Webinar:
Optimizing HIV Testing Services Using HIV Risk Assessment Tools

1 June 2021: 15h00-16h30 (CEST)
Language: English with simultaneous translation in French

Presentation of systematic review findings: Risk-based screening tools to optimize HIV testing services
Dr Jason ONG (Central Clinical School, Monash University)

Programmatic implementation highlights of pediatric HIV screening tools in East and Southern Africa
Christian STILLSON & Stephanie DOWLING (Clinton Health Access Initiative)

FHI 360 experience using HIV risk screening tools among key populations: innovations in peer- and self-administered online approaches
Andrew LAMBERT & Benjamin EVESLAGE (FHI 360)

Implementation considerations for including robust and validated screening tools in optimized HIV testing services programmes
Cheryl JOHNSON (WHO), Vincent WONG (USAID)

Register in advance: https://who.zoom.us/webinar/register/WN_gl3PlnB-Qtqp61AVcOFCxw
Questions? Cheryl Johnson: johnsonc@who.int
Housekeeping

How to join audio interpretation line

- You need a new version of Zoom for this to work
- Choose to mute the English part of the session or listen to both, translation will be louder than speaker

Chat and support

- Presentation slides and recording link will be shared by email for those who registered after the session
- Please use the “Q&A” function icon to ask questions (French or English), not the “chat”
- This session is being recorded and your attendance is consent to be recorded.
Risk-based screening tools to optimize HIV testing services: a systematic review (1st June 2021)

Assoc. Prof. Dr. Jason Ong
@DrJasonJOng
Jason.Ong@monash.edu
Acknowledgements

• WHO
  • Cheryl Johnson
  • Muhammad Jamil
  • Caitlin Quinn
• Melbourne Sexual Health Centre
  • Katie Coulthard

• Monash University
  • Tran Ngoc An Huynh
  • Myo Jin Tang
Overview

• Aims
• Methods
• Overview of HIV risk-based screening tools
• Lessons learnt
Risk-based screening tool

• Aim = risk stratification to target HIV testing
  • Screen in (choosing people to test) vs.
  • Screen out (choosing people NOT to test)
Risk-based screening tool

- **Screen in** (choosing people to test) [http://sdet.ucsd.edu/](http://sdet.ucsd.edu/)
Risk-based screening tool

• **Screen out** (choosing people *NOT* to test)

---

<table>
<thead>
<tr>
<th>Risk exposure items</th>
<th>Elias, Spain, ED/primary care, 2012-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unprotected sexual intercourse</td>
<td></td>
</tr>
<tr>
<td>Partner with HIV infection</td>
<td></td>
</tr>
<tr>
<td>Man with man sex</td>
<td></td>
</tr>
<tr>
<td>To have received any hemoderivative transfusion</td>
<td></td>
</tr>
<tr>
<td>Parental illicit or recreational drug use</td>
<td></td>
</tr>
<tr>
<td>Any suspicion of HIV acquisition</td>
<td></td>
</tr>
</tbody>
</table>

| Clinical conditions items                                                           |                                        |
| Sexually transmitted infection                                                      |                                        |
| Lymphoma                                                                            |                                        |
| Cancer                                                                              |                                        |
| Herpes Zoster                                                                       |                                        |
| Mononucleosis-like syndrome                                                         |                                        |
| B or C hepatitis                                                                    |                                        |
| Trombopenia                                                                         |                                        |
| Seborrheic dermatitis                                                               |                                        |
| Candidiasis oral                                                                    |                                        |
| Oral hairy leukoplakia                                                              |                                        |
| Unexplained fever                                                                   |                                        |
| Unexplained prolonged diarrhea (>3 months)                                         |                                        |
| Unexplained weight loss                                                             |                                        |
| Mycobacterium tuberculosis disease                                                  |                                        |

**100% Negative Predictive Value**
Purpose of review

• Describe global use of risk-based screening tools used in HIV testing services
  • How developed?
  • Who is using them?
  • What tool?
  • What population?
  • What setting?
  • Performance (sensitivity/specificity)
  • Acceptable to patients? Providers?
  • Cost-effective? Affordable?
Methods
Data source 1

