

# Unvaccinated children in Mt Hagen: characteristics of infants and care givers

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## ▶ Part 3: Basic Knowledge, Attitudes and Approach of Parents of Unvaccinated Children & Some Responses

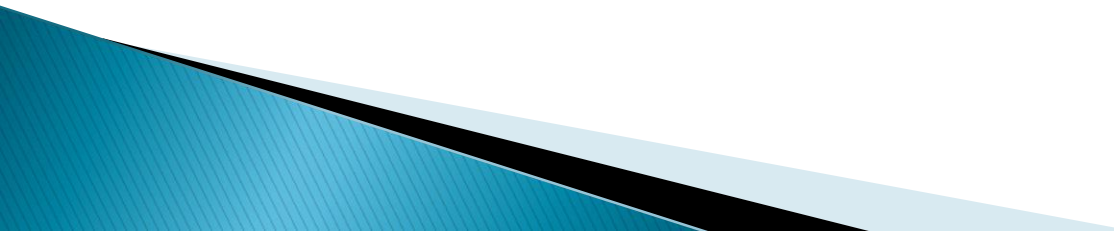
## ▶ Part 4: Discussion

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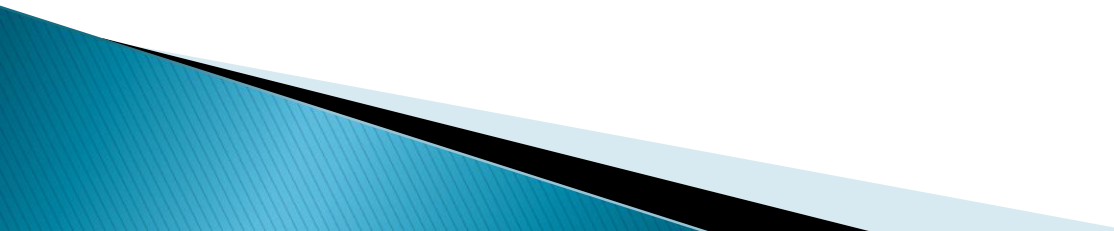
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# Introduction

- ▶ WHO definition of Unvaccinated Infant – as any infant over three months of age who has not received any vaccines
  - ▶ According to WHO globally in 2023 14.5 million children missed out on vaccines – so called zero-dose children
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# Aim

- ▶ The aim of this study is to analyze the basic attitudes, basic knowledge and practices of parents of unvaccinated infants admitted to Mt Hagen General Hospital children's outpatient and general ward with respect to the current urban drift and general increase in cash flow at the rural setting.
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# Definitions & Key terms

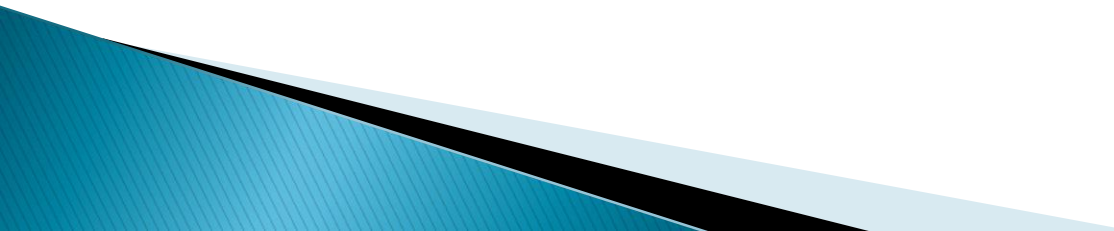
- ▶ **Vaccine** – a biological preparation formulated to provide acquired immunity for a particular disease
- ▶ **Vaccination** – the act of giving an animal or person a vaccine
- ▶ **Immunization** – A process by which a person becomes protected against a disease through vaccination
- ▶ **Practice** – the actual application or use of an idea, belief or method
- ▶ **Attitude** – a feeling or opinion about something or someone or a way of behaving that is caused by this
- ▶ **Knowledge** – awareness or familiarity gained by experience of a fact or situation
- ▶ **Unvaccinated infant** – an infant over three months of age who has not received any vaccines

