

Focus for Impact

Profile for **XXX** District
XXX Province

Date completed

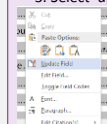
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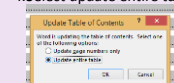
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Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
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
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
PIP	Provincial Implementation Plan
PLHIV	People living with HIV/AIDS
PrEP	Pre-exposure antiretroviral prophylaxis
PWID	People Who Inject drugs
SANAC	South Africa National AIDS Council
STI	Sexually Transmitted Infection
TB	Tuberculosis

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Acknowledgement

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Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the Funders.

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DRAFT

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.

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 process for identifying high-burden areas for intensification of efforts dates to September 2015, when the SANAC Secretariat established the Hotspot Mapping Advisory Committee. The Committee – including academia, governmental and non-governmental public health and 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 **approach 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** has an increased at risk of infection in this high burden area?
- (d) **Which multi-sectoral interventions** may be deployed in the high-burden area to reduce associated HIV and/or TB risks?

The ultimate success of the NSP 2017 – 2022, depend 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 approach aims to answer: *“Why does a specific area have a higher HIV and/or TB burden (i.e. what are the contributing/associated factors)?”* and third question *“Who is at risk in this high burden area?”*

- **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.

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

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

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 the XXX district, XXX Province.

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 or TB infected and where they are within a specific location, the profile assists to identify the people who need targeted prevention and care services. The latest available ward level population data from the 2011 Census was utilised, adjusted for the 2016 Demarcation Board boundaries (calculations by STATSSA) where it is available. 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 or TB 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 and TB 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 considers and combines 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 by community engagement through stakeholder and community workshops in the specific catchment area. The following community and stakeholder engagements have contributed to this profile:

High-burden Facility and catchment area	Date	Venue	Number of participants
XXX Health facility (wards XXX)	XXX	XXX	XXX

As more local level profiles are completed within the district, a richer picture of the context within the district 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.

The following key and vulnerable populations as well as interventions were prioritised through the community engagement in the high burden areas consisting of a health facility and its catchment wards:

High burden area (catchment area)	Key and vulnerable TB populations	Priority interventions identified by community
All Areas	•	•
	•	•
High burden area (catchment area)	Key and vulnerable HIV populations	Priority interventions identified by community
All Areas	•	•
	•	•
	•	•
	•	•

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1. Socio-economic and demographic profile

1.1 Demarcated boundaries

XXX District is one of the 3 district municipalities of Mpumalanga province, South Africa. The other districts are XXX

Figure 1: Location of Ehlanzeni district in XXX Province (Source Demarcation Board 2016)

The XXX District municipality constitute of XXX local municipalities (see Figure 2). They are XXX local municipalities.

Figure 2: Distribution of Local Municipalities in the XXX District

1.2 Population by sex and age

During the 2011 Census XXX people were living in the local municipalities in the District. Table 1 summarises the age and sex per population in these local municipalities. Females constitute XXX % of population, compared to XXX% males. The young people ≤ 25 years make up nearly half (XXX%) of the population in the district.

Local Municipality	Age							Sex		
	0-9	10-14	15-19	20-24	25-49	50+	Total	Female	Male	Total
Total										
Proportion										

Table 1: Population per age groups per local municipality, XXX District

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

Local Municipality	Female					Male				
	10-14	15-19	20-24	25-29	30-34	10-14	15-19	20-24	25-29	30-34
Total										

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

Error! Reference source not found. below reflects the population pyramid for XXX District. This figure visualises sex (male and female) and age in five-year age bands for this population. It is noted that the largest group is in the age group XXX, followed closely by the age group XXX year-old.

Figure 3: Population Pyramid XXX District

From this population, XXX % of population is the children under 15 years, XXX % above 65 years and XXX % are potentially economically active within the population of the XXX local municipality (**Error! Reference source not found.**).

