Focus for Impact

Community profile
Catchment area for Sundimbili CHC (Wards 5, 7, 12, 13, 14, 15)

Mandeni local municipality
iLembe District
KwaZulu-Natal

July 2017

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Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
CCG	Community Care Givers
CCMDD	Centralised Chronic Medicines Dispensing and Distribution
CDC	Centres for Disease Control and Prevention
CHC	Community Health Centres
DAC	District AIDS Council
DHIS	District Health Information System
HIV	Human Immunodeficiency Virus
HTS	HIV Testing Services
KZN	Kwa-Zulu Natal
LAC	Local AIDS Council
LGBTI	Lesbian Gay Bisexual Transgender and Intersex
MSM	Men Who Have Sex with Men
NDOH	National Department of Health
NHIRD	National Health Information Repository and Data warehouse
PEP	post-exposure antiretroviral prophylaxis
PLHIV	People living with HIV/AIDS
PrEP	pre-exposure antiretroviral prophylaxis
PWID	People Who Inject drugs
SAMPI	South Africa Multidimensional Poverty Index
SANAC	South Africa National AIDS Council
SRD	Social Relief of Distress (vouchers)
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
TB	Tuberculosis

Acknowledgement

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Focus for Impact – understanding the background

At the heart of the NSP 2017-2022, is the strategy to "focus for impact" using the more detailed information and insights now available. While comprehensive prevention and care will be provided countrywide, intensified, concentrated efforts will be made in HIV and TB high burden areas. In these high-burden areas, redoubled efforts will draw on detailed, innovative data sources (such as geospatial mapping) to identify those most at risk. The purpose is saturation of high-impact prevention and treatment services and strengthened efforts to address the social and structural factors that increase vulnerability to infection. Nationally, but especially within these high-burden areas, key and vulnerable populations most heavily affected by the epidemics will receive intensified focus to empower them, improve service access and reduce barriers to service uptake. The "focus for impact" approach represents a new, transformative way to achieve reductions in the morbidity and mortality associated with HIV and TB and morbidity from STIs. In line with the evidence, there will be a substantially stronger focus on adolescent girls and young women and on key and vulnerable populations, not forgetting adolescent boys and young men.

The process for identifying high-burden areas for intensification of efforts dates back to September 2015, when the SANAC Secretariat established the Hotspot Mapping Advisory Committee. The Committee – including governmental and non-governmental epidemiological experts as well as international partners – was tasked with developing a transparent, multi-sectoral, locally informed and user-friendly approach to Focus for Impact.

An approach was developed that use geospatial mapping and risk profiling to allow stakeholders to have a more granular understanding of geospatial variations in HIV, TB and STI burden. The ***model aims to answer four key questions***:

(a) ***Where*** in a particular district ***are the areas with the highest HIV and/or TB burden***?

(b) ***Why*** does a ***specific area*** have a higher HIV and/or TB burden (i.e. what are the contributing/associated factors)?

(c) ***Who*** are the most vulnerable populations?

(d) ***Which multi-sectoral interventions*** may be deployed in the high-burden area to reduce associated HIV and/or

To maximise the impact of efforts, the NSP introduces this more intensified, more strategic focus at provincial, district and ward levels. There will be a greater priority on primary prevention and on strategies to address the social and structural drivers of the three infections in a thoroughly multi-sectoral manner. South Africa's recent success in scaling up prevention and treatment programmes will be complemented by an equivalent focus on improving service quality and on reducing loss to follow-up among people who initiate care, while simultaneously implementing the new "test and treat" policy. Recognising that different people require different prevention approaches, differentiated care models will be scaled up to tailor interventions to each person's needs, including enhanced use of proven community-centred service delivery. Priority is given to ensuring that treatment programmes are holistic, addressing each person's health needs, including co-morbidities. The need for innovative new sources of funding is identified. A higher priority is placed on the collection and timely use of high-quality data to guide and inform programmes and policies.

The ultimate success of the NSP 2017 – 2022, depends on effective implementation at the provincial, district and ward levels. From the national to the local context, three levels of focus will accelerate implementation of the Plan and optimise its impact:

- ***Spatial location:*** The NSP calls for steps to ensure the delivery of comprehensive services to all who need them, regardless of where they live. In cognisance of the marked geographic variation in disease burden, intensified action is required in localised areas of high burden for intensified action. In each of these high-burden areas:
  1) ambitious coverage targets will be set;
  2) current and new programmes will focus strategically on those in greatest need; and
  3) other strategies will be intensified to address the social and structural factors that increase individual and community vulnerabilities which contribute to the disease burdens.

  This component links with the first question that the Focus for Impact model aims to answer: *"Where in a particular district are the areas with the highest HIV and/or TB burden?"*

- ***Population and community profile:*** The community profile is done once a high burden area is identified using secondary data from multiple sources (health, education, socio-economic) and the provision and utilisation of services is described. The engagement with the community is to identify priorities of the risks for HIV, TB and STIs in that specific area and gaps in service delivery to address these priorities.

  In each of these high-burden areas, programmatic efforts will be strategically targeted towards the populations among whom the need is greatest, and where the impact of efforts will be most pronounced. Given the degree to which transmission among adolescent girls and young women is driving HIV across the country, *every* province, district and ward must take steps to intensify efforts to reduce new HIV infections and increase service access for adolescent girls and young women, including addressing the social and structural factors that increase their vulnerability. Guided by local data and circumstances from geospatial mapping and profiling, provincial and local responses should prioritise key and vulnerable populations.

  This component links with the second question that the Focus for Impact model aims to answer: *"Why does a specific area have a higher HIV and/or TB burden (i.e. what are the contributing/associated factors)?"*

- ***Multi-sectoral interventions:*** Enhanced focus is also needed on the combination of interventions that are prioritised for scale-up. Priority will be placed on implementing the right mix of high-value, high-impact interventions that will maximise the number of new infections and deaths averted.

  This component links with the third question that the Focus for Impact model aims to answer: *"Which multi-sectoral interventions may be deployed in the high-burden area to reduce associated HIV and/or TB risks?"*

> **Multi-sectoral** refers to deliberate collaboration among various stakeholder groups (e.g., government, civil society, and private sector) and sectors (e.g., health, environment, economy) to jointly achieve a common goal. In this case reducing the associated risks in high burden areas

Introduction to Profile

This profile presents secondary (public and non-public) data on the HIV and TB epidemics and population demographic profile, enriched with information collected from the community identified associated risk factors, services and assets in this area in Mandeni local municipality under the iLembe District, KwaZulu Natal. The latest available ward level population data is that from Census 2011. This is used as the basis for the population data and aligned with boundaries within this report.

The profile is intended to give the AIDS Councils and any other planning groups a thorough understanding of the HIV, TB and STI related context within this district. By reflecting who is at risk of becoming HIV infected and where they are within a specific location, the profile assists to identify the people who need prevention and care services, both those who are infected and those at risk of infection.

The profile highlights factors that influence the risks of HIV infection. Such factors include the socio-economic status e.g. structural measures of poverty; sexual risk behaviours such as condom use, multiple sexual partnerships and transactional sex in a given population in a specific service area and/or administrative area. The same applies to data on exposure to psycho-active substances, report or history of sexually transmitted infections (STIs). Data is presented at the level that it is available. The risk factors are explored within the categories of the socio-demographic data (e.g., age, sex, race, educational status) at wards level.

The profile for this specific area includes two types of data: 1) secondary (public and non-public) data and 2) local knowledge and understanding of what influences the associated risk profile. Information that reflects the local knowledge and understanding of the associated risk profile for the area is collected through community engagement through stakeholder and community workshops in the specific catchment area. More detail on the approach is described in Appendix C: Methodology for stakeholder engagement to explore local level data.

For this profile, the catchment area for Sundimbili CHC, Mandeni local municipality is defined as Mandeni Wards 5, 7, 12, 13, 14, 15. For this specific profile, two stakeholder and community workshops held on 13 and 14 July 2017 in Mandeni Social development, Sundimbili. The workshops were attended by 83 stakeholders and community members during these two days. As more local level profiles are completed within the local municipality, a richer picture of the context within Mandeni local municipality will evolve. The same applies to more granular data that becomes available for this specific catchment area. This profile will be updated accordingly and should therefore be considered a living document.

During the workshops participants identified the following priorities for consideration during the implementation of multi-sectoral interventions and focus of key and vulnerable populations to reduce the HIV associated risk in the Sundimbili CHC catchment area:

- Key and vulnerable populations:
  - Young women and girls particularly those in poverty-affected families, granny-headed households and households and households whose parents work or live elsewhere
  - Unemployed youth and out-of-school youth
  - Child-headed households

- Interventions that address:
  - Poverty, especially livelihoods support
  - Parenting Support and Support to Teen mothers
  - Youth unemployment
  - Substance abuse, particularly among youth
  - Support for vulnerable family structures such as child-headed households and granny headed households
  - Follow-up and counselling for VMMC

1. Socio-demographic profile

1.1 Demarcated boundaries

iLembe District is one of the 11 district municipalities of KwaZulu-Natal province. The Mandeni local municipality is one of the four local municipalities in iLembe district. The rest are KwaDukuza, Maphumulo and Ndwedwe local municipalities.

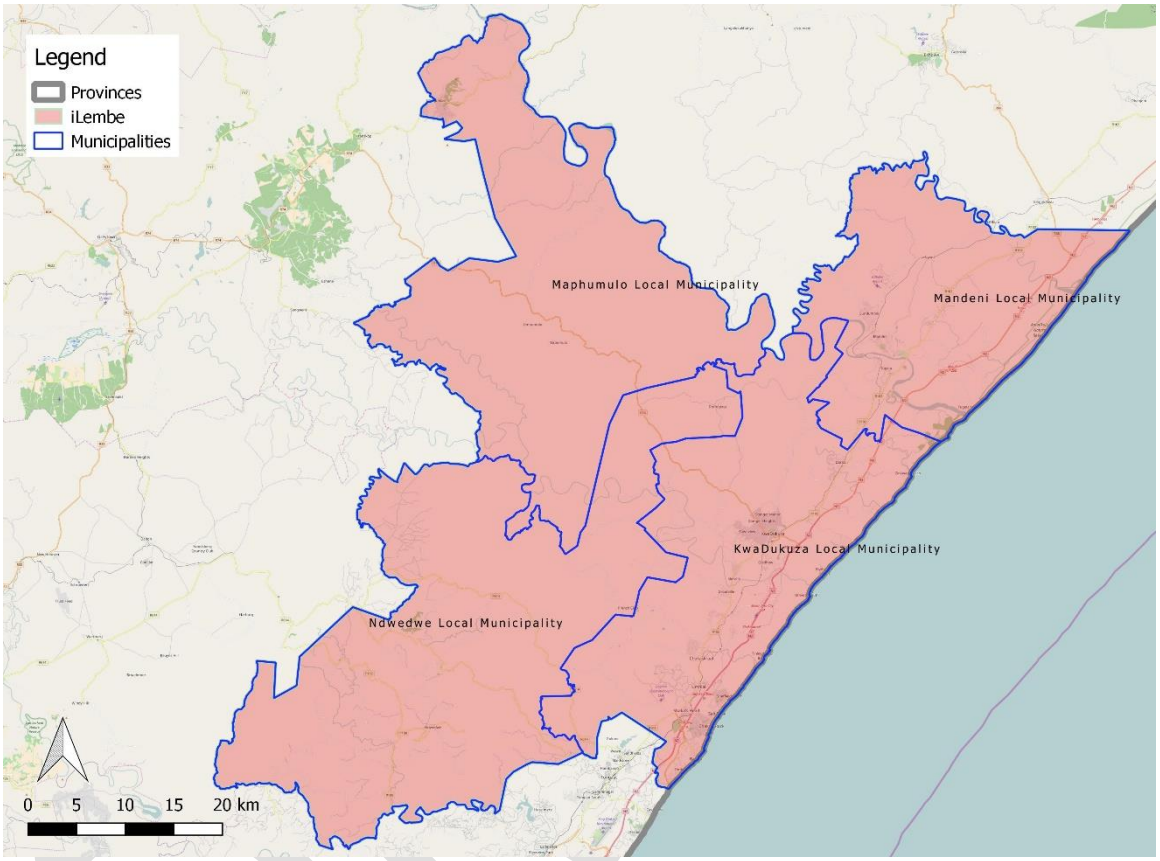

Figure 1: Local municipalities' iLembe district

The KwaDukuza local municipality constitute of 17 administrative wards (see Figure 2).

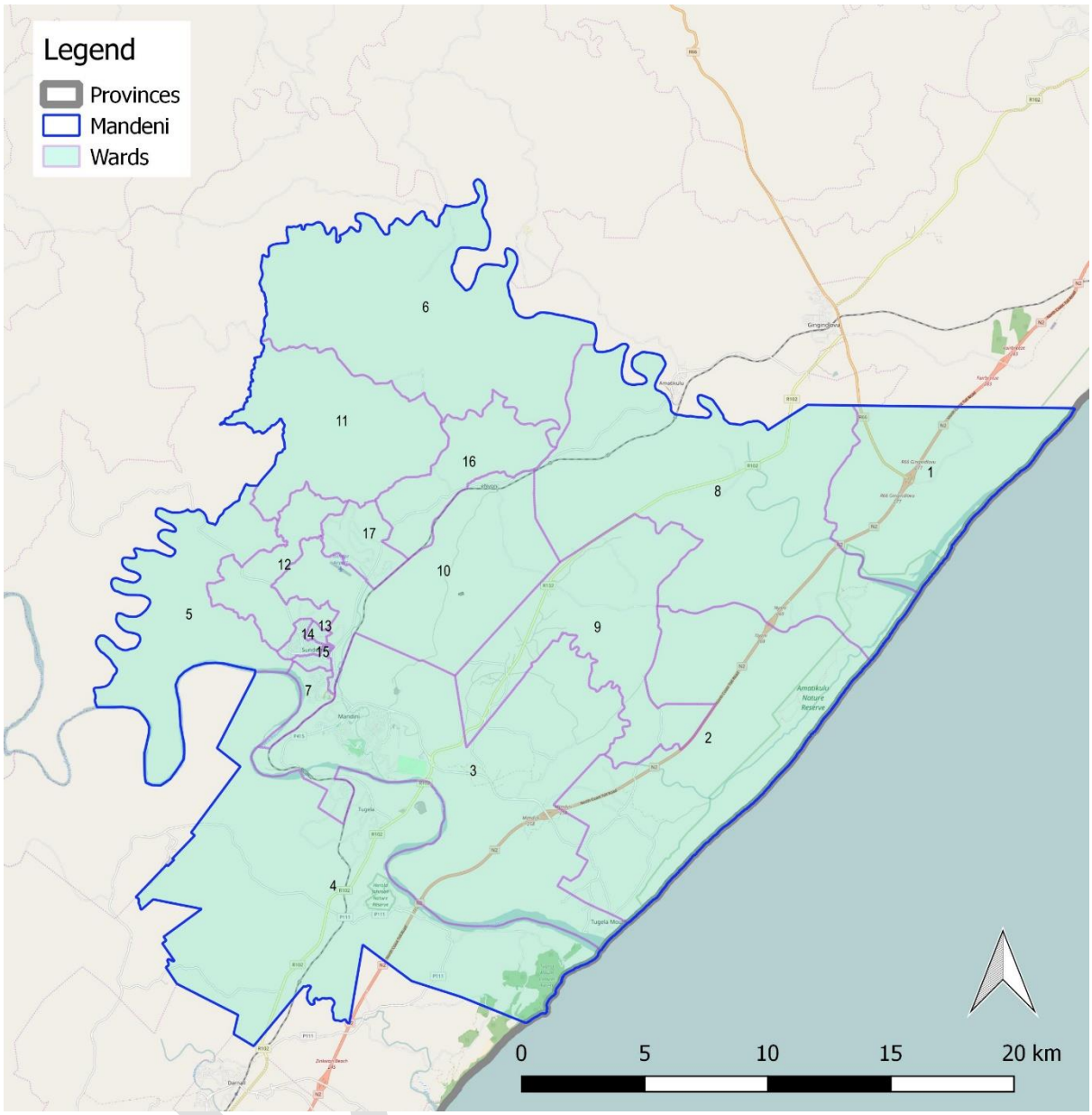

Figure 2: Distribution of Wards in the Mandeni local municipality

1.2 Population by sex and age

During the 2011 Census 138 060 people were counted in 17 wards. Table 1 summarises the age and sex per population in these wards. Females constitute 53% of population, compared to males 47%. The young people ≤ 25 years (40%) make up the majority of population in the local municipality. The detail for Wards 5, 7, 12, 13, 14, 15 that forms the catchment area for Sundimbili CHC, are highlighted in the table below.

Table 1: Population per age groups per ward, Mandeni local municipality

Ward	Age							Sex		
	0-9	10-14	15-19	20-24	25-49	50+	Total	Female	Male	Total
Ward 001	2223	1020	945	861	2082	1029	8160	4353	3807	8160
Ward 002	2370	975	1014	777	2076	1275	8487	4458	4029	8487
Ward 003	1563	768	879	735	2871	1344	8160	4137	4023	8160
Ward 004	2298	927	936	1026	3435	1239	9861	5115	4746	9861
Ward 005	1923	912	903	645	1734	942	7059	3894	3165	7059
Ward 006	1779	855	930	606	1587	1101	6858	3726	3132	6858
Ward 007	1905	783	1002	1227	3756	831	9504	4884	4620	9504
Ward 008	2304	1029	1122	963	2637	1284	9339	4731	4608	9339
Ward 009	2391	1083	1239	861	2283	1377	9234	4920	4314	9234
Ward 010	1980	735	849	990	2871	795	8220	4275	3945	8220
Ward 011	1839	894	948	882	2373	1020	7956	4173	3783	7956
Ward 012	3096	1311	1425	1608	4140	1374	12954	6900	6054	12954
Ward 013	705	294	333	456	1389	381	3558	1875	1683	3558
Ward 014	1926	945	1071	1182	3663	987	9774	5262	4512	9774
Ward 015	675	330	393	513	1746	396	4053	2124	1929	4053
Ward 016	2025	879	954	1098	3342	888	9186	4860	4326	9186
Ward 017	1128	372	489	765	2601	342	5697	3057	2640	5697
	32130	**14112**	**15432**	**15195**	**44586**	**16605**	**138060**	**72744**	**65316**	**138060**
%	**20%**	**9%**	**9%**	**11%**	**37%**	**14%**		**53%**	**47%**	

Table 2 reflects the sex and age breakdown of the youth between 10 and 35 years for the same geographic area.

Table 2: Youth population per sex and five-year age groups per ward, Mandeni local municipality

Ward	Female					Male					
	10-14	15-19	20-24	25-29	30-34	10-14	15-19	20-24	25-29	30-34	
Ward 001	516	471	417	384	252	504	474	444	294	210	**3966**
Ward 002	462	498	429	333	267	513	516	348	285	222	**3873**
Ward 003	399	450	390	291	288	369	429	345	348	294	**3603**
Ward 004	453	483	525	525	393	474	453	501	480	396	**4683**
Ward 005	435	432	354	315	228	477	471	291	219	156	**3378**
Ward 006	402	471	333	282	186	453	459	273	189	135	**3183**
Ward 007	396	471	594	660	456	387	531	633	600	432	**5160**
Ward 008	465	519	456	405	303	564	603	507	375	273	**4470**

Ward	Female					Male					
	10-14	15-19	20-24	25-29	30-34	10-14	15-19	20-24	25-29	30-34	
Ward 009	543	612	441	351	252	540	627	420	291	213	**4290**
Ward 010	351	414	501	495	339	384	435	489	408	321	**4137**
Ward 011	408	462	429	417	264	486	486	453	351	213	**3969**
Ward 012	666	711	828	747	567	645	714	780	642	420	**6720**
Ward 013	135	180	225	216	183	159	153	231	207	168	**1857**
Ward 014	465	564	597	648	468	480	507	585	513	399	**5226**
Ward 015	174	195	246	246	213	156	198	267	258	216	**2169**
Ward 016	441	495	573	615	423	438	459	525	468	363	**4800**
Ward 017	195	255	426	498	381	177	234	339	384	285	**3174**
	6906	**7683**	**7764**	**7428**	**5463**	**7206**	**7749**	**7431**	**6312**	**4716**	**68658**

Figure 3 below reflects the population pyramid for Mandeni local municipality. This figure visualises sex (male and female) and age in five-year age bands for this population. It is noted that the biggest group is in the 0-4 age group followed by 15-19 year olds and then the age group 20-24 years old.

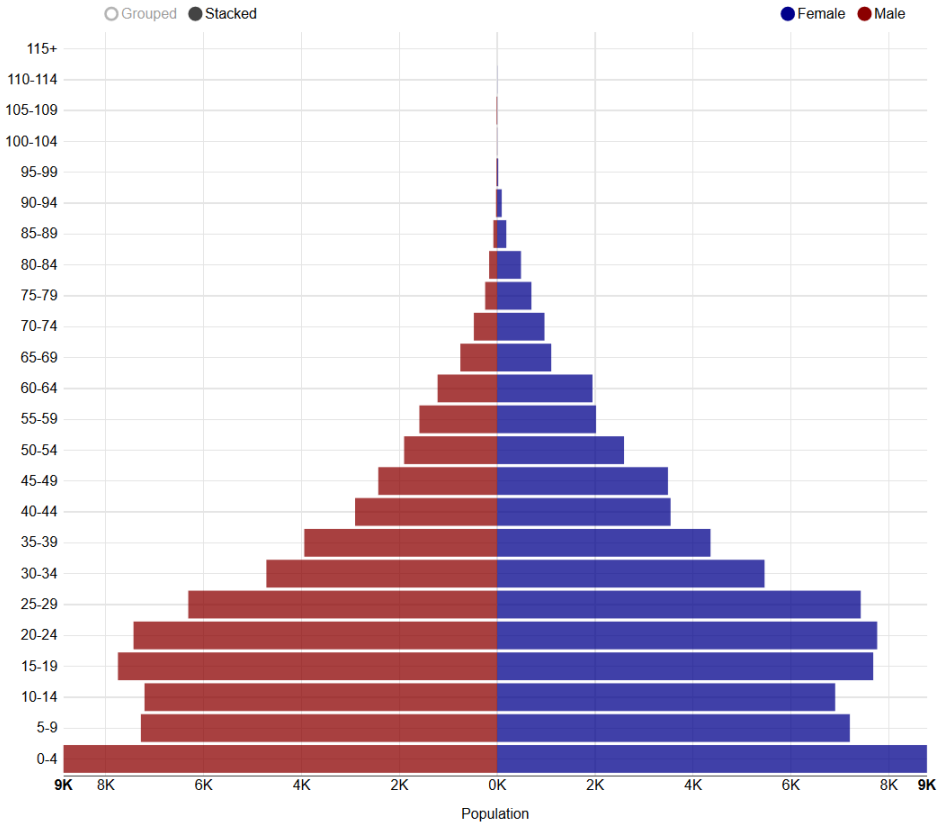

Figure 3: Population Pyramid Mandeni local municipality

From this population, 33.5% children and 3.9% elderly are dependent on the 62.6% economically active population of the Mandeni local municipality (Figure 4).

