Breaking the Cycle of Transmission:

Increasing uptake of HIV testing, prevention and linkage to treatment among young men in South Africa.
The challenge: Young South African men are less likely to be diagnosed and treated, and often transmit HIV to younger female partners, contributing to an inter-generational cycle of transmission.

Source: PEPFAR South Africa COP’19 Outbrief

Source: South African National Strategic Plan on HIV, TB and STIs 2017-2022
The goal: Support South African stakeholders in reaching young men with HIV services.

1. How can we better understand young men’s decisions and behaviours around HIV testing, prevention and treatment?

2. How can we identify different segments of young men to enable better tailoring/targeting?

3. How can we reach each segment more effectively with HIV prevention, testing and treatment?
We have finished the research phase and are now moving into design and piloting.

- **Ethnography**: Participant led observational method
- **Patient Pathways + Provider Archetyping**: Framing journeys through care systems
- **Segmentation**: Quantifying journeys and clustering different group pathways
- **Designing and piloting new interventions and monitoring to see whether we are moving the needle**

**Breaking the cycle of transmission**
Research took place in KZN and MPU with a total of 2095 men and 67 healthcare providers.

**Geographic focus**
- 5 districts of KwaZulu-Natal (eThekwini, King Cetshwayo, Ugu, uMgungundlovu, Zululand)
- 3 districts of Mpumalanga (Ehlanzeni, Gert Sibande, Nkangala)

**Qualitative phase** (n=76 men aged 25-34, 67 healthcare providers)
- Targeted sample to achieve mix of HIV-positive (linked and not linked) and HIV-negative, in ‘high-risk, hard-to-reach’ areas
- Eight-hour ethnographic shadowing (18 men, 4 HCPs)
- Two-hour in-depth interviews (58 men, 64 HCPs)
- Carried out by trained interviewers from similar demographics in the respondent’s home language

**Quantitative phase** (n=2019 men aged 20-34)
- Men 20-34, matric or less, lower socio-economic status (NLI 1-4)
- Random sample based on Enumerated Area sampling
- One-hour tablet-based survey, carried out by trained interviewers from similar demographics in the respondent’s home language
The qualitative research pointed to various barriers and challenges.

- Anticipated loss with no corresponding gain
- Fear, not indifference
- Grief and trauma
- Inconsistent condom use based on intuition
- Testing positive means life collapses
- Disclosure is frightening
- Provider empathy is not guaranteed
Selected insights from the qualitative research

• Many men’s responses to HIV are characterized by **anticipated loss** with no corresponding gain.
• Men are often perceived as **indifferent** when actually they are **paralysed by fear**.
• Many live with constant **stress and insecurity**; HTS and ART feel like additional burdens – not a relief.
• Many are AIDS orphans, and **unresolved grief and trauma** can trigger reflexive distancing from HIV services.
• Many engage in high-risk behaviours for HIV transmission that they **rationalize or misunderstand**.
• Testing positive can feel like life is over, triggering anticipated **loss of identity, status, pleasure and even life**.
• They want to be **in control** of decisions around testing, treatment, and disclosure, but often feel **hunted and coerced**.
• **Disclosure** ranks high on their list of fears. Many anticipate it will result in relationship conflict or loss, as well as loss of status among their family, peers and community.
• The **clinic environment** is not welcoming or familiar.
• Provider empathy is often **limited and conditional**, and counselling is often **scripted and didactic**.
A good segmentation meets several criteria:

**Distinct**
- No overlap in the segments
- Easily identifiable and recognisable
- Easily described (in terms of attitudes and behaviours)

**Meaningful**
- Based on attitudes and behaviours that are relevant to the product or service being developed/offered

**Actionable**
- Informs prioritisation of segments to target (and why), how to find them and how best to engage with them

### The segmentation process:

1. **Data cleaning & categorization**
   - Reduces the number of variables; places data into different themes

2. **Modelling**
   - Links attitudes to behaviours, group respondents into homogenous segments

3. **Evaluation of options**
   - Examine potential clusters of respondents based on fit statistics, key attitudes, goals, behaviours, demographics, etc.

