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10 years of experience in the delivery of HPV vaccine and COVID-19 Impact on vaccination coverage

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Outlines

- Rwanda EPI overview
- Rwanda HPV Vaccine Introduction Timeline and achieved coverage
- Factors of success
- HPV vaccine delivery strategies
- AEFI surveillance and monitoring
- Acceptance and Hesitancy
- Sustainability
- Research activities
- Lessons learned

Rwanda Vaccination program overview

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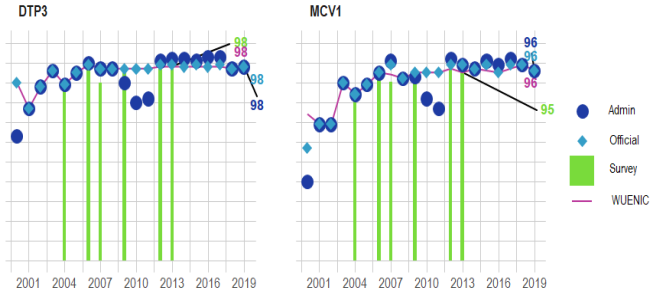
Source of Funds	Available vaccines	Year of introduction	Achievements
Procured 100% by Gov;	BCG, OPV, TT, DPT, Measles	1980	
Active GAVI supported vaccines with GoR co-financing	Hepatitis B and Hemophilus Infl. Type B	2002	97% of districts achieved a coverage exceeding 80% and the overall coverage > 95% for DPT-HepB-Hib3
	Pneumococcal vaccine	2009	
	Human Papilloma Virus	2011	From 2011-2019: 1,119,841 Girls fully vaccinated. Coverage > 90% over the years
	Rotavirus	2012	
Gavi support up to June 2020	Measles&Rubella	2013	Given in two doses and both doses: 96% and 92% for MCV1 and MCV2 respectively
Fully supported by GAVI	Inactivated Polio Vaccine (IPV)	2018	

12 Antigens being used in Rwanda vaccination programs with 93% of children fully vaccinated (DHS 2015)



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VACCINATION CALENDAR

Pre-birth	Birth	6 weeks	10 weeks	14 weeks	9 Months	15 Months	12 Years
							
2doses of Tetanus toxoid during pregnancy (do not exceed 5 doses during life course)	BCG Bacillus Calmette-Guérin (BCG) Oral Polio Vaccine (OPV)	Oral Polio Vaccine (OPV) Diphteria, Tetanus, Pertussis, Hepatitis B and Hemophilus Influenza (DTP-HepB-Hib) Pneumococcal vaccine (PCV13) Rotavirus (Rotarix)	Oral Polio Vaccine (OPV) Diphteria, Tetanus, Pertussis, Hepatitis B and Hemophilus Influenza (DTP-HepB-Hib) Pneumococcal vaccine (PCV13) Rotavirus (Rotarix)	Oral Polio Vaccine (OPV) Inactivated Polio Vaccine (IPV) Diphteria, Tetanus, Pertussis, Hepatitis B and Hemophilus Influenza (DTP-HepB-Hib) Pneumococcal vaccine (PCV13)	Measles-Rubella (MR)		Human papillomavirus (HPV) with a 6 months interval between 2 doses.

2. HPV Vaccine Introduction Timeline and achieved coverage

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MERCK Donation; Campaign mode: 2011 – Coverage: 93%; 2012 – Coverage: 97%

2011-12

2013 - 14

Continue campaign mode: 2013 – Coverage: 97% and HPV testing activity started / ended; **Gavi;** 2014 – Vaccine coverage: 99%; VIA screening started

Routine immunization mode: 2015 – Coverage: 90%

2015

2016

2016 – Coverage: 93%

2017 – Coverage: 93%

2017

2018

2018 – Coverage: 92%

2019 – Coverage: 97%

2019

2020

2020– Coverage: 77% (1st dose)

From 2011-2019: 1,119,841 Girls fully vaccinated

3. Factors to success

- Leadership from the highest level- First Lady at vaccine launch, Ministerial level commitment

- Partnerships and Collaboration:

Strong collaboration and support from partners through the TWG

- Community engagement

- Cold chain capacity updated to support several new vaccines

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4. HPV vaccine delivery strategies

- School based approach to deliver HPV vaccine

- 2011-2013: Vaccination targeting grades

- 2014 to date: vaccination targeting single age group (12 year girls)

- Out of school girls or girls who missed doses in school, they are vaccinated in health facilities

5. AEFI Surveillance and Monitoring

- Each course of vaccination takes place over six 2 weeks including AEFI surveillance

- reporting of side-effects and adverse reactions through teacher training is part of comprehensive monitoring.

- No serious AEFI has been reported

6. Acceptance and Hesitancy

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- Overall very high acceptance amongst parents and girls due to trust in communication campaign, MOH and high acceptance of vaccines in general
- Effective community mobilization via mass media campaign (organized by RHCC and Urunana DC) and community health workers played important role in mobilizing communities, parents, teachers and students
- Communication campaigns help address myths and rumors such as, vaccine causing infertility and amenorrhea early on
- There was no refusal based on culture, beliefs or religious grounds

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7. Sustainability

- Integration in routine immunization
- Ownership of the program by health facilities/local leaders
- Full involvement of the leaders in charge of education
- Increase the awareness of the beneficiaries

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8. Studies

- Human papillomavirus infection in Rwanda at the moment of implementation of a national HPV vaccination programme (https://bmcinfectdis.biomedcentral.com/articles/10.1186/s12879016-1539-6)
- Evaluation of human-papillomavirus testing and visual inspection for cervical cancer screening in Rwanda (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5921370/)

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Studies (Continued)

- Phase II of the study "Assessment of Early Impact of HPV vaccine and screening in Rwanda: an integrated approach to cervical cancer prevention" is underway.
- Similar results are expected compared with a recently published study: **Prevalence of Human Papillomavirus and Estimation of Human Papillomavirus Vaccine Effectiveness in Thimphu, Bhutan, in 2011–2012 and 2018** (https://www.acpjournals.org/doi/10.7326/M20-2849)

9. Lessons learned

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- Start with a strong advocacy and implementation strategy and engage high-level leadership and stakeholders
- Work closely with related departments, especially Ministry of Health and Ministry of Education – early and continued coordination at national and district level
- Assess a country's health system and contextualize before implementing HPV; need good cold chain, logistics, sufficient vaccine and strong community mobilization
- Use national cervical cancer prevalence data and global data on the efficacy and cost effectiveness of HPV vaccination for advocacy
- Create cross-cutting technical working groups to involve and get opinions from all the stakeholders

Lessons learned

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- Plan for introduction well in advance – dates, strategy, data recording tools, cold chain, training and community engagement
- Campaigns are good to build awareness and understanding on HPV vaccination; but building into routine immunization services reduces costs
- Use many communication channels to ensure that messages are consistent and far reaching
- Conduct refresher training for teachers so they are better aware of HPV vaccine and its benefits
- Work with community leaders and CHWs to accurately identify in-school and out-of-school girls

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Thank you