## PNG Immunization Schedule

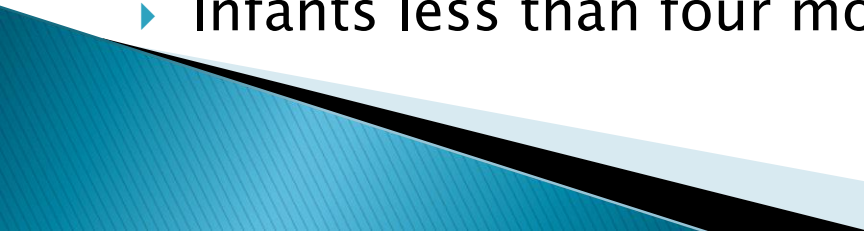
VACCINE	WHEN GIVEN	WHAT DOSE	ROUTE
<b>BCG</b>	1. As soon as possible after birth	0.05ml	Intradermal into left upper arm
<b>Hepatitis B Vaccine</b>	1. As soon as possible after birth (within 24 hours)	0.5ml (10mcg)	Intramuscular into left thigh
<b>Measles Vaccine</b>	1. At 6 months of age or as soon as possible afterwards 2. At 9 months of age or 3 months after the first dose	0.5ml	Subcutaneous into right upper arm  Do not give IM
<b>Oral Polio (OPV/Sabin)</b>	1. One month of age 2. One month after 2 <sup>nd</sup> dose 3. One month after 3 <sup>rd</sup> dose	2 drops	Orally
<b>Pentavalent Vaccine</b>  (contains TA, Haemophilus influenza & Hepatitis B vaccines)	1. One month of age 2. One month after 1 <sup>st</sup> dose 3. One month after 2 <sup>nd</sup> dose	0.5ml	Intramuscular into right upper arm
<b>Tetanus Toxoid</b>	1. First year of community school 2. Last year of community school 3. During pregnancy (2 doses, 4 weeks apart in the first pregnancy, one dose in each of the next pregnancies)	0.5ml	Intramuscular into left upper arm
<b>Vitamin A Capsules</b>	1. At 6 months of age together with measles vaccine	100,000 Units *	Orally
	1. At 12, 18 and 24 months	200,000 Units *	

# Study Design

## Cohort study of unvaccinated children:

- **mixed methods:** analyzing the basic knowledge, attitude and approach to vaccination programs of parents and caregivers
  - **Infants over three months of age who have never been vaccinated** admitted to Mt Hagen General Hospital children's outpatient and general ward
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# Methodology

- ▶ **Semi-structured questionnaire** used to interview parents of cohort of 28 unvaccinated infants
  - ▶ Relevant subthemes identified and taken into consideration
  - ▶ Informed consent
  - ▶ Interview lasting 30 to 45 minutes
  - ▶ Medical charts (additional information source)
  - ▶ Duration of study – 3 months
  - ▶ Infants less than four months were excluded
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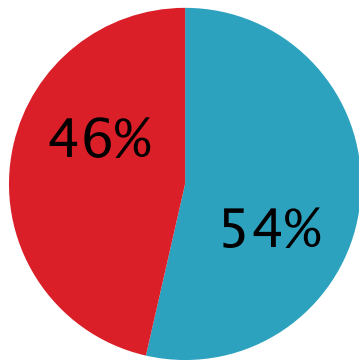