4. **Profiling based on selected solution**
   - Clustering solution with the most potential selected, and groups fully profiled with the available data
We identified five segments of men in relation to HIV testing and linkage.

**Mr. Grey**
A traditional, community-oriented, often rural man, with a low level of education, low HIV knowledge, high level of fear of HIV, and a traditional concept of gender, but a positive outlook and a sense of responsibility to family and community.

**Mr. Teal**
Young, fun-loving, and optimistic, with a high level of HIV knowledge and progressive views on gender, but also a high number of sexual partners, and in denial about his level of risk and concerned that an HIV diagnosis would mean 'the end of the party'.

**Mr. Rose**
Young, responsible, engaged in his community, optimistic about the future, and open about sexual health and health-seeking, with progressive views on gender, but concerned about how an HIV diagnosis would diminish his standing in the community.

**Mr. Blue**
Older, more educated and more stable, but disconnected and pessimistic, with problematic alcohol use contributing to impulsive behaviour, and a traditional concept of gender.

**Mr. Green**
Disconnected and pessimistic, with a low level of education, very low HIV knowledge, high levels of depression, problematic use of alcohol, a traditional concept of gender, higher rates of intimate partner violence, and negative views of healthcare.
What’s similar across segments?

- Low levels of stable employment, averaging 35%.

- Low and inconsistent condom use – only 31% said they ‘always used a condom in the past year’.

- Average of 2.4 sexual partners in past year.

(Note: All figures are self-reported.)
Mr Teal (23% of respondents)
• Hopeful and optimistic about the future
• Engaged in his community, strong sense of belonging, prides himself in being upstanding and reliable
• Leads a relatively reserved lifestyle—less drinking, fewer casual partners, more condom use
• Confident and comfortable in a group setting, and tends to see himself as a role model
• Modern in his views of gender roles
• Comfortable speaking to others about sexual health and not averse to health-seeking
• Reasonably knowledgeable about HIV
• Concerns about HIV testing and linkage are primarily social—sensitive to how those around him would react and fears an HIV diagnosis would diminish his standing and reputation.
Mr Teal by the numbers

Age
- 20-24, 45%
- 25-29, 33%
- 30-34, 22%

Joint youngest of segments

Circumcision
- None, 32%
- Traditional, 17%
- Clinic <16, 26%
- Clinic >16, 25%

More likely to be urban, predominantly Ehlanzeni and eThekwini

Education
- 58% matric
- Average level of education

Employment
- 32% with a steady job
- Least likely to be employed

15% HIV+
- 82% initiated

More likely to have been medically circumcised

Testing
- Never tested
  - 8%
- Infrequent tester
  - 33%
- Frequent tester
  - 59%
- Most likely to test
  - 60%
- Not tested within last year
  - 32%
- Tested within last year
  - 60%

Breaking the cycle of transmission
Mr Teal prioritises community, family and work.
Mr. Rose (25% of respondents)
• Hopeful and optimistic about the future
• Fun-loving and carefree, ‘living the good life’
• Enjoys socializing and drinking with friends
• Likely to be living/working in a bigger city, away from his wife or main partner
• Sense of connection and belonging in his community
• Modern in his views of gender roles
• Most casual hook-ups of all segments
• High level of knowledge about HIV, but in denial about his level of risk
• Comfortable speaking to others about sexual health and not averse to health-seeking
• Fearful of the ‘cliff-edge’ of HIV, believes an HIV diagnosis would mean ‘the party’s over’
• Upon testing positive, less likely to start ART
Mr Rose by the numbers

