

# Vaccination – comments, questions and answers

**2nd exchange meeting  
of the Difäm Health Community**

6th December 2022

# Agenda

14.00 – 14.10	Introduction and presentation of the agenda
14.10 – 14.20	Recap of selected podcasts on vaccination
14.20 – 14.40	Contributions regarding the situation in various countries
14.40 – 15.00	Open questions

# Recap on vaccine development

## Malaria

- Vaccine: RTS,S, prequalified on 6th September 2022, new vaccine R21 in trial phase 3
- Efficacy: Only 30%, more efficient vaccines in development (R21 with 77%)
- Prevention of severe disease, not of the infection itself
- No information on long-term protection yet
- Recommendation: Vaccination of children at the age of 5-6 months in endemic areas and areas with seasonal malaria

## TB

- Vaccine: Only BCG, but several vaccines in phase 3 trials
- Efficacy: BCG is protective in 37% in children U5, but loss of protective effect after 5 years; new vaccines have an efficacy of about 50%
- New vaccines will probably be used as boosters after a BCG vaccination

## HPV

- Vaccin: 4 vaccines available, only 1 vaccine protects against HPV 16 and 18
- Efficacy: ca. 90%
- Administration: 2 doses before the onset of sexual activity (age 9 – 14)

## Rabies

- Difficult to diagnose
- Vaccine used for active vaccination and for post-exposure prophylaxis after a bite
- Important is thorough wound cleaning and disinfection

# Recap on vaccine development

## Typhoid fever

- Vaccine: Typhbar and Pyphibev, typhoid conjugate vaccines, in short TCV
- Efficacy: 79% to 85%
- Vaccination of children older than 6 months and adults
- In Nepal: Part of the PEV

## Cholera

- Vaccine: 3 oral Cholera Vaccines (OCV) prequalified – Dukoral, Shanchol and Euvichol-Plus
- Administered in 2 – 3 doses
- Vaccination of children over 1y (Shanchol and Euvichol Plus), Children over 2y (Dukoral)

## Ebola

- Vaccine: Ervebo against the Zaire Ebola virus, 2 more in development
- Efficacy: 97% (Ervebo)
- Ring vaccinations during Ebola outbreaks

## Menigo-coccal disease

- Vaccine: MenAfriVac
- Prevents silent carriers and latent infections
- Can also be given to vulnerable patients like children, pregnant women and immunocompromised persons

# Feedback on the situation in the countries

# Input on malaria vaccination

## **Pierre Mano, Burkina Faso:**

"Burkina Faso is among the six countries with the highest number of malaria cases in the world. In children under five, nearly 50% of hospitalizations, more than 41% of consultations and more than 30% of deaths are due to malaria. In 2021, Burkina Faso will have recorded more than 12 million cases of malaria with 4,355 deaths. According to the head of the National Malaria Control Programme (PNLP), the RTS'S vaccine recommended by the WHO is not yet administered to children. We cannot therefore speak of experience yet. However, two major challenges are looming on the horizon:

- The mobilisation of the necessary funds to ensure good vaccination coverage,
- The acceptance of the vaccine by the population.

The new R21 vaccine, with an efficacy rate of 77%, was tested on 450 children aged between 5 and 17 months. The research team assures that the results of the second and third phase of the study will be available soon. In addition to Burkina, Tanzania, Mali and Kenya are included in phase 3."

**Florence Bull, Sierra Leone:** In Sierra Leone there is a lot of prevention and free chemo prophylaxis for pregnant women, but no vaccination.

**Lavilé Bilivogui, Guinea:** There are only bednets and chemo prophylaxis, but no vaccination.

**Ernest Ndzi, Cameroon:** „ There is no vaccination program on malaria in our area. I'm in Douala, Cameroon. Nevertheless there are programs to fight against malaria wherein treated mosquito nets are shared in malaria endemic areas, and free treatment to children ages zero to fifty nine months."

**Freddy Zihindugla, Democratic Republic of Congo:** There is no vaccination, but it should be made available as soon as possible.

