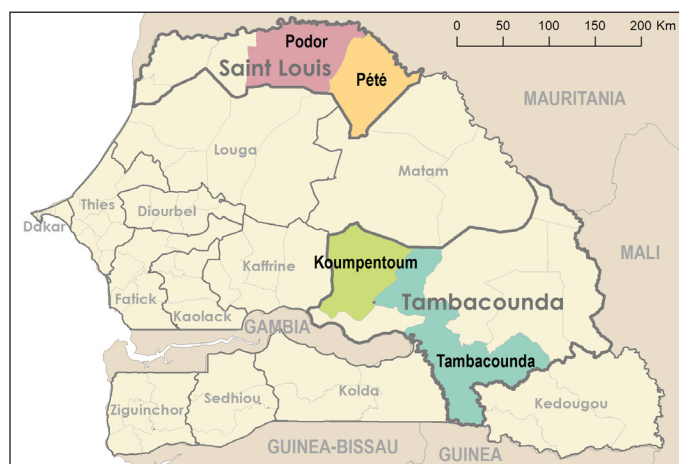
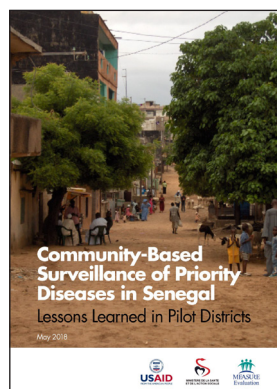


On the Lookout for Infectious Diseases Experiences from a Community-Based Surveillance Pilot Activity in Senegal

Background

The Health Emergencies Operations Center (COUS) of the Ministry of Health and Social Action (MSAS) of Senegal launched community-based surveillance (CBS) in 2016, with support from the United States Agency for International Development (USAID) and the World Health Organization (WHO). Using funds from Pillar IV of the Global Health Security Agenda of USAID to support Senegal's post-Ebola response, MEASURE Evaluation provided technical support to implement the pilot stage of CBS in four districts in the regions of Saint Louis and Tambacounda. These regions border countries also affected by the 2013 Ebola outbreak (see map). This initiative aimed to prevent infectious disease epidemics, by reducing the lag between the onset of symptoms and the health system's response.

A full report on our findings is available in English, here: <https://www.measureevaluation.org/resources/publications/tr-18-247/>. And the French version is here: <https://www.measureevaluation.org/resources/publications/tr-18-247-fr/>



Contributions

- Using the integrated disease surveillance and response (IDSR) guide for CBS of such high-priority diseases as Ebola, cholera, yellow fever, and measles, we created a curriculum consisting of a facilitator's guide and materials for trainees, tailored to the health-post head nurses (ICPs) and community watch and alert committees (CVACs). Key elements of the training were case definitions for community alerts of high-priority diseases, communication techniques, and standard operating procedures (SOPs) for CBS. In addition, the CVAC members were trained to use mobile phones to send SMS (Short Message Service) texts to ICPs.
- MEASURE Evaluation supported the configuration of the mHealth Info platform to allow CVAC members to send SMS to ICPs and developed dashboards to visualize performance indicators for the district medical teams (ECDs) to track investigation and response.
- We teamed with the COUS to implement a cascaded training initiative in the four pilot districts, where 16 ECD members, 106 ICPs, and 2,094 CVAC members were trained to implement CBS.
- In close collaboration with the COUS, we developed SOPs for data analysis and checklists for supportive supervision. As of March 2018, four district-level data analysis meetings were held and 93 health posts had been supervised, with the aim of improving follow-up on community disease alerts by ICPs.

Results

Training for CVACs began on September 25, 2017, and ended on January 18, 2018. As of March 13, 2018, 360 SMS alerts had been sent to ICPs through the mHealth Info platform. Of these, 259 (72%) were investigated by ICPs, which required a visit to the community to assess the patients' symptoms and determine if they corresponded to the definition of a clinical case. Overall, 206 investigations (57%) were conducted within the recommended 48 hours. The ICPs found that 112 (43%) of the investigated

community alerts corresponded to the definition of a clinical case and were considered genuine suspected cases, justifying collecting a sample for the laboratory (see table).

CBS indicators (as of 13 March 2018)

	Total
Alerts sent by CVACs	360
Investigation of alerts by ICPs	259
Investigation of alerts by ICPs within 48 hours	206
Suspected cases among the investigated alerts	112
Percentage of alerts investigated	72%
Percentage of alerts investigated within 48 hours	57%
Percentage of suspected cases among the investigated alerts	43%

Success Factors

- **Data analysis and use:** While the system to collect indicator-based surveillance data from health facilities is well-established, this new source of event-based surveillance data from the community represents a new opportunity to triangulate information. We encouraged analysis and use of community-based surveillance data in data review meetings, to organize supervision visits and ensure that priority disease alerts were investigated within 48 hours.
- **Capacity building of ECD:** We deployed MEASURE Evaluation consultants to strengthen capacity of surveillance focal points within the ECD in each of the four pilot districts. This model encouraged ECDs and ICPs to assume leadership in the rollout of the massive training initiative, which also fostered MSAS ownership. Ongoing support to district-level surveillance focal points aims to enhance data analysis skills and ensure appropriate follow-up of alerts for high-priority diseases.
- **MSAS ownership of the initiative:** We supported the information technology team of the MSAS to enhance the existing software platform according to the specifications developed by a technical working group, which was involved in every step of planning and design. We worked closely with the COUS in the development of training materials, which were endorsed for use in pilot districts with the hope that they be used throughout the country. This high level of ownership of the software

and training materials in-country will contribute to sustainability in the long term.

Constraints

- Continual pushback against the established government norms for payment of per diems and travel stipends (G-50 policy) caused multiple delays in the training calendar at all levels.
- The overall coordination of service delivery by the CVACs at the national level needs strengthening. It is difficult to track where CVACs have been established and are considered functional. Furthermore, the multiplicity of community-level initiatives resulted in fragmented management of the CVACs.
- The surveillance system for reporting high-priority diseases detected at the health facility level requires strengthening. Many facilities encountered in pilot districts could be considered “silent,” because they do not submit routine reports. These ICPS do not supervise community surveillance adequately and have not been able to respond appropriately to community-level disease alerts.

Conclusion

This pilot initiative to implement CBS in four districts in Senegal has encountered and overcome significant challenges. The impact of CBS on the overall surveillance system is only beginning to be felt.

We anticipate that case management of high-priority diseases will improve, along with the ECDs' capacity to initiate investigations and implement preventative measures. Enthusiasm for CBS in Senegal will increase when public health officials have seen how community-level detection of priority diseases reported in real time improves epidemic prevention and control.

We hope that lessons learned can be applied to future MSAS initiatives, to broaden the scope of CBS so that it includes the detection of events of potential risk to public health and zoonoses in animal populations.