# Graphical Analysis of Results



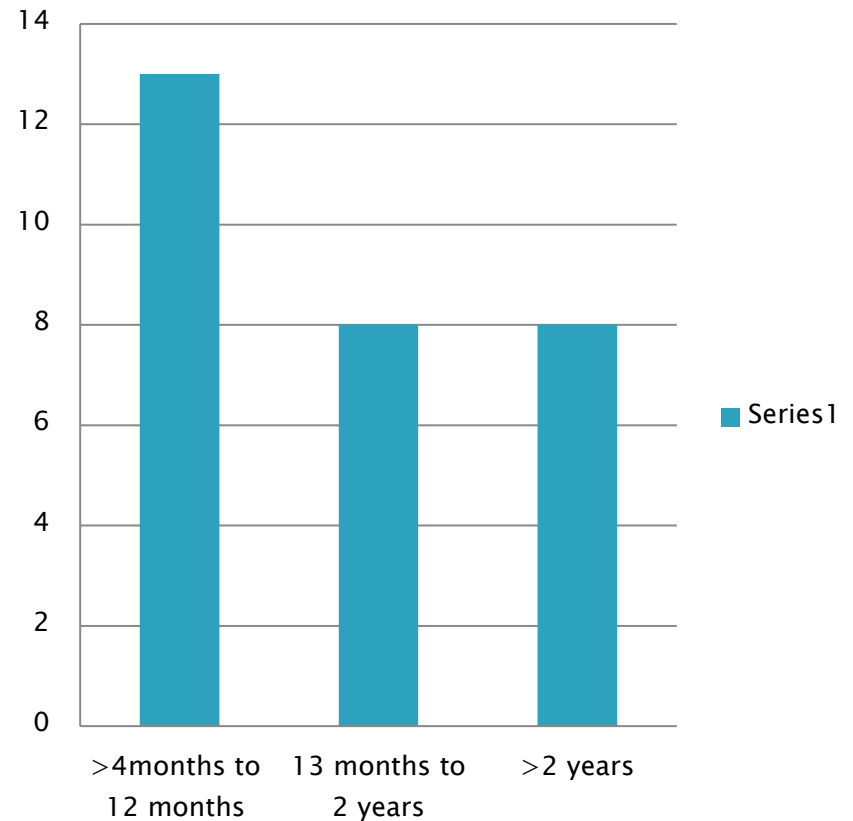
# Sex and Age Groups

■ Female ■ Male



Sex	
Female	15
Male	13

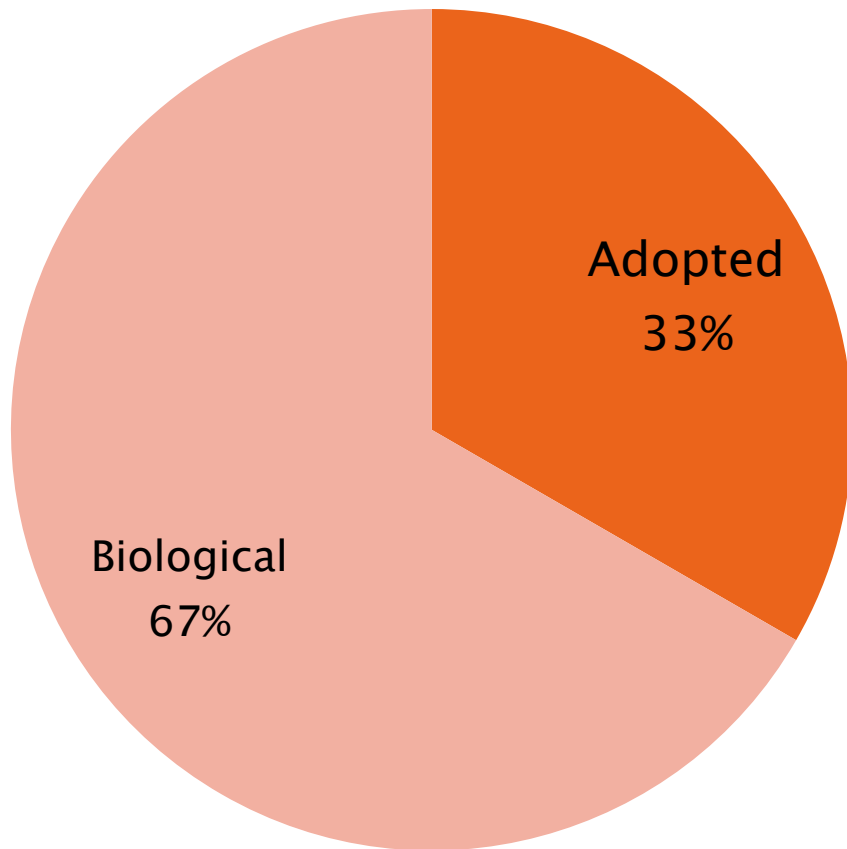
## Age Range



# Delivery Details

Delivery Details	
NVD, n=27 C/section, n=1	
Hospital/ Health Centre deliveries, n=12 Village deliveries, n=15 Home delivery, n=1	<p>The infants delivered in hospital or health centers may have received vaccines at birth however information was not clearly recorded or misguided or misinterpreted</p> <p>Infants and children born at home or in the village did not receive any vaccines at birth</p>

# Social background



## Biological vs Adopted

Biological	19