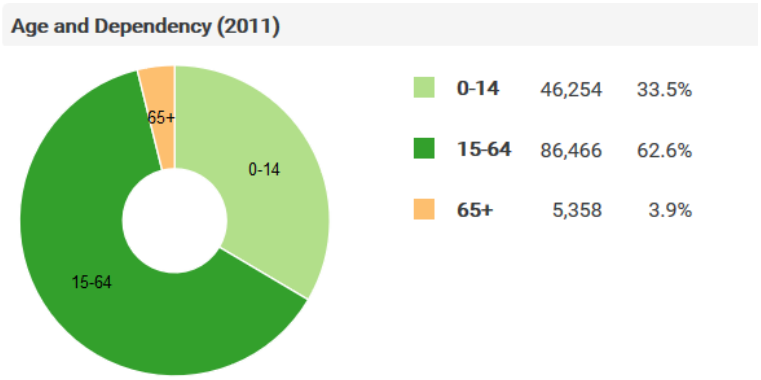

Figure 4: Dependency ratio Mandeni local municipality (Source Census 2011)

In the catchment area for the Sundimbili CHC (Mandeni Wards 5, 7, 12, 13, 14, 15) there is a slight change in the population profile (Figure 5) with a larger 20-24 age group and different male to female distribution to that seen in the Mandeni local municipality population pyramid in Figure 3.

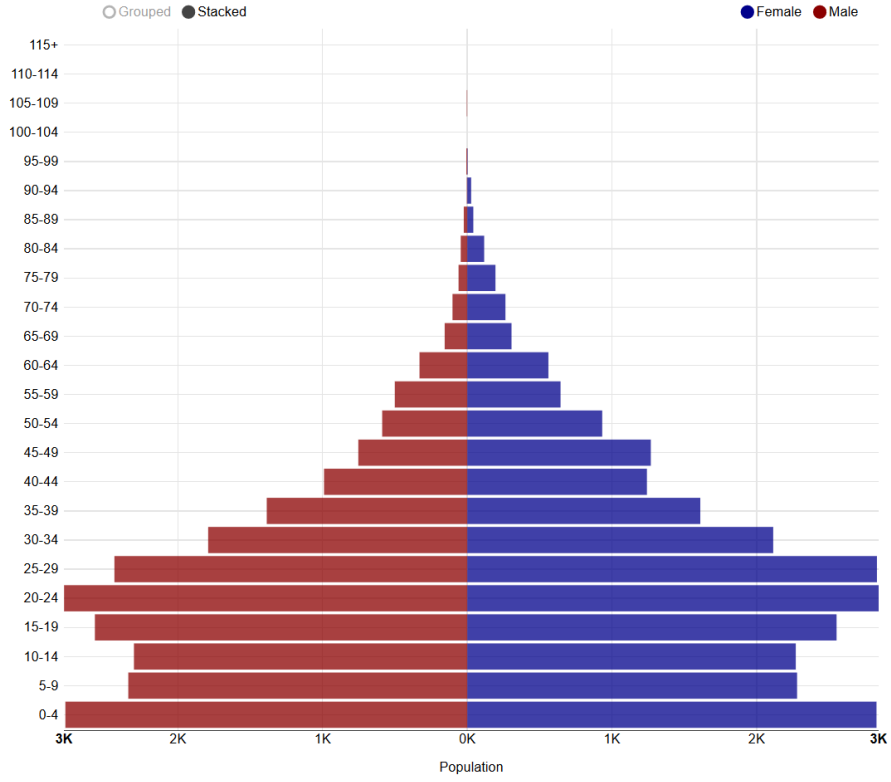

Figure 5: Population Pyramid Sundimbili CHC catchment area (Source Census 2011)

In the same catchment population, 31.6% children and 2.9% elderly are dependent on the 65.5% economically active population (Figure 6).

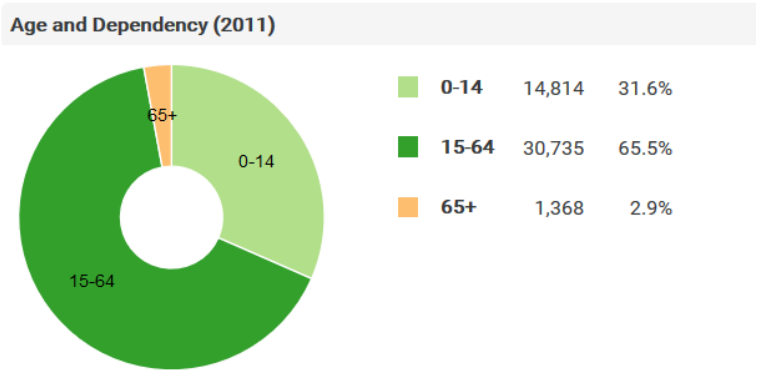

Figure 6: Dependency ratio Sundimbili CHC catchment area (Source Census 2011)

1.3 Population by race

The dominant population group in Mandeni local municipality is Black African at 96,7 % followed by Asian with 1.7% (detail in Figure 7 and Table 3).

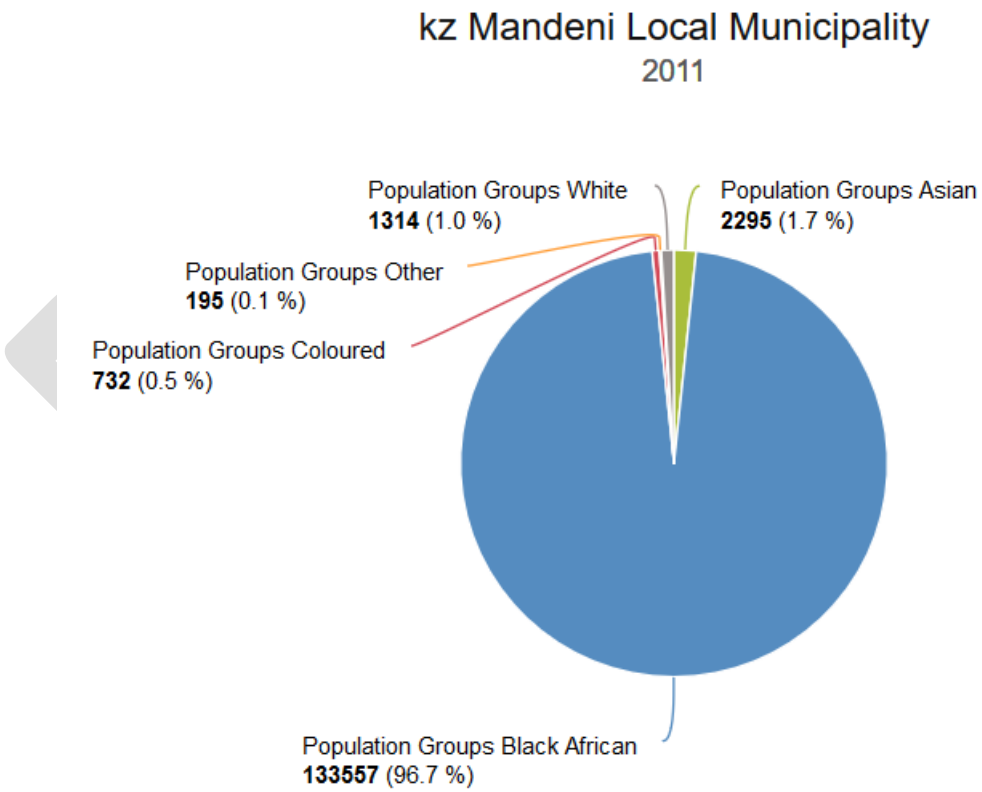

Figure 7: Population group distribution in Mandeni local municipality (Source Census 2011)

The detail for Wards 5, 7, 12, 13, 14, 15that forms the catchment area for Sundimbili CHC, are highlighted in the table below.

Table 3: Ward level population distribution by Race in Mandeni local municipality

Ward	Asian	Black African	Coloured	Other	White	Total
Ward 001	18	8136	9	3	12	**8178**
Ward 002	12	8457	24		12	**8505**
Ward 003	798	5781	411	42	1128	**8160**
Ward 004	1335	8274	129	27	84	**9849**
Ward 005	15	7020	15	3	6	**7059**
Ward 006	6	6849	3		3	**6861**
Ward 007	9	9486	9	12		**9516**
Ward 008	15	9306	9	12	18	**9360**
Ward 009	12	9171	27	6	9	**9225**
Ward 010	24	8166	6	9	9	**8214**
Ward 011	6	7917	6	3	6	**7938**
Ward 012	9	12918	12	12	6	**12957**
Ward 013		3549	12			**3561**
Ward 014	6	9726	24	9	9	**9774**
Ward 015	3	4029	9	18	3	**4062**
Ward 016	21	9132	21	6	6	**9186**
Ward 017	6	5640	6	33	3	**5688**
	2295	**133557**	**732**	**195**	**1314**	**138093**

2. Epidemiological profile

2.1 Causes of death

With the roll out of ART in South Africa, AIDS is now becoming a chronic disease since many people living with HIV are living longer. The main causes of death, the iLembe District is TB (xxx%) followed by HIV (xxx%) (Table 4). The profile would also show five-year series to show the trend of deaths over the past 5 years comparing AIDS related deaths and all-cause mortality at a local level.

Table 4: Main cause of deaths in the iLembe District (Source STATSSA)

Cause	Number of deaths	Percent deaths

2.2 HIV

The figures that follow below reflects the HIV positivity rate based on the routine health data collected, collated and reported in health facilities under iLembe District. The definitions for these indicators can be found in Appendix B: Terms, Definitions and calculations.

Due to the small numbers at a local level, it is not included at ward level in this report. See note on small number in Appendix A: Selecting Data for the Profile.

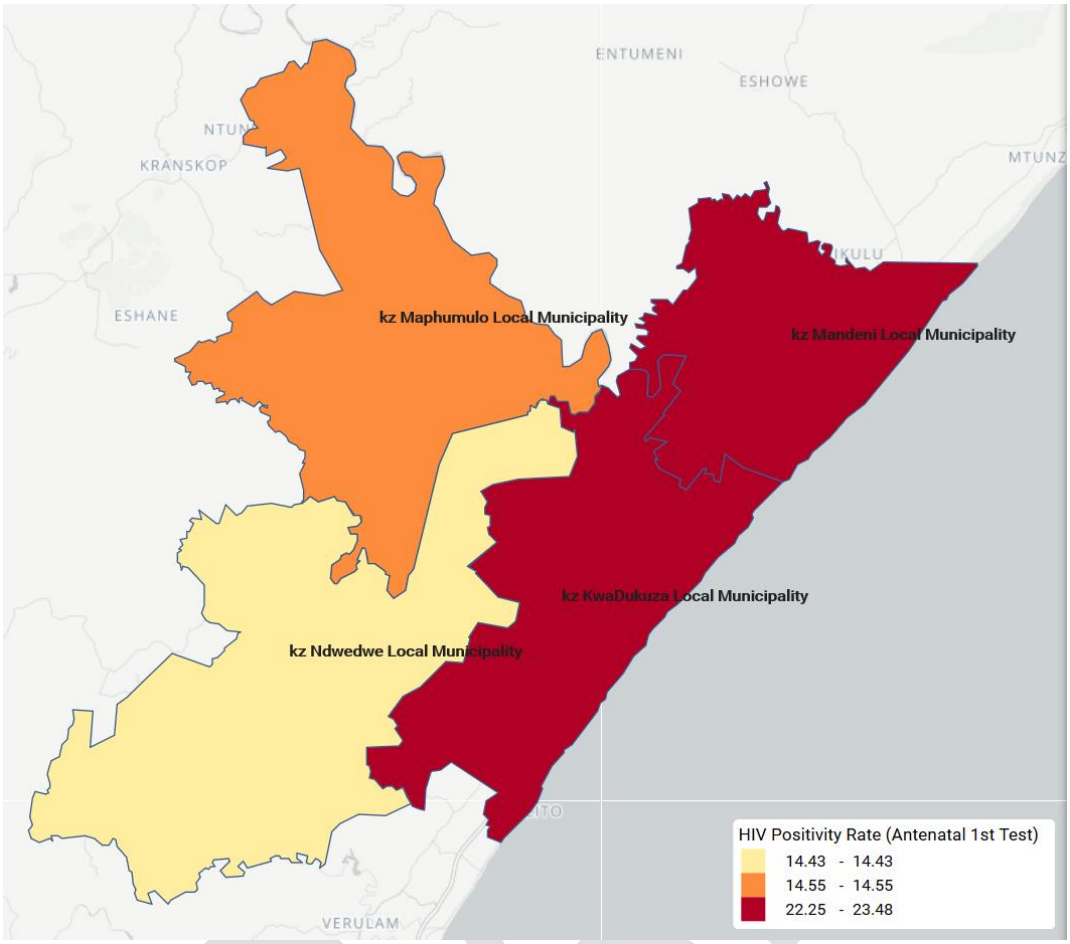

Figure 8: ANC client HIV 1st test positive rate iLembe district (Source: KZN DHIS 2015)

Table 5: HIV Positivity Rate (Antenatal 1st Test) iLembe district (Source: KZN DHIS 2015 report 26 June 2017)

KZ ILEMBE DISTRICT MUNICIPALITY: 19.9 %								
	local municipality	**2015: HIV Positivity Rate (Antenatal 1st Test)**					**NUM %**	**DEN %**
1	kz Ndwedwe local municipality	14.43	%	(278	/	1926)	13.57 %	18.70 %
2	kz Maphumulo local municipality	14.55	%	(269	/	1849)	13.13 %	17.96 %
3	kz Mandeni local municipality	22.25	%	(535	/	2404)	26.11 %	23.35 %
4	kz KwaDukuza local municipality	23.48	%	(967	/	4118)	47.19 %	39.99 %

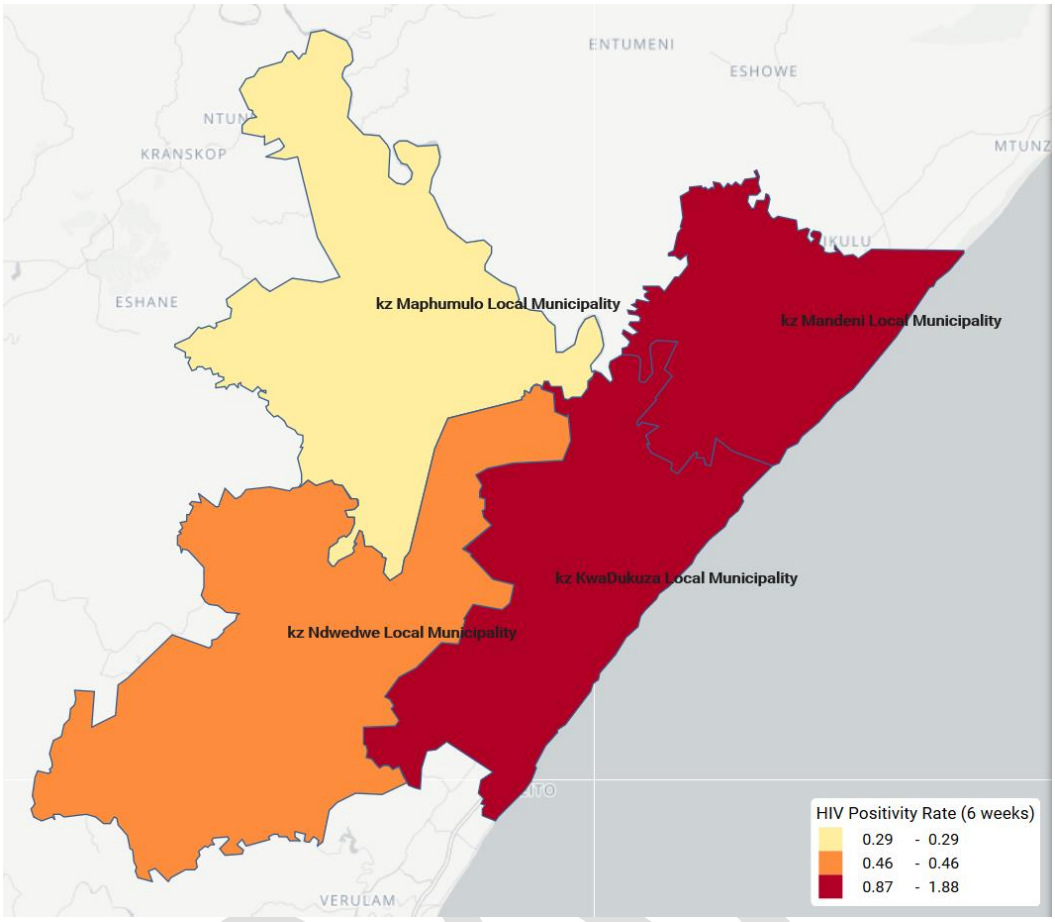

Figure 9: Infant 1st PCR test positive around 6 weeks rate iLembe district (Source: KZN DHIS 2015)

Table 6: HIV Positivity Rate (6 weeks) iLembe district (Source: KZN DHIS 2015 report 26 June 2017)

KZ ILEMBE DISTRICT MUNICIPALITY: **1.2 %**								
	local municipality	**2015: HIV Positivity Rate (6 weeks)**					**NUM %**	**DEN %**
1	kz Maphumulo local municipality	0.29	%	(1	/	349)	2.63 %	11.21 %
2	kz Ndwedwe local municipality	0.46	%	(3	/	647)	7.89 %	20.79 %
3	kz Mandeni local municipality	0.87	%	(5	/	577)	13.16 %	18.54 %
4	kz KwaDukuza local municipality	1.88	%	(29	/	1539)	76.32 %	49.45 %

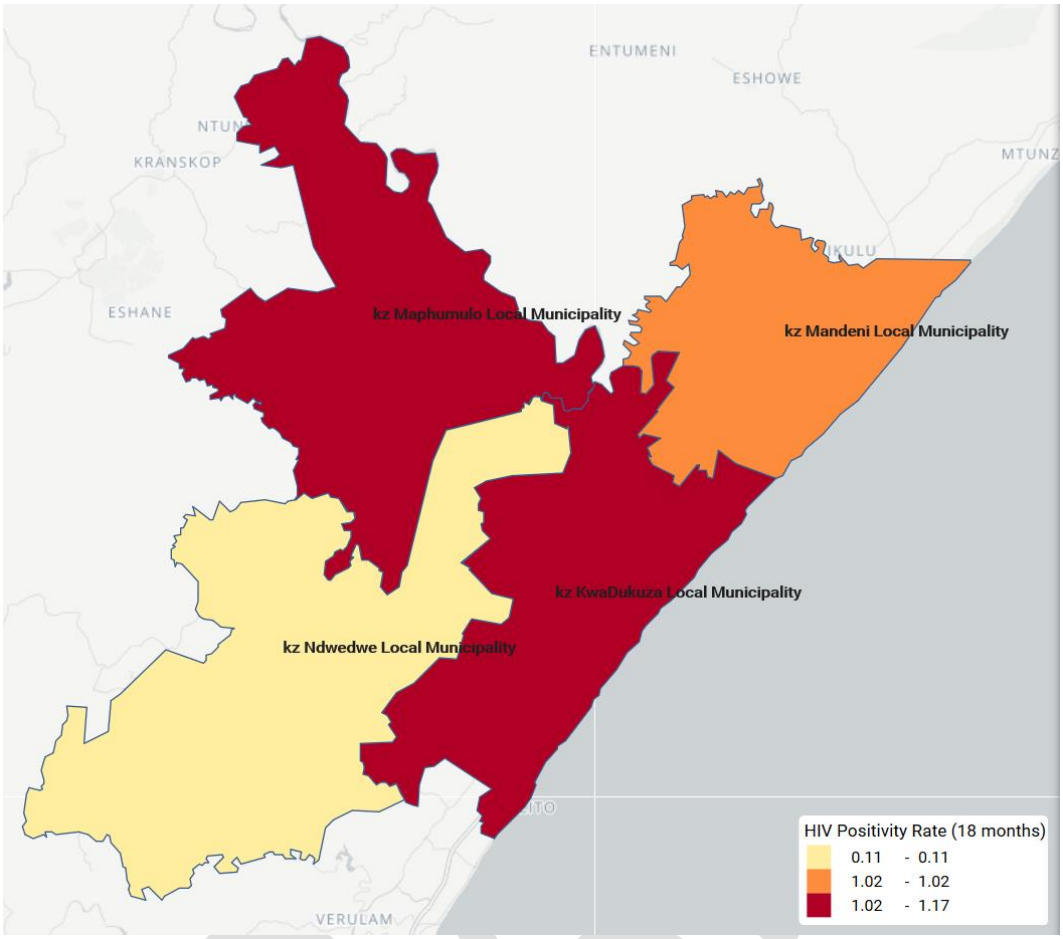

Figure 10: Infant rapid HIV test around 18 months positive rate iLembe district (Source: KZN DHIS 2015)

Table 7: HIV Positivity Rate (18 months) iLembe district (Source: KZN DHIS 2015 report 26 June 2017)

KZ ILEMBE DISTRICT MUNICIPALITY: **1 %**								
	local municipality	**2015 : HIV Positivity Rate (18 months)**					**NUM %**	**DEN %**
1	kz Ndwedwe local municipality	0.11	%	(1	/	951)	1.69 %	15.34 %
2	kz Mandeni local municipality	1.02	%	(11	/	1077)	18.64 %	17.37 %
3	kz Maphumulo local municipality	1.02	%	(13	/	1270)	22.03 %	20.49 %
4	kz KwaDukuza local municipality	1.17	%	(34	/	2901)	57.63 %	46.80 %

