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INTERNAL MEMO

Date:	23 March 2022		
To:	**Minister Dr J Phaahla** **Honourable Minister of Health**	From:	**National Advisory Group on Immunisation**

ADVISORY 1 2022: IMPLEMENTATION OF RUBELLA VACCINATION

Problem Statement

South Africa is one of 21 remaining countries in the world that does not include a rubella-containing vaccine (RCV) in the national expanded programme on immunisation (EPI).

Background

- Congenital rubella syndrome (CRS) is a life-threatening condition leading to foetal loss, congenital malformations and physical/mental retardation in infants of non-immunised women who contract rubella during pregnancy.
- CRS is preventable through control and ultimately elimination of rubella through vaccination with RCV.
- The World Health Organization (WHO) and Gavi (the Vaccine Alliance) have supported roll-out of RCV across the world and in low- and middle-income countries in alignment with the 2021-2030 measles and rubella strategic framework (1) which seeks to eliminate measles and rubella by 2030.
- WHO advises co-administration of RCV with measles vaccine from 9 months of age, and provision of a second vaccination administered at a later time point (2).

Points considered

Benefit:

- RCV is a live-attenuated vaccine developed in 1969 with a proven record of safety when co-formulated and administered with measles vaccine.
- Introduction of RCV into a national EPI is relatively simple and cost effective because costs and vaccination visits are shared with co-administered measles vaccine. For example, the combined vaccine could replace the second dose of monovalent measles vaccine given at 12 months.

- Many global products with co-formulated RCV and measles vaccine are available, whereas products with measles vaccine alone are increasingly hard to find.
- By adding RCV into the national EPI programme, and ensuring sustained high levels of vaccination coverage, we can eliminate rubella in South Africa, support the global measles and rubella elimination strategy and achieve sustainable development goals.

Risks:

- Introduction of RCV may lead to an increase in CRS cases within 5-8 years after introduction of the vaccine if high vaccination coverage is not sustained. This occurs through the following mechanism
  - Circulating community rubella infections are stopped as vaccination levels increase.
  - This leaves some older children, adolescents and young adults who would have acquired rubella in childhood/adolescence susceptible to rubella infection.
  - As girls/women in this group enter child-bearing age, they may acquire rubella during pregnancy if resurgences of rubella occur.

Recommendation strategies for RCV introduction:

- To prevent an increase in CRS cases, WHO recommends different strategies including a once-off, cross-sectional rubella vaccination campaign targeting all persons up to 15 years of age, followed by introduction of RCV into routine EPI.
- Modelling work done by Motaze and colleagues (3) regarding implementation of RCV in South Africa suggests that, when compared to other WHO-recommended strategies, the most cost effective approach in South Africa is the concurrent introduction of RCV with measles vaccine in the EPI and a school age dose of RCV at 9-10 years of age. In addition to being the most cost-effective strategy, this strategy also has the lowest budget implication compared to other recommended mass vaccination strategies.
- WHO has provided a technical support document to guide introduction of RCV into EPI programmes (4).
- WHO does not consider RCV given at age <9 months of age to be a 'valid' vaccination as seroconversion rates are lower than after nine months.

References:

1. WHO. Measles and rubella strategic framework 2021–2030. Available at https://apps.who.int/iris/rest/bitstreams/1333580/retrieve
2. World Health Organization (2020). Rubella vaccines: WHO position paper – July 2020 Weekly Epidemiological Record 95 (27), 306 - 324. https://apps.who.int/iris/handle/10665/332952
3. Motaze NV, Edoka I, Wiysonge CS, Metcalf CJE, Winter AK. Rubella Vaccine Introduction in the South African Public Vaccination Schedule: Mathematical Modelling for Decision Making. Vaccines (Basel). 2020 Jul 13;8(3):383. doi: 10.3390/vaccines8030383. PMID: 32668819; PMCID: PMC7565203
4. World Health Organization Introducing rubella vaccine into national immunization programmes: a step by step guide. 2020. Available at http://apps.who.int/iris/bitstream/10665/184174/1/9789241549370_eng.pdf

Recommendations

NAGI recommends that South Africa introduce RCV into the EPI programme at least by the end of 2024.

NAGI recommends that the EPI vaccination schedule be adjusted in the most efficient, most cost-effective and least disruptive way to ensure provision of at least two rubella vaccination opportunities in childhood – one opportunity in the first year of life and one opportunity through either campaign-based or school-based vaccination targeting both boys and girls.

Public health messaging should encompass the goal of elimination of both measles and rubella.

Thank you for consideration of this request.

Kind regards,

PROFESSOR ANNE VON GOTTBERG
CHAIRPERSON: NATIONAL ADVISORY GROUP ON IMMUNISATION
DATE: 23 March 2022