

Lessons learned from the Uganda immunization training program

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Background: The philanthropic Merck Vaccine Network - Africa (MVN-A) was established to improve immunization program capacity in sub-Saharan Africa. Collaborative partnerships developed and implemented effective Expanded Program on Immunization (EPI) training programs in 4 sub-Saharan countries including Uganda to improve staff knowledge, skills and practice. Low immunization coverage remains a challenge in sub-Saharan Africa. The World Health Organization (WHO) identifies one major reason as the lack of adequate numbers of skilled health workers. Training needs assessments (TNAs) conducted by the WHO Regional Office for Africa (AFRO), MOHs and MVN-A collaborative partnerships identified gaps in health workers' EPI knowledge and skills, as well as inadequacies in reference materials and equipment.

Methods: In Uganda, the MVN-A partnership including the African Field Epidemiology Network (AFENET), Makerere University School of Public Health (MUSPH) and the Uganda Ministry of Health drew upon national TNA findings to develop a customized EPI training program to promote best practices and improve knowledge retention. We adapted a subset of AFRO Mid Level Management (MLM) modules covering various EPI topics including safe vaccine storage and handling, forecasting needs to ensure adequate vaccine supply, immunization planning and disease surveillance. Interactive adult training techniques were implemented and adjusted for each EPI delivery level, from the national level down to the health sub-district level. A pool of effective facilitators was identified following Training of Trainers (TOT) and charged with conducting national and district-level training across the country. Response to training and changes in knowledge and practice were measured using various techniques including pre- and post-tests of knowledge and retention, and daily course evaluations on content, facilitation and participation. Skill retention was also assessed.

Results: Between 2007 and 2013, more than 600 EPI staff in Uganda participated in adapted EPI management training. Course evaluations to date show the training is useful to trainees, the pre-test average score was 62% and post-test score was 73.6%. An assessment conducted at the end of the trainings showed that trainees could recall several course modules/themes but mostly cold chain and management of logistics (92%) and support supervision (72%), while less than 56% remembered other course modules. In all the modules a very high proportion of trainees had applied the skills they learnt, for example 99% for immunisation safety; supportive supervision (96%), cold chain and management of logistics (95%), partnering with communities (90%) disease surveillance (86%) monitoring the immunisation system (82%) and annual immunisation planning (76%). MOHs remain highly committed partners in all four national programs, having enlisted MVN-A trainees to conduct operational-level training, disease outbreak responses, mass immunization campaigns in camps of internally-displaced persons and new vaccine introduction.

Conclusions: In partnership with MOHs and other key stakeholders, four MVN-A collaborative partnerships developed and customized focused EPI training to effectively address specific gaps identified in countries' formal TNAs. Trainees in Uganda demonstrated significant improvement in perceived ability, competence, knowledge and skills in most targeted areas of EPI. A cadre of local trainers is now available to sustain these efforts. Cascade training appears to be an efficient way to reach several management levels but requires extensive TOT and follow-up efforts to reach peripheral levels in an effective manner.

Biography

Nicholas Ayebazibwe has completed his MBChB at the age of 24 years from Makerere University School of Health Sciences and an MPH from the same University. He is an epidemiologist at African Field Epidemiology Network (AFENET), a regional public health organization that works across 22 African countries and the Caribbean.

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