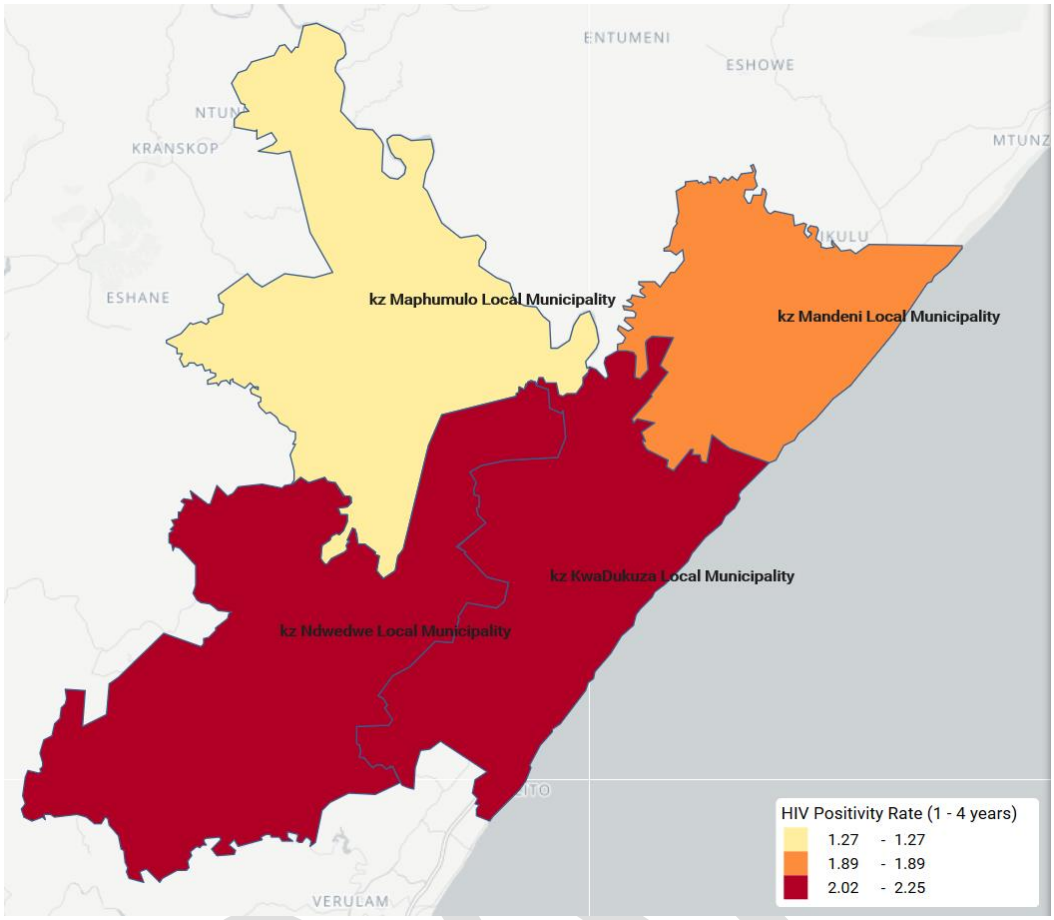

Figure 11: HIV test positive child 12-59 months rate iLembe district (Source: KZN DHIS 2015)

Table 8: HIV Positivity Rate (12-59 months) iLembe district (Source: KZN DHIS 2015 report 26 June 2017)

KZ ILEMBE DISTRICT MUNICIPALITY: **1.9 %**								
	local municipality	**2015 : HIV Positivity Rate (1 - 4 years)**					**NUM %**	**DEN %**
1	kz Maphumulo local municipality	1.27	%	(31	/	2436)	15.27 %	23.07 %
2	kz Mandeni local municipality	1.89	%	(32	/	1692)	15.76 %	16.03 %
3	kz Ndwedwe local municipality	2.02	%	(43	/	2126)	21.18 %	20.14 %
4	kz KwaDukuza local municipality	2.25	%	(97	/	4303)	47.78 %	40.76 %

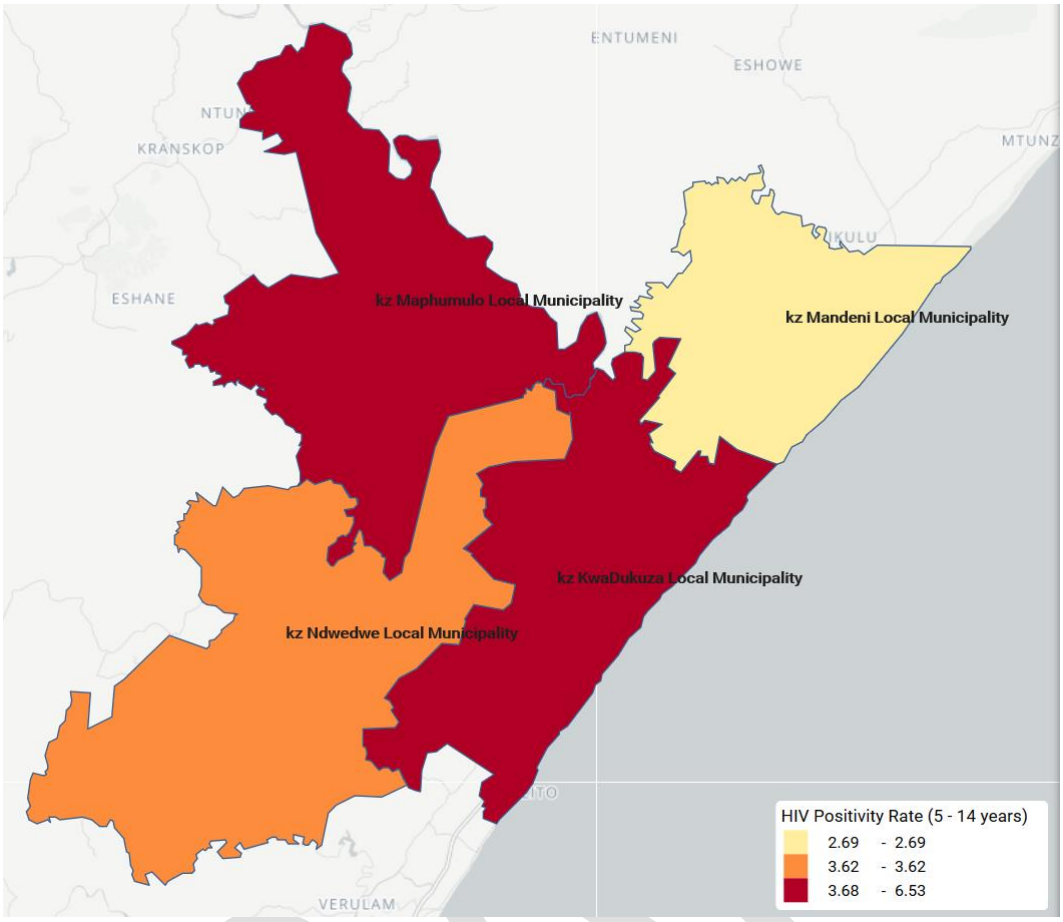

Figure 12: HIV test positive child 5-14 years rate iLembe district (Source: KZN DHIS 2015)

Table 9: HIV Positivity Rate (5 - 14 years) iLembe district (Source: KZN DHIS 2015 report 26 June 2017)

KZ ILEMBE DISTRICT MUNICIPALITY: **4 %**								
	local municipality	**2015 : HIV Positivity Rate (5 - 14 years)**					**NUM %**	**DEN %**
1	kz Mandeni local municipality	2.69	%	(34	/	1265)	14.59 %	21.93 %
2	kz Ndwedwe local municipality	3.62	%	(71	/	1963)	30.47 %	34.03 %
3	kz Maphumulo local municipality	3.68	%	(49	/	1332)	21.03 %	23.09 %
4	kz KwaDukuza local municipality	6.53	%	(79	/	1209)	33.91 %	20.96 %

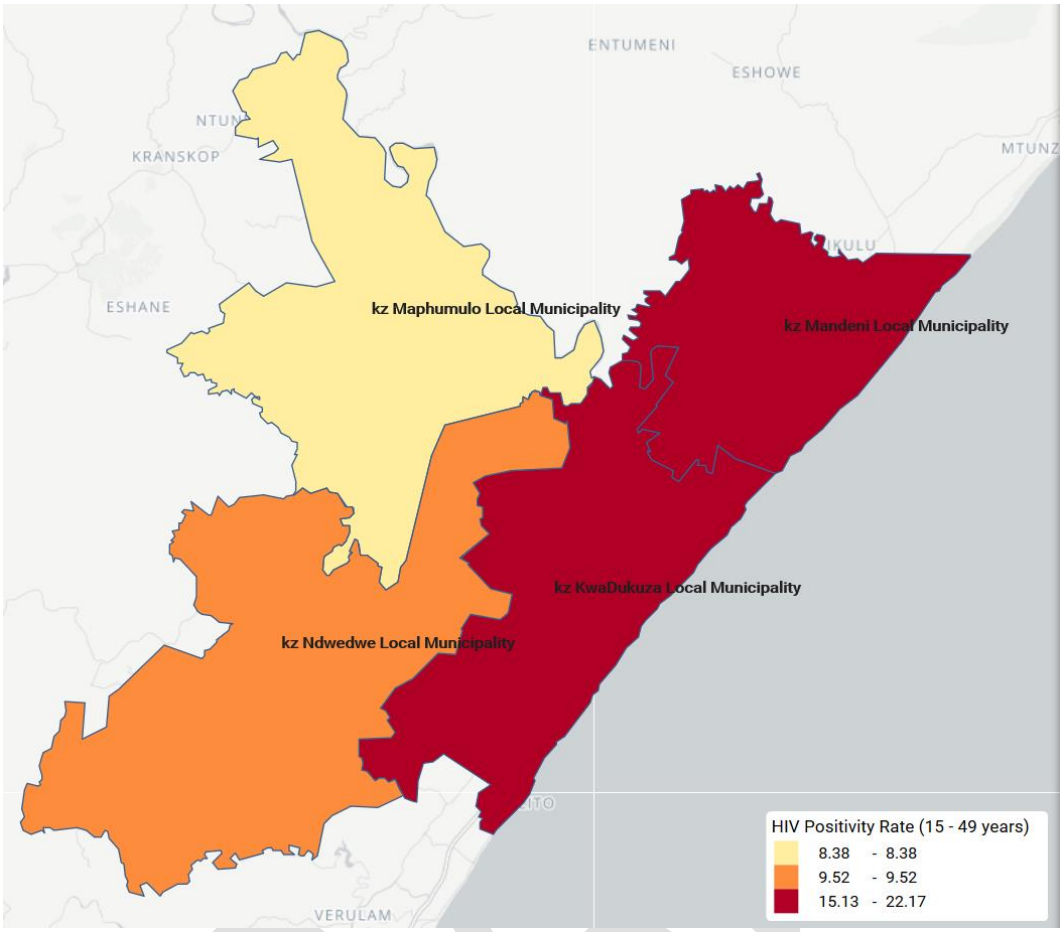

Figure 13: HIV prevalence amongst client tested 15-49 years rate iLembe district (Source: KZN DHIS 2015)

Table 10: HIV Positivity Rate (15 - 49 years) iLembe district (Source: KZN DHIS 2015 report 26 June 2017)

KZ ILEMBE DISTRICT MUNICIPALITY: **14.5 %**								
	local municipality	**2015 : HIV Positivity Rate (15 - 49 years)**					**NUM %**	**DEN %**
1	kz Maphumulo local municipality	8.38	%	(1565	/	18670)	11.10 %	19.25 %
2	kz Ndwedwe local municipality	9.52	%	(2238	/	23514)	15.87 %	24.24 %
3	kz Mandeni local municipality	15.13	%	(3989	/	26368)	28.29 %	27.18 %
4	kz KwaDukuza local municipality	22.17	%	(6309	/	28458)	44.74 %	29.34 %

2.3 TB

The figures that follow reflects the TB burden based on the routine health data collected, collated and reported in health facilities under iLembe District. The definitions for these indicators can be found in Appendix B: Terms, Definitions and calculations.

Due to the small numbers at a local level, it is not included at ward level in this report. See note on small number in Appendix A: Selecting Data for the Profile.

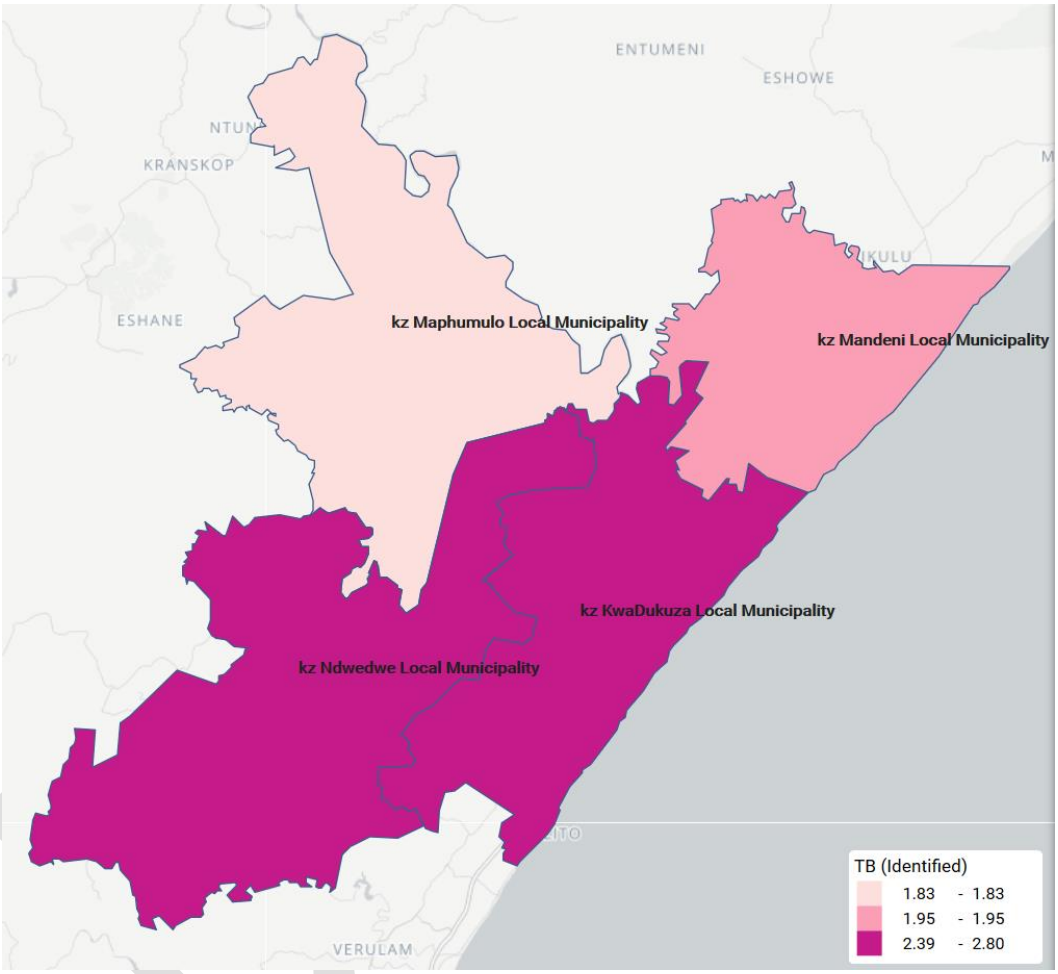

Figure 14: TB (pulmonary) case finding index iLembe district (Source: KZN DHIS 2015)

Table 11: TB (pulmonary) case finding index iLembe district (Source: KZN DHIS 2015 report 26 June 2017)

KZ ILEMBE DISTRICT MUNICIPALITY: **2.3 %**								
	local municipality	**2015 : TB (Identified)**					**NUM %**	**DEN %**
1	kz Maphumulo local municipality	1.83	%	(5289	/	288352)	13.84 %	17.13 %
2	kz Mandeni local municipality	1.95	%	(8606	/	441841)	22.51 %	26.24 %
3	kz KwaDukuza local municipality	2.39	%	(13751	/	575669)	35.97 %	34.19 %
4	kz Ndwedwe local municipality	2.80	%	(10579	/	377770)	27.68 %	22.44 %

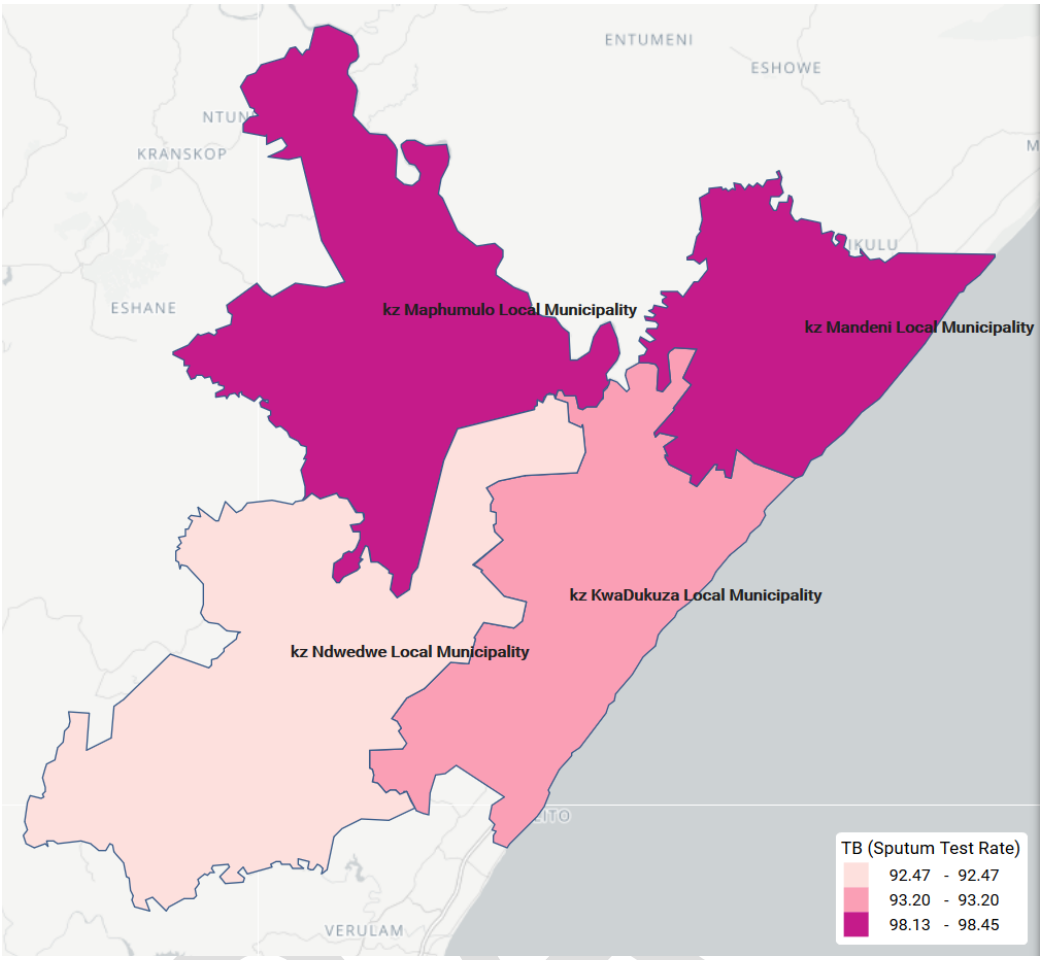

Figure 15: TB suspect sputum test rate iLembe district (Source: KZN DHIS 2015)

Table 12: TB (Sputum Test Rate) iLembe district (Source: KZN DHIS 2015 report 26 June 2017)

KZ ILEMBE DISTRICT MUNICIPALITY: **94.8 %**								
	local municipality	**2015 : TB (Sputum Test Rate)**					**NUM %**	**DEN %**
1	kz Ndwedwe local municipality	92.47	%	(10579	/	11441)	27.68 %	28.36 %
2	kz KwaDukuza local municipality	93.20	%	(13751	/	14755)	35.97 %	36.58 %
3	kz Mandeni local municipality	98.13	%	(8606	/	8770)	22.51 %	21.74 %
4	kz Maphumulo local municipality	98.45	%	(5289	/	5372)	13.84 %	13.32 %

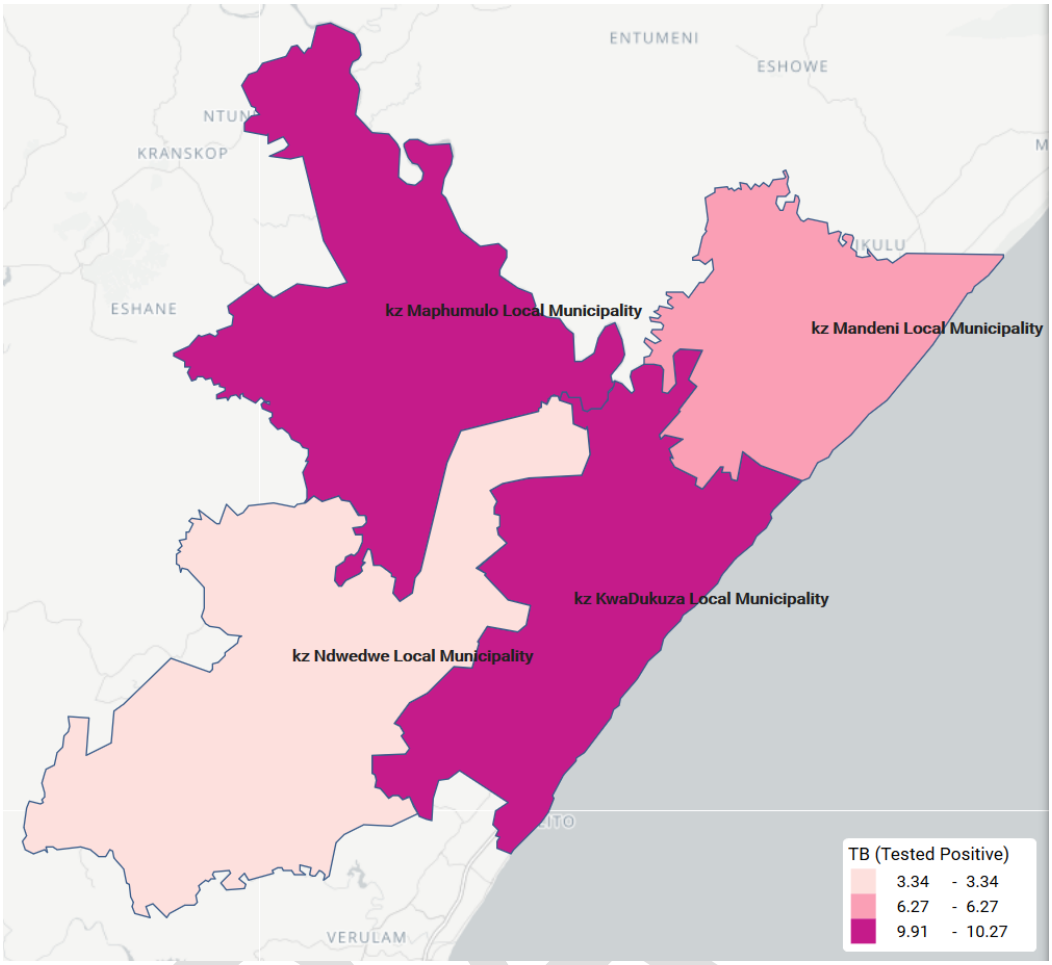

Figure 16: TB suspect smear positive rate iLembe district (Source: KZN DHIS 2015)