Figure 4: Age distribution XXX District (Source Census 2011)

1.3 Population by race

The dominant population group in XXX district is Black African at XXX % followed by XXX with XXX % (detail in Figure 5 and Table 3).

Figure 5: Population group distribution in XXX District (Source Census 2011)

Table 3: Local municipality level population distribution by Race in XXX District (Source Census 2011)

Local Municipality	Asian	Black African	Coloured	Other	White	Total
Total						

2. Epidemiological profile

2.1 Causes of death

The main causes of death in the XXX District in 2016 is XXX with XXX (XXX %) deaths followed by XXX with XXX (XXX %) deaths (Table 4).

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

Ranking	Cause of death	Number of deaths	Percent deaths
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
	Other Natural Causes		
	Non- Natural Causes		
All causes		33 261	100,0

2.2 HIV

The figures and tables that follow below reflect the HIV positivity rate based on the routine health data collected, collated and reported in health facilities in the XXX 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: Data used in the Profile.

The report is drawn for a specific date. Due to changes in the data (e.g. adding DHIS 1.4 to web-based DHIS) it is important to reflect on the date that a report is drawn. Although chances are minimal, the possibility exists for minor changes over time.

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Figure 6: ANC client HIV 1st test positive rate XXX District (Source: DHIS 2016 report XXX)

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Table 5: HIV Positivity Rate in XXX District (Antenatal 1st Test) (Source: DHIS 2016 report XXX)

Figure 7: Infant 1st PCR test positive around 10 weeks rate XXX District (Source: DHIS 2016 report XXX)

Table 6: HIV Positivity Rate in XXX District (10 weeks) (Source: DHIS 2016 report XXX)

Figure 8: Infant rapid HIV test around 18 months positive rate XXX District (Source: DHIS 2016 report XXX)

Table 7: HIV Positivity Rate in XXX District (18 months) (Source: DHIS 2016 report XXX)

Figure 9: HIV test positive child 12-59 months rate XXX District (Source: DHIS 2016 report XXX)

Table 8: HIV Positivity Rate in XXX District (12-59 months) (Source: DHIS 2016 report XXX)

Figure 10: HIV test positive child 5-14 years rate XXX District (Source: DHIS 2016 report XXX)

Table 9: HIV Positivity Rate in XXX District (5 - 14 years) (Source: DHIS 2016 report XXX)

Figure 11: HIV prevalence amongst client tested 15-49 years rate XXX District (Source: DHIS 2016 report XXX)

Table 10: HIV Positivity Rate in XXX District (15 - 49 years) (Source: DHIS 2016 report XXX)

2.3 TB

The figures that follow reflect the TB burden and are based on the routine health data collected, collated and reported in health facilities in the XXX 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: Data used in the Profile.

Figure 12: TB (pulmonary) case finding index XXX District (Source: DHIS 2016 report XXX)

Table 11: TB (pulmonary) case finding index XXX District (Source: DHIS 2016 report XXX)

Figure 13: TB suspect sputum test rate XXX District (Source: DHIS 2016 report XXX)

Table 12: TB (Sputum Test Rate) XXX District (Source: DHIS 2016 report XXX)

Figure 14: TB suspect smear positive rate XXX District (Source: DHIS 2016 report XXX)

Table 13: TB suspect smear positive rate XXX District (Source: DHIS 2016 report XXX)

2.4 STIs

Sexually transmitted infections (STIs) are a major risk factor to the Human Immunodeficiency Virus (HIV) epidemic¹. 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 200% - 300% 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 inflammation²³. 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 syndrome⁶

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 in the XXX 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: Data used in the Profile.

Figure 15: Male urethritis syndrome rate XXX District (Source: DHIS 2016 report XXX)

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. AIDS CAP 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. AIDS CAP 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>

Table 14: Male urethritis syndrome rate XXX District (Source: DHIS 2016 report XXX)

2.5 Teenage Pregnancy rate

Figure 16 is a reflection of under 18-year-old girls that deliver in facilities. This is a proxy for teenage pregnancies in the District. The indicator definition is included in Appendix B: Terms, Definitions and calculations. Due to the small numbers at a ward level, it is not included at ward level in this report. See note on small number in Appendix A: Data used in the Profile.

