

Vaccine Derived Polio Virus Detailed Case Investigation

Social Profiling Summary

Kamuli District, Kisozi Sub-County, Uganda

Background: On November 3, 2014 UNEPI lab had notified of the two VDPV Type 2 cases from Kween and Kamuli districts of Uganda. Both cases are contacts of AFP cases (not actual AFP, no signs of paralysis); both are under five years old. Kween, which is located on the very East of Uganda, bordering Kenya, has been a low performing district in the past four years (and is part of the 37 high-risk districts) with immunization coverage of less than 80%. Last year Kween had a routine immunization coverage of 77%.

Kamuli district, also located in the East, 24 km North of Jinja, was considered as a relatively well performing district with high immunization coverage rates. However, the quality of AFP surveillance activities remained sub-optimal (no AFP case reported in 2013 with the expected rate of 12 cases). The Ministry of Health team was aware of the surveillance gaps and STOP team member was deployed to assist with the surveillance activities.

Findings: UNICEF team, consisting of Polio C4D Specialist, Sheeba Afghani, EPI Specialist Eva Kabwongera, and Regional Polio C4D Specialist, Rustam Haydarov, as part of detailed case investigation with WHO and Uganda Ministry of Health have collected social data of the family and the affected community. This report will describe social characteristics that will inform development of communications component for the response plan. However, given several critical findings in other areas, specifically AFP surveillance activities in Kamuli, the team feels it is important to summarize and bring this to the attention of programme managers.



Figure 1. The AFP child (right), sibling VDPV positive contact (left), & medical record from the health center, indicating weakness concluded to injection

The AFP and the Contact Cases: The initial information about both the AFP case and the contact case was collected from the AFP surveillance and the Contact Specimen Collection forms. According to the forms, the initial AFP case - Kasimizi Samuel, 37 months old, developed a paralysis (13 Aug), following an injection. The first specimen was collected in six weeks (25 Sept) following the onset. The contact case (VDPV2 positive), Galubale Hissan, initially listed with a date of birth one month earlier than the index child (38 months), was found to be a younger sibling of the index child – actually 4 months of age (the year of birth was entered incorrectly on the contact specimen collection form). Similarly, the information on number of doses was not available for index or contact child, while it was indicated that the vaccination cards were available. Upon further examination of both vaccination cards, it was determined that both children were up to date on

their vaccination schedule. Only contact child had missed one last dose of OPV due to (reported) vaccine stock-out in the health center.

The pediatrician, from the local district hospital, conducted thorough examination of the AFP child and found no paralysis, which was initially attribute to injection (as mentioned in the AFP form). Further examination of medical records from the health center (available with the parent) revealed that the weakness in the leg was likely due to the injection technique (neuritis). The contact child had no complaints.

	VACCINE	PROTECTS AGAINST	HOW GIVEN	DATE GIVEN
AT BIRTH	BCG	Tuberculosis	Right Upper Arm	19/7/11
	Polio 0	Polio	Mouth Drops	19/7/11
At 6 Weeks	Polio 1	Polio	Mouth Drops	6/9/11
	DPT - HepB+Hib 1	Diphtheria/Tetanus/Whooping Cough/Hepatitis B/Haemophilus influenzae type B	Left Upper Thigh	6/9/11
At 10 Weeks	PCV 1	Pneumococcal Pneumonia	Right Upper Thigh	
	Rota 1	Rota Virus Diarrhoea	Mouth Drops	4/10/11
	Polio 2	Polio	Mouth Drops	4/10/11
	DPT - HepB+Hib 2	Diphtheria/Tetanus/Whooping Cough/Hepatitis B/Haemophilus influenzae type B	Left Upper Thigh	4/10/11
At 14 Weeks	PCV 2	Pneumococcal Pneumonia	Right Upper Thigh	
	Rota 2	Rota Virus Diarrhoea	Mouth Drops	11/10/11
	Polio 3	Polio	Mouth Drops	11/10/11
	DPT - HepB+Hib 3	Diphtheria/Tetanus/Whooping Cough/Hepatitis B/Haemophilus influenzae type B	Left Upper Thigh	11/10/11
9 Months	PCV 3	Pneumococcal Pneumonia	Right Upper Thigh	
	Rota 3	Rota Virus Diarrhoea	Mouth Drops	27/14/12
9 Months	Measles	Measles	Left Upper Arm	

Fig 2. Immunization record - fully immunized AFP index child 37 month old.

