



**HIV RISK FACTORS AMONG INFANTS IN THE JOE
GQABI HEALTH DISTRICT OF THE EASTERN
CAPE PROVINCE**

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Dana

Social science that makes a difference



Outline of the Presentation

- Background
- Study Objectives
- Methods
- Results
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- Acknowledgements

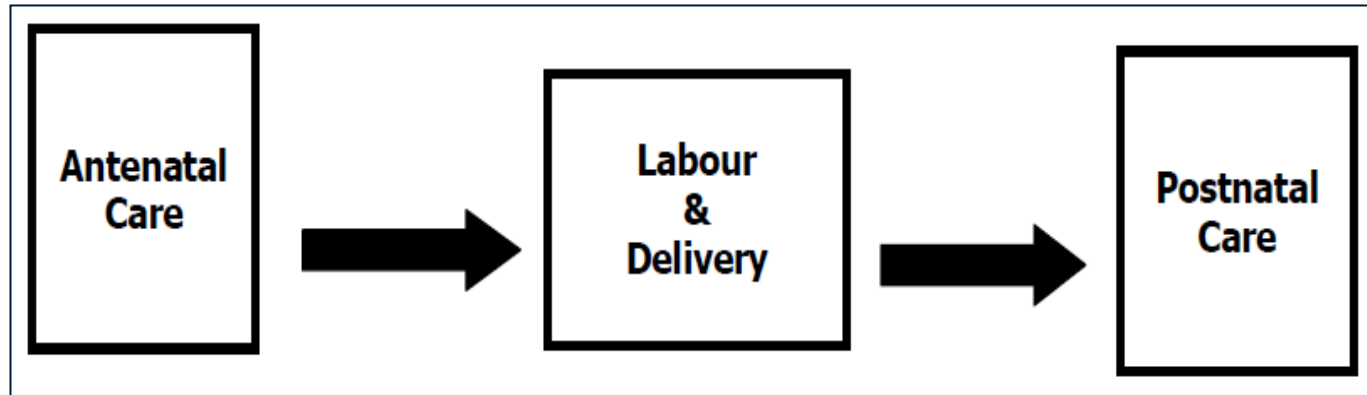


Background

- There is a gap in knowledge on risk factors associated with transmission of HIV among infants
- Limited data exists (based on random surveys) on non vertical transmission of HIV to infants in health care settings in Africa, i.e. care taken to implement infection, universal precautions accidental, and switching of babies at birth (Gisselquist *et al*, 2004).
- Limited data also exists on factors contributing to non-transmission among infants outside health care settings i.e. wet nursing, and sexual abuse (Hiemstra *et al*, 2003).
- A groundbreaking study by Shisana *et al* (2005) among children aged 2-9 years old in FS Province, provided evidence on nosocomial infections (hospital and dental care) and cultural risk factors in understanding HIV infection in children.
- However, risk factors associated with non-vertical transmission of HIV in infants have not been conclusively studied.
- Against this background, the current study was undertaken to determine potential risk factors that predispose infants to HIV infection from 6 weeks post-delivery to 12 months in Joe Gqabi DM

Study Objectives

- To determine risk factors that predispose infants born HIV negative to develop HIV infection from 6 weeks after birth to 12 months (last phase of PMTCT process).



- To review health facility registers in order to identify babies born HIV-negative, but who sero-converted in the first year of their life.

Area of study: Joe Gqabi DM



- This District was chosen because of the recent high infant mortality rates reported in its health facilities.
- The study was conducted in 3 sub-districts: Elundini, Maletswai & Senqu

Design & Sampling

A facility based survey was conducted in February 2012.

- 15 of 51 PMTCT facilities were selected through systematic random sampling
- In each facility, interviews were conducted with 15-17 women
- A total of 230 mothers/guardians participated in the study
- Health facility registers were used to identify babies born HIV-, but who later sero-converted in their first year of life.

Sub District	Total (ALL Facilities)	Excluded (Type & #)		Total 'Eligible'	Weights	# Needed per sub district
Elundini Health sub-District	29	District Hospital	2	21	0.41	6
		EMS Station	2			
		Mobile Service	4			
		sub-Total	8			
Maletswai Health sub-District	29	District Hospital	5	12	0.24	4
		EMS Station	5			
		Mobile Service	5			
		Satellite Clinic	2			
Senqu Health sub-District	35	District Hospital	4	18	0.35	5
		EMS Station	3			
		Mobile Service	8			
		Satellite Clinic	2			
Total	93	Total	42	51	1	15

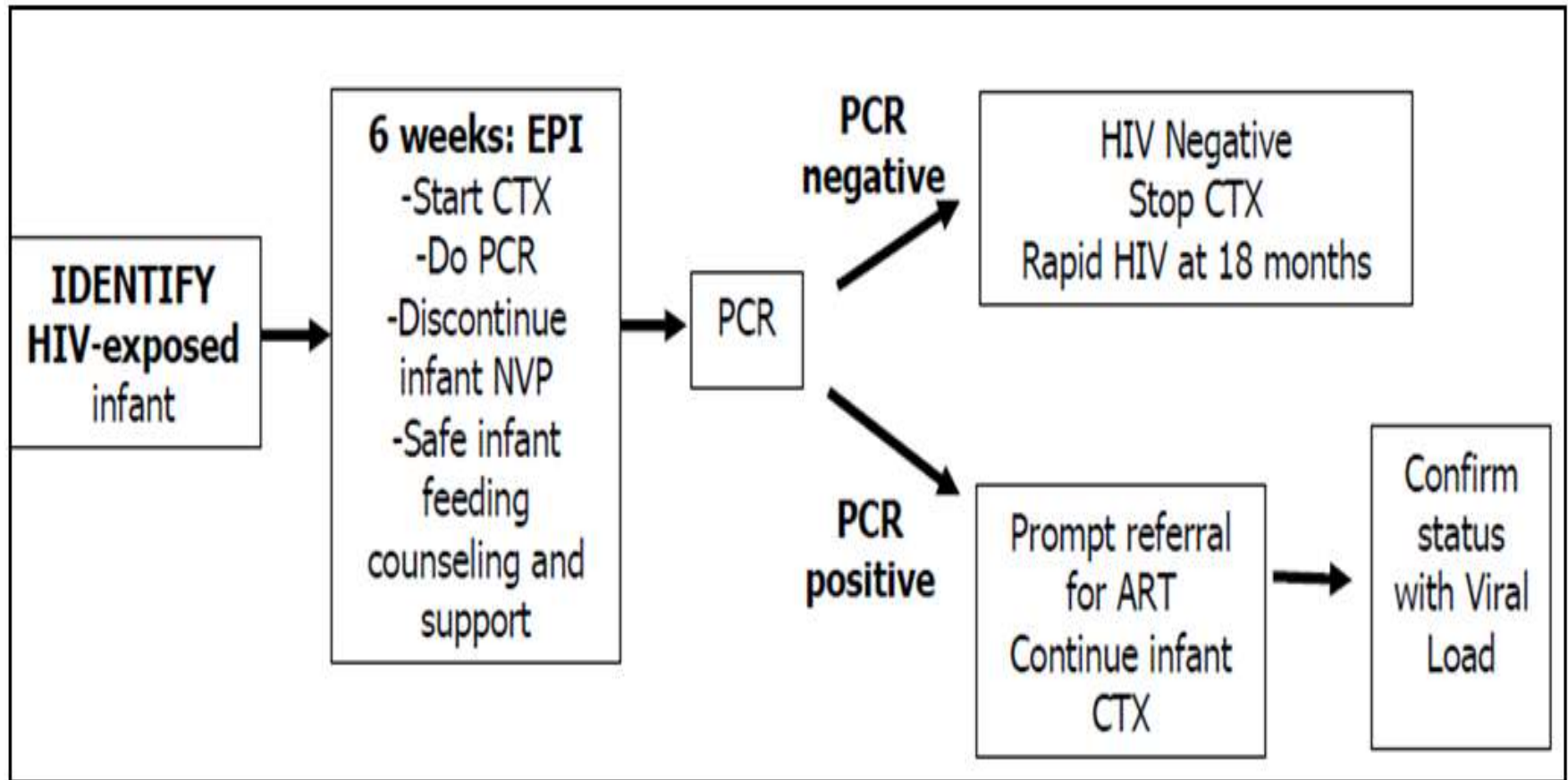
Selected clinics in Joe Gqabi DM

SUBDISTRICT	CLINIC (s)
Elundini Health sub-District	Lower Tsitsana Clinic
	Maclear Clinic
	Mangoloaneng Clinic
	Mqokolweni Clinic
	Ncembu Clinic
	Seqhobong Clinic
Maletswai Health sub-District	Aliwal North Block H Clinic
	Khayamnandi Clinic
	Maletswai Clinic
	Steynsburg Clinic
Senqu Health sub-District	Esilindini Clinic
	Herschel Clinic
	Ndofela Clinic
	Pelandaba Clinic
	Umlamli Gateway Clinic