Figure 16: Teenage Pregnancy rate XXX District (Source: DHIS 2016 report XXX)

Table 15: Teenage Pregnancy rate XXX District (Source: DHIS 2016 report XXX)

3. Associated risk profile

3.1 Bio-medical risks

3.1.1 HIV Testing and TB screening

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 HIV⁷. It is therefore important to determine the success of routine HIV counselling and testing. 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.

Narrative report based on community engagement

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 males¹⁰. 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 groups¹¹.

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 ibidmulo

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.

Narrative report based on community engagement

3.1.3 ARV and TB treatment

Narrative report based on community engagement

3.1.4 PEP, PrEP and Lubricant

Narrative report based on community engagement

3.2 Behaviour that influences risk for HIV infection

The reported high incidence among young 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 infections¹² 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 surveys¹³, and are reported at provincial level which is much higher than 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 and TB Knowledge

Narrative report based on community engagement

3.2.2 Sexual risky behaviours

Of those participants interviewed during the 2012 National HIV Prevalence, Incidence and Behaviour Survey¹⁴ in XXX, XXX % had the perception that they have a low risk of becoming HIV positive.

Figure 17: HIV risk perception Ehlanzeni district municipality (Source HSRC 2014)

Of the respondents in the National HIV Prevalence, Incidence and Behaviour Survey XXX % had their sexual debut before 15 years of age, see Figure 18.

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

¹³ ibid

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

Figure 18: Age at sexual debut Ehlanzeni district municipality (Source HSRC 2014)

In terms of number of sexual partners in the last 12 months, XXX % had one sexual partner in the last 12 months (Figure 19). Of these XXX % was five or more years older, XXX % was five or more years younger and XXX % had an age difference of less than five years between partners Figure 20.

Figure 19: Number of sexual partners in last 12 months Ehlanzeni district municipality (Source HSRC 2014)

Figure 20: Intergenerational sex Ehlanzeni district municipality (Source HSRC 2014)

Narrative report based on community engagement

3.2.3 Substance abuse

Narrative report based on community engagement

3.2.4 Condom use and distribution

During the National HIV Prevalence, Incidence and Behaviour Survey, XXX% of the respondents indicated that they did not use a condom during the last sexual act (Figure 21).

Figure 21: Condom used at last sex act XXX District (Source HSRC 2014)

In Figure 22 and

Figure 23 the condom distribution for females and males (annual) are reflected at District level. The definitions for these indicators can be found in Appendix B: Terms, Definitions and calculations.

Figure 22: Female condom distribution rate XXX District (Source: DHIS 2016 report XXX)

Table 16: Female condom distribution rate XXX District (Source: DHIS 2016 report XXX)

Figure 23: Male condom distribution XXX District (Source: DHIS 2016 report XXX)

Table 17: Male condom distribution rate District (Source: DHIS 2016 report XXX)

Narrative report based on community engagement

3.3 Social and Structural Factors that influence risk

3.3.1 Orphan hood

Narrative report based on community engagement

3.3.2 Cultural and religious norms

Narrative report based on community engagement

3.3.3 Gender norms and Gender-based violence

Narrative report based on community engagement

3.3.4 Stigma

Narrative report based on community engagement

3.3.5 Poverty

Narrative report based on community engagement

3.3.6 Employment

In XXX District, XXX % of the female population at economically active age is employed while XXX % of the economically active males are employed. See Figure 24 below.