Location
- KZN, 48%
- MP, 52%

More likely to be urban, predominantly Ehlanzeni and eThekwini

Circumcision
- None, 40%
- Traditional, 19%
- Clinic <16, 25%
- Clinic >16, 17%

Average rates of medical circumcision

Age
- 20-24, 43%
- 25-29, 39%
- 30-34, 17%

Joint youngest of all segments

Education
- 60% matric
Above average level of education

Employment
- 36% with a steady job
Above average likelihood of being employed

Testing
- Never tested
- Frequent tester
- Infrequent tester
- Tested within last year
- Not tested within last year

Second highest testing frequency compared to other segments

14% HIV+
70% initiated (lowest)
Mr Rose prioritises friends and fun.
Mr Green (15% of respondents)
- Pessimistic about the future
- Feels disconnected from his community
- More indications of clinical depression
- Excessive use of alcohol as an escape, linked to impulsive sexual risk behaviors
- Traditional view of gender and higher propensity for intimate partner violence
- More likely to consult a traditional healer
- Few close friends, but likes social spaces
- Few people he trusts and feels comfortable talking to about sexual health
- Very low level of knowledge about HIV and deliberate avoidance of it
- More negative views of the health system and healthcare providers
- On testing positive, less likely to start ART
Mr Green by the numbers

Education
- 58% matric
- Average level of education

Employment
- 35% with a steady job
- Second least likely to be employed

Circumcision
- More likely to live in informal housing
- KZN, 59%
- MP, 41%
- None, 46%
- Traditional, 20%
- Clinic <16, 19%
- Clinic, after 16, 14%

Age
- 20-24, 38%
- 25-29, 37%
- 30-34, 25%

Average age amongst segments

Testing
- Never tested, 12%
- Frequent tester, 52%
- Infrequent tester, 36%
- Not tested within last year, 22%
- Tested within last year, 66%

Lower than average testing rates and frequency

Breaking the cycle of transmission
Mr Green prioritises friends and recreation.
Mr Blue (22% of respondents)

• Older, more educated and more materially stable
• Bleak and pessimistic outlook, with few ambitions or motivations
• Little sense of connection or belonging in his community
• Excessive alcohol use contributing to impulsive sexual risk behaviors
• Traditional views of gender
• Reasonable level of knowledge about HIV but does not translate into decisions and behaviors
• Few people he feels comfortable to talk to about sexual health and less likely to engage with the health system
• Views HIV as yet another burden to carry
• On testing positive, less likely to initiate ART
Mr Blue by the numbers

Education
- 73% matric
- Most educated segment

Employment
- 40% with a steady job
- Most likely of all segments to be employed

Circumcision
- Most likely to live in KZN of all segments
- 79%
- 21% MP

Age
- 20-24, 29%
- 25-29, 43%
- 30-34, 28%

Comparatively older
- Not circumcised, 45%
- Traditional 13%
- Clinic, before 16, 24%
- Clinic, after 16, 18%

Comparatively less likely to be circumcised

Testing
- 73% matric
- Most educated segment
- 14% HIV+
- 75% initiated

Age
- 20-24, 29%
- 25-29, 43%
- 30-34, 28%

Comparatively older
- Not circumcised, 45%
- Traditional 13%
- Clinic, before 16, 24%
- Clinic, after 16, 18%

Comparatively less likely to be circumcised

Testing
- Never tested 9%
- Frequent tester 53%
- Infrequent tester 38%

Medium testing frequency among segments
- 26% Not tested within last year
- 64% Tested within last year
Mr Blue has few strong motivations, making interventions challenging to design.