Adopted	9

Adopted by:

Maternal Grandparents, n=4

Maternal Sister, n= 4

Paternal Grandparents, n= 1

Reason for Adoption:

**Maternal Grandparents , n=4**

- Divorce of biological parents , n=3

- Mother died, n=1

**Maternal Sister, n=4**

- Barren, n=2

- Both Parents died, n=1

- Wanted Female Child, n=1

**Paternal Grandparents, n=1**

- Neglect, n=1

- None of the infants were formally adopted

# Marital Status, Origin & Religion of parents or guardians

## Parents / guardians marital status:

- Single parent(s), n=6
- Married parents(s), n= 22

## Origin:

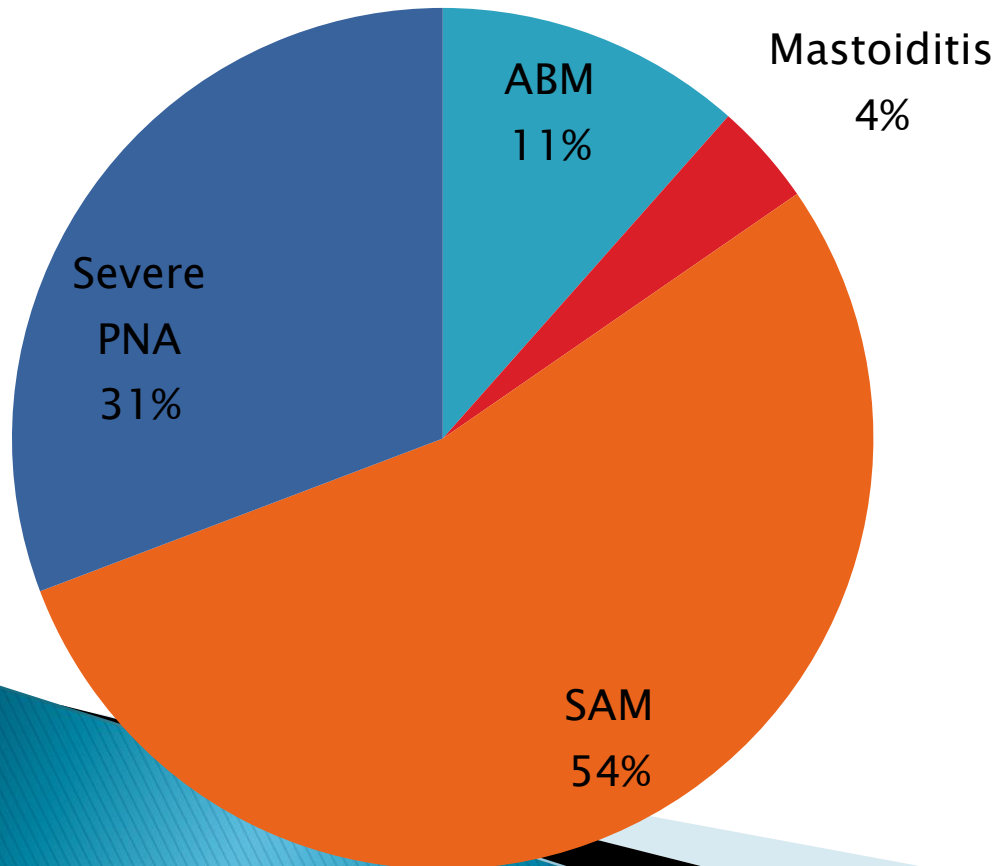
- WHP, n=21
- Enga, n=3
- Jiwaka, n=3
- SHP, n=1

