

Vaccination has been shown to be one of the most effective public health interventions. In the past ten years many new vaccines have become available to low- and middle-income countries. The London School of Hygiene & Tropical Medicine carried out a study, in collaboration with partners in six countries, exploring the impact of new vaccines on country health systems.

Rwanda

Introducing HPV vaccine

Impact of HPV vaccine introduction on the health system

It is often hoped that introducing additional vaccines may help to strengthen immunisation programmes and health systems more broadly. There are also concerns, however, that such additions may prove to be an additional stressor where resources are already overstretched. Cervical cancer, mainly caused by human papilloma virus (HPV), is the most common type of cancer in Rwanda; there were 986 cases in 2010 and 678 deaths.¹ Rwanda introduced the HPV vaccine, Gardasil, in April 2011 and was the first country in Africa to do so. The aim of this study was to evaluate the impact of HPV vaccine introduction on Rwanda's immunisation programme and the broader health system.

Methods

The study used a mixed methods approach and data were collected during August 2012, after one complete round of three doses of HPV vaccination had been delivered. Semi-structured interviews with 30 key informants were conducted at national and district levels. Structured questionnaires were completed with staff at 27 health facilities in the Northern,

Eastern and Kigali regions. Routine data on the number of antenatal visits and the number of children vaccinated were collected one month before, during, and one month after HPV vaccine introduction from all selected health facilities. Data collection tools and data analysis were structured using the WHO health system building blocks framework.²



Photo: Adam Jones

References

1 World Health Organization. Human papillomavirus and related cancers in Rwanda: summary report 2010. Geneva: WHO/ICO Information Centre on HPV and Cervical Cancer. Available from: www.who.int/hpvcentre [accessed 30 Oct 2013].

2 World Health Organization, *Everybody's business: strengthening health systems to improve health outcomes. WHO's Framework for Action*. Geneva: World Health Organization. 2007.

The vaccination campaign

- In 2011, Merck made a 3-year donation of 2 million doses of Gardasil to Rwanda
- The Government of Rwanda covered operational costs
- The campaign consisted of two consecutive days of school-based vaccination with doses delivered three times per year
- Every year, girls in the 6th year of primary school were targeted
- The second and third phases of the campaign included catch-up phases
- Each health facility distributed the vaccine to an assigned number of schools in the vicinity
- Vaccines were available at the health facility for girls not enrolled in school on the days of the campaign
- In 2012, 97% of girls in school were vaccinated compared to 45% of those out of school
- GAVI has committed to financing the costs of HPV vaccine from 2014 to 2017

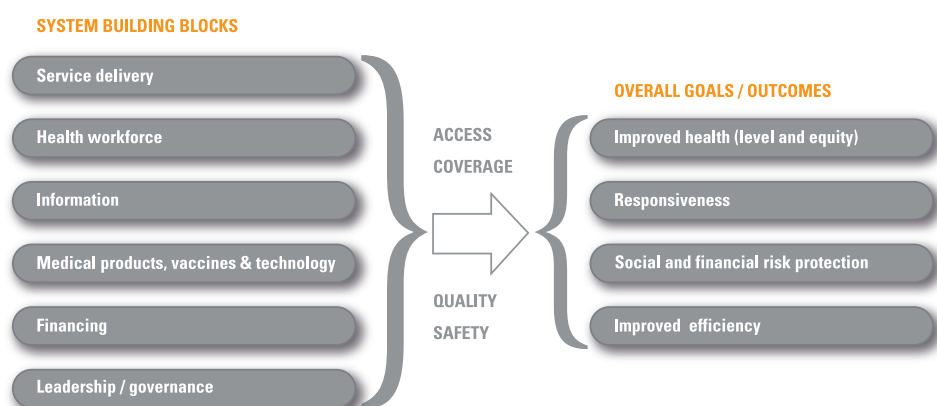
"There wasn't any impact on operational costs because it was well planned and the budget was known"

District level interviewee

"It had a positive effect on the health system because it was an opportunity to see other adolescent health elements, as mental health, reproductive health, the prevention of diseases. So it was an opportunity to think again on adolescent health"

National level interviewee

The WHO health system framework



The six building blocks of a health system: aims and desirable attributes

"It had been long since we last worked in collaboration with the Ministry of Education...it was a good opportunity for authorities, ministers to be aware of school based activities – it has also awakened teachers, school directors that we can think again about the health of children...the last time we combined vaccination and de-worming, so it is a very good opportunity"

National level interviewee

Rwanda

Findings

The vaccine was well-integrated into Rwanda's immunisation programme and there were no major impacts on the EPI or health system.

- The decision-making and planning process led to reinforced partnerships between actors involved e.g. Ministry of Health and Ministry of Education
- The new vaccine did not cause any disruptions to regular health services at the facility level
- Facilities co-delivered other services during HPV vaccination sessions e.g. education on hygiene and sexual health, distribution of de-worming drugs
- The communication campaign was also used to relay other health messages
- Workload increased during the days of vaccination and there was an increase in general workload at introduction
- Training related to HPV vaccine was helpful in strengthening EPI-related skills
- Positive effects were reported on staff motivation
- Information and communication with the public increased knowledge and demand for vaccines, a concurrent pilot scheme of cervical cancer screenings was rolled out



Photo: Sergio Torres Rueda

CONCLUSION: *The introduction was well planned and the vaccine was well-integrated into Rwanda's existing vaccination programme, with high coverage achieved. Overall, the impact was positive; an increased awareness of cervical cancer was reported, links between health facilities and schools were created, and the opportunity was used to co-deliver interventions. HPV vaccine had no or minimal effects on most health system components, including regulatory policy, planning, procurement, cold chain capacity and waste management.*