Figure 24: Female and Male employment XXX District (Source Census 2011)

Narrative report based on community engagement

3.3.7 Types of Settlements and Conditions of Living

Narrative report based on community engagement

3.3.8 Migration patterns in the area

Narrative report based on community engagement

3.3.9 Education and Literacy

Narrative report based on community engagement

3.3.10 Hate Crimes – Xenophobia, Homophobia etc.

Narrative report based on community engagement

3.3.11 People with Disabilities

Narrative report based on community engagement

4. Services in the District

4.1 Community Systems

The participants in the community and stakeholder engagement shared the following about community services:

Narrative report based on community engagement

4.2 Health facilities

XXX District has XXX fixed clinics, XXX Mobile Clinics, XXX Community Health Centre (CHC) and XXX Hospitals. See Figure 25 below for distribution of these facilities.

Figure 25: Distribution of health facilities in XXX District

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, 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. These plans need to be linked with the Provincial Implementation Plan (PIP) and Multi-sectoral District Implementation Plans (MDIPs) that guides the HIV, TB and STI response in the province and district. This will form the foundation for tracking performance and progress against the implementation plan.

Table 18 summarises the key and vulnerable populations as well as priority interventions identified during the development of the community profiles in XXX of the XXX local municipalities in the XXX District. Due to the importance of TB as the main cause of death in the district, it is included in the priority interventions.

Table 18: Key and vulnerable populations as well as priority interventions identified in high burden areas

High burden area (catchment area)	Key and vulnerable TB populations	Priority interventions identified by community
All areas	•	•
	•	•
High burden area (catchment area)	Key and vulnerable HIV populations	Priority interventions identified by community
All areas	•	•
	•	•

Commented [A10]: Ensure this is the same as the introduction of the profile

Considering the priorities identified during the stakeholder and community workshops as well as the general profile, the following service delivery packages (Table 20) 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 need to be unpacked and included in the multi-sectoral district implementation plan referred to above, based on the existing resource envelope in the province. Priority is given to the key and vulnerable populations identified, followed by other interventions identified in the NSP.

Please note the recommended service package is informed by the findings from the community engagement from one community and although some interventions are generic, the recommendation is not necessarily that all these services be available for the whole province. As more profiles for additional high burden areas become available, these recommendations can be refined to be area specific to allow the resources to be focussed for impact.

Table 19: Recommended multi-sectoral service packages (refer to note above)

Commented [A11]: Refer to NSP Annexure A

Appendix A: Data used in 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 is mostly obtained through routine service delivery by providers such as 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 26 below reflects on the source of various levels of data for the profile. Data is presented at the level that it is available.

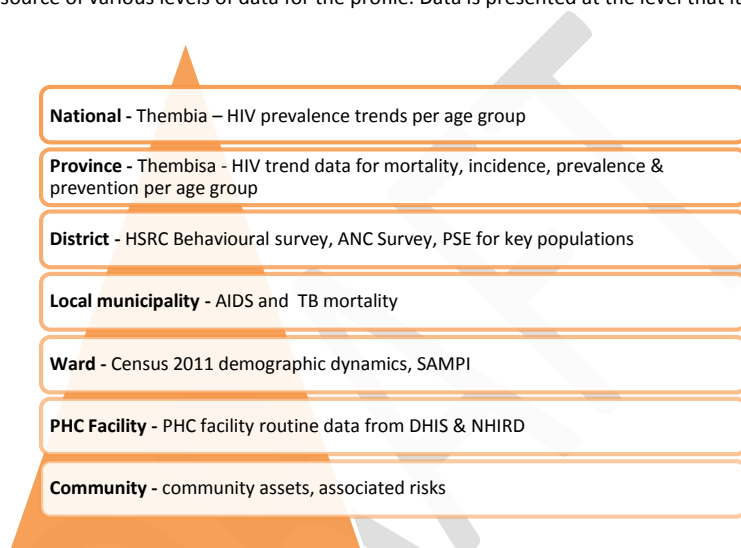


Figure 26: Data pyramid used for risk profiles

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 purpose of 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 DoH, a geospatial approach was used to allocate each ward 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 for example 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).