Measures

- Socio-demographic factors: age, marital status, education, employment, race, etc
- Biological risk factors: method of delivery, place of birth, baby full term, HIV testing, PCR testing, Counseling at ANC and PNC, infant feeding options, timing, duration, breast health, etc
- Socio-cultural risk factors: wet nursing, vasectomy, female circumcision, pricking, tribal marks
- Sexual risk factors: condoms, abstinence, MCP, communication on sexual issues
- HIV proxy measures: PCR testing and concern about infecting baby
- Indicators: CTX, PCR, etc

HIV Proxy Question: PCR testing is done on HIV exposed infants



(Source: NDoH & SANAC, 2010)

Data Analysis & Ethical Considerations

- Data was captured and analyzed by trained personnel using STATA 11.
- Descriptive and inferential statistics were used to answer the research question
- Ethical approval was obtained from the HSRC Research Ethics Committee.
- Permission to conduct the study was obtained from:
 - The Eastern Cape Department of Health
 - The Joe Gqabi DM

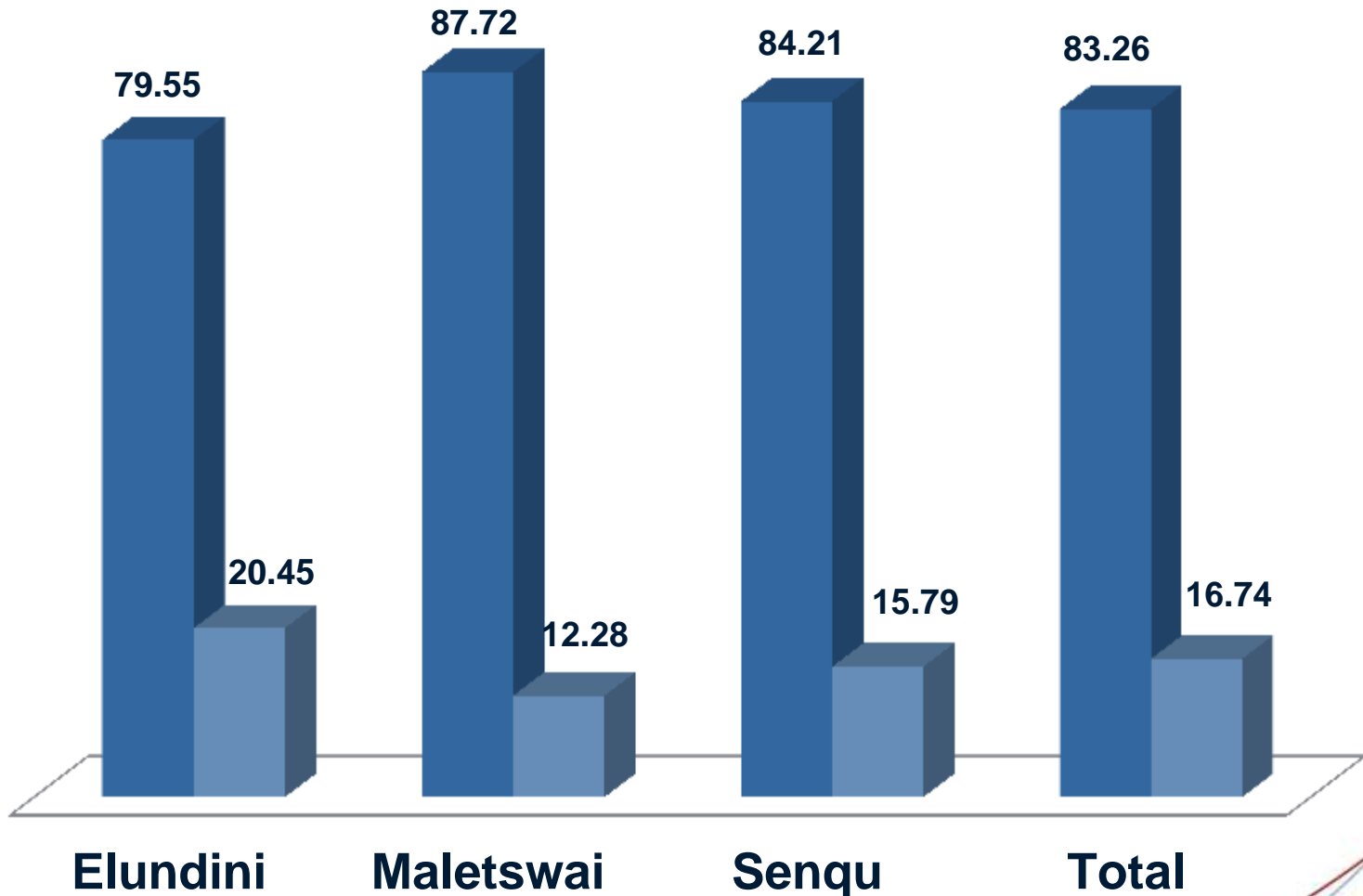
RESULTS: SOCIO- DEMOGRAPHIC FACTORS

- **Age of Respondents (Mean; Range):** 36 years; 18-86
- **Marital status:** 65% not married
- **Education:** Majority completed primary (33.2%) & high school education (46.2%) only
- **Employment:** 87% were unemployed
- **Race:** 98% were African
- **Relationship with baby:** 57% were biological mothers and cared for their babies (65.2%) on a day to day basis
- **Sex of baby:** 65% were girls
- **Age of babies:** 7.1 months; 1-12 months
- **SES:** 56-66% had gone without food, cash income, medicines, shelter, water & electricity
- **Poor maternal education** has been included in several studies as a background independent variable for postnatal HIV transmission (Embree *et al* (2000) & Tawengwa *et al* (2007)). These women would probably need continuous empowerment on HIV prevention education.
- **Lack of basic necessities:** Women with less education, living in houses with no electricity etc were more likely to mix-feed (Coutsoudis *et al.* 1999). It might be helpful to consider economic empowerment of women through cash transfer related projects.