## Religion:

- Lutheran, n=6
- Catholic, n=5
- Apostolic/Pentecostal, n=3
- Others, n=14

# Admission diagnosis, background issues and average length of hospital stay

## Admission Diagnosis



## Background Illness(s)

SAM, n 16  
RVI Exposed, n=1  
Recurrent PNA, n=1  
PTB, n=1  
Down's Syndrome, n=1  
Cerebral Palsy, n=1

- Adopted infants, n=9
- SAM, n=9
- Started Solids:
  - 1 month, n=6
  - 2 months, n=1
  - 3 months, n=2

Early weaning for all adopted patients

## Average LOHS

- Adopted Infants, n= 15 days
- Biological, n= 6 days

# Basic Knowledge, Attitudes & Approach



## Basic Knowledge, Attitudes and Approach

### Education Level of Parents:

- Grade <8, n=15
- Illiterate, n=12
- Degree, n=1

### Attitude:

- Lack of Knowledge, n=9
- Misguided customary belief, n=1
- Ignorant, n=18

### Employment:

Formal Employment, n=1  
No Formal Employment, n=27

Minimal Average Income per week: K18

### Lifestyle:

Village, n=20  
Urban Settlement, n=8

Village average income per week: K6.60  
Average Income per week  
Hagen Urban Settlers: K11.5

### Migration

Migrators, n=6  
Adopted, n=2  
Biological, n=4

Reason for migration - Election Related



# Some responses

- ▶ Question: Mama, You save y ol pikinin na baby need lo kisim baby sut? (Mama, why is vaccination important?)
- ▶ Answer: (*Shrugs Shoulders and laughs a little*) *Mi no save lo displa ol samtin. Mi lpun pinis na how ba me save? Ol pikinini blo me karim na lusim na nau me karim displa baby raun*
- ▶ *I don't know. I am old. How should I know about these things? My children brought this child and left him with me and now I have become his care giver (Ignorance, informal adoption, lack of knowledge, negligence)*
- ▶ Question: Why na baby no kisim baby sut taim you karim em kam inap nau em 6 mun igo pinis? (Why have you not brought this child in for vaccinations? He is over six months old and has not received any vaccines?)
- ▶ Answer: *Mi karim em lo ples na haus sik em long weh. Em onepla day ba me wokabout. Na tu ol kukim pinis long election fight so em hard stret so mipla lo ples blo mi mipla no sa kisim baby sut. Em sik olsem na me karim em kam lo Hagen.*
- ▶ *I gave birth to him in the village and the nearest health centre is quiet a distance. It is almost a day's walk there. Besides this, the building was burnt down during the election related fights so its is very hard and most of the children in my village have not been vaccinated. He is sick and that is why I have brought him to Hagen. (Ignorance, Migration, Lack of knowledge, Mis-guided cultural beliefs)*

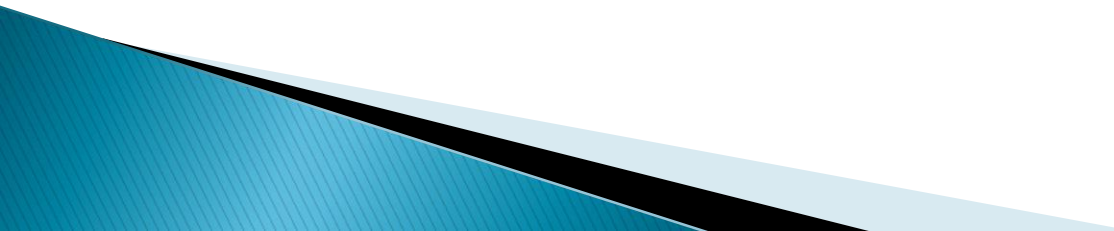
# Some responses

- ▶ Question: Why na you no kisim baby kam lo kisim banis sut blo ol baby? ( Why have you not brought your baby in for vaccination?)
- ▶ Answer: *Mi stap lo ples na nogat busfare*
- ▶ *I am a villager. I do not have bus fare ( poor socioeconomic status, ignorance, lack of knowledge)*
  
