

CONCURRENT INTRODUCTION OF TWO VACCINES

A Case Study from Tanzania, 2013

◆ Tanzania introduced Rotavirus (Rota) and Pneumococcal Conjugate (PCV) vaccines concurrently in infants in 2013 to accelerate improvement in child health and survival. ◆ The operational effects of concurrent introduction were compared to the effects if each of the vaccines had been introduced alone and sequentially. ◆ The lessons learned in Tanzania confirm that there are potential benefits to concurrent introduction of vaccines that other countries should consider for their immunization programs.

TANZANIA INTRODUCES ROTAVIRUS VACCINE CONCURRENTLY WITH PNEUMOCOCCAL CONJUGATE VACCINE

In January 2013, the Ministry of Health of Tanzania newly introduced Rota and PCV vaccines into the Expanded Programme on Immunization (EPI) schedule as part of routine immunization of infants, beginning six weeks of age.

The introduction of any new vaccine into routine vaccination programs requires a complex set of activities including: mobilization and leverage of political will and country leadership; advocacy and communications; advanced planning for all aspects of vaccine introduction including processes, standard operating procedures, preparation of the cold chain, logistics, training, and monitoring and evaluation; broad engagement of stakeholders including health care workers, community leaders, and caregivers; alignment of staff and resources; and, allocation of sufficient and timely human and financial resources. Whereas many of the activities and challenges were similar to introduction of a single new vaccine, EPI program staff and observers in Tanzania noted several lessons learned that seemed to be particularly important to the concurrent vaccine introductions.

CONCURRENT INTRODUCTION MADE VACCINES AVAILABLE TO CHILDREN EARLIER

As part of its commitment to achieving the Millennium Development Goals, The Government of Tanzania worked to reduce the burdens of disease in infants due to pneumonia and diarrhea. It had planned to introduce PCV in 2012 and to begin Rota vaccination by the end of 2013. However, motivated by the desire to avoid delays in new vaccine introduction, Tanzania decided to introduce both vaccines concurrently.



Tanzania has an estimated population of 43.6 million people and an annual population growth rate of 2.7%. The under 1 year and under 5 (U5) year populations are 1.73 million and 8.73 million, respectively. The infant mortality rate is estimated to be 51 per 1,000 live births and U5 mortality ratio is 82 per 1,000 live births. The country has a total of 25 regions and 130 district councils. Streptococcus pneumonia is responsible for 21% of deaths in children under five years of age in Tanzania. The burden of Rotavirus has also been highlighted in several studies, and accounts for 17% of deaths in children US and overall disease prevalence rates ranging up to 43%.

CONCURRENT INTRODUCTION POTENTIALLY STRAINS THE VACCINE COLD CHAIN

Three months prior to its concurrent introduction launch, Tanzania conducted a rapid cold chain inventory to determine functional and non-functional storage levels, to identify capacity gaps, and to outline a rehabilitation plan to address challenges. However, program staff recommended that, in the future, **countries should conduct the cold chain assessments in a comprehensive fashion and with enough time to allow for equipment procurement and distribution** (typically at least six months). Program staff recommended that cold chain assessments should be incorporated into a regularly updated database, whenever possible, so that future assessments can be streamlined and be more cost effective. In addition, EPI staff suggested that during concurrent vaccine introductions, standard coping mechanisms such as increasing vaccine distribution frequency or conducting a fridge installation and repair campaign might not be sufficient to cope with the needs for greater cold storage capacity.

CONCURRENT INTRODUCTION OF TWO VACCINES

A Case Study from Ghana, 2012

CONCURRENT INTRODUCTION IMPROVED EFFICIENCY OF PLANNING AND TRAINING

Tanzania EPI staff and reviewers report that the **formation of joint technical working groups and the combining of discussion meetings saved significant time and effort related to concurrent vaccine introduction.** Work planning, budgeting, and development of timelines for implementation were all reported to be easily executable in the concurrent introduction without adding significant complexity. In addition, Tanzanian staff stated that efforts were combined to complete forecasting, procurement, receipt, and distribution tasks for the two vaccines.

Master trainers and health workers at national, regional, and district levels were trained on introduction of the two vaccines. **The integrated training of health workers on the two vaccines was seen as being more efficient than separate trainings on individual vaccines, resulting in health workers being away for extended periods from their station only once.** The combined trainings provided opportunity for greater concentration/refresher training on good immunization practices. Trainers reported that covering broader topics for a concurrent introduction was not more difficult and that the quality of the training was not affected. A post-training survey demonstrated that, on average, 90% of health workers showed good knowledge of both new vaccines and of vaccine preventable diseases. In addition, EPI staff observed significant savings in the development of communications messages, materials, advertising, and in conducting social mobilization activities. These savings were highlighted in both vaccines because they targeted the same age group – infants.



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However, in-country staff and observers suggested that improved savings in time and effort might also be reduced in the development of messages, materials, and social mobilization in a concurrent introduction that targeted differing age groups, e.g. human papillomavirus (HPV) and Inactivated Polio Vaccine (IPV). Separate materials and events might be warranted. In addition, due to the different routes of administration for the concurrently introduced vaccines in Tanzania (i.e. oral Rota and injectable PCV), EPI staff suggested that caregivers might have been more receptive to having the children receive multiple vaccinations during one visit. **Should future concurrent vaccine introductions result in two additional injections (e.g., for PCV and IPV), staff predicted that additional effort might be required to ensure that caregivers are comfortable with the additional injections.**



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