Most important

- Family
- Sex and relationships
- Friends
- Work
- Community
- Recreation

Least important
Mr Grey (16% of respondents)

- More likely to live in more traditional, rural areas
- Deeply rooted in his community, with a sense of purpose and responsibility
- Traditional concept of gender and traditional values and outlook overall
- Few people he trusts and feels comfortable talking to about sexual health
- Low level of knowledge about HIV but more likely to report consistent condom use
- In denial about the relevance of HIV in his life or his community, and unlikely to seek out testing
- But more likely to initiate ART on testing positive
Mr Grey by the numbers

Location
- MP, 38%
- KZN, 62%

Most likely to live in a traditional rural home
Second most likely to live in KZN

Age
- 20-24, 42%
- 25-29, 36%
- 30-34, 23%

Average age amongst segments

Circumcision
- None, 32%
- Traditional, 15%
- Clinic <16, 32%
- Clinic >16, 21%

More likely to be medically circumcised before 16

Testing
- Never tested, 11%
- Frequent tester, 47%
- Infrequent tester, 42%
- Not tested within last year, 39%
- Tested within last year, 50%

Low testing frequency among segments

Education
- 55% matric
Lowest level of education

Employment
- 33% with a steady job
Second least likely to be employed

14% HIV+
85% initiated (highest)
Mr Grey prioritizes community and family.
<table>
<thead>
<tr>
<th></th>
<th>Teal</th>
<th>Rose</th>
<th>Green</th>
<th>Blue</th>
<th>Grey</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV prevalence</td>
<td>15%</td>
<td>14%</td>
<td>19%</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>ART initiation</td>
<td>82%</td>
<td>70%</td>
<td>70%</td>
<td>75%</td>
<td>85%</td>
</tr>
<tr>
<td>VMMC</td>
<td>51%</td>
<td>42%</td>
<td>33%</td>
<td>42%</td>
<td>53%</td>
</tr>
<tr>
<td>HIV knowledge</td>
<td>High</td>
<td>Highest</td>
<td>Lowest</td>
<td>Middle</td>
<td>Low</td>
</tr>
<tr>
<td>Social support</td>
<td>Highest</td>
<td>High</td>
<td>Middle</td>
<td>Lowest</td>
<td>Low</td>
</tr>
<tr>
<td>Gender equity</td>
<td>Highest</td>
<td>High</td>
<td>Lowest</td>
<td>Middle</td>
<td>Low</td>
</tr>
<tr>
<td>Optimism</td>
<td>Highest</td>
<td>High</td>
<td>Lowest</td>
<td>Low</td>
<td>Middle</td>
</tr>
<tr>
<td>Top values</td>
<td>Community</td>
<td>Friends, recreation, sex</td>
<td>Friends, recreation</td>
<td>None</td>
<td>Community, family</td>
</tr>
</tbody>
</table>
Segments at a glance: Demographics

**Location**
- More likely MPU: 48% KZN/52% MPU
- More likely KZN: 79% KZN/21% MPU

**Education (% with matric)**
- Less educated: 52% 55% 58% 60% 73%

**Employment (% with steady job)**
- Less likely to be employed: 32% 33% 35% 36% 40%
- More likely to be employed: 52% 59% 62% 68% 79%

**Age**
- Younger: 25.7 25.9 26.1 26.3 26.9
- Older
<table>
<thead>
<tr>
<th>Segment</th>
<th>Description</th>
</tr>
</thead>
</table>
| Teal    | Lowest level of risk (more likely to be circumcised, fewer casual partners)  
|         | Fears that being HIV-positive would diminish his reputation and standing |
| Rose    | High level of acquisition/transmission risk (more casual partners)  
|         | In denial about his level of risk  
|         | Fears that being HIV-positive would require undesirable lifestyle changes |
| Green   | High level of acquisition/transmission risk (low VMMC, high alcohol use, more casual partners)  
|         | Low knowledge of HIV, perhaps as a deliberate avoidance tactic  
|         | Few people he trusts or feels comfortable talking to about sexual health  
|         | Negative view of health system and healthcare workers  
|         | Fears that being HIV-positive would drag him even further down in life |
| Blue    | Few meaningful connections or sources of motivation  
|         | Few people he trusts to talk about sexual health  
|         | Negative view of health system and healthcare workers  
|         | Fears that being HIV-positive would be yet another burden to carry |
| Grey    | Lower level of risk (higher VMMC and condom use, fewer casual partners)  
|         | Few people he trusts or feels comfortable talking to about sexual health  
|         | Fears that being HIV-positive would diminish his standing in the community |
## Segments at a glance: What might improve linkage to treatment?