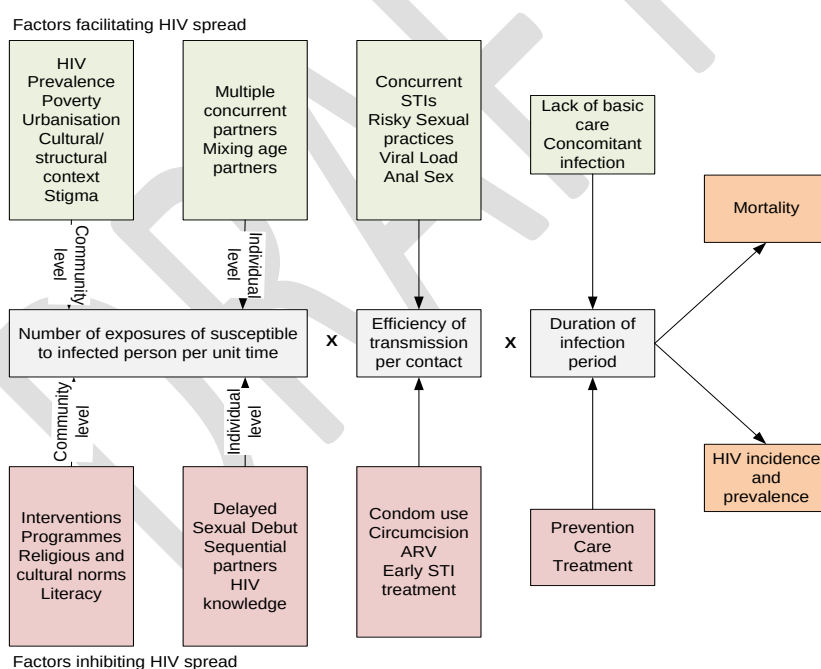


Figure 27: Factors influencing HIV associated risk and outcomes

Appendix B: Terms, Definitions and calculations

ANC client HIV 1st test positive rate (routine health indicator DHIS)	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)	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)	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)	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	Short name - HIV test 15-49y pos rate Numerator - HIV test positive 15-49 years, excl ANC

tested 15-49 years rate (routine health indicator DHIS)	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)	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)	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 6w 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 1st PCR test positive around 10 weeks' rate (routine health indicator DHIS 2016 report XXX)	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 10 weeks
Infant rapid HIV test around 18 months positive rate (routine health indicator DHIS)	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)	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)	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	Homosexual 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. $(10 \div 40) \times 100 = 25\%$
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. $\frac{\text{number of HIV diagnoses}}{\text{Population}} \times 100000 = \text{population rate of HIV diagnosis}$ 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: $200 \div 400,000 \times 100,000 = 50$ 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 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
Service area	The jurisdictions of service areas or planning regions of respective planning groups. Example Health districts, sub- districts, wards or health facility catchment areas
Socio-demographic factors	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
Socio-economic status (SES)	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)
South Africa Multidimensional Poverty Index	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

(SAMPI¹⁵) (StatsSA, 2014) Due to the changes in the demarcation board boundaries in 2016, this is not used and require recoding by StatsSA	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		
	Dimension	Indicator	Deprivation cut-off
	Health	Child mortality	If any child under the age of 5 has died in the past 12 months
	Education	Years of schooling	If no household member aged 15 or older has completed 5 years of schooling
		School attendance	If any school-aged child (aged 7 to 15) is out of school
	Standard of living	Fuel for lighting	If household is using paraffin/candles/nothing/other
		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			

¹⁵ StatSSA. (2014). *The South African MPI: Creating a multidimensional poverty index using census data*. Pretoria, South Africa.

	amongst the poor households was 44%. Then the SAMPI equals $0.09(=20\% \times 44\%)$ 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)	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)	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)	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)	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