Table 13: TB suspect smear positive rate iLembe district (Source: KZN DHIS 2015 report 26 June 2017)

KZ ILEMBE DISTRICT MUNICIPALITY: **7.3 %**									
	local municipality	**2015 : TB (Tested Positive)**					**NUM %**	**DEN %**
1	kz Ndwedwe local municipality	3.34	%	(353	/	10579)	12.61 %	27.68 %
2	kz Mandeni local municipality	6.27	%	(540	/	8606)	19.29 %	22.51 %
3	kz KwaDukuza local municipality	9.91	%	(1363	/	13751)	48.70 %	35.97 %
4	kz Maphumulo local municipality	10.27	%	(543	/	5289)	19.40 %	13.84 %

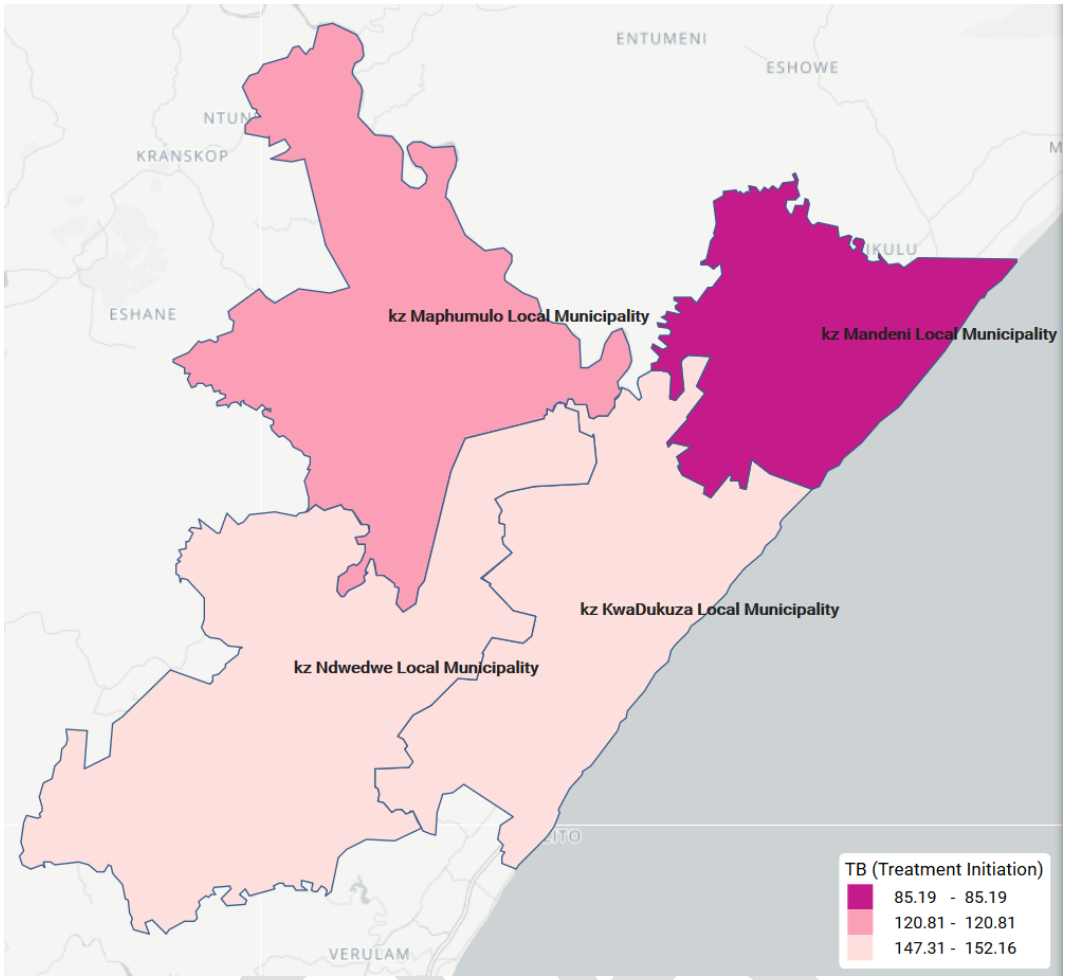

Figure 17: TB suspect treatment initiation rate iLembe district (Source: KZN DHIS 2015)

Table 14: TB suspect treatment initiation rate iLembe district (Source: KZN DHIS 2015 report 26 June 2017)

KZ ILEMBE DISTRICT MUNICIPALITY: **132.5 %**								
	local municipality	**2015 : TB (Treatment Initiation)**					**NUM %**	**DEN %**
1	kz Mandeni local municipality	85.19	%	(460	/	540)	12.40 %	19.29 %
2	kz Maphumulo local municipality	120.81	%	(656	/	543)	17.68 %	19.40 %
3	kz Ndwedwe local municipality	147.31	%	(520	/	353)	14.02 %	12.61 %
4	kz KwaDukuza local municipality	152.16	%	(2074	/	1363)	55.90 %	48.70 %

2.4 STIs

Sexually transmitted infections (STIs) are a major risk factor to the human immunodeficiency virus (HIV) epidemic[1]. The presence of a sexually transmitted infection, such as syphilis, gonorrhoea, or herpes simplex virus infection, greatly increases the risk of acquiring or transmitting HIV infection (by two to three times, in some populations). The HIV-1 infected persons with STIs are at increased risk of transmitting HIV-1 because genital tract shedding of HIV-1 is elevated in the presence of genital tract inflammation[23]. v. In 2014, HIV co-infection amongst STI patients remained relatively high with a HIV co-infection of 30.1% [45] among those with male urethritis syndrome, 40.3% among those with vaginal discharge syndrome and 46.3% among those with genital ulcer syndrome[6] Location is also a factor. Ramjee et.al confirms the high prevalence and incidence of STIs among women living in rural and urban communities of KwaZulu-Natal. Therefore, STI control programmes need to be embedded in HIV care and treatment programmes and vice-versa in order to achieve optimal benefit in ameliorating the impact of HIV, AIDS and STIs.

The figure below reflects the STI burden based on the routine health data collected, collated and reported in health facilities under iLembe District. At this point the most robust data is for Male urethritis syndrome rate. As the data quality for other STI routine health indicators improve, it will be included in updated profiles. The definitions for this indicator can be found in Appendix B: Terms, Definitions and calculations. Due to the small numbers at a local level, it is not included at ward level in this report. See note on small number in Appendix A: Selecting Data for the Profile.

[1] Naidoo, S., Wand, H., & Ramjee, G. (2014). High prevalence and incidence of sexually transmitted infections among women living in Kwazulu-Natal, South Africa. *AIDS Research and Therapy*, 11–31. http://doi.org/10.1186/1742-6405-11-31

[2] Cohen, M., Hoffman, I., Royce, R., Kazembe, P., Dyer, J., & Daly, C. (1997). Reduction of concentration of HIV-1 in semen after treatment of urethritis: implications for prevention of sexual transmission of HIV-1. AIDSCAP Malawi Research Group. *Lancet*, *349*(9096), 1868–73.

[3] Johnson, L., & Lewis, D. (2008). The effect of genital tract infections on HIV-1 shedding in the genital tract: a systematic review and meta-analysis. *Sex Transm Dis*, *35*(11), 946–59.

[4] Cohen, M., Hoffman, I., Royce, R., Kazembe, P., Dyer, J., & Daly, C. (1997). Reduction of concentration of HIV-1 in semen after treatment of urethritis: implications for prevention of sexual transmission of HIV-1. AIDSCAP Malawi Research Group. *Lancet*, *349*(9096), 1868–73.

[5] Johnson, L., & Lewis, D. (2008). The effect of genital tract infections on HIV-1 shedding in the genital tract: a systematic review and meta-analysis. *Sex Transm Dis*, *35*(11), 946–59.

[6] Naidoo, S., Wand, H., & Ramjee, G. (2014). High prevalence and incidence of sexually transmitted infections among women living in Kwazulu-Natal, South Africa. *AIDS Research and Therapy*, 11–31. http://doi.org/10.1186/1742-6405-11-31

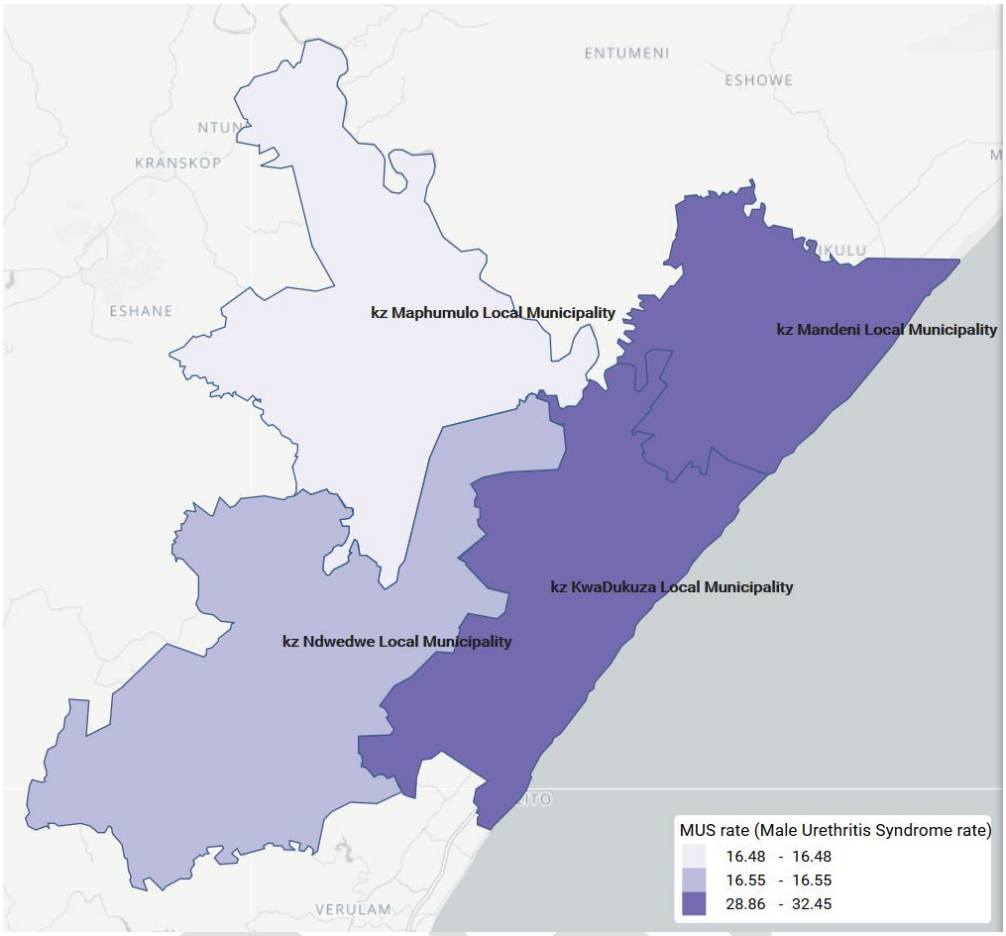

Figure 18: Male urethritis syndrome rate iLembe district (Source: KZN DHIS 2015)

Table 15: Male urethritis syndrome rate iLembe district (Source: KZN DHIS 2015 report 26 June 2017)

KZ ILEMBE DISTRICT MUNICIPALITY: **27.9 %**								
	local municipality	**2015 : MUS rate (Male Urethritis Syndrome rate)**					**NUM %**	**DEN %**
1	kz Maphumulo local municipality	16.48	%	(504	/	3059)	7.12 %	12.04 %
2	kz Ndwedwe local municipality	16.55	%	(443	/	2676)	6.26 %	10.53 %
3	kz Mandeni local municipality	28.86	%	(2030	/	7034)	28.69 %	27.69 %
4	kz KwaDukuza local municipality	32.45	%	(4099	/	12633)	57.93 %	49.73 %

3. Associated risk profile

3.1 Biomedical Profile

3.1.1 HIV Testing

Awareness of one's HIV status through HIV Testing Services (HTS) is pivotal to accessing prevention, care services, and ARV treatment which mitigate the impact of HIV [7]. It is therefore important to determine the success of routine HIV testing and counselling by the department of health. From the National 2013 HIV testing campaign, nearly two-thirds of respondents (65.5%) indicated that they had tested for HIV with females reporting higher rates of testing (71.5%) than of males (59%)[8]. 78% of adults aged 25–49 years reported testing compared to youth aged 15–24 years (50.6%) and the elderly (aged 50 years and older) (54.8%)[9].

Stakeholder and community engagement workshops revealed the following about ***HIV Testing Services*** in the area:

- HIV Testing services are offered at the Sundimbili CHC, a Mobile Clinic and a testing site in Sundimbili Plaza. Love Life also offers HIV testing. It was felt that the availability of this service is sufficient;
- Infants are tested as part of the PMCTCT programme if their mothers are enrolled in the programme;
- Men in general are averse to testing;
- Only pregnant women who attend the clinic, men and boys who want to go for circumcision and people who are already sick are the ones that test;
- General population and vulnerable populations do not test unless they are sick, pregnant, or want to be circumcised; and
- However, outreach services to underserved areas such as near Isithebe and vulnerable populations such as sex workers, young girls and boys, as well as blessers would improve uptake.

3.1.2 Circumcision

Voluntary medical male circumcision (VMMC) is being scaled up in the country because it has been shown to be partially effective in reducing HIV infection among males[10]. Nationally, there are reported about 46.4% circumcisions, with a significant lower percentage of men aged 15–19 years compared to all age groups. High percentage of black Africans (52.4%) reported that they were circumcised compared to the other three race groups[11].

[7] Shisana, O., T. Rehle, et al. (2014). South African National HIV Prevalence, Incidence and Behaviour Survey,2012. Cape Town, HSRC Press.
[8] ibid
[9] ibid
[10] SANAC. 2011. NSP 2012–2016
[11] Shisana, O., T. Rehle, et al. (2014). South African National HIV Prevalence, Incidence and Behaviour Survey,2012. Cape Town, HSRC Press.

There is a perception in the community that circumcision is low because there is no cultural circumcision in KwaZulu Natal and medical circumcision is low in Mandeni.

3.1.3 ARV treatment

Stakeholder and community engagement workshops revealed the following about ***ARV treatment*** in the area:

- ART is available but there is not enough public knowledge about it;
- Loss to follow up happens because community members give the wrong informational and cannot be traced;
- The change in ART from many to one pill has had a positive impact on HIV treatment
- There are barriers to accessing ART. This includes:
    - Lack of knowledge about ART;
    - Long queues at Sundumbili Clinic;
    - Lack of disclosure in the community makes people default because they don't want to be found;
    - There is still conflict between western treatment such as ART and traditional therapies;
- Adherence is weak because of environmental stressors like lack of transport, lack of food to take medication and general pressure of patients for survival;
- CCMDD is still affected by stigma because there are now long queues at clicks and everyone knows those people are there for ART.

3.1.4 PEP and PrEP

The community does not know about PrEP and they are not sure about PEP.

3.1.5 Lubricant

The community does not know about Lubricants.

3.2 Behaviour that influences risk for HIV infection

The reported high incidence among young women aged women aged 15–24 years (2.54; 2.04–3.04) approximately 116 000 new infections compared to young men (0.55; 0.45–0.65) approximately 26 000 new infections[12] calls for need to address the associated social factors such as age-disparate relationships, particularly at a much local level. However, data on factors influencing risk of HIV infection e.g. condom use, multiple sexual partnerships, intergenerational sex, transactional sex, risky sexual practices (anal sex) are not routinely collected. Such data are mostly obtained from independent behavioural surveys[13], and are reported at provincial level which is much higher that district, local municipalities, and high burden areas. There is need for the department of health to devise approaches to routinely collect quantitative data on sexual risk behaviours in identified local levels and/or high burden areas.

3.2.1 HIV Knowledge

The following was discussed around ***HIV knowledge*** during the stakeholder and community engagement workshops in the area:

- Parents don't educate their children about sex;
- there are not enough health and education campaigns;
- Not every clinic has a school health team;
- There are also young girls without parental guidance;
- All institutions of society are scared to educate about sex; and
- Circumcised men have unprotected sex because they believe that they will not be infected.

3.2.2 Sexual risky behaviours

Some girls who want to pass virginity tests practice anal sex but it is not very common

3.2.3 Substance abuse

The following was discussed about ***substance abuse*** during the stakeholder and community engagement workshops in the area:

- Alcohol and substance abuse is very high which contributes to a lot of unprotected sex;
- There are a lot of taverns in Mandeni so alcohol is very accessible; and
- Drugs are also easily available.

3.2.4 Condoms

Stakeholder and community engagement workshops revealed the following about ***condoms use and availability*** in the area:

[12] Shisana, O., T. Rehle, et al. (2014). South African National HIV Prevalence, Incidence and Behaviour Survey,2012. Cape Town, HSRC Press.
[13] ibid

- Female condoms are available but are not mostly used. They take long to insert and delay intercourse;
- Male condoms are the ones mostly available and are used a lot;
- Some don't use condoms because of their religious beliefs that procreation should not be tampered with; and
- Those who are married do not want to use condoms because they say they paid lobola for their wives which free them from protection.

In Figure 19 and Figure 20 the condom distribution for females and males (annualised) are reflected at local municipality level in iLembe District. The definitions for these indicators can be found in Appendix B: Terms, Definitions and calculations.

Due to the small numbers at a local level, it is not included at ward level in this report. See note on small number in Appendix A: Selecting Data for the Profile.

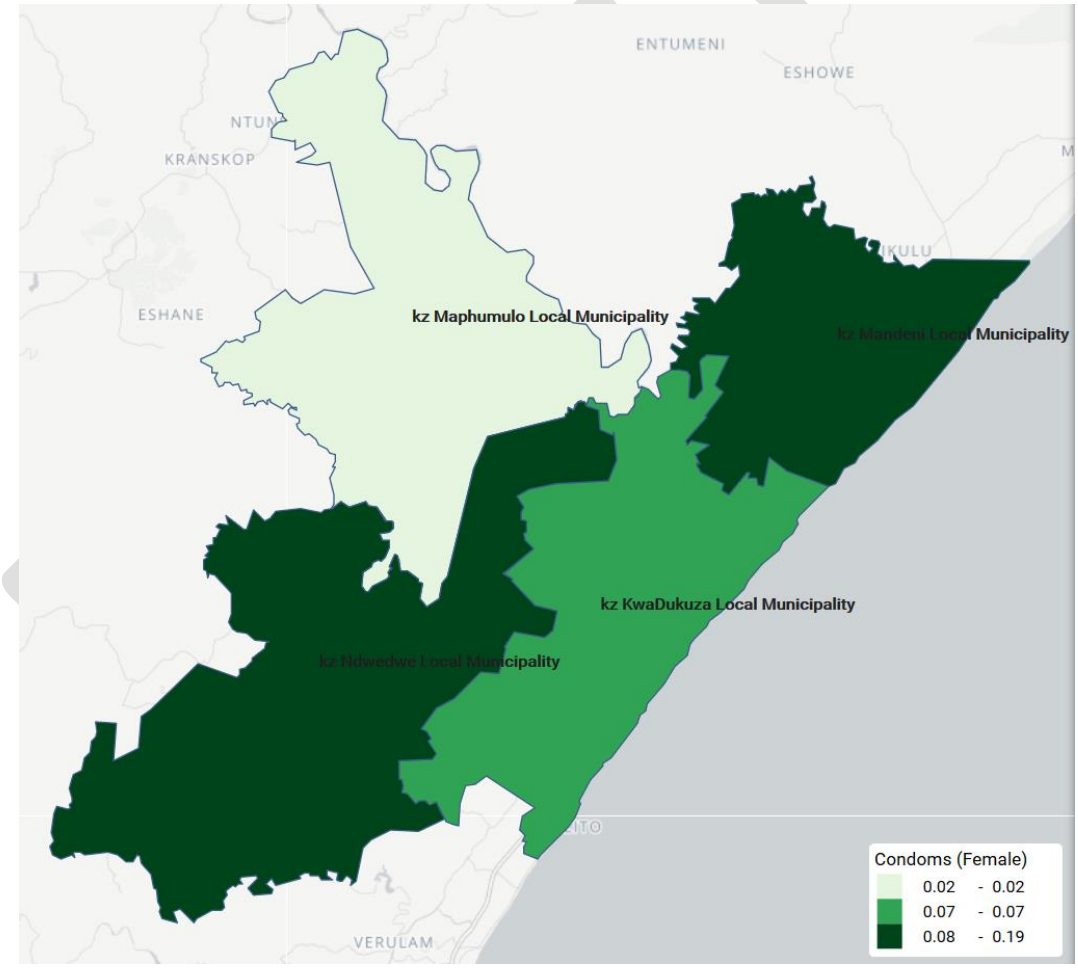

Figure 19: Female condom distribution rate iLembe district (Source: KZN DHIS 2015)

Table 16: Female condom distribution rate iLembe district (Source: KZN DHIS 2015 report 26 June 2017)

KZ ILEMBE DISTRICT MUNICIPALITY: **9.1 No**								
	local municipality	**2015 : Condoms (Female)**					**NUM %**	**DEN %**
1	kz Maphumulo local municipality	0.02	No	(8809	/	462732)	3.28 %	15.67 %

2	kz KwaDukuza local municipality	0.07	No	(78665	/	1149648)	29.30 %	38.94 %
3	kz Ndwedwe local municipality	0.08	No	(52002	/	661380)	19.37 %	22.40 %
4	kz Mandeni local municipality	0.19	No	(129036	/	678396)	48.06 %	22.98 %