	VACCINE	PROTECTS AGAINST	HOW GIVEN	DATE GIVEN
At Birth	BCG	Tuberculosis	Right Upper arm	2/7/11
	Polio 0	Polio	Mouth Drops	2/7/11
At 6 Weeks	Polio 1	Polio	Mouth Drops	2/7/11
	DPT - HepB+Hib 1	Diphtheria/Tetanus/Whooping Cough/Hepatitis B/Haemophilus influenzae type B	Left Upper thigh	2/7/11
At 10 Weeks	Polio 2	Polio	Left Upper thigh	2/7/11
	DPT - HepB+Hib 2	Diphtheria/Tetanus/Whooping Cough/Hepatitis B/Haemophilus influenzae type B	Left Upper thigh	2/7/11
At 14 Weeks	Polio 3	Polio	Mouth Drops	
	DPT - HepB+Hib 3	Diphtheria/Tetanus/Whooping Cough/Hepatitis B/Haemophilus influenzae type B	Left Upper thigh	
9 Months	Measles	Measles	Left Upper arm	

Fig 3. Immunized VDPV positive contact - 5 months old (one dose of polio missed due to stock out)

AFP Surveillance in Kamuli: A discussion took place at the Kamuli district health team office with the senior district nurse (Osire Victoria), district surveillance focal person (Bogere Edith), and cold chain technician (Karish Joseph). It was established that the district has been experiencing challenges with financing AFP surveillance activities since 2011. Specifically, while the network of focal persons for disease surveillance exist at each facility, the funds for active case search were not available. For example, 3,664,000 Ugandan shillings allocated for AFP surveillance were impounded by the Uganda revenue authority as part of the campaign to recover 71 million Ugandan shillings from the Kamuli district as fiscal debt. The funds were never replenished by the district. Funds for eleven identified AFP cases in 2011 were not received, thus the team got demoralized. There was an instance where district hospital declined to admit and transport stool sample, because of the same reason – failure to reimburse transport expenses. As the result, along with other plausible reasons, the quality of surveillance activities in the district remained sub-optimal.

Kamuli district has a population of 665,000 people with population under 15 estimated at 326,000. The expected annual AFP rate for the community is 3 or more cases (based on 1/100,000 children < 15). To date, there have been 4 AFP cases identified in the district. No cases were reported in 2013. The Ministry of Health is aware of the challenges in the AFP surveillance and responded with the deployment of STOP volunteer to assist the staff on the ground; the last 3 AFP cases of 4 reported were identified by the STOP volunteer.

Social profiling – the community: Kisozi village is located in Kisozi district of Kamuli county. The village, with an estimated population of 4000 residents, is located 10 kilometers off the main road that links Jinja and Kamuli. There is a good tarmac road in between Jinja and Kamuli; the distance to the Kisozi village from Jinja is approximately 35 kilometers (out of which 10 kilometers are on unpaved but accessible road). The community is rural, located close to the White Nile River and surrounded by fields. This is an established village with solid well-build brick housing. No mobile population was present or known. There are no security

challenges in the community. The religious affiliation of the community is mixed – Christian and Sunni Muslim (Imam Magairewo Musa). There are mosques and churches in the area. The community has coverage by various media – Radio, TV, and Cell. There are obvious signs of outdoor advertising present, although not extensively, as in the district center.



Fig 4. Kisozi village – central road



Fig 5. 10 km off tarmac road – quite accessible

Social profiling – the family: A relative of the AFP and the contact case children (a grandfather) was interviewed to elucidate knowledge, attitude, and practice in the family and the community vis-à-vis health, vaccination, and polio. Mpanso Kasim, age 45, is a local community leader at LC1 level (lowest administrative division in Uganda). Mpanso is a father to 6 children age 14-25. He and his wife have basic senior education (Senior 3). He is Sunni Muslim, and regularly attends mosque gatherings (of 90-100 people on Fridays). Kasim and his family have access to water – a borehole on the street. There is a pit toilet in the house. Kasim and his family possess TV, radio, and basic cell phone. Kasim is watching and listening to Bokede, UBC, KBS FM and other stations. He is mostly interested in the news, health programmes, and politics.