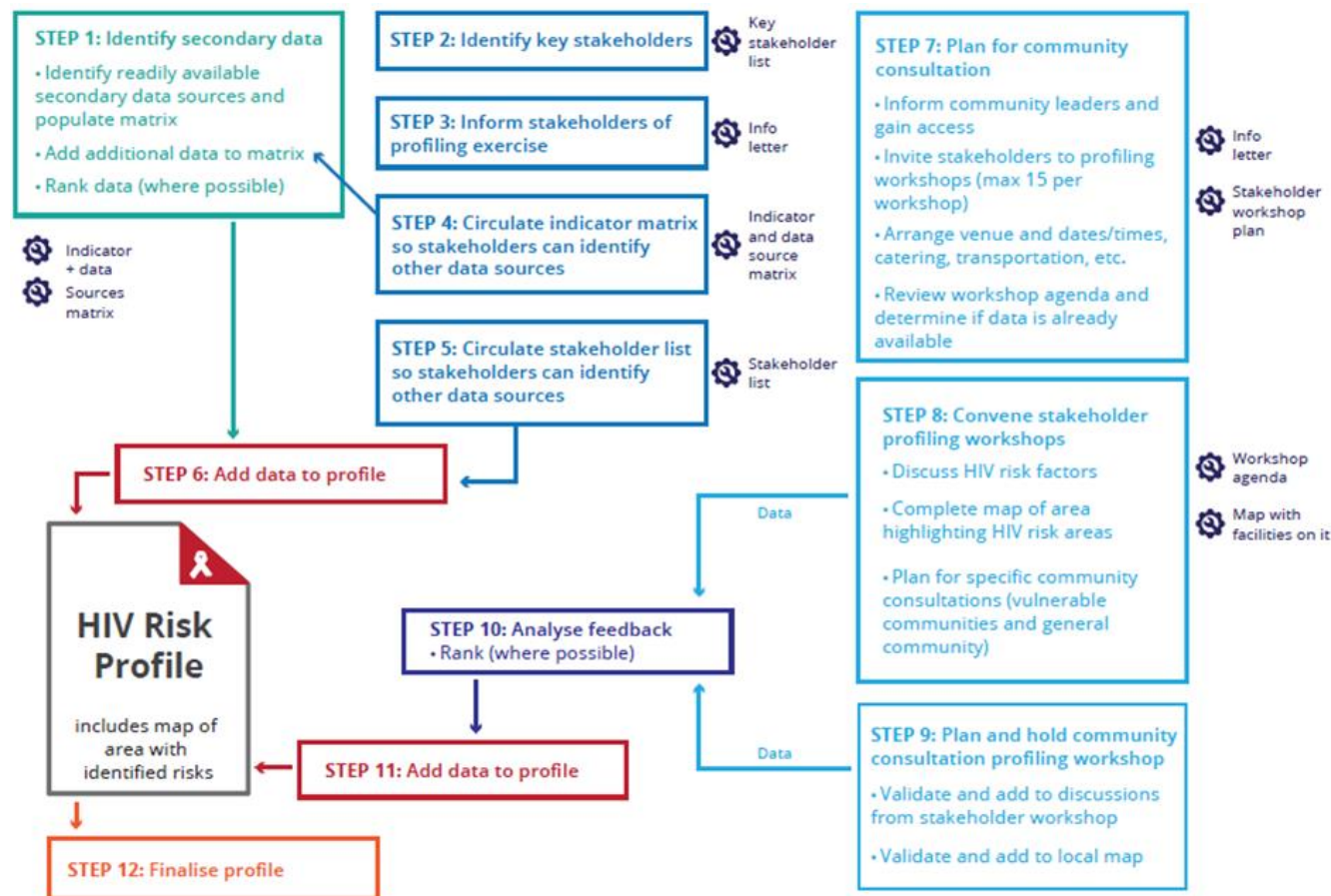


Figure 28: Steps for development of HIV associated risk profile