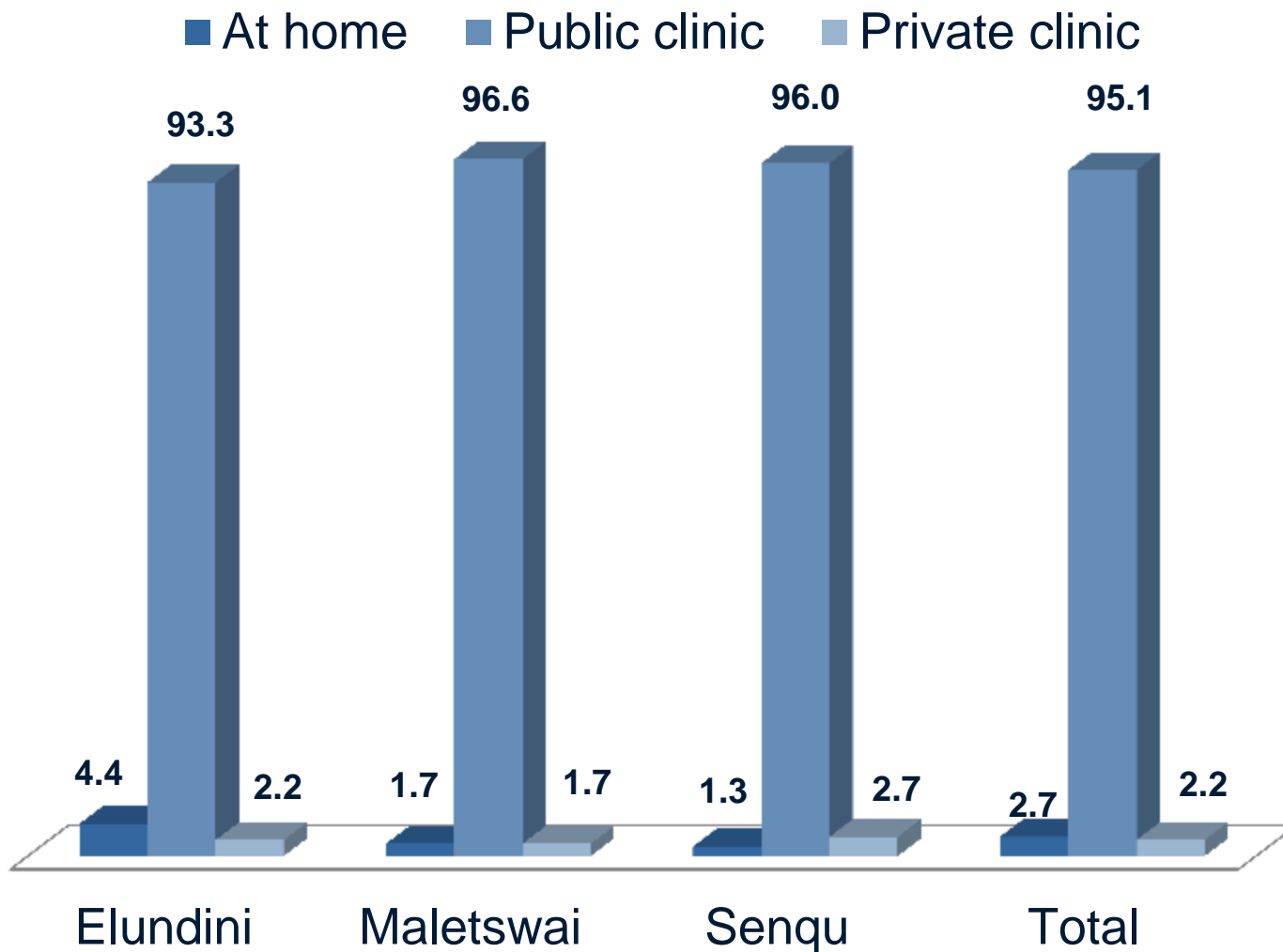
RESULTS: BIOLOGICAL RISK FACTORS

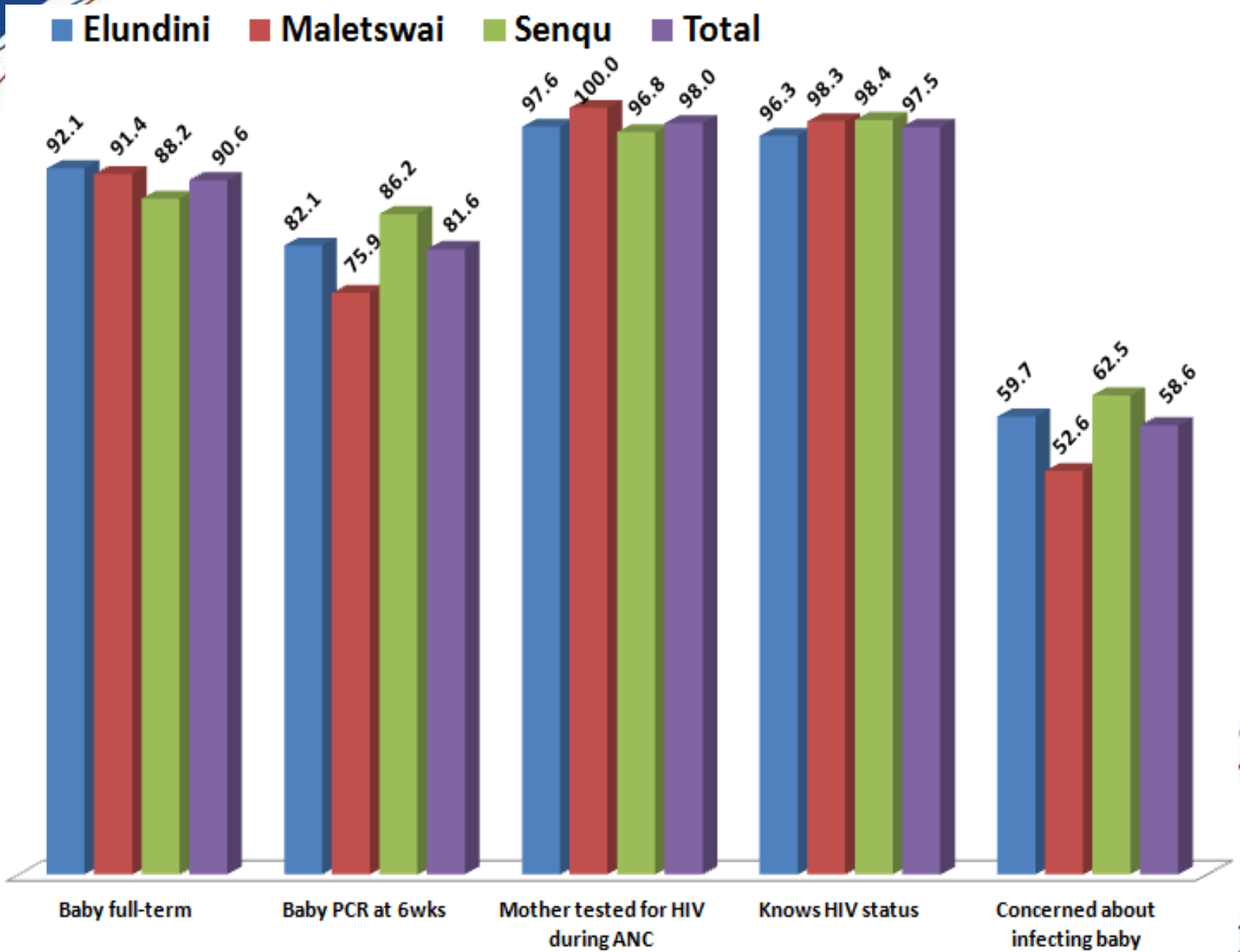
Method of Delivery

■ Vaginal ■ Cesarean section



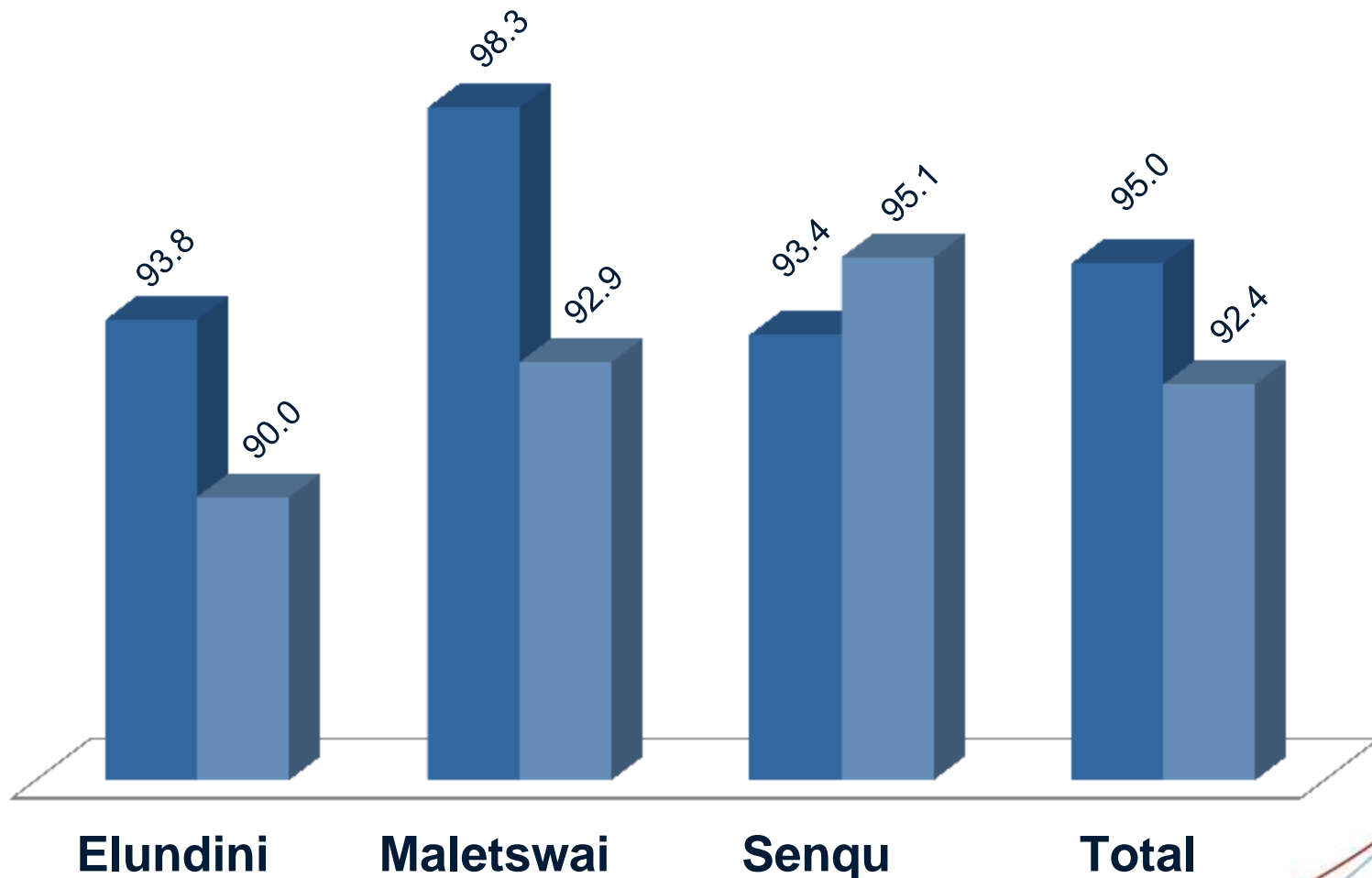
Place of Delivery





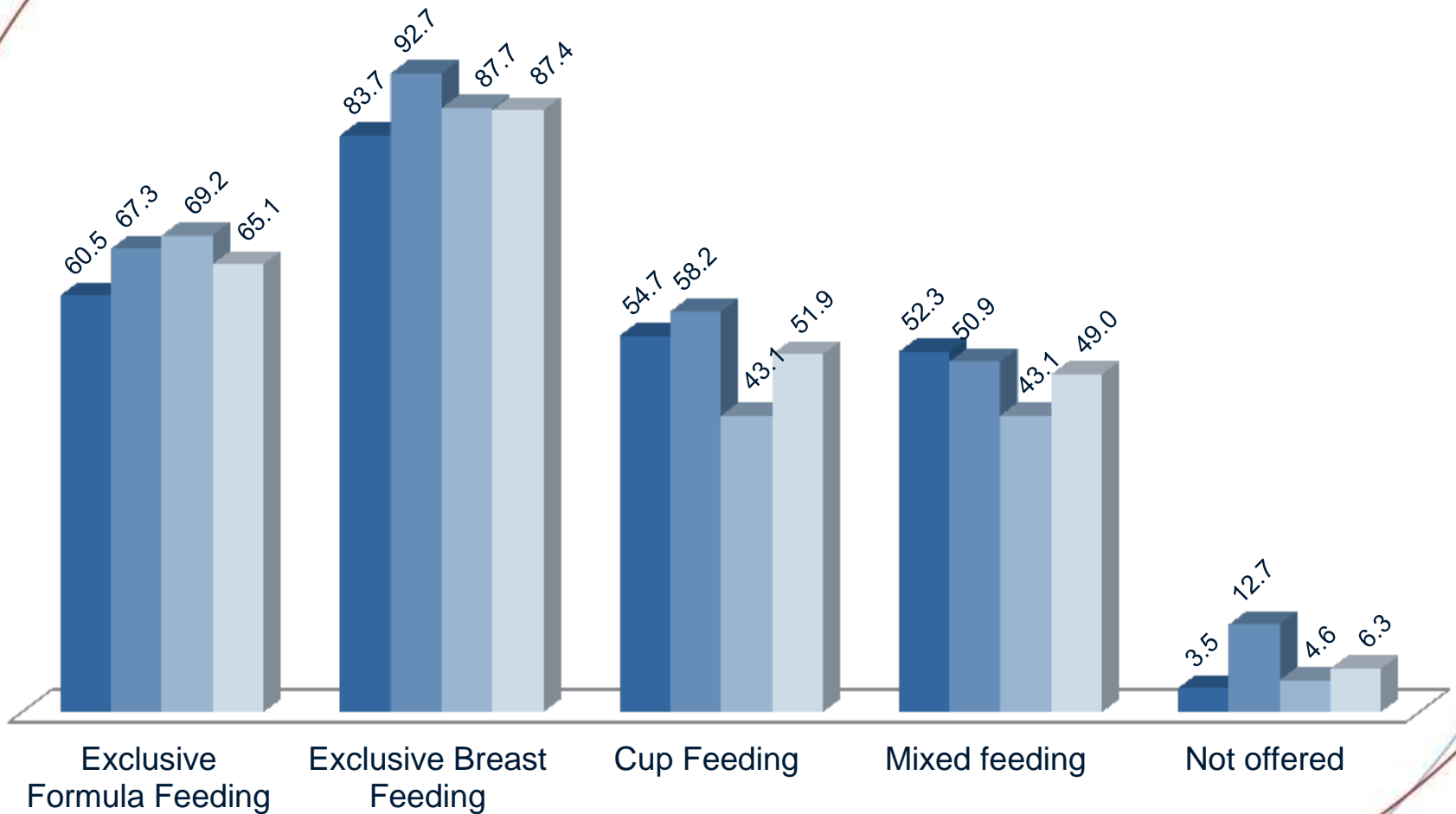
Counseling received during ANC & PNC