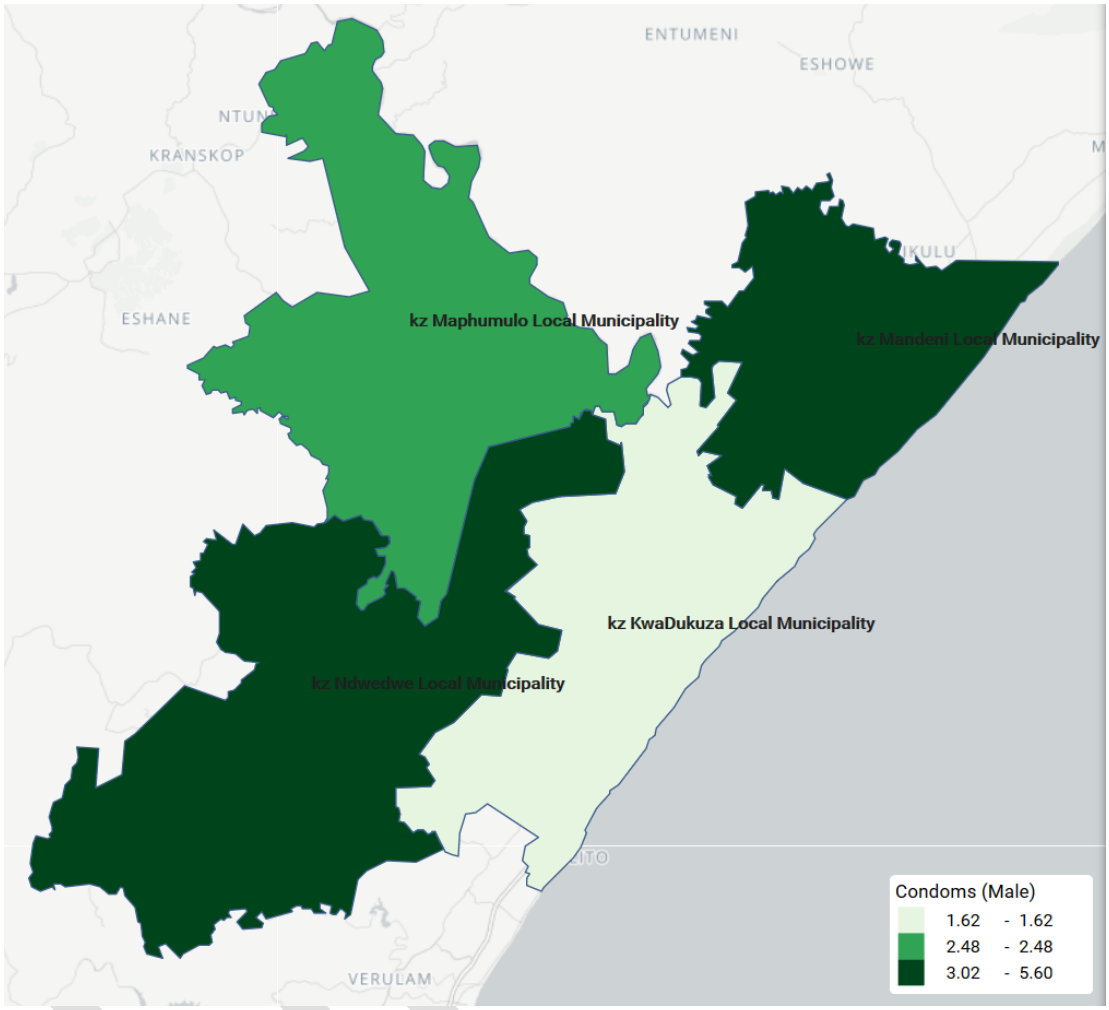

Figure 20: Male condom distribution rate iLembe district (Source: KZN DHIS 2015)

Table 17: Male condom distribution rate iLembe district (Source: KZN DHIS 2015 report 26 June 2017)

KZ ILEMBE DISTRICT MUNICIPALITY: **292.4 No**								
	local municipality	**2015 : Condoms (Male)**					**NUM %**	**DEN %**
1	kz KwaDukuza local municipality	1.62	No	(1787393	/	1103880)	24.34 %	43.95 %
2	kz Maphumulo local municipality	2.48	No	(759819	/	306240)	10.35 %	12.19 %
3	kz Ndwedwe local municipality	3.02	No	(1602470	/	530868)	21.82 %	21.14 %
4	kz Mandeni local municipality	5.60	No	(3193579	/	570768)	43.49 %	22.72 %

3.2.5 Key and vulnerable populations

Figure 21 is a reflection of under 18-year-old girls that deliver in facilities. This is a proxy for teenage pregnancies in the community. The indicator definition is included in Appendix B: Terms, Definitions and calculations.

Due to the small numbers at a local level, it is not included at ward level in this report. See note on small number in Appendix A: Selecting Data for the Profile.

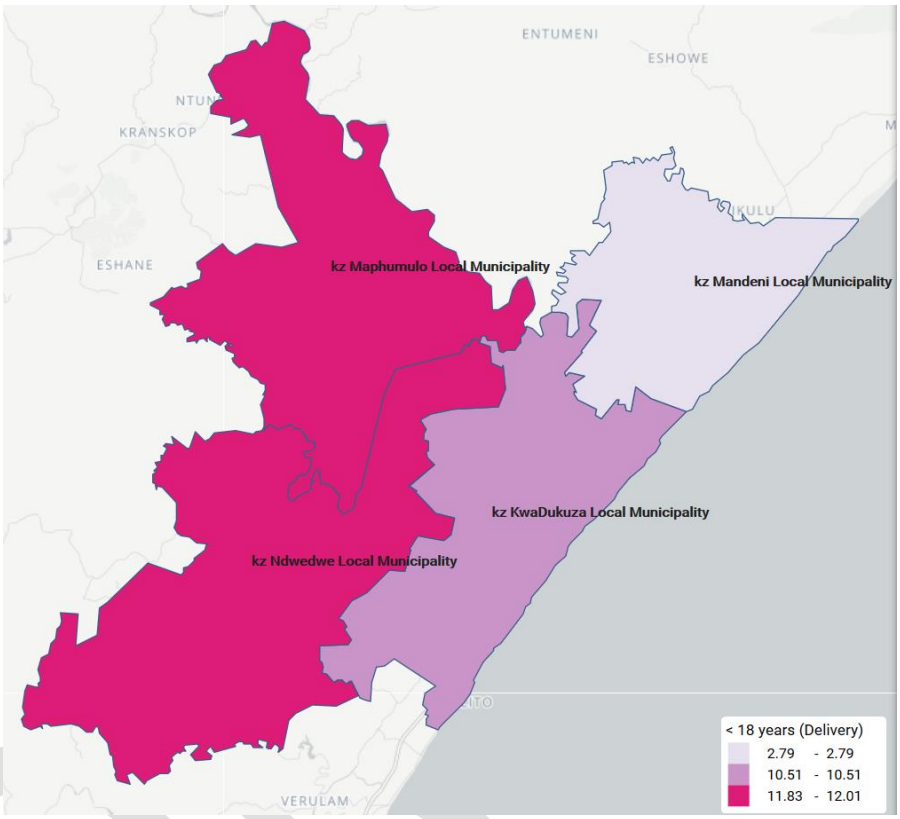

Figure 21: Teenage Pregnancy rate iLembe district (Source: KZN DHIS 2015)

Table 18: Teenage Pregnancy rate iLembe district (Source: KZN DHIS 2015 report 26 June 2017)

KZ ILEMBE DISTRICT MUNICIPALITY: **10 %**									
	local municipality	**2015 : < 18 years (Delivery)**						**NUM %**	**DEN %**
1	kz Mandeni local municipality	2.79	%	(36	/	1289)		3.39 %	12.11 %
2	kz KwaDukuza local municipality	10.51	%	(669	/	6366)		62.99 %	59.81 %
3	kz Ndwedwe local municipality	11.83	%	(130	/	1099)		12.24 %	10.33 %
4	kz Maphumulo local municipality	12.01	%	(227	/	1890)		21.37 %	17.76 %

Table 19 reflects different discussions during the community engagement that relates to key and vulnerable populations specifically.

Table 19: Key and vulnerable population groups

Key and vulnerable population group	Stakeholder and community feedback
Young women	Young girls are the main vulnerable population for HIV infection. Because of poverty they cannot provide for their needs – both survival like transport to school and food; and aspirational needs like phones and clothes. Peer pressure from friends and boyfriends make them want things they can't afford so they practice transactional sex. Because of gender inequality and age mixing relationships young girls cannot negotiate condoms so they get exposed to HIV by older men who can afford to maintain them financially.
Youth	Youth are affected by alcohol and substance abuse because they don't go to school or study further and there are no recreational facilities so they get bored. When they are under the influence of alcohol and drugs they don't make healthy decisions about sex.
Sex workers	Sex workers are not in the community but they service contract workers at Isithebe and truck drivers. The sex workers are at Isithebe Industrial Park, Highview Park and Sasol Garage.
Orphans and vulnerable children	Child headed households are very vulnerable to people who exploit their need for food, uniform and other things they need. Because these needs are not met they are forced into sex work or transactional sex where they have no choice about condoms.
Drug users	Drug use is very high and leads to poor choices, poor decision-making when having sex. Also, drugs will make a young person to have sex for quick money so they can get their drugs.
Disabled	Intellectually disabled people get taken advantage of for their grants and other benefits. They don't know about condoms and can't ask for condoms because they are dependent on their boyfriends/girlfriends.

3.3 Social and structural factors that influence HIV risk

3.3.1 Orphan hood

In 2011, the proportion of orphans was especially high in the rural Wards. High level of HIV prevalence in KwaZulu-Natal had been associated with high proportion of orphans[14] , albeit at provincial level. The detail for Wards 5, 7, 12, 13, 14, 15 that forms the catchment area for Sundimbili CHC, are highlighted in the table below.

Table 20: Orphan hood for Census 2011 at Ward level in Mandeni local municipality

Ward	Maternal orphans			Paternal orphans			Double orphans		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Ward 1	81	81	162	301	304	605	171	178	349
Ward 2	98	92	190	305	285	590	141	138	279
Ward 3	58	60	119	162	143	304	47	58	104
Ward 4	47	41	88	246	266	512	72	86	158
Ward 5	69	62	131	245	247	491	127	97	224
Ward 6	70	39	109	316	308	624	123	118	241
Ward 7	72	72	145	233	256	489	84	73	157
Ward 8	108	95	203	363	335	698	172	117	289
Ward 9	97	113	209	279	332	611	143	125	268
Ward 10	54	57	110	268	250	519	101	83	184
Ward 11	88	77	165	328	294	621	155	115	269
Ward 12	133	78	211	451	461	913	195	193	388
Ward 13	19	21	40	82	83	166	51	36	87
Ward 14	80	69	149	257	273	530	124	96	220
Ward 15	21	28	50	100	91	191	46	51	97
Ward 16	76	81	157	291	364	655	127	98	225
Ward 17	32	24	56	139	147	286	43	32	75

[14] Shisana, O., T. Rehle, et al. (2014). South African National HIV Prevalence, Incidence and Behaviour Survey,2012. Cape Town, HSRC Press.

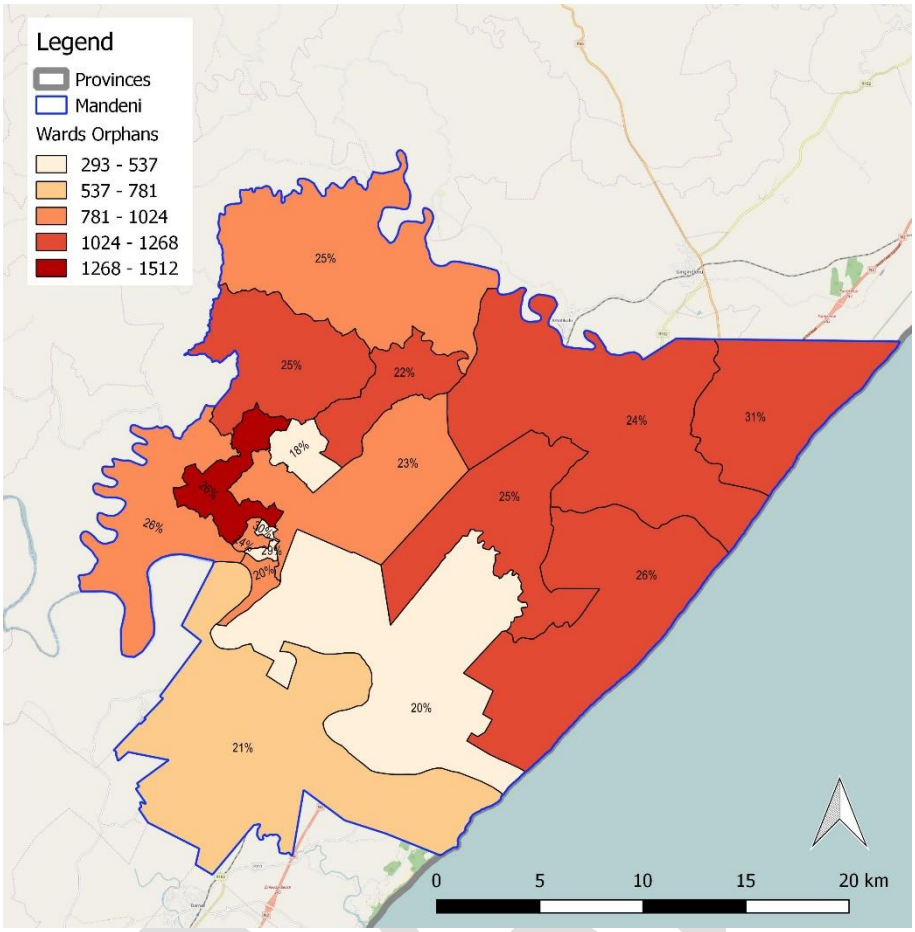

Figure 22: Total number of Orphans with percentage that are double orphans per ward (Source Census 2011)

The following was identified as associated risks for ***Orphans and vulnerable children***:

- There is a lot of sexual abuse in homes that people sort out "inside" – they don't report it to the authorities and if the child is infected there is no way of knowing;
- There are a lot of girls that practice transactional sex from child headed families; and
- Orphan homes can be very vulnerable to older people - they do child trafficking making the home a place for sex for money.

3.3.2 Cultural and Religious Norms

Stakeholder and community engagement workshops revealed the following about ***cultural and religious norm***s:

- According to culture and religion in the area, a woman is only supposed to have sex with her husband but men are allowed to have girlfriends on the side. The men will then bring diseases to the partner and infect her while she is innocent; and
- The community still believe in traditional medication and traditional healers. These practices involve using razor blades which are shared, this leads to infections.

3.3.3 Gender norms and gender-based violence

Stakeholder and community engagement workshops revealed the following about ***gender norms and gender-based violence*** in the area:

- Violence and rapes are rife and this leads to infection because condoms are not used; and
- Young people commit crimes and rape victims because of unemployment and lack of morals.

3.3.4 Stigma

Stakeholder and community engagement workshops revealed the following about ***stigma*** and how this affects HIV in the area:

- Our clinics mix all patients in the same area and this makes people fear going for treatment because they will be seen by families and neighbours who will then know their status;
- People don't disclose their status when they get into relationships because they fear rejection;
- People don't disclose to their families when they are positive, their family is not educated around HIV and when taking care of him/her they get infected.

3.3.5 Poverty

Poverty is measured through the South Africa Multidimensional Poverty Index (SAMPI)[15]. The detail for Wards 5, 7, 12, 13, 14, 15that forms the catchment area for Sundimbili CHC, are highlighted in the table below.

Table 21: Poverty measures for Census 2011 at Ward level in Mandeni local municipality

	Poverty Headcount (H)	Intensity of Poverty (A)	SAMPI (HxA)
kz Mandeni Ward 001	13.7	43.1	0.059
kz Mandeni Ward 002	20.5	41.0	0.084
kz Mandeni Ward 003	5.3	42.8	0.023
kz Mandeni Ward 004	5.3	39.8	0.021
kz Mandeni Ward 005	16.1	41.2	0.066
kz Mandeni Ward 006	20.0	40.5	0.081
kz Mandeni Ward 007	5.4	40.8	0.022
kz Mandeni Ward 008	11.6	42.7	0.050
kz Mandeni Ward 009	20.0	43.0	0.086
kz Mandeni Ward 010	10.8	43.1	0.047
kz Mandeni Ward 011	9.1	38.7	0.035
kz Mandeni Ward 012	9.1	40.5	0.037
kz Mandeni Ward 013	1.1	39.9	0.004
kz Mandeni Ward 014	1.2	38.6	0.005
kz Mandeni Ward 015	1.8	38.4	0.007
kz Mandeni Ward 016	8.0	40.6	0.032

[15] SAMPI is the product of the headcount (proportion of households defined as multi-dimensionally poor using the poverty cut-off) and intensity of poverty (average proportion of indicators in which poor households are deprived). The SAMPI constitutes weighted education, health, assets, and economic activity (unemployment rates) indicators.

	Poverty Headcount (H)	Intensity of Poverty (A)	SAMPI (HxA)
kz Mandeni Ward 017	5.4	38.5	0.021
kz Mandeni	**9.7**	**40.8**	**0.040**

Ward 9 was the poorest Ward in Mandeni local municipality with two out of every ten households (20) being poor (Table 20, Appendix B). with a poverty intensity of 43%. The greatest contributors to high poverty measures in KZN are health (measured by child mortality) and education (measured by years of schooling and school attendance). The Multidimensional Poverty Index for Mandeni local municipality changed between 2001 (Figure 23) and 2011 (Figure 24).

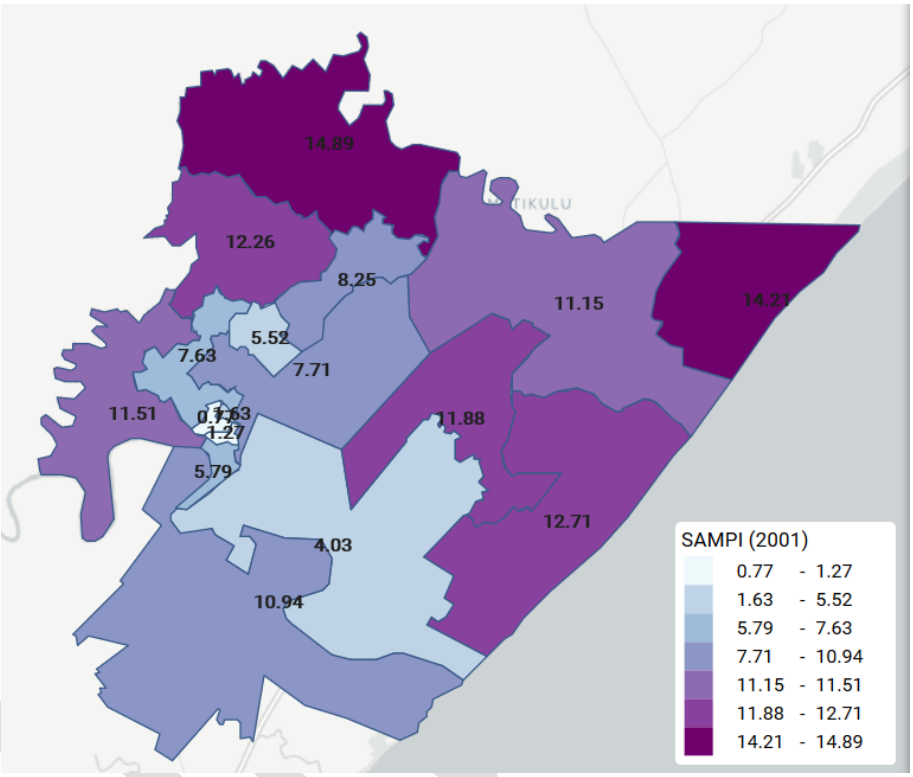

Figure 23: SAMPI (poverty Index) 2001 - ward level, Mandeni local municipality

Table 22: SAMPI (poverty Index) 2001 - ward level, Mandeni local municipality

KZ MANDENI LOCAL MUNICIPALITY: **8.2 %**						
	Ward (2011)	**SAMPI (2001)**				
1	kz Mandeni Ward 014	0.77	%	(0.8	/	100)
2	kz Mandeni Ward 015	1.27	%	(1.3	/	100)
3	kz Mandeni Ward 013	1.63	%	(1.6	/	100)
4	kz Mandeni Ward 003	4.03	%	(4	/	100)
5	kz Mandeni Ward 017	5.52	%	(5.5	/	100)
6	kz Mandeni Ward 007	5.79	%	(5.8	/	100)
7	kz Mandeni Ward 012	7.63	%	(7.6	/	100)
8	kz Mandeni Ward 010	7.71	%	(7.7	/	100)
9	kz Mandeni Ward 016	8.25	%	(8.2	/	100)
10	kz Mandeni Ward 004	10.94	%	(10.9	/	100)
11	kz Mandeni Ward 008	11.15	%	(11.2	/	100)
12	kz Mandeni Ward 005	11.51	%	(11.5	/	100)

KZ MANDENI LOCAL MUNICIPALITY: **8.2 %**						
	Ward (2011)	**SAMPI (2001)**				
13	kz Mandeni Ward 009	11.88	%	(11.9	/	100)
14	kz Mandeni Ward 011	12.26	%	(12.3	/	100)
15	kz Mandeni Ward 002	12.71	%	(12.7	/	100)
16	kz Mandeni Ward 001	14.21	%	(14.2	/	100)
17	kz Mandeni Ward 006	14.89	%	(14.9	/	100)

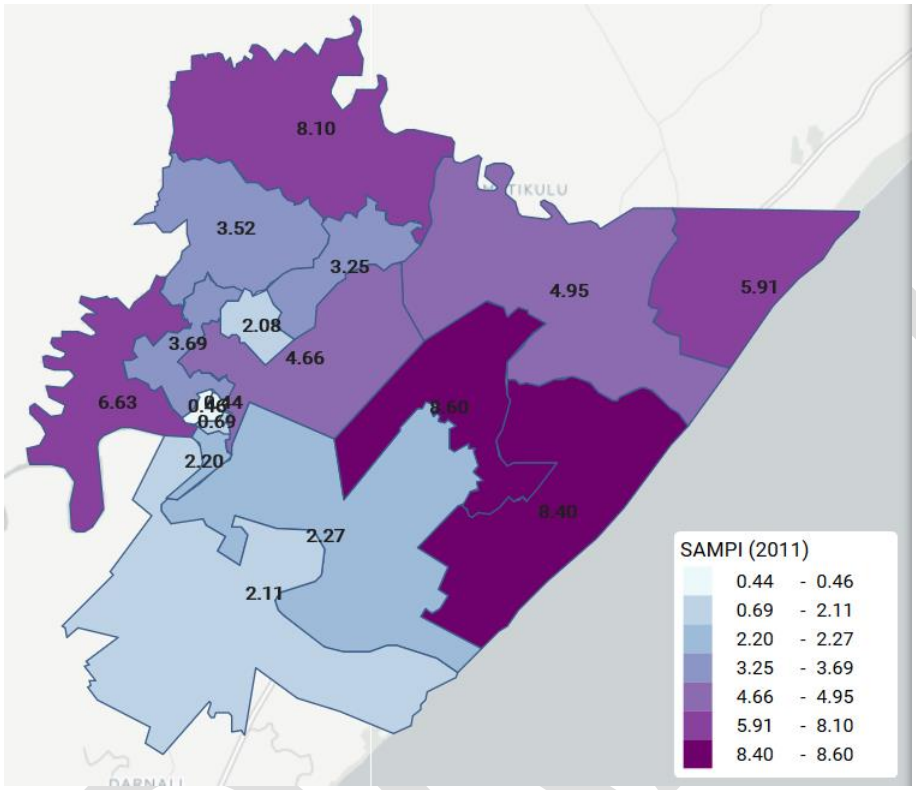

Figure 24: SAMPI (poverty Index) 2011 - ward level, Mandeni local municipality

Table 23: SAMPI (poverty Index) 2011 - ward level, Mandeni local municipality

KZ MANDENI LOCAL MUNICIPALITY: **3.5 %**						
	Ward (2011)	**SAMPI (2011)**				
1	kz Mandeni Ward 013	0.44	%	(0.4	/	100)
2	kz Mandeni Ward 014	0.46	%	(0.5	/	100)
3	kz Mandeni Ward 015	0.69	%	(0.7	/	100)
4	kz Mandeni Ward 017	2.08	%	(2.1	/	100)
5	kz Mandeni Ward 004	2.11	%	(2.1	/	100)
6	kz Mandeni Ward 007	2.20	%	(2.2	/	100)
7	kz Mandeni Ward 003	2.27	%	(2.3	/	100)
8	kz Mandeni Ward 016	3.25	%	(3.2	/	100)
9	kz Mandeni Ward 011	3.52	%	(3.5	/	100)
10	kz Mandeni Ward 012	3.69	%	(3.7	/	100)
11	kz Mandeni Ward 010	4.66	%	(4.7	/	100)
12	kz Mandeni Ward 008	4.95	%	(5	/	100)
13	kz Mandeni Ward 001	5.91	%	(5.9	/	100)

KZ MANDENI LOCAL MUNICIPALITY: **3.5 %**						
	Ward (2011)	**SAMPI (2011)**				
14	kz Mandeni Ward 005	6.63	%	(6.6	/	100)
15	kz Mandeni Ward 006	8.10	%	(8.1	/	100)
16	kz Mandeni Ward 002	8.40	%	(8.4	/	100)
17	kz Mandeni Ward 009	8.60	%	(8.6	/	100)

It is important to note that changes between the 2001 (Figure 25) and 2011 (Figure 26) for SAMPI at ward level. In 2001 the highest headcount amongst the wards in Mandeni was 34.80. This reduced to 20.05 in 2011.