- Systematic literature review
- Search strategy (9th July 2020)
  - 5 databases (Medline OVID, EMBASE, Web of Science, Global Health search)
- Screening process
  - Inclusion criteria
    - Primary data about use of screening tools to optimize HTS
    - 2010-2020
Data source 2

• Survey emailed to list of known HIV test providers (WHO)
  • August-September 2020

• 109 individuals responded --> 171 sites and 103 tools
  • 80 tools from 46 responders with sufficient information
Complementary

Data source 1

• Formal evaluations

Data source 2

• What is being used on the ground
Outcomes

• Predictive ability
  • Receiver Operating Characteristic (ROC) curve

• High sensitivity tools
  • Don’t want to miss PLHIV
  • Even with poor specificity => “falsely tested +ve”

• High specificity tools
  • Can rule out those who don’t need testing.
Results from systematic review
Africa (n=30)
- Nigeria = 2
- Botswana = 1
- South Africa = 7
- Zimbabwe = 6
- Cameroon = 2
- Central Sudan = 1
- Kenya = 6
- Malawi = 1
- South Africa, Uganda, Zimbabwe = 1
- Malawi, South Africa, Uganda, Zimbabwe = 1
- Kenya, Malawi, South Africa = 1
- Botswana, Kenya, Rwanda, South Africa, Tanzania, Uganda, Zambia = 1

North America (n=25)
- Canada = 1
- US = 24

Europe (n=11)
- France = 1
- Netherlands = 2
- Switzerland = 1
- UK = 2
- Spain = 5

Asia (n=4)
- China = 3
- Indonesia = 1

Oceania (n=1)
- PNG = 1
Studies by country-income level

- **High-**
  - Low HIV prevalence country: 36
  - High HIV prevalence country: 0

- **Middle-**
  - Low HIV prevalence country: 15
  - High HIV prevalence country: 18

- **Low-**
  - Low HIV prevalence country: 1
  - High HIV prevalence country: 5

Legend:
- Blue: Low HIV prevalence country
- Red: High HIV prevalence country
Studies by settings

- Primary care: 7 (Low HIV prevalence country), 10 (High HIV prevalence country)
- Hospital: 10 (Low HIV prevalence country), 3 (High HIV prevalence country)
- Emergency Department: 11 (Low HIV prevalence country), 0 (High HIV prevalence country)
- Community recruitment: 8 (Low HIV prevalence country), 0 (High HIV prevalence country)
- STI clinic: 4 (Low HIV prevalence country), 1 (High HIV prevalence country)
- Antenatal/maternity ward: 1 (Low HIV prevalence country), 3 (High HIV prevalence country)
- Prisons: 2 (Low HIV prevalence country), 0 (High HIV prevalence country)
Studies by population

- MSM
- Paediatrics
- Primary care attendees
- Emergency department attendees
- Women
- Hospital inpatients
- Adults in community
- STI clinic attendees
- Incarcerated persons
- Serodiscordant couples
- People who inject drugs
- Female sex workers

- Low HIV prevalence country
- High HIV prevalence country
Screen in or screen out?

- **Screen out**
  - Low HIV prevalence country: 14
  - High HIV prevalence country: 7

- **Screen in**
  - Low HIV prevalence country: 38
  - High HIV prevalence country: 12

Legend:
- Blue: Low HIV prevalence country
- Red: High HIV prevalence country
Tool administered by:

- **Provider**
  - Low HIV prevalence country: 26
  - High HIV prevalence country: 16

- **Patient**
  - Includes lay providers: 6
  - High HIV prevalence country: 7
Data available for:

- MSM
- Primary care
- Testing at birth
- Paediatrics
- Women
- Other specific populations
MSM
<table>
<thead>
<tr>
<th>Lead Author (year of publication)</th>
<th>Year(s) of data</th>
<th>Sample size</th>
<th>Country</th>
<th>Setting</th>
<th>Externally validated?</th>
<th>AUC (95% CI)</th>
<th>Sensitivity</th>
<th>Specificity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sanders (2015)</td>
<td>2005-12</td>
<td>Unclear</td>
<td>Kenya</td>
<td>Health facilities</td>
<td>Yes</td>
<td>0.89</td>
<td>90%</td>
<td>74.1%</td>
</tr>
<tr>
<td>Lin (2018)</td>
<td>2007-17</td>
<td>757</td>
<td>USA</td>
<td>Community-based screening program</td>
<td>Yes</td>
<td>0.88 (0.84-0.91)</td>
<td>78.2%</td>
<td>81%</td>
</tr>
<tr>
<td>Lin (2018)</td>
<td>2007-17</td>
<td>998</td>
<td>USA</td>
<td>Community-based screening program</td>
<td>Yes</td>
<td>0.85 (0.78-0.92)</td>
<td>72%</td>
<td>96%</td>
</tr>
<tr>
<td>Dijkstra (2017)</td>
<td>1984-2009</td>
<td>1562</td>
<td>Netherlands</td>
<td>STI clinic</td>
<td>Yes</td>
<td>0.82 (0.79-0.86)</td>
<td>76.3% (68.2-83.2)</td>
<td>76.3% (75.6-77.0)</td>
</tr>
<tr>
<td>Scott (2020)</td>
<td>2009-10</td>
<td>1164</td>
<td>US</td>
<td>Community</td>
<td>Yes</td>
<td>0.8</td>
<td>81.1%</td>
<td>59.6%</td>
</tr>
<tr>
<td>Wahome (2013)</td>
<td>2005-2012</td>
<td>6531</td>
<td>Kenya</td>
<td>Unclear</td>
<td>Yes</td>
<td>0.79</td>
<td>75.3%</td>
<td>76.4%</td>
</tr>
<tr>
<td>Wahome (2018)</td>
<td>2005-16</td>
<td>753</td>
<td>Kenya</td>
<td>Community - personal networks, sex venues</td>
<td>No</td>
<td>0.76 (0.71-0.8)</td>
<td>97.9%</td>
<td>16.9%</td>
</tr>
<tr>
<td>Smith (2012)</td>
<td>1998-2001</td>
<td>7754</td>
<td>USA</td>
<td>Unclear</td>
<td>Yes</td>
<td>0.74</td>
<td>84%</td>
<td>42%</td>
</tr>
<tr>
<td>Yin (2018)</td>
<td>2013-14</td>
<td>3588</td>
<td>China</td>
<td>Study clinics and community</td>
<td>Yes</td>
<td>0.71</td>
<td>Not reported</td>
<td>Not reported</td>
</tr>
<tr>
<td>Dijkstra (2020)</td>
<td>2003-18</td>
<td>1071</td>
<td>Netherlands</td>
<td>STI clinic</td>
<td>Yes</td>
<td>0.70 (0.64-0.76)</td>
<td>54.0%</td>
<td>77.9%</td>
</tr>
<tr>
<td>Hoenigl (2015)</td>
<td>2008-2014</td>
<td>8326</td>
<td>USA</td>
<td>Community-based screening program</td>
<td>Yes</td>
<td>0.70 (0.63-0.78)</td>
<td>58%</td>
<td>76%</td>
</tr>
<tr>
<td>Luo (2019)</td>
<td>2009-16</td>
<td>1442</td>
<td>China</td>
<td>Unclear</td>
<td>Yes</td>
<td>0.63 (0.61-0.66)</td>
<td>Nor reported</td>
<td>Not reported</td>
</tr>
<tr>
<td>Jones (2018)</td>
<td>2010-14</td>
<td>562</td>
<td>USA</td>
<td>Recruited from venue-based time-space sampling and via Facebook ads</td>
<td>Yes</td>
<td>HIRI: 0.62 Menza: 0.51 SDET: 0.55</td>
<td>HIRI: 62.5% Menza: 62.5% SDET: 25%</td>
<td>HIRI: 56.7% Menza: 41.1% SDET: 83.9%</td>
</tr>
<tr>