■ ANC ■ PNC

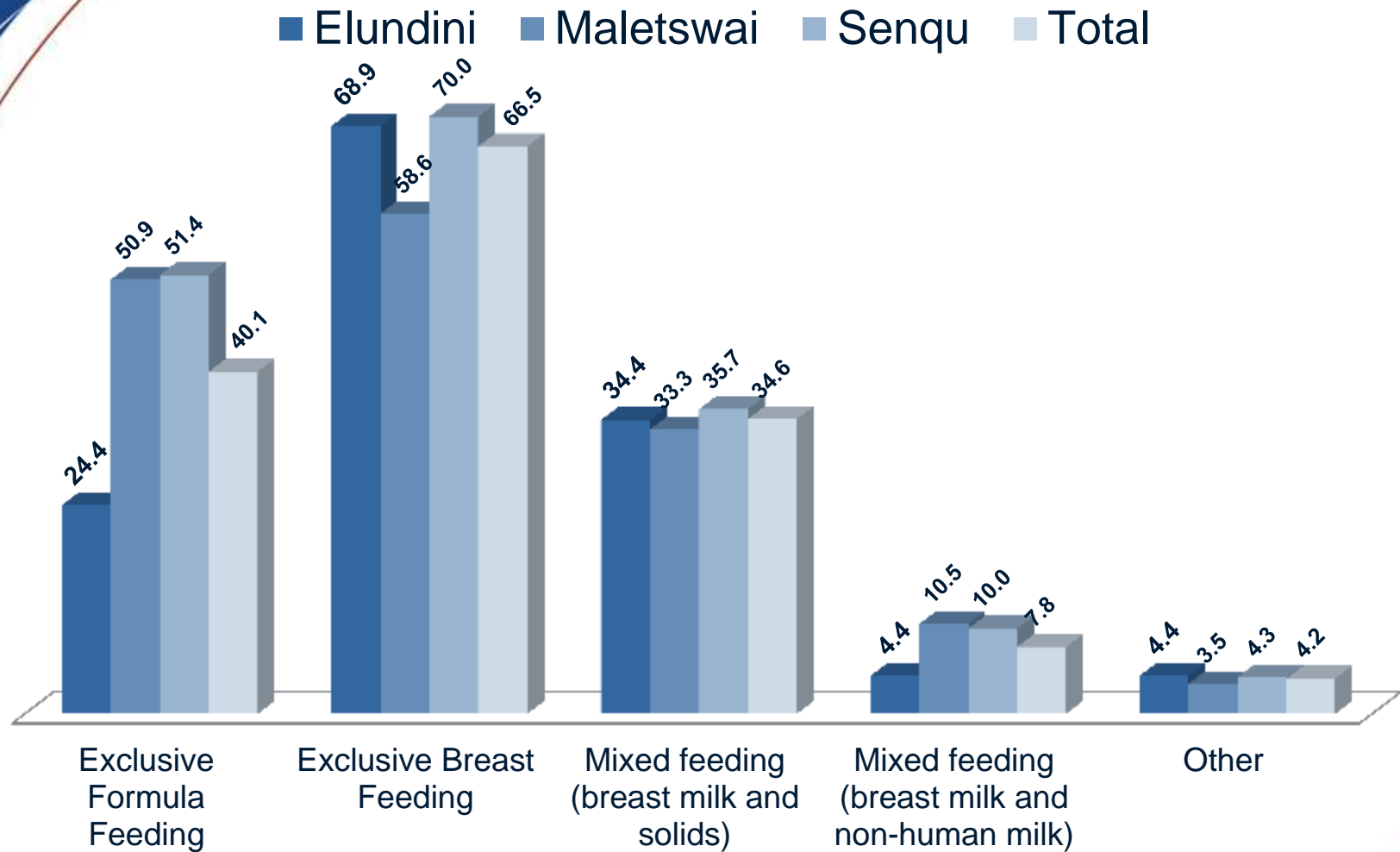


Feeding options counseled on

■ Elundini ■ Maletswai ■ Senqu ■ Total



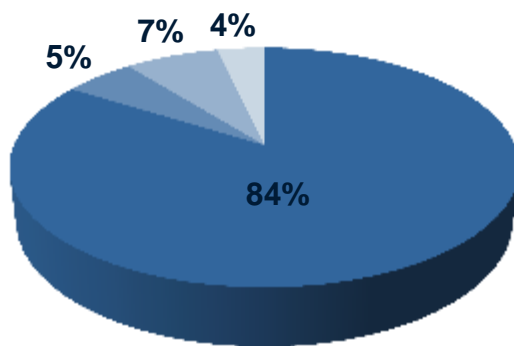
Feeding options being practiced



Timing of initiating breastfeeding

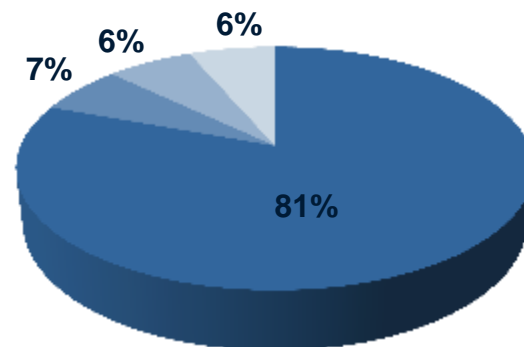
Elundini

■ < 1 hr ■ 1 - 8 hrs ■ >8hrs, <1day ■ > 1 day