<table>
<thead>
<tr>
<th>Color</th>
<th>Counseling that helps him cope with fear of losing his identity as an upstanding member of the community</th>
<th>Support in disclosing to his family and community</th>
<th>Messages that reduce stigma around PLHIV as irresponsible, promiscuous, ‘a problem’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rose</td>
<td>Counseling that focuses on continuing to live a fun and carefree life, rather than what he must give up</td>
<td>Support in disclosing to his partner and friends</td>
<td>Messages that focus on U=U/Treatment as Prevention, which he is likely to find motivating</td>
</tr>
<tr>
<td>Green</td>
<td>Empathetic counseling that helps him to surface and cope with his particular barriers (including depression)</td>
<td>Community/peer outreach that takes services and support to him—he is unlikely to go to the clinic</td>
<td>Services that make it easy to be on treatment—make it a relief rather than a burden Adherence clubs and other social/group approaches—he likes ‘safety in numbers’ and tends to go with the flow Information on the benefits of starting treatment—he has very low overall knowledge of HIV</td>
</tr>
<tr>
<td>Blue</td>
<td>Challenging segment as he reports few strong motivations in life</td>
<td>Empathetic counseling that helps him to surface and cope with his particular barriers</td>
<td>Community/peer outreach that takes services and support to him—he is also unlikely to go to the clinic Messages that focus on U=U/Treatment as Prevention, which he may find somewhat relevant</td>
</tr>
<tr>
<td>Grey</td>
<td>Challenge for this segment appears to be more testing than linkage</td>
<td>Counseling that helps him cope with his fear of losing his identity as a traditional family man and community man</td>
<td>Support in disclosing to his partner, family and community Messages that focus on U=U/Treatment as Prevention, which he is likely to find motivating</td>
</tr>
</tbody>
</table>
Barriers to PrEP adoption and use fall into four main categories.
Mr. Teal and Mr. Rose seem to be the best candidates for PrEP.

**Mr. Rose** shows high interest in PrEP, motivated by the reward of a carefree lifestyle while staying away from the HIV ‘cliff edge’. He also has fewer barriers than other segments. His level of risk is also relatively higher, with more casual partners and less consistent condom use.

**Potential challenge:** Motivation to sustain use given his tendency to underestimate his risk

Among this segment, 36% responded that they are ‘very likely’ to use it.

**Mr. Teal** also shows high interest in PrEP, motivated by a sense of responsibility and the desire to protect his reputation. He also has fewer barriers than other segments. His risk level is relatively lower, but he may be a social catalyst for making PrEP acceptable to other segments.

**Potential challenge:** Motivation to sustain use given his lower level of risk

Among this segment, 42% responded that they are ‘very likely’ to use it.
Priority segments for PrEP

- Higher risk
  - More interest / fewer barriers
    - Teal
  - Less interest / more barriers
    - Blue
- Lower risk
  - More interest / fewer barriers
    - Rose
  - Less interest / more barriers
    - Green

- Grey
Next steps

• Design workshops

• Prototyping

• Piloting & evaluation
We gratefully acknowledge the guidance and support that we have received from more stakeholders than we have space to mention. Particular thanks to:

- National Department of Health
- Provincial Department of Health in KZN and MPU
- Premier’s Office/Provincial AIDS Council in KZN and MPU
- District teams in Ehlanzeni, eThekwini, Gert Sibande, King Cetshwayo, Nkangala, Ugu, uMgungundlovu and Zululand
- South African National AIDS Council (SANAC)
- Foundation for Professional Development (research co-sponsor)
- Implementing partners including Anova, BroadReach, CCI, CHAI, FHI 360, Health Systems Trust, MatCH, NACOSA, Right to Care, SFH and Sonke.
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Thank you!

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