<td>Yun (2019)</td>
<td>2009-16</td>
<td>999</td>
<td>China</td>
<td>VCT in hospital, recruitment from community</td>
<td>Yes</td>
<td>0.6 (0.45-0.74)</td>
<td>Not reported</td>
<td>Not reported</td>
</tr>
<tr>
<td>Beymer (2017)</td>
<td>2009-14</td>
<td>9481</td>
<td>USA</td>
<td>LGBT Centre</td>
<td>No</td>
<td>0.75</td>
<td>75%</td>
<td>50%</td>
</tr>
<tr>
<td>Lead Author (year of publication)</td>
<td>Year(s) of data</td>
<td>Sample size</td>
<td>Country</td>
<td>Setting</td>
<td>Externally validated</td>
<td>AUC (95% CI)</td>
<td>Sensitivity</td>
<td>Specificity</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>----------------</td>
<td>-------------</td>
<td>---------</td>
<td>---------</td>
<td>---------------------</td>
<td>--------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Sanders (2015)</td>
<td>2005-12</td>
<td>Unclear</td>
<td>Kenya</td>
<td>Health facilities</td>
<td>Yes</td>
<td>0.89</td>
<td>90%</td>
<td>74.1%</td>
</tr>
<tr>
<td>Lin (2018)</td>
<td>2007-17</td>
<td>757</td>
<td>USA</td>
<td>Community-based screening program</td>
<td>Yes</td>
<td>0.88 (0.84-0.91)</td>
<td>8.2%</td>
<td>81%</td>
</tr>
<tr>
<td>Lin (2018)</td>
<td>2007-17</td>
<td>998</td>
<td>USA</td>
<td>Community-based screening program</td>
<td>Yes</td>
<td>0.85 (0.78-0.92)</td>
<td>2%</td>
<td>96%</td>
</tr>
<tr>
<td>Dijkstra (2017)</td>
<td>1984-2009</td>
<td>1562</td>
<td>Netherlands</td>
<td>STI clinic</td>
<td>Yes</td>
<td>0.82 (0.79-0.86)</td>
<td>6.3% (68.2-83.2)</td>
<td>76.3% (75.6-77.0)</td>
</tr>
<tr>
<td>Scott (2020)</td>
<td>2009-10</td>
<td>1164</td>
<td>US</td>
<td>Community</td>
<td>Yes</td>
<td>0.8</td>
<td>1.1%</td>
<td>59.6%</td>
</tr>
<tr>
<td>Wahome (2013)</td>
<td>2005-2012</td>
<td>6531</td>
<td>Kenya</td>
<td>Community - personal networks, sex venues</td>
<td>Yes</td>
<td>0.79</td>
<td>5.3%</td>
<td>76.4%</td>
</tr>
<tr>
<td>Wahome (2018)</td>
<td>2005-16</td>
<td>753</td>
<td>Kenya</td>
<td>Community - personal networks, sex venues</td>
<td>No</td>
<td>0.76 (0.71-0.8)</td>
<td>7.9%</td>
<td>16.9%</td>
</tr>
<tr>
<td>Smith (2012)</td>
<td>1998-2001</td>
<td>7754</td>
<td>USA</td>
<td>Unclear</td>
<td>Yes</td>
<td>0.74</td>
<td>4%</td>
<td>42%</td>
</tr>
<tr>
<td>Yin (2018)</td>
<td>2013-14</td>
<td>3588</td>
<td>China</td>
<td>Study clinics and community</td>
<td>Yes</td>
<td>0.71</td>
<td>Not reported</td>
<td>Not reported</td>
</tr>
<tr>
<td>Dijkstra (2020)</td>
<td>2003-18</td>
<td>1071</td>
<td>Netherlands</td>
<td>STI clinic</td>
<td>Yes</td>
<td>0.70 (0.64-0.76)</td>
<td>4.0%</td>
<td>77.9%</td>
</tr>
<tr>
<td>Hoenigl (2015)</td>
<td>2008-2014</td>
<td>8326</td>
<td>USA</td>
<td>Community-based screening program</td>
<td>Yes</td>
<td>0.70 (0.63-0.78)</td>
<td>8%</td>
<td>76%</td>
</tr>
<tr>
<td>Luo (2019)</td>
<td>2009-16</td>