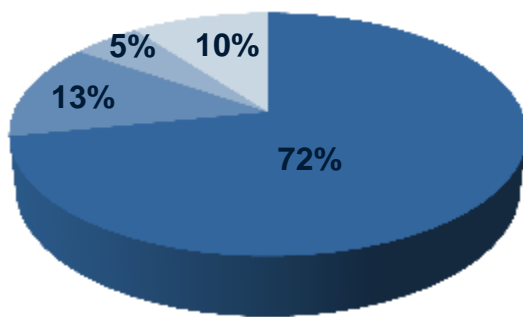
Maletswai

■ < 1 hr ■ 1 - 8 hrs ■ >8hrs, <1day ■ > 1 day



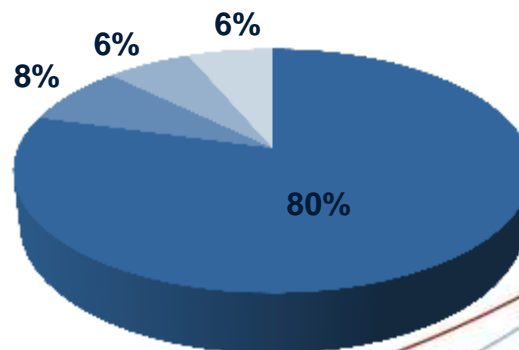
Senqu

■ < 1 hr ■ 1 - 8 hrs ■ >8hrs, <1day ■ > 1 day



Total

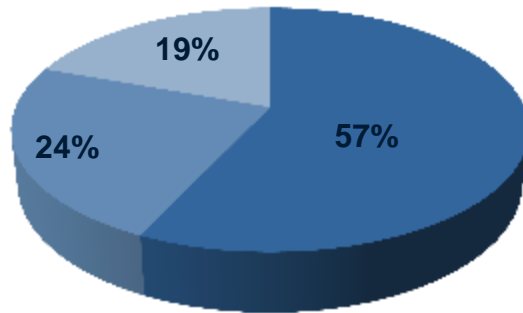
■ < 1 hr ■ 1 - 8 hrs ■ >8hrs, <1day ■ > 1 day



