UNDERSTANDING MEASLES VACCINE HESITANCY IN SUDAN

Majdi Sabahelzain
B.Pharm, MPH, PhD Candidate
Lecturer, School of Health Sciences, Ahfad University for Women, Sudan
PhD Candidate, Care and Public Health Institute (CAPHRI), Maastricht University, Netherlands

7th Vaccine Acceptance Meeting
September 23-25 2019
Background
Measles outbreaks are a global problem

Confirmed cases of measles May 2018 - Apr 2019

- Ten countries with biggest outbreaks
- Other significant outbreaks

Source: WHO
Evolution of Immunization Program and Prominence of Vaccine Safety

1. Prevaccine
2. Increasing Coverage
3. Loss of Confidence
4. Resumption of Confidence
5. Eradication

Incidence
- Disease
- Vaccine Coverage
- Adverse Events
- Outbreak
- Eradication

Maturity
Measles in Sudan

Increase of Number of Measles cases and Measles vaccine coverage

Source: World Health Organization
Immunity Profile of Measles Cases, Sudan 2006 - 2016

Source: World Health Organization
EPI in Sudan

- EPI was launched in 1976.

- The EPI services are provided free of charge through the Primary Health Care centers.

- Coverages for the pentavalent vaccine (DTP-HepB-Hib) and the Poliomyelitis vaccine (OPV) are 95%.

- Due to the Open Vial Policy, 1-2 (rarely) Session/s per week allowed for measles vaccination.
Objective and Methods of the study
Measles Vaccine hesitancy in Sudan: Research Project

- **Research Project goal**
  
  To investigate the magnitude and determinants of measles vaccine hesitancy in Khartoum state, Sudan

- **Research Design:**
  
  Mixed Methods
Aim:
To explore the opinions of Expanded Program on Immunization (EPI) officers/experts and frontline vaccine providers about the determinants of measles vaccine hesitancy in Khartoum state, Sudan.

Method:
- Qualitative study,
- In-depth interviews with 14 Participants:
  - EPI managers in UNICEF, WHO, FMOH, Khartoum state MOH, and
  - Vaccine providers in different urban and rural PHC centers
Framework: "Determinants of Vaccine Hesitancy Matrix"
Key Findings, Conclusion and Recommendation
Determinants of Measles Vaccine Hesitancy in Sudan

Contingual Influences
- Geographic barriers
  - VP (2)
- Influential leaders and Anti vaccine lobby
  - EPI officers/ Experts (1)
- Experience with past vaccination
  - EPI officers/ Experts (1)
  - VP (3)
- Beliefs, attitudes about health and prevention
  - EPI officers/ Experts (5)
  - VP (1)
- Knowledge/awareness
  - EPI officers/ Experts (2)
  - VP (3)
- Health system and providers-trust and personal experience
  - EPI officers/ Experts (1)
  - VP (2)
- Risk/benefit (perceived, heuristic)
  - VP (4)
- Immunisation as a social norm vs. not needed/harmful
  - EPI officers/ Experts (1)
  - VP (1)
- Mode of Administration
  - EPI officers/ Experts (2)
  - VP (1)
- Design of vaccination program/Mode of delivery
  - EPI officers/ Experts (3)
  - VP (3)
- Vaccination Schedule
  - EPI officers/ Experts (3)
  - VP (3)
- Role of healthcare professional
  - EPI officers/ Experts (4)
  - VP (4)
Measles Vaccine Hesitancy in Khartoum state, Sudan

Contextual Influences
- Religion/culture/gender/socio-economic
  - EPI officers/ Experts (5)
  - VP (5)
- Geographic barriers
- Influential leaders and Anti vaccine lobby

Individual/Group Influences

Measles Vaccine and vaccination factors
"Some tribes such as Falatta (a tribe of a Nigerian origin) do not vaccinate all their children in their households; they are afraid of the evil eye (i.e. they think that people will notice that they have many children in their house, so they think some of them will die)"

'Not only measles, but also all vaccines, sometimes they talk about Freemasons and infidel states ... etc. which bring vaccines"
16

Measles Vaccine Hesitancy in Khartoum state, Sudan

Individual/group factors

Contextual Influences

Experience with past vaccination

Beliefs, attitudes about health and prevention
EPI officers/ Experts (5) VP (1)

Knowledge/awareness

Health system and providers-trust and personal experience

Risk/benefit (perceived, heuristic)

Immunization as a social norm vs. not needed/harmful

Measles Vaccine and vaccination factors
"Measles is believed to be a common household disease that every child contracts, with mild fever and mild rash, then topical medication or anything else is used, and then the disease disappears.

**Individual/group influences:**
**Beliefs and attitudes about measles, treatment and prevention from measles**
Measles Vaccine Hesitancy in Khartoum state, Sudan

Contextual Influences

Individual/Group Influences

Measles Vaccine and vaccination factors

Mode of Administration

Design of vaccination
- EPI officers/Experts (3) VP (3)

Vaccination Schedule
- EPI officers/Experts (3) VP (3)

Role of healthcare professional
- EPI officers/Experts (4) VP (4)
One day, three women came to me and turned, I told them that the measles vaccine was not that day, measles vaccination is on Wednesdays. They got upset, because it was hard to come again.
This study shows how complex measles hesitancy is in Sudan and how much variation there is regarding the perceived causes and consequences.

Negative beliefs and attitudes of people (parents/guardians) are important, but vaccination program aspects should not be neglected.

There is a clear need to study the issue in even more detail, including among the parents/guardians of the children.
Recommendations

❑ **Communication strategies are needed:**
  - To address the concerns that are raised by some religious and ethnic groups.
  - Appropriate interventions are needed to address different beliefs related to measles in order to increase the measles vaccine coverage.

❑ **Program level strategies**
  - To address issues related to the measles vaccine schedule:
    - Parents reminder system, including calls and text messages,
    - Revisiting the opened-vial policy is needed
Acknowledgement

□ Research team

Professor Bart Van den Bourne, Maastricht University, Netherlands
Professor Hans Bosma, Maastricht University, Netherlands
Dr. Mohamed Moukhyer, Jazan University, KSA
Professor Eve Dube, Canada
Dr. Ahmed Hardan, WHO Sudan

□ Ahfad University for Women, Sudan

□ Merieux Fondation, France

□ Cultural Attaché of French Embassy in Sudan