- ▶ Question: Na nau you stap na go na ba you come bek gen long kisim banis sut blo baby long six mun? ( So now that you know about vaccines and their importance will you bring your baby back for vaccination when he is six months old?)
- ▶ Answer: No, mi no ting. Supos mi gat busfare em ba orait mi ting but supos nogat mi nonap ba kam.
- ▶ ( No, I don't think so. I will come if I have bus fare but otherwise I will not come)  
(Reluctant, poor socioeconomic status, ignorance)
- ▶ Question: Why na you no kisim baby kam lo kisim banis sut? ( Why have you not brought your baby in for vaccination?)
- ▶ Answer: Pikinini stap orait so mi no kam na nau em sik so mi kam
- ▶ *He has been well all this time so I did not come. He is sick now so I have brought him.*
- ▶ (Ignorance, lack of knowledge, poor attitude)

# Discussion




# Discussion

- ▶ Identification and demonstration of the inappropriate attitudes, knowledge and basic approach of parents of unvaccinated infants towards vaccination and immunization
  - ▶ Issue of migration from conflict zones highlighted
  - ▶ Difference in attitudes, knowledge and basic approach in parents of adopted infants and biological infants varied minimally (common feature being lack of education)
  - ▶ Information obtained from delivery details varied with some information either missing or misguided ( no record) or misinterpreted
  - ▶ Most if not all from poor socioeconomic status
  - ▶ All village delivered infants captured were unvaccinated at birth
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# Limitations



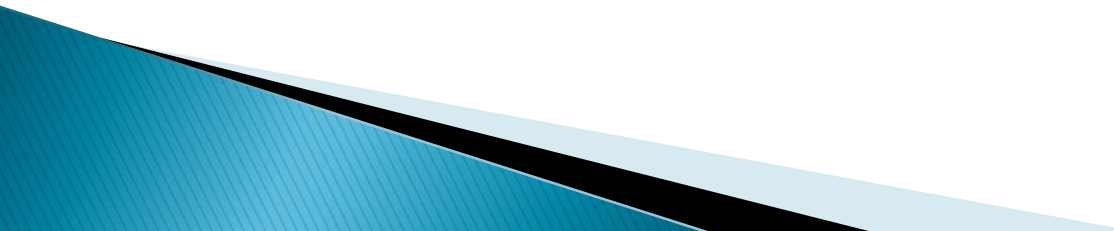
# Limitations

- ▶ Small hospitalized sample with large denominator population thus sample may not have adequately represented most of the population
  - ▶ Sample included a proportion of SAM cases, all of whom were adopted not ideal for understanding the overall approach, attitudes and basic knowledge of parents with unvaccinated adopted infants.
  - ▶ Some information may have been misinterpreted, misguided or misunderstood during the interview by either the parent or interviewer.
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# Recommendations




# Recommendations

- ▶ Mobile vaccine outreach programs
  - ▶ Educate on the importance of vaccination upon presentation to hospital or health center
  - ▶ Interdisciplinary approach to understanding vaccines
  - ▶ Requires public health and national health interventions to reach rural population and conflict zones
  - ▶ Consider obtaining funding for further training of staff and public health interventions to reach a wider audience and educate on the importance of vaccine administration
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# Acknowledgements

- ▶ Supervisors:
    - Prof Duke, Dr Paulus Ripa, Dr Jonah Kurubi, Dr Ian Kintwa
  - ▶ Respectfully acknowledge the contribution of parents who gave time and thought to this subject
  - ▶ Medical Records for allowing me to access charts
  - ▶ Pediatric Team of WHPHA
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The End