Frequency of breastfeeding in a day

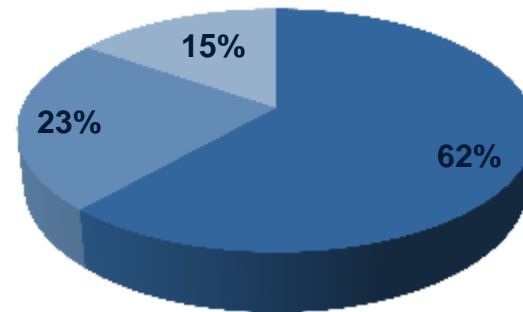
Elundini

■ < 7 ■ 8 to 10 ■ > 10



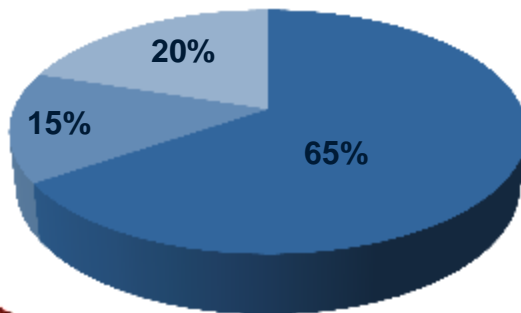
Maletswai

■ < 7 ■ 8 to 10 ■ > 10



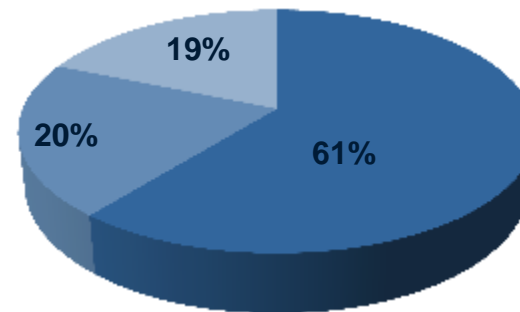
Senqu

■ < 7 ■ 8 to 10 ■ > 10



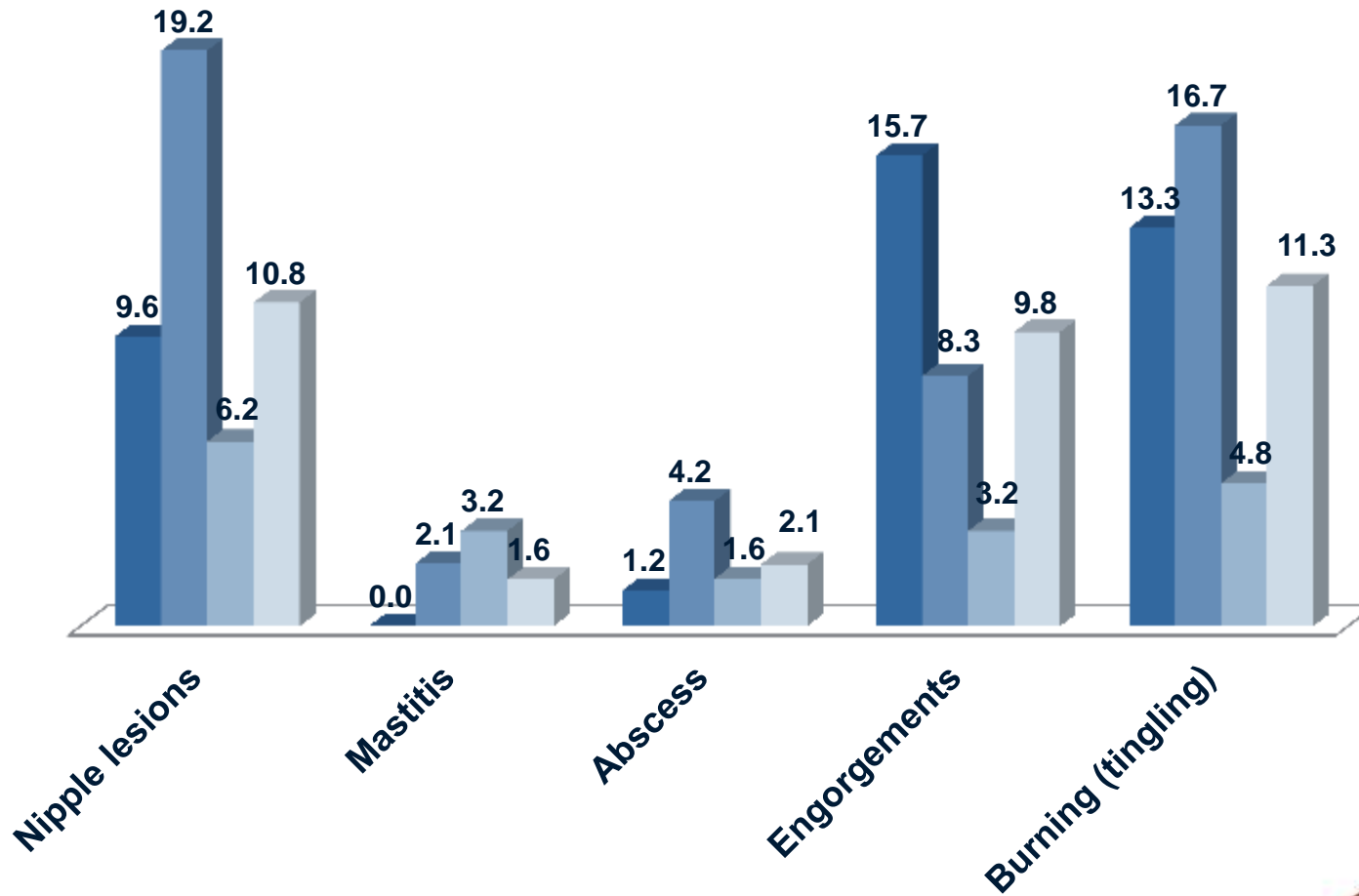
Total

■ < 7 ■ 8 to 10 ■ > 10



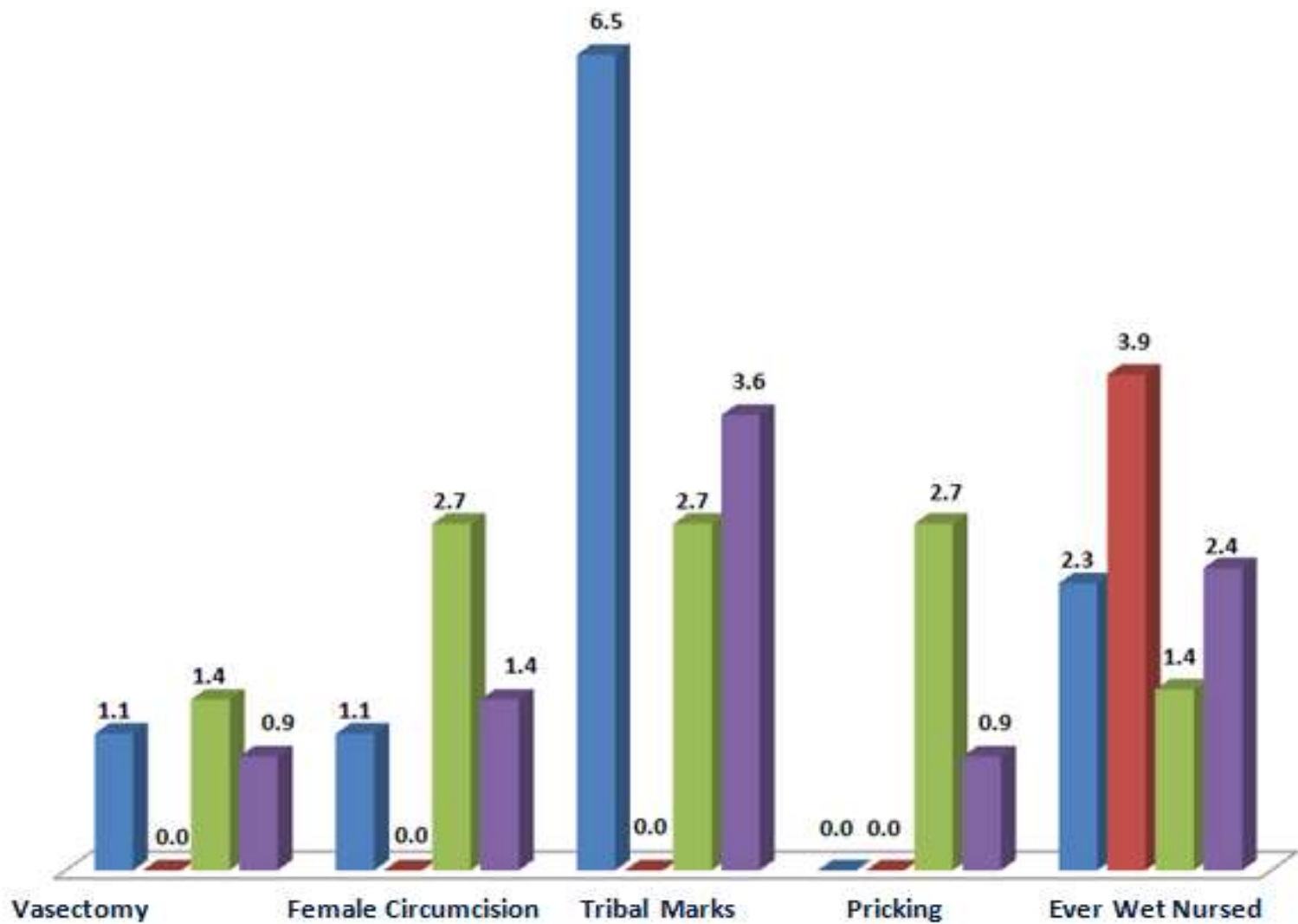
