

References:

1. The WHO list of AMR pathogens of concern includes: *Escherichia coli*: resistance to 3rd generation cephalosporins (ESBL) and to fluoroquinolones, *Klebsiella pneumoniae*: resistance to 3rd generation cephalosporins (ESBL) and to carbapenems, *Staphylococcus aureus*: methicillin resistance, MRSA, *Streptococcus pneumoniae*: resistance (non-susceptibility) to penicillin, Non-Typhoid salmonella (NTS): resistance to fluoroquinolones, *Shigella* species: resistance to fluoroquinolones, *Neisseria gonorrhoeae*: reduced susceptibility to 3rd generation cephalosporins
2. Targets: For USAID EPT work, the number of high-risk countries is currently 18. For 2013, the baseline is 17% (3 countries). Our targets for others years are: 2014 = 22% (4 cumulative countries); 2015 = 33% (6 cumulative countries); 2016 = 44% (8 cumulative countries); 2017 = 56% (10 cumulative countries); 2018 = 67% (12 cumulative countries); 2019 = 78% (14 cumulative countries)
3. The laboratory results must be as accurate as possible, all aspects of the laboratory operations must be reliable, and reporting must be timely in order to be useful in a clinical or public health setting. Laboratory quality can be defined as accuracy, reliability and timeliness of reported test results.
4. The list of 10 core tests in each country includes six testing methods selected according to the IHR immediately notifiable list and the WHO Top Ten Causes of Death in low-income countries: PCR for Influenza virus; virus culture for poliovirus; serology for HIV; microscopy for mycobacterium tuberculosis; rapid diagnostic testing for plasmodium spp.; and bacterial culture for Salmonella enteritidis serotype Typhi. These six methods are critical to the detection of epidemic-prone and emerging diseases, and competency in these methods is indicated by the successful testing for the specific pathogens listed. The remaining four tests should be selected by the country on the basis of major national public health concerns (see Ijaz EID 2011;18:1054-7 for details).
5. For example, accredited laboratories are those that have completed appropriate steps of the Strengthening Laboratories Towards Accreditation (SLAMTA) accreditation process. These steps can be found in the WHO Guide for the Stepwise Laboratory Improvement Process Towards Accreditation in the African Region (with checklist), available online at <http://www.afro.who.int/en/clusters-a-programmes/hss/blood-safety-laboratories-a-health-technology/blt-highlights/3859-who-guide-for-the-stepwise-laboratory-improvement-process-towards-accreditation-in-the-african-region-with-checklist.html>
6. “Minimum common standards” are defined as emergency management program standards such as the International Organization for Standardization (ISO) 22300 family of standards, or national equivalents to include the WHO Emergency Response Framework (www.who.int).
7. “Rapid response teams” are rostered, trained, multidisciplinary teams able to deploy to a public health emergency in any part of the country within 24 hours to investigate and characterize the epidemic, evaluate patients, collect clinical specimens, oversee containment measures, and communicate with public health authorities.
8. A “real-time” network or system is one in which information generated by one node in the network or system can be distributed to another node within the network or system within 60 minutes.
9. “Activating a coordinated emergency response” is defined as conducting a first conference call or meeting including all relevant emergency management sectors and functions (e.g., command/management, operations, planning, logistics, administration/finance, and communications).