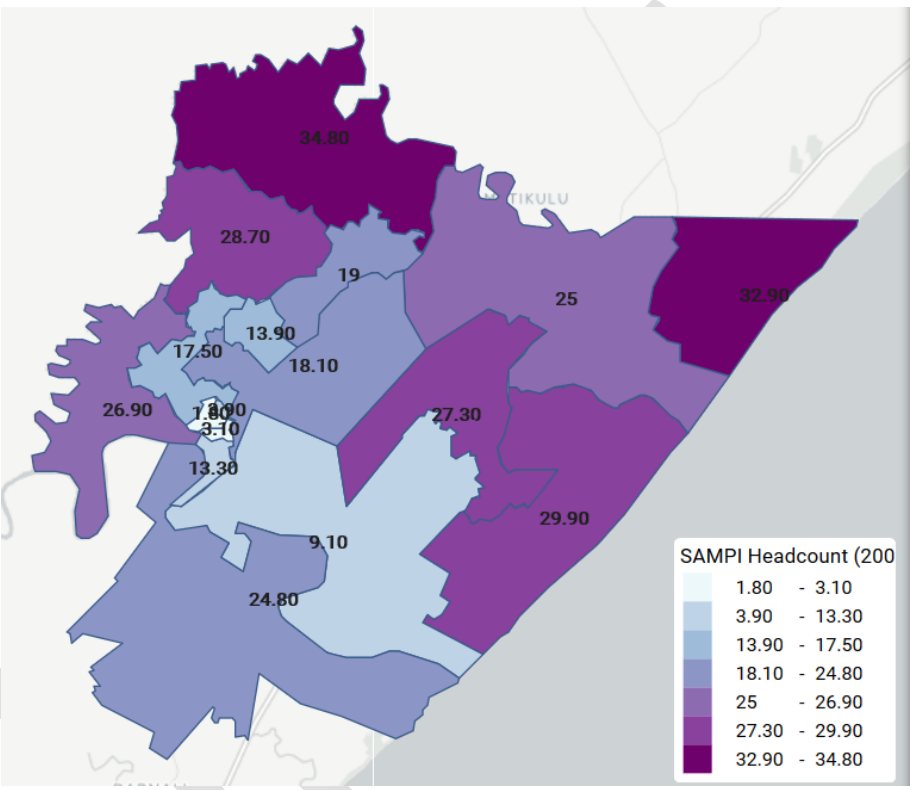

Figure 25: SAMPI 2001 poverty headcount - ward level, Mandeni local municipality

Table 24: SAMPI 2001 poverty headcount - ward level, Mandeni local municipality

KZ MANDENI LOCAL MUNICIPALITY: **19 %**						
	Ward (2011)	**SAMPI Headcount (2001)**				
1	kz Mandeni Ward 014	1.80	%	(1.8	/	100)
2	kz Mandeni Ward 015	3.10	%	(3.1	/	100)
3	kz Mandeni Ward 013	3.90	%	(3.9	/	100)
4	kz Mandeni Ward 003	9.10	%	(9.1	/	100)
5	kz Mandeni Ward 007	13.30	%	(13.3	/	100)
6	kz Mandeni Ward 017	13.90	%	(13.9	/	100)
7	kz Mandeni Ward 012	17.50	%	(17.5	/	100)
8	kz Mandeni Ward 010	18.10	%	(18.1	/	100)
9	kz Mandeni Ward 016	19	%	(19	/	100)
10	kz Mandeni Ward 004	24.80	%	(24.8	/	100)
11	kz Mandeni Ward 008	25	%	(25	/	100)

KZ MANDENI LOCAL MUNICIPALITY: **19 %**						
	Ward (2011)	**SAMPI Headcount (2001)**				
12	kz Mandeni Ward 005	26.90	%	(26.9	/	100)
13	kz Mandeni Ward 009	27.30	%	(27.3	/	100)
14	kz Mandeni Ward 011	28.70	%	(28.7	/	100)
15	kz Mandeni Ward 002	29.90	%	(29.9	/	100)
16	kz Mandeni Ward 001	32.90	%	(32.9	/	100)
17	kz Mandeni Ward 006	34.80	%	(34.8	/	100)

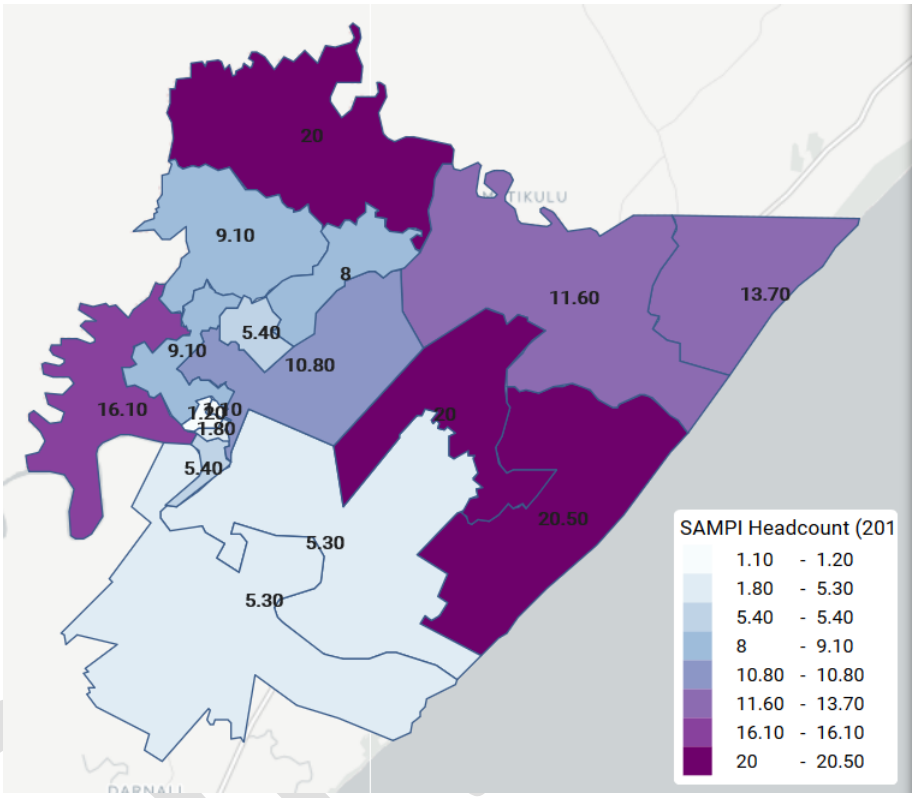

Figure 26: SAMPI 2011 poverty headcount - ward level, Mandeni local municipality

Table 25: SAMPI 2011 poverty headcount - ward level, Mandeni local municipality

KZ MANDENI LOCAL MUNICIPALITY: **9.1 %**						
	Ward (2011)	**SAMPI Headcount (2011)**				
1	kz Mandeni Ward 013	1.10	%	(1.1	/	100)
2	kz Mandeni Ward 014	1.20	%	(1.2	/	100)
3	kz Mandeni Ward 015	1.80	%	(1.8	/	100)
4	kz Mandeni Ward 003	5.30	%	(5.3	/	100)
5	kz Mandeni Ward 004	5.30	%	(5.3	/	100)
6	kz Mandeni Ward 007	5.40	%	(5.4	/	100)
7	kz Mandeni Ward 017	5.40	%	(5.4	/	100)
8	kz Mandeni Ward 016	8	%	(8	/	100)
9	kz Mandeni Ward 011	9.10	%	(9.1	/	100)
10	kz Mandeni Ward 012	9.10	%	(9.1	/	100)
11	kz Mandeni Ward 010	10.80	%	(10.8	/	100)

KZ MANDENI LOCAL MUNICIPALITY: **9.1 %**						
	Ward (2011)	**SAMPI Headcount (2011)**				
12	kz Mandeni Ward 008	11.60	%	(11.6	/	100)
13	kz Mandeni Ward 001	13.70	%	(13.7	/	100)
14	kz Mandeni Ward 005	16.10	%	(16.1	/	100)
15	kz Mandeni Ward 006	20	%	(20	/	100)
16	kz Mandeni Ward 009	20	%	(20	/	100)
17	kz Mandeni Ward 002	20.50	%	(20.5	/	100)

Stakeholder and community engagement workshops revealed the following about ***poverty*** and how this affects HIV in the area:

- The husband does not provide for the wife and she ends up looking for help outside and gets infected because she has multiple partners and unprotected sex;
- There are generational problems with grannies looking after children so thy can't discuss sex with the grandchildren who remain uneducated about healthy sexual choices;
- Poverty is causing young girls between the age of 13/16-35 to engage in transactional sex to meet their needs; and
- Festive season also causes the young girls to be involved in transactional sex because they want money for entertainment.

3.3.6 Employment

In Mandeni local municipality, 30% of the female population at economically active age is employed while 38% of the economically active males are employed. See Figure 27 below.

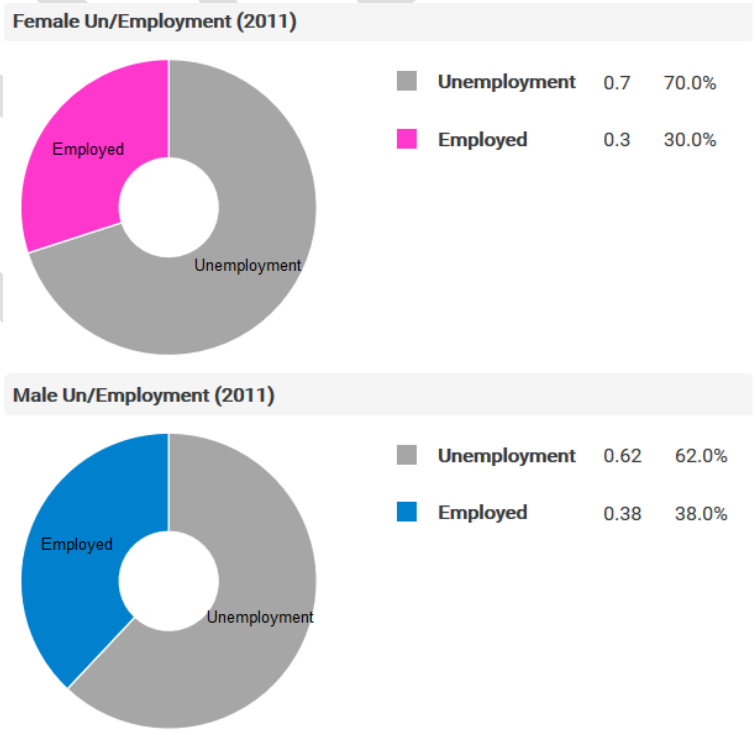

Figure 27: Female and Male employment Mandeni local municipality (Source Census 2011)

Unemployment of youth in Mandeni local municipality is at 70.6%. Almost three quarters of the youth in the area was therefore unemployed at the time of the Census.

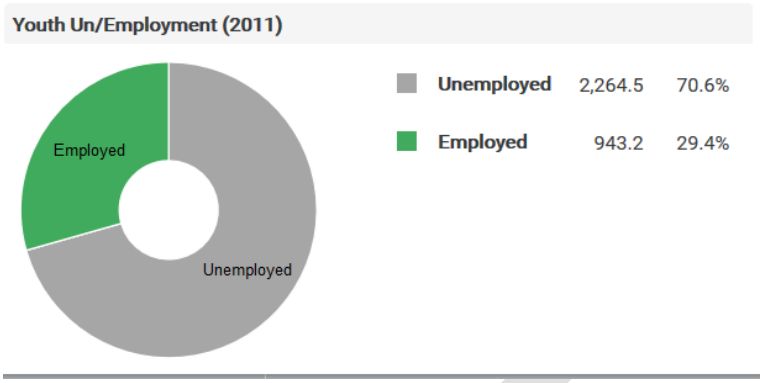

Figure 28: Youth unemployment Mandeni local municipality (source Census 2011)

In comparison with the Mandeni local municipality a bigger percentage of females and males are employed from the total population in the Sundimbili CHC catchment area. In this area 34% of the female population and 40% of the male population is employed (see Figure 29)

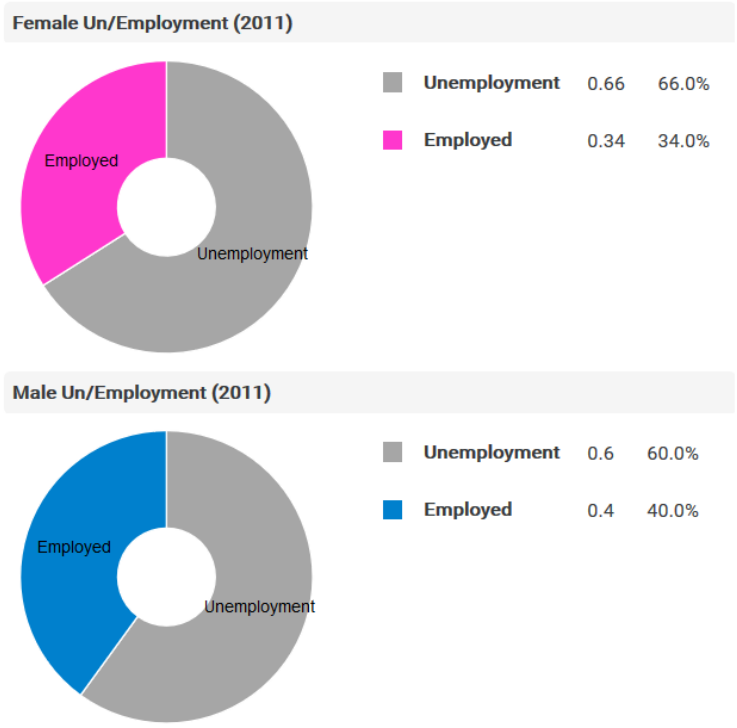

Figure 29: Female and Male employment Sundimbili CHC catchment area (Source Census 2011)

Nearly the same percentage of the youth (70.1%) are unemployed in the Sundimbili CHC catchment area than the Mandeni local municipality (70.6%).

Figure 30: Youth unemployment Sundimbili CHC catchment area (source Census 2011)

During the stakeholder and community engagement workshops the following was said about ***employment*** and how this affects HIV in the area:

- Those who are unemployed have enough time to do anything and end up sleeping with many people and get infected. They also sleep around because they need money to buy things;
- People come to stay and work at Isithebe and sleep with young girls in exchange for money;
- Girls from well-off families do not engage in such behaviours.

Stakeholder and community engagement workshops felt that the ***types of settlements*** have the following influences in the area:

- The rooms are shared and children sleep with parents and also sleep with them sexually;
- Congestion means there no boundaries and young people follow their parents' example.

3.3.7 Migration patterns in the area

The following was identified as implications of ***migration patterns*** in the area on the associated risk of HIV:

- Internal migration occurs by the attraction of jobs at Isithebe Industrial Park;
- There are a lot of immigrants in the informal settlements who come to stay and work and use the young girls for sex;
- Parents that work elsewhere don't supervise their children; and
- Foreign nationals have opened tuck shops and taverns frequented by young people and there is also drug abuse taking place.

3.3.8 Education and literacy

The community noted that there are no further education and training opportunities after school or in place of school.

3.3.9 Hate crimes – xenophobic, homophobic, other

The community reflected that some people are homophobic and especially towards lesbians - they rape them with the intention that they will rid them of being lesbian. There was no sense that xenophobia occurred.

3.3.10Disability

Stakeholder and community engagement workshops felt that the ***people with disability*** have an increased risk of HIV infection because:

- Disabled people get infected easily because their partners cheat on them and infect them;
- Most people use the state of disability to access a grant;
- Intellectually disabled children and adults are not supervised at home and are then exposed to rape;
- There is child-trafficking where child homes are like brothels and receive cash for sex in that home; and
- Disabled people also feel insecure and end up having multiple partners because they are searching for the right partner but end up being infected.

4. Services in the local municipality

4.1 Health facilities

There are eight health facilities in Mandeni local municipality. See Figure 31 below for distribution of these facilities.

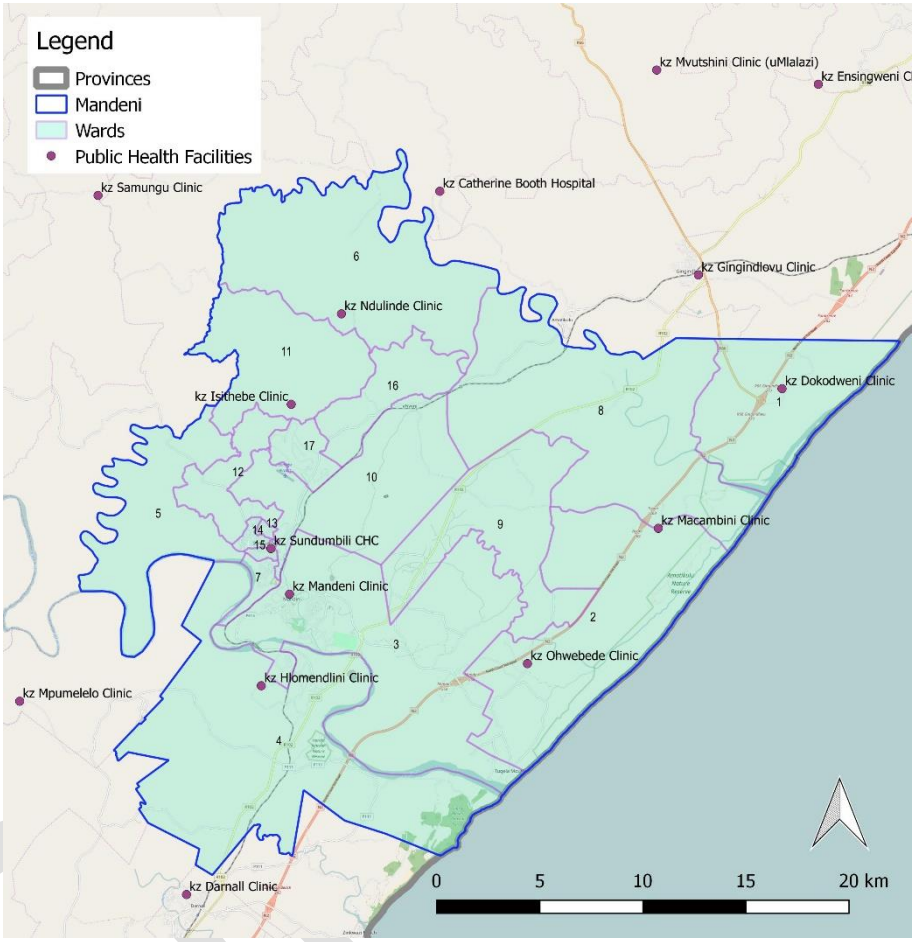

Figure 31: Distribution of health facilities in Mandeni local municipality

5. Recommendations for multi-sectoral interventions and focus on key and vulnerable populations

Based on the priorities identified in the profile for high burden areas, a mechanism needs to be put in place to coordinate the multi-sectoral response at the various levels. This is to ensure a comprehensive approach and to build sustainability of the response with local ownership.

Coordination of the multi-sectoral interventions at the level of implementation would result in:

- increased access to available resources;
- more efficient use of resources;
- enhancement of accountability;
- development of innovative implementation strategies and modalities;
- broadened awareness about the priorities highlighted in the risk profile;
- development of new partnerships to render services;
- sustainable development of activities;
- broadened sharing of responsibility for different, yet related activities;
- stronger ownership by stakeholders;
- use of strengths of different partners; and
- sharing of new knowledge and lessons learnt.