# Input on TB vaccination

## **Tafadzwa Munemo, Zimbabwe:**

« The BCG vaccine is administered to all children at birth. There was an evaluation of the childhood tuberculosis program in Chegutu District, Zimbabwe, in 2020. The childhood TB program failed to meet its targets due to inadequate inputs, suboptimal knowledge and COVID-19 lockdown measures. A review of the Chegutu District Health Information System (DHIS2) TB notification records showed that childhood tuberculosis case detection rate was low, in 2018 and 2019 tuberculosis notifications in children were 4% and 7% respectively against the annual national childhood TB case detection target of 12%.

Another challenge faced inadequate resources. There were two functional Gene Xpert machines and one functional X-ray machine in the district for 34 health facilities. There was one non-functional motor vehicle for the AIDS and TB program without fuel allocation to assist in the childhood TB program. There were three motorcycles from the Biomedical Research and Training Institute (BRTI) that supported the collection of sputum specimens from each facility twice weekly. The funds allocated for servicing motor vehicles and motorcycles were inadequate.»

**Henry Zamarano, Uganda:** BCG is available and a good number of people were vaccinated during the Covid period.

**Paul Ngando, Moussa Satou, Cameroon:** BCG is available for children since many years and is one of the best accepted vaccines. There was a shortage of the vaccine due to a shortage of public funds in 2022 but now the stock has been filled for 2023.

# Input on cholera vaccination

## **Jonah Sinyangwe, Grace Msowoya, Norman Jumbe, Malawi:**

« The Cholera vaccine is not always available in Malawi like any other routine vaccine and is only available when there is an outbreak of cholera . Now the vaccine is available and Malawi received the cholera vaccine on 7<sup>th</sup> November 2022 to support the cholera outbreak response. Studies were done and the aim was to find out the annual incidence of cholera, the history of confirmed cases and water sanitation indicators. In April 2018, 1 million doses were administered in a trial in 5 districts. The vaccine is safe and effective and also easy to use since is administered orally and everyone can administer it with little training requirements.

However, people were complaining on side effects of the vaccine e.g. nausea and vomiting together with headache. With the coming of Covid-19 and misconceptions, people are now associating the cholera vaccine with the Covid-19 vaccine and many parts of the areas lose trust in the vaccine. So, there is the need to increase awareness on the cholera vaccine.”

Jonah underlined the fact that the cholera outbreak of 2022 was during the DRY season and nobody knows the reasons. Malawi is fearing to carry on the cholera outbreak into the rainy season which starts soon.

**Tchass Chasinga, Democratic Republic of Congo:** The cholera vaccines has been introduced by MSF two years ago but it is not accepted by the population. Due to Covid-19, there is a growing resistance to vaccination, also against Cholera.



# Input on HPV vaccination

## **Etienne Tsunku, Togo:**

"Cervical cancer (16.2%) is the second most common cancer found in Togolese women after breast cancer (21.2%). The anatomy and pathology laboratory of the CHU S.O of Lomé is the only public cancer diagnosis service in Togo. A study carried out in the anatomy and cytology pathology laboratory of CHU S.O from 2011 to 2013 on 512 patients, shows a significant percentage (8.6%) of patients with abnormalities on their smear. From 2014 to 2020, 187 cases of cervical cancer were detected at the CHU S.O. And in 2021, estimates from the World Cancer Observatory show 455 women affected and 309 deaths.

In March 2020, out of 518 women screened in Kétao Atchangbadè and Baga, 21 were positive, i.e. 4.05%. In November 2015 and May 2016, out of 19596 girls aged 10 years counted in the districts of Golfe (Maritime Region) and Tchamba (Central Region), 19586 received the first dose of HPV vaccine and 18,894 received the second dose. This vaccine was announced (since June 2017) to be integrated into the Expanded Programme of Immunisation EPI in Togo, but for the time being, this is not the case. The rate of cervical cancer screening in Togo is very low. However, many Togolese women suffer in the shadows and are discovered only at a very late stage. A lot of effort still needs to be made to save these thousands of young Togolese girls, women and mothers from this dangerous disease which is still on the increase."