Breast health problems

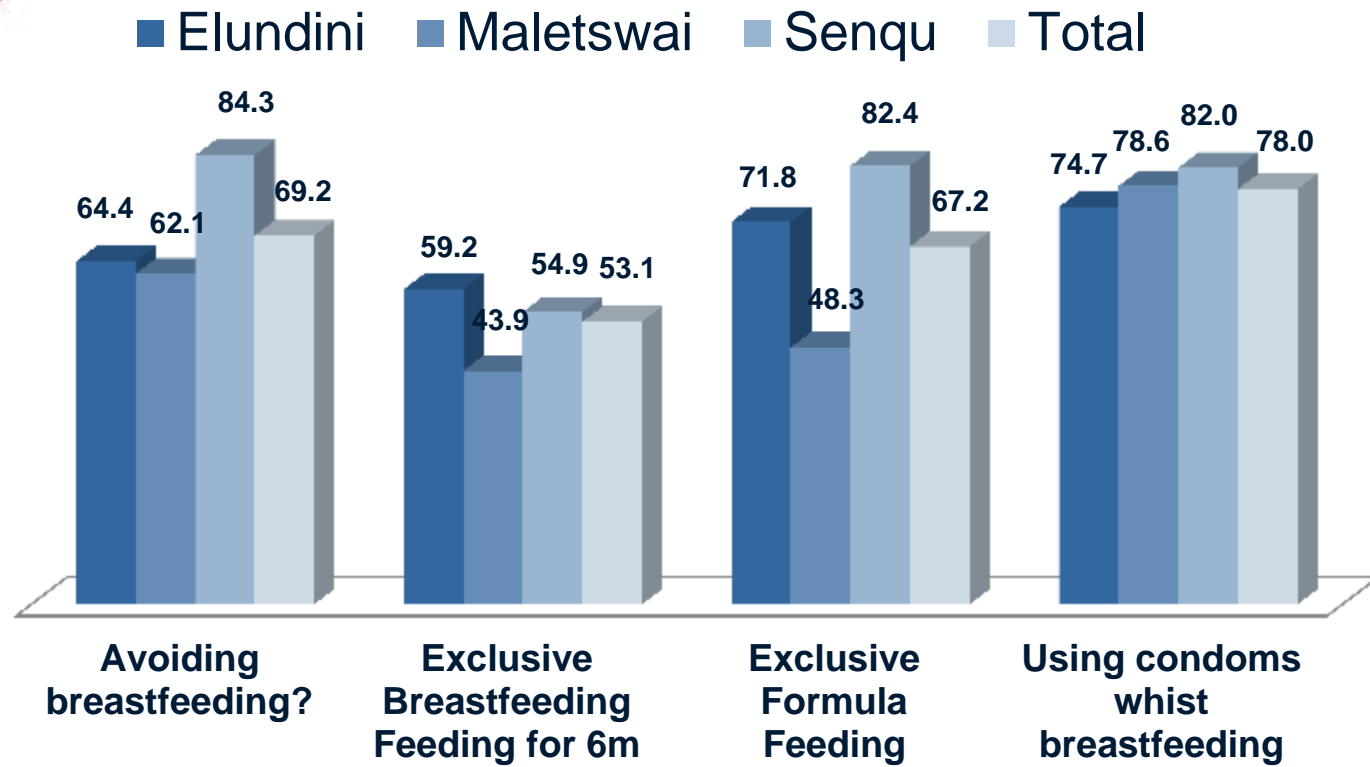
■ Elundini ■ Maletswai ■ Senqu ■ Total



RESULTS: SOCIO-CULTURAL FACTORS

■ Elundini ■ Maletswai ■ Senqu ■ Total





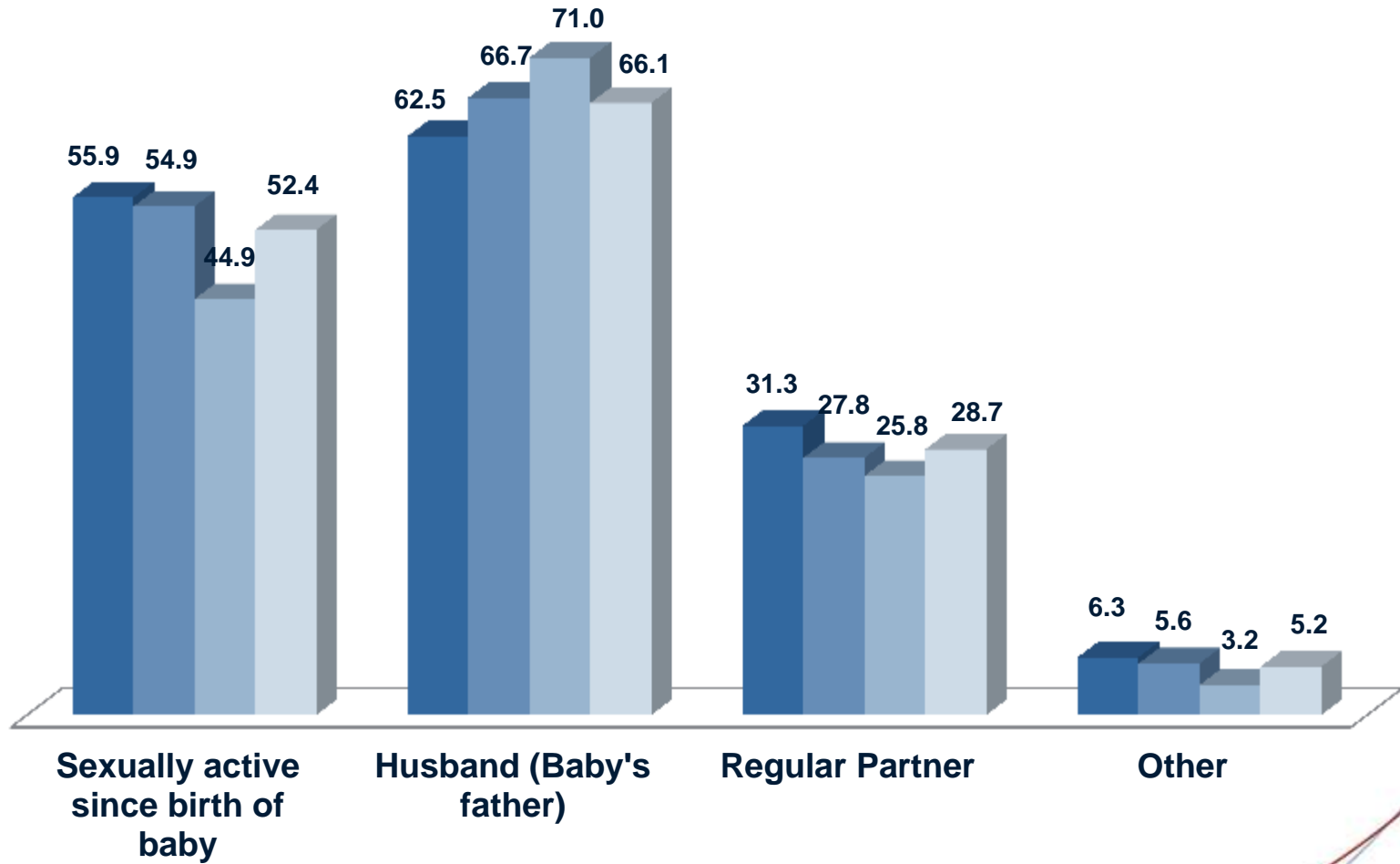
HIV Knowledge

A sizeable proportion indicated that HIV cannot be prevented through EFF (33.0%) and EBF (47.0%) practised for six months.