Process for development and implementation of multi-sectoral HIV, TB and STI intervention packages through existing multi-sectoral coordination structures e.g. AIDS Councils, OSS war rooms:

1. Update community profiles with directory of existing services e.g. rendered by government, NGO, donor funded organisations. This will be used to determine resources and programmes already available to address the priorities in the community profile as well as resource and programme gaps that exist;
2. Communicate and validate the profiles through meetings with government, private and civil society organisations in the specific geographical area;
3. Present the profile findings and recommendations for multi-sectoral interventions to the multi-sectoral structure for validation of findings, prioritization of programmatic gaps and linkage with existing resources (final decision on resource allocation should be requested through appropriate channels, e.g. government processes, Global Fund etc.);
4. For gaps prioritised, identify possible service providers and interventions that can address the needs following the relevant government or donor processes and procedures (depending on source of funding); and
5. Provincial, district and local coordination structures to coordinate an implementation plan with clear activities, timelines and responsible stakeholders that aligns with the profile. This will form the foundation for tracking performance and progress against the implementation plan.; and

6. Further and focused engagement to be done with the Young women and girls group identified as the priority population in this area to have a detailed understanding of their specific risks.

Considering the priorities identified during the stakeholder and community workshops as well as the general profile, the following service delivery packages are recommended in line with the National Strategic Plan for HIV, TB and STIs (2017 to 2022) and other relevant strategic documents. These service delivery packages needs to be unpacked and included in the implementation plan referred to above based on the existing resource envelop in the District and local municipality. Priority is given to the key and vulnerable populations identified, followed by other interventions identified in the NSP. Due to the importance of TB as the main cause of death in the district, it is included in the priority interventions.

Table 26: Key and vulnerable populations as well as Priority interventions

Key and vulnerable populations for TB	**Priority interventions**
• People living with HIV • Household contacts of TB index patients • Health care workers • Pregnant women • Children < 5 years old • Diabetics • People living in informal settlements	• TB contact tracing, testing and post-exposure management • Enhanced health education about HIV/TB co-infection, reinfection • Service delivery and treatment delivery points in community, non-traditional settings
Key and vulnerable populations for HIV	**Priority interventions**
• Young women and girls particularly those in poverty-affected families, granny-headed households and households and households whose parents work or live elsewhere • Unemployed youth and out-of-school youth • Child-headed households	• Poverty, especially livelihoods support • Parenting support and support to Teen mothers • Youth unemployment • Substance abuse, particularly among youth • Support for vulnerable family structures such as child-headed households and granny headed households • Follow-up and counselling for VMMC

Table 27: Recommended multi-sectoral service packages

Inclusive package of services for all key and vulnerable populations that will be customised to age and population served		Multi-sectoral partner

• Service delivery in non-traditional settings, including after-hours and weekend hours
• Health information, customised to client needs
• Sexual and reproductive health services
• HIV screening, testing and treatment
• STI screening, treatment
• TB screening, treatment (including preventive therapy) and contact tracing for DS- and DR-TB
• Mental health screening and psychosocial support
• Access to PEP and post-sexual assault support
• Alcohol and drug use screening and referral to harm reduction services
• Violence screening and referral to psychosocial and other support services
• Condom and lubricant promotion and provision
• Targeted social and behaviour change communication
• Core rights-based programme components:
  ○ Human rights and constitutional protection
  ○ Health empowerment
  ○ Economic empowerment
  ○ Gender norms and equality
  ○ Justice
  ○ Principles of universal design and accommodation that enables reasonable access for persons with disabilities
		• NGOs
		• DoH
		• DSD
		• DBE
		• NPA
		• PCA, DAC, LAC
		• SAPS
		• DOT

HIV and STI vulnerable populations		

Adolescent girls and young women	• Peer-led outreach
	• Youth-friendly sexual and reproductive health services in schools and community settings which include:
	  ○ PrEP (for over 18 years olds)
	  ○ Complete two dose HPV vaccine (Grade 4 learners)
	  ○ PMTCT
	  ○ Choice of termination of pregnancy
	  ○ Family planning services
	  ○ Male and female condom provision in school
	  ○ Sanitary towels
	• Programmes to keep girls in schools, including support for pregnant learners
	• Access to peer groups and clubs
		• DBE
		• DHET
		• DoH
		• DSD
		• NGOs
		• DoL
		• Private sector

Inclusive package of services for all key and vulnerable populations that will be customised to age and population served		Multi-sectoral partner
	• Access to parenting programmes • Economic empowerment programmes • Increased access to further education opportunities • Increased access to mentorship and internships • Comprehensive sexuality and gender education • Provide reasonable accessibility for girls and young women with disabilities • Age-specific support to HIV-positive adolescents (support for disclosure, adherence)	

Children and orphans and vulnerable children	• Specific targeted support interventions for OVC with elderly caregivers (applicable grants, home-based support, linkage to support services)
	• Health education, with a particular focus on sexual exploitation in the absence of primary caregivers
	• Accelerated nutritional and social grant support
	• Youth-friendly sexual and reproductive health services in schools and community settings which include:
	  ○ HPV vaccination
	  ○ Contraceptives including condoms
	  ○ Choice of termination of pregnancy
	• Comprehensive sexuality education in residential, school and non-school and youth-friendly settings
	• Intensive psychosocial support
	• Gender norms education, including risk reduction in relation to age-disparate relationships
	• School retention
		• DSD
		• DBE
		• DoH

TB key populations		
People living in informal settlements (also a vulnerable population for HIV and STIs)	• Facilitate access and demand creation to increase community HIV, TB and STI service provision • Intensify GBV programmes and screening • Accelerate social support • Community education • Provide mobile services to improve accessibility • Infection control strategy for TB	• DoH • DSD • NGOs

Inclusive package of services for all key and vulnerable populations that will be customised to age and population served		Multi-sectoral partner
People living with HIV	• Prompt ART initiation as a component of TB prevention • Adherence and psychosocial support • Peer education and support for TB prevention and treatment • Optimal uptake of preventive therapy for TB • Infection control in facilities, communities and households • TB symptom screening at each visit, linkages to treatment and care • HIV screening for household members, including partners and children • Cohort monitoring of HIV/TB co-infected patients • Support groups specifically addressing internalised stigma	• DoH
Pregnant women and neonates	• Full access to PMTCT services • Household TB and HIV screening, immediate linkage to treatment • Improve mother–child pair tracing and service delivery • Improve TB screening and testing among pregnant women to reduce congenital and perinatal TB transmission • Improve diagnostic and treatment capacity for neonatal TB	• DoH • NGOs • DSD

Addressing social and structural drivers	Service	Multi-sectoral partner
Community awareness and advocacy programmes	• Implement programmes to increase awareness of services	• DSD • Civil society including NGOs
Training for adolescent girls and young women	• Empower young women, such as through SABCOHA's BizAIDS programme, to start and improve their own businesses • Encourage companies to support the programme through co-funding and job opportunities	• SABCOHA and other private sector • Organised labour • DOT
Combination socio-economic programmes	• Strengthen economic capacities through support to access further education, training, job placements and entrepreneurial activities, including for PWDs	• DSD • Private sector • DHET • Civil society including NGOs
Expand inpatient and outpatient rehabilitation facilities	• Develop adolescent-friendly practices • Sensitise and capacitate HCWs to screen for and refer and provide interim support for people with harmful use of alcohol and drugs	• DSD • DoH • DBE

Addressing social and structural drivers	Service	Multi-sectoral partner
	• Expand availability of inpatient rehabilitation facilities	• NGOs
Implementation of harm reduction services to identify and support people who use substances and alcohol	• The Drug Master Plan harm reduction interventions including the provision of Opioid Substitution Therapy • Needle and syringe exchange programmes by NGOs • Identify for referral to in- and out-patient rehabilitation services	• DSD • DoH • NGOs • DBE • DHET
Strengthened and scaled-up community based one-stop Khuseleka Centres	• Integrate community support programmes in one-stop centres	• DSD • SAPS • DoH • DOJ
Strengthened and scaled-up community-based 'white-door' shelters	• Provide short-term (72-hour) places of safety and shelter within communities and referral/integration with HIV/TB/STI services	• DSD • SAPS • DoH • DOJ
Scaled-up provision of food parcels, and nutritional supplementation to all eligible PLHIV and PTB	• Strengthen capacity of HIV/TB providers to screen for food insecurity • Ensure access to sufficient food in particular for PLHIV and PWTB • Expand drop-in centres especially in high-burden districts • Expand access through Isibindi model	• DSD • NGOs • SANAC sectors

Comprehensive package of services for the general population, that will then be supplemented and customised to the age and population served			Multisectoral partner
• Accessible, friendly, comprehensive service delivery and health education, customised to client needs • HIV screening, testing, treatment • STI screening, testing, treatment • TB screening, testing, treatment and contact tracing for DS- and DR-TB • Medical male circumcision, referral • Comprehensive SRH services (including: cervical cancer screening, Pap smears, access to emergency contraception, choice of termination of pregnancy) • Prevention of mother-to-child transmission (PMTCT) of HIV • Mental health screening and psychosocial support • Access to PEP and post-sexual assault support • Alcohol and drug-use screening, referral • Violence screening, referral • Condom promotion and provision • Targeted social and behaviour change communication			• All implementing agencies • DoH • DSD • NPA • DBE • NGOS • PCA and DAC
Population	**Services/Interventions/Approaches**	**Setting**	**Multisectoral partner**
Children	• Child abuse screening • Age-appropriate HIV testing, treatment, adherence support • Support for disclosure of HIV status • HIV testing of household adult or adolescent index client • Contact tracing from adult, adolescent TB cases • Sputum induction for TB testing • Update hospital admission requirements for DR-TB treatment • Comprehensive sexuality education: Sexuality, puberty education, gender and empowerment, GBV, reproductive health, contraception, alcohol and drug use prevention, decision-making, self-esteem	• Health facility-based • School-based • Community-based • Mobile services	• DoH • DBE • DSD • CBOs • NGOs • Private employers • Private healthcare providers
PLHIV (adults, adolescents)	• Hearing and vision screening, referral, treatment • Partner HIV testing, disclosure support, treatment, adherence support • Hepatitis B and HPV vaccine where eligible • PMTCT and enhanced adherence support through pre- and post-natal period, including breastfeeding • Gender norms • Health and health rights literacy • Economic empowerment and health promotion	• Health facility-based • School-based • Community-based • Mobile services	• DoH • DBE • DCS • DSD • CBOs • NGOs • Private employers • Private healthcare

Population	Services/Interventions/Approaches	Setting	Multisectoral partner
	• School retention • Accelerated nutritional and social grant support, if indicated • Targeted demand creation for services • Targeted, PLHIV-friendly IEC materials and SBCC, including social media and materials for those with vision and hearing impairment • Service delivery points in community, non-traditional settings		providers

Generic HIV, TB and STI prevention, management and care		
Focus	**Activities**	**Multi-sectoral partner**
Promote retention in care for all PLHIV on ART	This will be supported and strengthened by: • Increased efforts to implement the test and treat policy at facility level through the DIP process • Increased quality assurance to promote adherence to guidelines • Expansion of implementation strategies to include community based ART initiation demonstration projects for well patients, including the use of GPs • Prioritise rapid and same day ART initiation • Implement extended hours services for working people and adolescents • Use PLHIV in health facilities and communities to encourage linkage to care • Explore innovative ways to improve patients' linkage to services • Differentiated ART delivery for stable patients, including a minimum of 3 months drug supply and optimised prescription periods to meet the needs of key and vulnerable populations and improve adherence • Ensure a functional fast lane for collection of repeat drug prescriptions at all pharmacies • Use of approved patient representatives to collect ART refills • Expand of the Central Chronic Medicine Dispensing and Distribution programme • Implementation of a return friendly system in all facilities • Track and improve the management of chronic diseases and their complications, as the population on ART ages	• DoH • DoT • Dept. of Agriculture • Private Sector • Civil society (PLHIV sector)
Improve adherence support	• Implementation of a comprehensive and age appropriate psychosocial package to enhance adherence • Promoting the establishment of peer-led differentiated support groups for new	• DSD • DoH

Generic HIV, TB and STI prevention, management and care		
Focus	**Activities**	**Multi-sectoral partner**
	and stable patients • Ensuring their linkages to psychosocial support.	• Private Sector
Intensified facility-level TB case-finding	• Passive case-finding (test individuals presenting with symptoms of TB • Routine symptom screening for all adult clinic attendees • Undertaking Xpert MTB/RIF test for symptomatic individuals not tested for TB in the last 3 months and undertaking culture test for HIV+, Xpert-negative cases	• DoH • Private healthcare providers
Improve laboratory diagnostics to deliver optimal DS and DR-TB services	• Universal implementation of Xpert MTB/RIF as initial diagnostic tests • Monitoring and optimising implementation of all existing algorithms • Implementing robust reflex testing for samples found to be Xpert RIF resistant • Developing a platform for introduction of new diagnostics • Prepare and train on guidelines and algorithms in advance of Xpert Ultra introduction • Upgrade the laboratories to ensure sufficient second line LPA coverage to ensure optimal implementation of MDR-TB short regimen • Implement lessons learnt from Xpert rollout • All labs doing second line LPA should be either able to conduct phenotypic second line drug sensitivity testing or have easy referral to a lab that has this capability.	• DoH
Active case-finding for key and vulnerable populations	• Screening of household contacts under 5 years of age • Intensified TB screening and access to appropriate treatment in correctional facilities, mines, informal settlements and antenatal clinics and for diabetics, PLHIV, health care workers and all household contacts • Contact tracing for all household members of TB index cases • Routine screening for health care workers • TB screening and testing among pregnant women to reduce congenital and perinatal TB transmission • Improved paediatric sputum induction at PHC and hospital level.	• DoH • NGOs and CBOs working in this area • DBE • DSD • Private healthcare providers
Reduce initial loss to follow-up rates for DS and DR TB cases	• Retrain staff and implement on-going clinical governance using QI approach • Establish initial loss to follow-up rate as a management priority as part of the DIP process • Reduce duration and number of visits from symptom onset to treatment initiation.	• DoH • Districts • Facilities • Development partners
Provide standard care for DS-TB	• Provision of adherence support and retention of patients in care for treatment	• DoH

Generic HIV, TB and STI prevention, management and care		
Focus	**Activities**	**Multi-sectoral partner**
cases	duration including referral for psychosocial support as needed • Bacteriological monitoring of treatment outcomes and implementation of recommendations from reviews • National research priority studies to determine what health facility and programme management interventions impact on treatment outcomes, whether alternative drug dispensing strategies affect adherence and patient outcomes and what clinical management and adherence support strategies improve treatment outcomes? • The multi-sectoral TB Think Tank using the findings to timeously review and update policies.	• Civil society (PLHIV, PTB sectors) • NGOs
Scale up short-course MDR-TB treatment and provide decentralised MDR-TB care	• Training and mentoring of staff on these at PHC level and referral centres • Adaptation of the EDR to accommodate new regimens • Monitoring the initiation rate of patients on the new regimen as part of the DIP process to optimise uptake • Provision of psychosocial support to patients who need it.	• DoH
Implement a quality improvement (QI) initiative to close gaps in the TB care cascade and improve programme outcomes.	• Development of DoH capacity to undertake QI (district and sub-district teams established; leadership and QI skills developed; tools and guidelines developed; learning networks established) with demonstration sites for QI established • All implementing partners to implement TB QI projects • Then undertake district baseline assessments and set targets for national scale-up based on successful models including nurse initiated care.	• DoH • Support partners
Implement the National STI National Framework guidance on the detection and treatment of asymptomatic STIs	• Developing, testing and validation of the sexual history tool for different populations and different ages as the basis for screening tests and / or presumptive treatment • Building capacity of health workers on the use of the tool and integrating it into all customised delivery sites. • Improved ACSM in high burden districts through targeted STIs messages. • Using the sexual history tool to screen and treat priority populations (pregnant women, AGYW and SW) for asymptomatic STIs.	• DoH, NICD, NHLS • Dept. of Transport • Civil society (key population sectors) • District Management Teams • Private health sector
Appropriate syndromic management of STIs	• Ensuring appropriate management of cases non-responsive to the syndromic approach • The use of mobile outreach services for men with extended hours • Implementation of strategies to strengthen partner notification and contact	• DoH • DHET/HEAIDS • Private health sector

Generic HIV, TB and STI prevention, management and care		
Focus	**Activities**	**Multi-sectoral partner**
	tracing especially for key populations • Training and re-training of HCWs on syndromic management • Quality assurance programmes and advanced level STI management in secondary hospitals and CHCs with the necessary tools and training.	
Screening of all pregnant women for syphilis at first ANC visit	• Screening for syphilis at birth for all infants born to Syphilis positive women or to women who were unbooked or untested • Linking all children diagnosed with congenital syphilis to care and ensuring they receive treatment; • Intensified notification process • Routine congenital syphilis monitoring and tracing and management of confirmed syphilis clients.	• DoH • Private health sector
Promote integration of STI prevention care and treatment into HIV, TB, ANC, sexual and reproductive health services	• Strengthened ART initiation at STIs services or linkage to ARV services	• DoH • Private health sector

Appendix A: Selecting Data for the Profile

It is important to note that the quality of an HIV epidemic and risk profile depends on the quality of secondary data used. The following are considerations for reviewing data and data sources to be used in the epidemiologic profile:

- **Completeness of the data:** How well do the prevalence of HIV and the associated factors represent the true number of persons living with HIV in the selected service and/or administrative area?

- **Representativeness of the data:** How well do the characteristics from a data source correspond to the characteristics of the overall population? For example, data from a hospital-based sample may not represent all HIV-infected persons or all HIV-infected persons in care in the area covered by the survey.

- **Age of the data:** For example, a behavioural survey conducted in 2000 might not provide data that are sufficiently up-to-date for current prevention activities.

- **Timeliness of the data:** if dealing with administrative data, how long is the reporting delay between the diagnosis of HIV and associated socio demographic characteristics recorded and reported to relevant departments?

- **Surrogate, or proxy, markers:** A proxy variable can be used as a marker for other variables when what we really want to measure is too difficult to measure directly. For example, some areas may use STI data as a proxy when data on sexual behaviours are not available.

- **Reliability of the data:** How accurate and complete are the data? For example, how well was information e.g. age, recorded whether in a survey or in administrative records and transcribed to the case report from the medical record.

- **Small numbers:** Small numbers of cases need to be interpreted with caution because small absolute changes in the number of cases can produce large relative or proportionate changes in rates that may be misinterpreted by end users. Rates calculated from numerators smaller than 10 should be denoted in a footnote as unreliable.

Data assumptions and limitations

The National Department of Health collects routine HIV data. The data is captured in the National Health Information Repository and Data warehouse (NIRDS), through the provincial and district health information systems (DHIS). The data are mostly obtained through routine service delivery by providers e.g. health facilities, and PHC clinics and consist of reports of confirmatory HIV tests, viral loads and CD4 counts. Additionally, the system captures case reports and interview data that might include information on socio-demographics e.g. age, race, sex. Data on socio demographics rely heavily on patient and provider reporting. In most cases data of this nature may be obtained from independent cross-sectional and bio-behavioural surveys and only reported at much higher geographical levels than local levels or high burden areas. The bio-behavioural surveys also provide data on sexual risk behaviours.

Age breakdown of routine indicators are limited to predefined indicators, with no sex breakdown available at Provincial and National Dataset level. No key population specific data can be segregated from any of the available datasets. Given the importance of key populations in understanding of the local context, this is considered a serious limitation in available routine data. Data on HIV risk exposure or mode of transmission require disease specialists and willingness of patient to participate is also not available at national and/or local level. Mobile clinic data is reported under the point where mobile is working from and is not segregated by service delivery point. This skews the picture when data is projected geospatially. Sexual risk data not part of routine data collected, secondary data available from surveys are included for this yet this is only available at District level. Figure 32 below reflects on the source of various levels of data for the profile. Data is presented at the level that it is available.

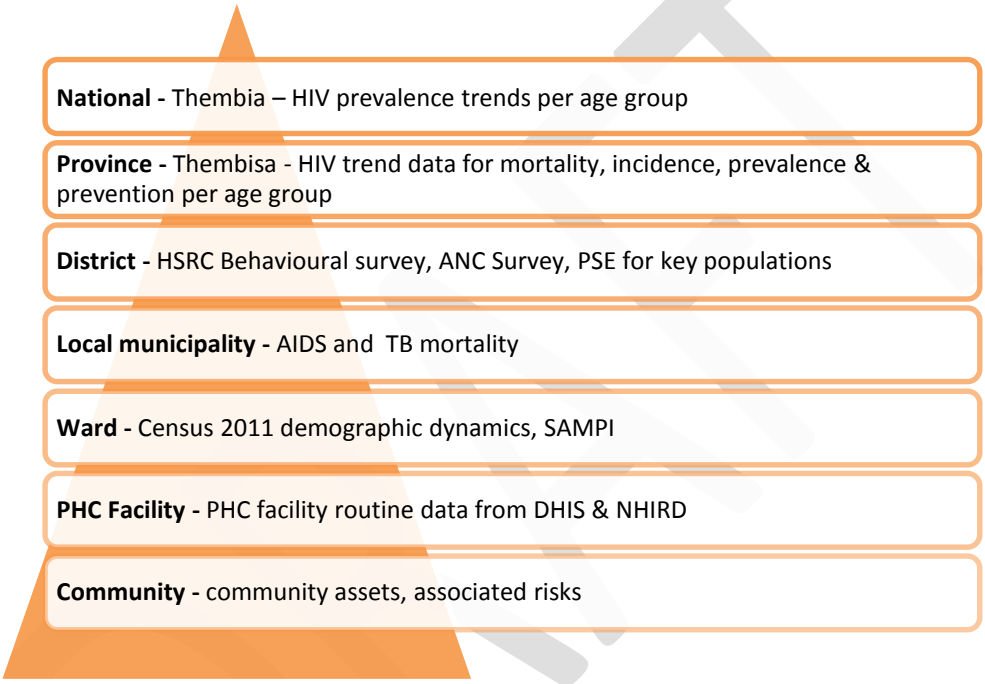

Figure 32: Data pyramid used for risk profiles

Care is also taken to avoid reporting on small number of cases without caution. Definitions and outlines of calculations are provided in

Catchment area and catchment populations

The catchment population is different from a catchment area, whereby the population is not simply just a count of the total number of people that are resident within that geographical boundary, but is rather an estimate of the estimated population that could access that specific facility.

