Community-based surveillance on polio eradication in the Horn of Africa

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The Horn of Africa experienced an outbreak of wild poliovirus type 1 (WPV1) in 2013 with the epicentre in Somalia; it then spread to Kenya and Ethiopia. Somalia recorded 194 cases and Kenya and Ethiopia had 14 and 9 cases respectively. The 7th Horn of Africa Technical Advisory Group (TAG) had convened in 2012 and warned that the area was at great risk of polio outbreak by potential importation of virus due to three reasons:

- Clear evidence of undetected circulation of WPV in countries (confirmed WPV case in Rongo district, Kenya, 2011, genetically linked to the 2010 Uganda outbreak; WPV was not detected in Somalia between 2010 to 2012 despite AFP surveillance meeting standards but detected in 2013 when outbreak erupted);
- Large populations of susceptible children; and
- Inaccessible areas due to security issues.

A year after the warning an outbreak occurred. Massive and frequent vaccination campaigns were conducted to control the outbreak.

Recognizing the need to expanded acute flaccid paralysis (AFP) surveillance to ensure no poliovirus circulation goes undetected, TAG recommended the use of community-based surveillance (CBS) to improve the sensitivity of AFP surveillance. Community-based surveillance is operational in several Horn of Africa countries under different names and forms.

WHO Horn of Africa and the CORE Group Polio Project (CGPP) have collaborated in establishing, implementing and evaluating CBS in the area. This
article describes CBS in Ethiopia and South Sudan with a focus on process, results and challenges.

Methods

Community-based surveillance complements the existing facility-based surveillance system. It is an ongoing activity conducted at community level by community volunteers (CVs) and includes active case searches during house-to-house visits, religious and traditional healing sites (holy water, prayers, church, mosque) visits, with kalicha (Muslim traditional healers) and reporting to the nearby health facilities.

Community-based surveillance was initiated in Ethiopia in 2003 and in the South Sudan CGPP project areas in 2010. In Ethiopia 6,465 community volunteers in 81 districts woredas (districts) of CGPP areas cover a population of more than 5.1 million people. In South Sudan, there are 742 community surveillance volunteers covering a population of 1.2 million – mostly remote, hard to reach and migratory communities.

Community volunteers are trained for three days initially and refreshed on the case definition, reporting and roles of volunteers and facility workers in notification, investigation and response. The CBS is an integrated one that covers AFP, measles and neonatal tetanus (NNT) and other health conditions and events. The community volunteers work under the guidance and support of health facility workers in their respective areas, to whom they submit monthly reports.

The volunteers are not paid but they receive non-monetary incentives such as gowns and umbrellas embossed with the project logo, as well as bags in which to carry supplies and educational materials. Since they come from the communities they serve, they are well accepted and trusted.

Results

Community-based surveillance contributes significantly to AFP surveillance. In Ethiopia 30% to 59% of AFP cases reported annually between 2008 and 2014 were attributed to CBS as indicated in (Figure 1).

In South Sudan too, the percentage of AFP cases reported by CBS ranged from 31% to 44% between 2012 and 2014 (Figure 2).

Further, the programmes reported and number of other positive results:

- Improved AFP surveillance in remote, hard to reach and migratory populations;
- High detection of suspects and paralysis cases that were unlikely to visit health facilities due to taboo; and
- Reduced costs as CBS was integrated with other diseases and medical conditions and events and promoted community participation and positive health behaviour.

Challenges

The challenges implementing CBS include nominal leadership by ministries of health, inadequate motivation of community health volunteers and limited capacity of community health volunteers. Lack of resources for CBS programme management: incentives, supervision, information system, planning and review are a hurdle too. There are challenges documenting specific attribution to overall AFP surveillance performance because of inadequate information systems and limited integration of CBS within the formal AFP surveillance system.

Ways forward

To strengthen CBS and realize its benefits, there should be increased government ownership by enacting CBS policies, integrating of CBS within the national AFP surveillance to enhance rapid response and providing of motivational packages for volunteers. A set of performance indicators for CBS should be developed and the information system should be developed to capture CBS data adequately so that its benefits can be well documented.

General references