**Florence Bull, Sierra Leone:** Vaccination is available for girls at 10 years

**Tcchass Chasinga, DRC:** Cervical cancer is a big problem, There are no programmes and testing. The HPV vaccine is in the vaccination calender since 2022. Parents are already asking for the vaccine.

**Paluku Kamavu, DRC:** The HPV vaccination is not yet available in northern Kivu.

**Dr. Ngando and colleague, Cameroon:** Cervical cancer is a big problem, but their health facilities do not have the vaccine yet. The fake news on Covid-19 vaccination has created a big resistance against vaccination in general.

# Input on rabies vaccination

## **Bakari Mavura, Tanzania:**

„ There is no preventive vaccination for humans in place.

But general primary prevention for animals, specially dogs, is a routine campaign throughout the country and are mostly undergone yearly in the districts. Dogs are collected and given vaccination against rabies. The half wild, half domesticated dogs who cannot be caught are shot.

In case someone was bitten by a dog whose rabies infection is proven, therapeutic drug (vaccination) is supposed to be available in the district hospital or in private hospitals or drug stores. Rabies is not an issue and the way it is handled is sufficient.”

## **Florence Bull, Sierra Leone:**

The situation in SL is similar to Tanzania. The vaccine and the Rabies Immunoglobulin (RIG) is very expensive. There is more effort done to kill the dogs.

# Input on vaccination against meningitis

## **Tchass Chasinga, DRC:**

We have a vaccine against subtype A but we don't know if this is the most prevalent subtype. A study is needed to identify the subtypes of the virus that cause the disease in the local context.

# Input on vaccination against Ebola

## **Lavilé Bilivogui, Guinea:**

Ring vaccination worked very well in Guinea.

## **Jonah Sinyangwe, Malawi:**

We receive a lot of travellers and refugees from DRC. They are isolated for 10 days at the border not only due to Corona but also due to Ebola and other diseases. So far, no case of Ebola has occurred.

## **Henry Zamarano, Uganda:**

In Uganda we have the Sudan strain. The vaccine helps against the Zaire strain. The situation is bad, we already have 54 deaths and Ebola is spreading to 9 districts. We are waiting for the results of a study of the Ministry of health on the vaccines.

# Additional, very important points

Covid-19 and the rumours associated with the disease and the resistance against the vaccine, has disrupted the trust in vaccination in general. This was reported from DRC, Guinea, Malawi, Cameroon

Preventive measures such as hygiene, education and infection prevention and control remain crucial besides vaccination. Especially in the situation that fake news on Covid-19 and its related vaccination has destroyed the trust of the population in immunization as an important tool for health.

There are problems with the logistics around the vaccines, especially with conservation and transport.

# Open questions

# Question from Dr. Pierre Mano, Burkina Faso

After three years of vaccination against Covid-19, have the observations provided more knowledge about the side effects?

(Translated from French)

## Answer based on different meta-analyses:

The relative risk (RR) of adverse events after Covid-19 vaccination compared with placebo (August 2022)

	Inactivated virus vaccines	mRNA vaccines	Vector vaccines
Total adverse events	1.46	2.01	1.46
Systemic adverse reaction (fever, fatigue, headache)	1.13	1.53	1.58
Local adverse reaction (swelling, pain at injection site)	2.18	4.96	1.48

Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9148928/>

- Best documented vaccination in terms of adverse effects
- Adverse events mostly mild
- mRNA vaccines remain the most efficient vaccines also against variants

Serious adverse effects:

- Anaphylactic shock normally 1/1mio, in mRNA vaccine 10/1mio
- No increased risk of thromboembolism in a study of July 2022 with 790.000 patients  
Source: <https://pubmed.ncbi.nlm.nih.gov/35398975/>
- Myopericarditis risk in adolescents more common after Covid-19 than vaccination  
Source: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(22\)00842-X/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(22)00842-X/fulltext)

# What next?

Informative quiz on common and new vaccines in Medscape style

Another exchange forum at the end of the Covid-19 project 610 in April 2023

Information, podcasts, documents, video-tutorials and more on other health topics starting in May 2023

All information published by the Difäm Health Community is also available to listen, read or watch on its website: <https://www.difaem-community.de/en/home>



Thanks for your availability and your contributions