Agreement on a health-care facility's catchment area is an important component in the Focus for Impact approach for defining the soft boundary for associated risk profiling within the catchment population linked to a specific HIV high burden area, estimate population-based rates of HIV, TB and STI as well as other important analyses.

For the Focus for Impact approach demographic data for the population is derived from the Census 2011 data linked to a specific ward within the agreed catchment areas.

Working closely with the KZN DoH, the DoH used a geospatial approach to allocate each ward in KZN to the closest health facility. For the purposes of the Focus for Impact approach only the catchment area of fixed PHC facilities were used. Please keep in mind that multiple PHC facilities (fixed and mobile) refer to a specific Hospital and therefore relates to a larger catchment area that might overlap with several PHC facility catchment areas.

It is acknowledged that this approach does not take into consideration the topography of the area or preferences of the health facility users. It is therefore suggested that the catchment area be used as a starting point and that the approach be refined to determine the catchment population as better data becomes available e.g. through the scale up of the Health Patient Registration System (HPRS) where more granular patient level data will become available.

HIV associated risks

The HIV associated risk profile is a tool to assist decision-makers to design appropriate and sustainable interventions for HIV prevention. The diagram below illustrates factors affecting HIV associated risk. Data in this profile links with the different variables identified below (as far as it is available).

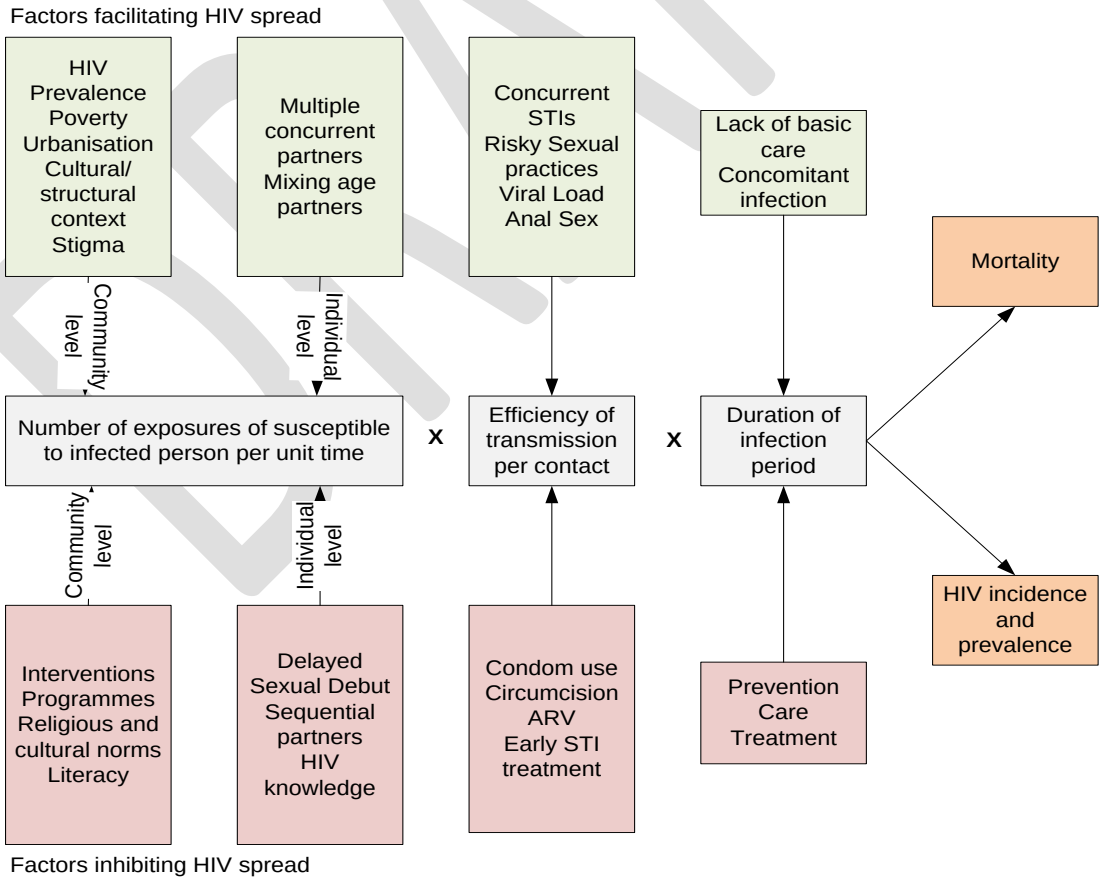

Figure 33: Factors influencing HIV associated risk and outcomes

Appendix B: Terms, Definitions and calculations

ANC client HIV 1st test positive rate (routine health indicator DHIS 2015)	Short Name - ANC HIV 1st test pos rate Numerator - Antenatal client HIV 1st test positive Denominator - Antenatal client HIV 1st test Indicator Type - % Definition - Antenatal clients tested HIV positive as proportion of antenatal clients HIV tested for the first time during current pregnancy
Antenatal client HIV re-test positive rate (routine health indicator DHIS 2015)	Short Name - ANC HIV re-test pos rate Numerator - Antenatal client HIV re-test positive Denominator - Antenatal client HIV re-test Indicator Type - % Definition - Antenatal clients re-tested positive for HIV as proportion of antenatal clients re-tested for HIV
Behavioral data	Data collected from studies of human behavior that is relevant to disease risk. Relevant behaviors for HIV risk may include sexual activity, substance use, needle sharing, condom use, or responses to primary and secondary prevention messages, knowledge of HIV transmission and prevention
Data	Raw, unprocessed numbers
Delivery in facility under 18 years rate (routine health indicator DHIS 2015)	Short Name - Delivery 18 rate Numerator - Delivery under 18 years in facility Denominator - Delivery in facility - total Indicator Type - % Definition - Deliveries to women under the age of 18 years as proportion of total deliveries in health facilities
Dependency ratio	The dependency ratio is an indicator of potential dependency burden of children and the elderly on those who are of economically productive ages in a population. Source Census 2011
Epidemiologic profile	A document that describes the distribution of HIV in various populations and identifies characteristics both of HIV-infected and HIV-negative persons in defined geographic areas. It is composed of information gathered to describe the effect of HIV on an area in terms of socio-demographic, geographic, behavioral, and clinical characteristics. Identifies characteristics of the general population and of populations who are living with, or at high risk for HIV infection in the pre-defined geographic areas in need of primary and secondary prevention or care services; and also identifies social, behavioral, cultural, factors driving local HIV infection. This providing information required to conduct needs assessments and gap analyses to complete the local HIV profile
Female condom distribution coverage (routine health indicator DHIS 2015)	Short Name - Fem condom dist cov Numerator - Female condoms distributed Denominator - Female population 15 years and older Indicator Type - %

	Definition - Female condoms distributed from a primary distribution site to health facilities or points in the community (e.g. campaigns, non-traditional outlets, etc.)
HIV prevalence amongst client tested 15-49 years rate (routine health indicator DHIS 2015)	Short name - HIV test 15-49y pos rate Numerator - HIV test positive 15-49 years, excl ANC Denominator - HIV test 15-49 years, excl ANC Indicator Type - % Description - Proportion of clients on whom an HIV test was done who tested positive for the first time
HIV test positive child 12-59 months rate (routine health indicator DHIS 2015)	Short Name - HIV+ 12-59 rate Numerator - HIV test positive 12-59 months Denominator - HIV test 12-59 months Indicator Type - % Definition - Children 12 to 59 months who tested HIV positive as a proportion of children who were tested for HIV in this age group
HIV test positive child 5-14 years rate (routine health indicator DHIS 2015)	Short Name - HIV+ 5-14 rate Numerator - HIV test positive 5-14 years Denominator - HIV test child 5-14 years Indicator Type - % Definition - Children 5 to 14 years who tested HIV positive as a proportion of children who were tested for HIV in this age group
Incidence	The number of new infections in a defined population during a specific period, often 1 year, which can be used to measure disease frequency. There is an important difference between HIV incidence and a new diagnosis of HIV infection: HIV incidence refers to persons newly infected with HIV, whereas persons newly diagnosed with HIV may have been infected years before the diagnosis. Population-based incidence estimates include new infections that have been diagnosed as well as new infections that have not been diagnosed. HIV incidence data may be used to monitor emerging trends and guide prevention activities
Indicators	A quantitative or qualitative variable that provides a simple and reliable measurement of one aspect of performance, achievement or change in a program or project
Infant 1st PCR test positive around 6 weeks' rate (routine health indicator DHIS 2015)	Short Name - PCR at 10w pos rate Numerator - Infant PCR test positive around 6 weeks Denominator - Infant PCR test around 6 weeks Indicator Type - % Definition - Infants tested PCR positive for follow up test as a proportion of Infants PCR tested around 6 weeks
Infant rapid HIV test around 18 months positive rate (routine health indicator DHIS 2015)	Short name - HIV test 18m pos rate Numerator - HIV test positive around 18 months Denominator - HIV test around 18 months Indicator Type - % Description - Infants tested positive for HIV antibodies around 18 months

	after birth as the proportion of Infants tested for HIV antibodies around 18 months
Information	Processed or analyzed data that adds context through relationships between data to allow for interpretation and use
Intensity of poverty	The average proportion of indicators in which poor households are deprived. Example, an intensity of 44% in 2011 means the average intensity of poverty was 44% amongst the 20% poor households
Male condom distribution coverage (routine health indicator DHIS 2015)	Short Name - Male cond dist cov Numerator - Male condoms distributed Denominator - Male population 15 years and older Indicator Type - % Definition - Male condoms distributed from a primary distribution site to health facilities or points in the community (e.g. campaigns, non-traditional outlets, etc.)
Male urethritis syndrome rate (routine health indicator DHIS 2015)	Short Name - MUS rate Numerator - Male Urethritis Syndrome treated - new episode Denominator - STI male - new episode Indicator Type - % Definition - Male Urethritis Syndrome new episodes treated as a proportion of total males with STI new episodes treated
Modes of HIV transmission or mode of HIV exposure	Heterosex (or heterosexual contact with a partner who is HIV positive or at increased risk for HIV. Often this level of knowledge about sexual partners (anonymous, casual, or exclusive) may be unknown; Men who have sex with men (MSM); People who Inject Drugs (PWID); Joint risk of MSM/PWID; and Other mode of exposure including (transplant, hemophilia, transfusion or mother with HIV or HIV risk (PMTCT)
Morbidity	The presence of illness in the population.
Mortality	The total number of persons who have died of the disease of interest. Usually expressed as a rate, mortality (total number of deaths over the total population) measures the effect of the disease on the population as a whole
Percentage	A proportion of the whole, in which the whole is 100. Example: Assume that 10 of the 40 cases of AIDS in a given year in a Ward occurred in men. (10 ÷ 40) x100= 25%
Poverty Headcount	The proportion of households defined as multi-dimensionally poor using the poverty cut-off. Example a headcount of 20% in 2011, based on 2011 census, means that 20% of households in South Africa were poor.
Prevalence	The proportion of cases of a disease in a population at risk, measured at a given point in time (often referred to as point prevalence). Prevalence can also be measured over a period of time (e.g., a year; known as period prevalence). Prevalence does not indicate how long a person has had a disease. It can provide an estimate of risk for a disease at a specific time.

	Prevalence data provide an indication of the extent of a condition and may have implications for services needed in a community. For HIV surveillance, prevalence refers to living persons with HIV disease, regardless of time of infection or date of diagnosis.
Qualitative data	Information from sources such as narrative behaviour studies, focus group interviews, open-ended interviews, direct observations, ethnographic studies, and documents. Findings from these sources are usually described in terms of common themes and patterns of response rather than by numeric or statistical analysis. Qualitative data often complement and help explain quantitative data
Quantitative data	Numeric information (e.g., numbers, rates, and percentages).
Rate	Measure of the frequency of an event compared with the number of persons at risk for the event. When rates are being calculated, it is usual for the denominator to be the general population rather than the population potentially exposed to HIV infection by various high-risk behaviours. The size of the general population is known from data from the U.S Census Bureau, whereas the size of a population at high risk is usually not known. $\frac{\text{number of HIV diagnoses}}{\text{Population}} X\ 100000 = \text{population rate of HIV diagnosis}$ Calculated for a given period. The multiplier (100,000) is used to convert the resulting fraction to number of cases per 100,000 populations. Although arbitrary, the choice of 100,000 is standard practice. Example: Assume that 200 cases of HIV disease were diagnosed during 2014 in a Ward X and that 400,000 persons lived in the Ward X in 2014 Rate: 200 ÷ 400,000 × 100,000 = 50 per 100,000
Routine health service based information	In terms of the National Health Act (Act 61 of 2003) the National Department of Health (NDoH) is required to facilitate and coordinate the establishment, implementation and maintenance of health information systems at all levels. The District Health Management Information System (DHMIS) Policy 2011 defines the requirements and expectations to provide comprehensive, timely, reliable and good quality routine evidence for tracking and improving health service delivery. The strategic objectives of the policy are to strengthen monitoring and evaluation (M&E) through standardization of data management activities and to clarify the main roles and responsibilities at each level for each category of staff to optimize completeness, quality, use, ownership, security and integrity of data. In 2000 the District Health Information System (DHIS) was adopted as the official South African routine health information system for managing aggregated routine health service based information. This information is defined as specific indicators and used in Focus for Impact to ensure

<table>
<tr><td></td><td>standardization of indicators across the different geographical areas.

Source: Department of Health. 2015. NDOH Data Directory. Available online from http://dd.dhmis.org/index.html</td></tr>
<tr><td>Service area</td><td>The jurisdictions of service areas or planning regions of respective planning groups. Example Health districts, sub- districts, wards or health facility catchment areas</td></tr>
<tr><td>Socio-demographic factors</td><td>Background information about the population of interest (e.g., age, sex, race, educational status, income, geographic location). These factors are often thought of as explanatory because they help us to make sense of the results of our analyses</td></tr>
<tr><td>Socio-economic status (SES)</td><td>A measure of social and economic factors that helps to describe a person's standing in society (e.g., income level, relationship to the national poverty line, educational achievement)</td></tr>
<tr><td>South Africa Multidimensional Poverty Index (SAMPI[16]) (StatSSA, 2014)</td><td>The SAMPI is based on the global Multidimensional Poverty Index (MPI) which is an international measure of acute poverty. The MPI "complements traditional income/ expenditure-based poverty measures by capturing the severe deprivations that each person or household faces with respect the following dimensions: - education (measured by years of schooling and school attendance indicators), health (measured by nutrition and child mortality indicators), and living standards (measured by indicators such as cooking fuel, Sanitation, water, electricity, floor, and assets).

The MPI creates a comprehensive picture of who and where people are that are living in poverty… [and it also] permits comparisons within countries by population group, settlement type, as well as other key household and community characteristics.

The SAMPI includes an additional dimension –the economic activity indicated by adult unemployment
<table>
<tr><th>Dimension</th><th>Indicator</th><th>Deprivation cut-off</th></tr>
<tr><td>Health</td><td>Child mortality</td><td>If any child under the age of 5 has died in the past 12 months</td></tr>
<tr><td>Education</td><td>Years of schooling

School attendance</td><td>If no household member aged 15 or older has completed 5 years of schooling
If any school-aged child (aged 7 to 15) is out of school</td></tr>
<tr><td>Standard of living</td><td>Fuel for lighting</td><td>If household is using paraffin/candles/nothing/other</td></tr>
</table>
</td></tr>
</table>

[16] StatSSA. (2014). *The South African MPI: Creating a multidimensional poverty index using census data*. Pretoria, South Africa.

		Fuel for heating	If household is using paraffin/wood/coal/dung/other/ none
		Fuel for cooking	If household is using paraffin/wood/coal/dung/other/ none
		Water access	If no piped water in dwelling or on stand
		Sanitation type	If not a flush toilet
		Dwelling type	If an informal shack/traditional dwelling/caravan/tent/other
		Asset ownership	If household does not own more than one of radio, television, telephone or refrigerator and does not own a car
	Economic activity	Unemployment (all adults)	If all adults (aged 15 to 64) in the household are unemployed

SAMPI is the product of the headcount (proportion of households defined as multi-dimensionally poor using the poverty cut-off) and intensity of poverty (average proportion of indicators in which poor households are deprived)

Example - If the headcount poverty was 20% in 2011 (i.e. 20% of all households were poor in 2011), and the average intensity of poverty amongst the poor households was 44%. Then the SAMPI equals 0.09(=20% X 44%)

In an extremely poor society where all households are poor and are deprived in all dimension indicators, the SAMPI score would be 1, 0. However, in an impoverished society where 50% of households are poor and experienced deprivation on 50% of all dimensions, the SAMPI score would be 0. 25.

TB (pulmonary) case finding index (routine health indicator DHIS 2015)	Short name - PTB case finding index Numerator - TB suspect 5 years and older sputum sent Denominator - PHC headcount 5 years and older Description - Proportion of clients 5 years and older, who were identified as TB suspects and for whom sputum was sent to the laboratory Growth-Sentiment - negative (high values are negative, low values are ideal: positive)
TB suspect smear positive rate (routine health indicator DHIS 2015)	Short name - TB suspect smear pos rate Numerator: TB suspect 5 years and older test positive Denominator: TB suspect 5 years and older sputum sent Indicator Type - % Description - Proportion of TB suspects with smear positive sputum results Growth-Sentiment: negative (high values are negative, low values are ideal: positive)

TB suspect sputum test rate (routine health indicator DHIS 2015)	Short name - TB susp sputum test rate Numerator - TB suspect 5 years and older sputum sent Denominator - TB suspect 5 years and older identified Indicator Type - % Description - Proportion of TB suspects with sputum sent to the laboratory for testing Growth-Sentiment: positive (low values are negative, high values are ideal: positive)
TB suspect treatment initiation rate (routine health indicator DHIS 2015)	Short name - TB suspect treatment rate Numerator - TB suspect 5 years and older initiated on treatment Denominator - TB suspect 5 years and older test positive Indicator Type - % Description - Proportion of smear positive TB suspects initiated on treatment Growth-Sentiment - positive (low values are negative, high values are ideal: positive)
Triangulation	Synthesis of data to compare and contrast the results of different kinds of research that address the same topic

Appendix C: Methodology for stakeholder engagement to explore local level data

The feedback from the community brings a local intelligence and ownership to the process that not only facilitates buy-in for HIV programming, but also brings about an opportunity for advocacy and accountability at this level. This gives new meaning to 'nothing about us, without us'. There is internal validation and triangulation of the data through this process, as stakeholders should be from various sectors/departments and types of organisations. Groups within the workshop validate the information before it is documented. In addition, the same information is tested with a community group (that should include members of key populations) and additions made with consensus.

Figure 34 below describes the various steps followed to develop this risk profile. A detailed guideline is available from SANAC that can be used be stakeholders and partners to ensure a standardised approach in the development and updating of the risk profile.

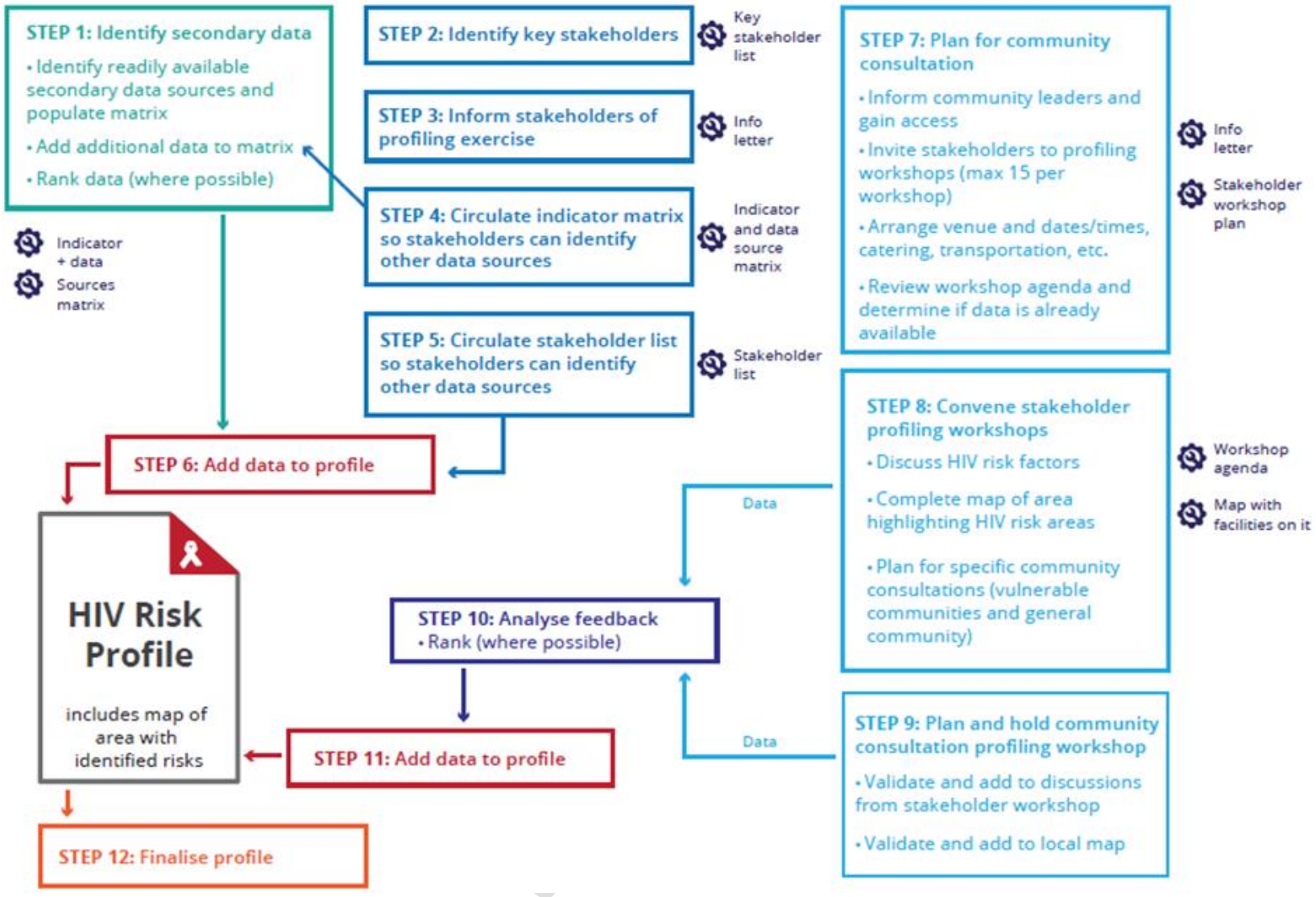

Figure 34: Steps for development of HIV associated risk profile