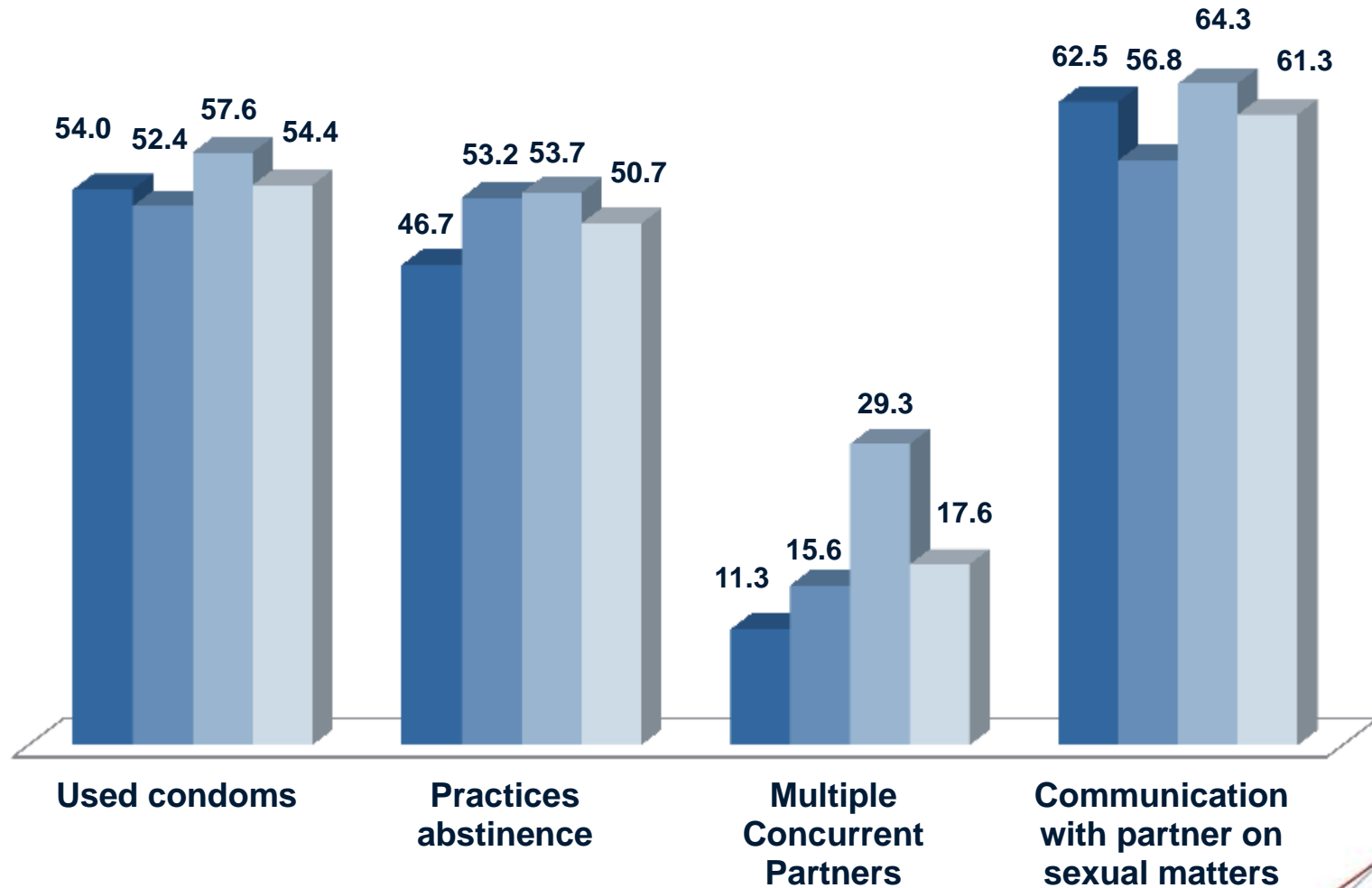
The level of understanding of the participants about the counseling received may be limited

RESULTS: SEXUAL RISK FACTORS

■ Elundini ■ Maletswai ■ Senqu ■ Total



■ Elundini ■ Maletswai ■ Senqu ■ Total



RESULTS: INDICATORS

- HIV Exposed Infants should start CTX at the time of conducting PCR testing - Ncembu : 1/19 & Pelandaba 1/21
- More babies were given CTX than PCR tested (Aliwal North & Mzamomhle).
- Is this due to misreporting or actual missed opportunities?

Indicator	<i>Lower Tsitsana</i>	<i>Mangoloaneng</i>	<i>Ncembu</i>	<i>Seqhobong</i>	Eludnini sub-District	<i>Esilindini</i>	<i>Herschel</i>	<i>Ndofela</i>	<i>Pelandaba</i>	<i>Umlamli Gateway</i>	Senqu sub-District	<i>Aliwal North Block H</i>	<i>Khayamandi</i>	<i>Maletswai</i>	<i>Mzamomhle</i>	Maletswai sub-District
Baby initiated on CTX	4	18	1	3	26	26	34	23	1	60	144	30	15	43	21	109
Baby PCR around 6 weeks	11	18	19	5	53	26	36	36	21	60	179	29	17	43	8	97
<i>Baby PCR Positive around 6 weeks</i>	0	0	0	0	0	0	0	1	0	0	1	1	0	0	1	2
<i>Baby PCR Negative around 6 weeks</i>	11	18	24	5	58	26	36	35	1	60	158	29	17	37	18	101
Baby receiving supplementary feeding	1	1	0	1	3	15	0	23	60	12	110	6	17	5	0	28

RESULTS: ASSOCIATIONS

Association between biological factors and PCR testing

	PCR Testing (Maternal HIV+ proxy)		p-value
	Yes	No	
	%	%	
Parity			
Once	81	19	0.992
Two or more	80.9	19.1	
Gravida			
Once	82.2	17.8	0.578
Two or more	79.1	20.9	
Twins/Triplets	81.8	18.2	0.952
Full Term Pregnancy	83	17	0.032
Mode of Delivery			
Vaginal	81.1	18.9	0.2588
Caesarean	84.8	15.2	

Association between biological factors and concern about infecting baby

	PCR Testing (Maternal HIV+ proxy)		p-value
	Yes	No	
	%	%	
Birth Weight			
< 2.5 kg	74.1	25.9	0.830
≥ 2.5 kg	76.1	23.9	
Medical conditions			
Oral Candidiasis	74.2	25.8	0.254
Nipple Lesions	89.5	10.5	0.391
Engorgement	88.9	11.1	0.473
Burning/Tingling	89.5	10.5	0.418
Infant feeding			
Feeding Problems	70	30	0.416
EFF	75.7	24.3	0.911
EBF	81.5	18.5	0.131
Mixed Feeding: BM and Solids	50	50	0.020

Association between biological factors and concern about infecting babies

	Concerned about infecting baby in future?		p-value
	Yes	No	
	%	%	
Oral candidiasis	60	40	0.893
Nipple lesions	60	40	0.851
Engorgement	61.1	38.9	0.804
Burning/Tingling	90	10	0.001
EFF	60.5	39.5	0.430
EBF	57.8	42.2	0.546
Intercourse since birth	55.8	44.2	0.808
Condom use	59.7	40.3	0.005
Abstinence since birth	68.9	31.1	0.001
Multiple sexual partner	80	20	0.009
Knowledgeable	57.4	42.6	0.338

Final comment

There is no causality, however, the following deductions are made:

- Socio-demographic factors like poor maternal education and lack of basic necessities may contribute to HIV transmission
- Biological risk factors like infant feeding, poor breast health, may be contributor to HIV infection
- Socio-cultural factors need to be explored qualitatively (tribal marks, wet nursing)
- Sexual risk factors (MCP, non condom use) might lead to contracting of HIV by mother and infants may get it through breastfeeding
- This study provides information which can serve as the basis of future studies
- The risk factors identified in this study reiterate the need to strengthen the public health sector in infant feeding, infant follow-up as well as reduce missed opportunities as has also been found in other studies (Rispel *et al*, 2009)
- Community support to provide psychosocial support to mothers may also contribute to improvements in reducing HIV transmission.

Acknowledgements



- The **Eastern Cape Socio-economic Consultative Council (ECSECC)** for funding this study.
- **The Eastern Cape AIDS Council (ECAC)** for commissioning the study and providing support throughout the study.
- **The Eastern Cape Department of Health (ECDOH)** for their support in giving approval for the study to be conducted in the Joe Gqabi District.
- The **Joe Gqabi District Manager** for giving approval and clearance of access to the health facilities in order to conduct data collection.
- The **15 facilities** where data collection was conducted for their willingness to participate in the study and assisting with locating relevant respondents.
- The **participants** for their willingness to participate in the study and share pertinent information.
- The **fieldworkers** for their hard work in conducting interviews across the district as well as for assisting with data capturing.

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**Mars sur et la lutte contre le VIH/SIDA avec
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**Thank you!
Merci!**



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