

COMMUNITY-BASED SURVEILLANCE DURING THE COVID-19 PANDEMIC



USAID's Infectious Disease Detection and Surveillance (IDDS) project is a cross-cutting project that supports priority countries' goals for the Global Health Security Agenda (GHS) and tuberculosis (TB). IDDS works with host countries to strengthen disease detection networks and surveillance systems for diseases of public health importance and improve identification of antimicrobial-resistant pathogens

Photo: Training community health workers in Guinea

Community-based surveillance (CBS) is used for early detection of potentially epidemic diseases through reporting by community members.

CBS enables the systematic detection and reporting of events of public health significance at the local level by community members. CBS uses two strategies: monitoring indicators in the form of community case definitions to identify diseases (indicator-based surveillance), and reporting unusual events that represent an acute risk to human health (event-based surveillance). When using the indicator-based approach, countries select a list of specific diseases such as measles, cholera, polio, and several others for surveillance at the community level.

Community health workers (CHW) use simplified community case definitions to identify suspected cases of these priority diseases. For example, the community case definition for yellow fever is any person with a fever and yellow coloration of the eyes. When using the event-based approach, communities identify unexplained clustered cases of disease, unexpected human or animal deaths, or exposure to contaminated food, water, or environmental hazards. The death of multiple livestock, such as chickens, at the same place and time would be considered an event that may be captured through CBS.

HOW CBS DIFFERS FROM ROUTINE SURVEILLANCE

In the routine surveillance system, data is collected from patients at health facilities such as clinics, health centers, and hospitals and is then transmitted to higher levels for analysis. In contrast, CBS data is collected by community members who send alerts by cell phone or smart phone to the nearest health facility. This allows the surveillance system to capture data from a wider area and more effectively track potential epidemics and health emergencies.



CBS INTERVENTIONS SUPPORT BY IDDS

IDDS has supported the implementation of CBS in Senegal, Guinea, and Mali. With the ongoing COVID-19 pandemic, many countries looked to their CBS systems to try and capture additional cases and integrate these systems into outbreak response.

TRACKING COVID-19 THROUGH CBS

To assist countries in responding to the COVID-19 pandemic, IDDS provided technical and operational support for integrating COVID-19 reporting into CBS activities including:

- Incorporating COVID-19 contact tracing into mInfoSanté, the smart-phone based system used for CBS in Senegal, and developing training modules for mobile contact tracing of COVID-19 cases in Senegal.
- Supporting the Guinea National Health Security Agency and CBS technical working group to update their existing CBS training materials for CHW to incorporate COVID-19 information.
 IDDS trained 84 health workers in Guinea during a pilot of their new training materials.



Supporting the Ministry of Health in Mali to modify their CBS training materials and create a combination of indicator- and event-based surveillance called SEBAC that included reporting for COVID-19. IDDS trained 72 CHW in Mali during a pilot of the new training materials to ensure COVID-19 cases could be captured in this new system.

BEST PRACTICES FOR INCORPORATING CBS INTO FUTURE PANDEMIC OUTBREAK RESPONSES

Through the activities supported by IDDS to integrate COVID-19 into existing CBS systems, several critical best practices were identified:

- Rapidly updating CBS training materials to incorporate COVID-19 was a critical step for rolling out improved guidance for responding to the pandemic at the community level. Ensuring that CHW are included in training opportunities to detect and appropriately respond to disease outbreaks ensures that outbreaks can be identified at the community level.
- Once training materials are updated, it is critical to have both in person and virtual options for training CHWs to lower the risk of COVID-19 spread. There were limited options for this in many of the IDDS-supported countries as CHW often have limited or no access to internet or other virtual training methods. In the future, incorporating alternative methods of reaching CHW such as training points at local community centers, delivery of training materials, or providing telephone-linked training opportunities can help ensure training can be provided despite travel restrictions.
- When assessing the impact of CBS in COVID-19 reporting, data must be able to trace back which cases
 were initially flagged by a CHW rather than from a patient arriving at a facility. Due to data
 management processes in some of the IDDS-supported countries, this was not always feasible.
 However, if a code for the origin of cases is incorporated into data reporting, health authorities can
 track the number of cases first detected by communities versus those first detected at health facilities.



Quarantine restrictions in Senegal prevented health authorities from making visits to verify CBS alerts for several months. Community workers were not able to make home visits to conduct education and data collection activities during that period because there were not adequate stocks of masks, gloves, and hand sanitizer to do so safely. Making these safety measures more available to health workers will increase the effectiveness of CBS.



Screenshot of the mobile application developed for community workers to monitor COVID-19 in Senegal