Mpanso Kasim is quite knowledgeable about vaccine preventable diseases and polio. He is local community leader (LC1) who takes active part in immunization promotion. He believes that polio is a disease that affects young children, disabling them and making not able to walk. He says that if a child has polio, then their legs “would become short and thin”. Poor immunization may cause polio according to him. He is not sure if polio could be treated and said he would rely on advice in health facility. He knows about polio vaccine and two drops for children and believes that sometimes vaccine can protect from polio. Out of most dangerous diseases in the community Mpanso had mentioned “jigaz” (foot worm parasite), measles, and “qishaq” – malnutrition. Other risks that children face in their community are – no education, being poor, and having problems with water. When asked to rank where polio was in that list, Mpanso Kasim, ranked it in the very bottom of the list, which is indicative of low risk perception about polio in the given context of the Kisazi village.

Promising findings were documented on health seeking behavior. There is a well-established notion of seeking health advice and services at the primary health care center. The village health teams do regular



(quarterly) health education community meetings (proof and records provided), and the village health volunteer is well known in the community. When asked about traditional healers – in his own words “African doctor”, Kasim said that these were available, but he, nor the community around him, does not seek health services there. When asked who knew more about health – a doctor or an “African doctor”, he claimed that the doctor was more knowledgeable. Kasim has positive attitude towards vaccination overall and believes that “it is good”! Furthermore, as a local leader, he has been following up with the health facility to ensure that stock outs are replenished (there was one instance where the facility didn’t have routine vaccines).

On the opinion leaders, Kasim believes that the village health team – the local nurse is the most influential person when it comes to health, followed by him as the thecommunity leader. He also believes that his imam, as well as leaders of the neighboring Christian churches, along with the doctors are important to mobilize the community. He believes that they all had positive attitude towards vaccination and health services. When informed about the plans to conduct polio campaign, he concluded that it was a good idea to do and he would fully support and cooperate. Among other things / concerns that Kasim had mentioned over our conversation, was the need for mosquito nets to protect from Malaria and requested to facilitate.

Conclusion & Recommendations: Overall the community in Kisozi is rather conducive to health services. Furthermore, most of the children that we have witnessed, had immunization cards present with most of the vaccination series completed. There is an active health seeking behavior in the community that could be attributed to many factors, not least of which is strong outreach work from the primary health center. In addition, vaccination cards are required to get the food rations/social support. Along the same lines, when mothers visit the health facility for advice, they are first asked to get their vaccination card, before any other services are rendered. Thus, most of the mothers would like to avoid “this complication”, and prefer to get the vaccination card and all the schedule completed on time.

Based on the social profiling findings, it is clear that the preventive campaign planned in Decmeber or even a special campaign in response to the VDPV case is unlikely to be hindered by social barriers. The communication strategy will need to heavily rely on the VHT teams, primary health care staff, LC1 local leaders, and religious leaders in the community. Use of TV would not be possible due to “spill over”, however for targeted campaign local media could be used, including 105.9 FM Kamuli Broadcasting Services that would specifically target the Kamuli districts with little spill over to the surrounding areas. For greater localization, social mobilization teams with megaphones could be engaged in some areas. In terms of communication content, as valid to all VDPV cases, the emphasis should be on the gaps in routine immunization (stock outs in the health centers were confirmed), that call for immediate catch up in the schedules and special campaigns. Messages could also include broader health context, including how to prevent diseases that are perceived more dangerous than polio, including “jigaz”, measles, malaria and “qishaq”. Opportunities for outdoor advertising are limited, especially for billboards; some poster placement is possible, however. Yet, banners could support the visibility for the campaign if prime locations are selected, including at congregation points that should include village hall (privately owned but used for community ceremonies, according to Kasim). UNICEF country office is ready to support the Ministry of Health in roll-out of comprehensive communication campaign in response to this VDPV case.