<td>1442</td>
<td>China</td>
<td>Unclear</td>
<td>Yes</td>
<td>0.63 (0.61-0.66)</td>
<td>Not reported</td>
<td>Not reported</td>
</tr>
<tr>
<td>Jones (2018)</td>
<td>2010-14</td>
<td>562</td>
<td>USA</td>
<td>Recruited from venue-based time-space sampling and via Facebook ads</td>
<td>Yes</td>
<td>HIRI: 0.62</td>
<td>Menza: 62.5%</td>
<td>HIRI: 56.7%</td>
</tr>
<tr>
<td>Yun (2019)</td>
<td>2009-16</td>
<td>999</td>
<td>China</td>
<td>VCT in hospital, recruitment from community</td>
<td>Yes</td>
<td>0.6 (0.45-0.74)</td>
<td>Not reported</td>
<td>Not reported</td>
</tr>
<tr>
<td>Beymer (2017)</td>
<td>2009-14</td>
<td>9481</td>
<td>USA</td>
<td>LGBT Centre</td>
<td>No</td>
<td>5%</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>Lead Author (year of publication)</td>
<td>Year(s) of data</td>
<td>Sample size</td>
<td>Country</td>
<td>Setting</td>
<td>Externally validated?</td>
<td>AUC (95% CI)</td>
<td>Sensitivity</td>
<td>Specificity</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----------------</td>
<td>-------------</td>
<td>---------</td>
<td>---------</td>
<td>-----------------------</td>
<td>--------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Sanders (2015)(^{21})</td>
<td>2005-12</td>
<td>Unclear</td>
<td>Kenya</td>
<td>Health facilities</td>
<td>Yes</td>
<td>0·89</td>
<td>90%</td>
<td>74·1%</td>
</tr>
<tr>
<td>Lin (2018)(^{13})</td>
<td>2007-17</td>
<td>757</td>
<td>USA</td>
<td>Community-based screening program</td>
<td>Yes</td>
<td>0·88 (0·84-0·91)</td>
<td>78·2%</td>
<td>81%</td>
</tr>
<tr>
<td>Lin (2018)(^{22})</td>
<td>2007-17</td>
<td>998</td>
<td>USA</td>
<td>Community-based screening program</td>
<td>Yes</td>
<td>0·85 (0·78-0·92)</td>
<td>72%</td>
<td>96%</td>
</tr>
<tr>
<td>Dijkstra (2017)(^{26})</td>
<td>1984-2009</td>
<td>1562</td>
<td>Netherlands</td>
<td>STI clinic</td>
<td>Yes</td>
<td>0·82 (0·79-0·86)</td>
<td>76·3% (68·2-83·2)</td>
<td>76·3% (75·6-77·0)</td>
</tr>
<tr>
<td>Scott (2020)(^{27})</td>
<td>2009-10</td>
<td>1164</td>
<td>US</td>
<td>Community</td>
<td>Yes</td>
<td>0·8</td>
<td>81·1%</td>
<td>59·6%</td>
</tr>
<tr>
<td>Wahome (2013)(^{28})</td>
<td>2005-2012</td>
<td>6531</td>
<td>Kenya</td>
<td>Unclear</td>
<td>Yes</td>
<td>0·79</td>
<td>75·3%</td>
<td>76·4%</td>
</tr>
<tr>
<td>Wahome (2018)(^{23})</td>
<td>2005-16</td>
<td>753</td>
<td>Kenya</td>
<td>Community - personal networks, sex venues</td>
<td>No</td>
<td>0·76 (0·71-0·80)</td>
<td>97·9%</td>
<td>16·9%</td>
</tr>
<tr>
<td>Smith (2012)(^{24})</td>
<td>1998-2001</td>
<td>7754</td>
<td>USA</td>
<td>Unclear</td>
<td>Yes</td>
<td>0·74</td>
<td>84%</td>
<td>42%</td>
</tr>
<tr>
<td>Yin (2018)(^{29})</td>
<td>2013-14</td>
<td>3588</td>
<td>China</td>
<td>Study clinics and community</td>
<td>Yes</td>
<td>0·71</td>
<td>Not reported</td>
<td>Not reported</td>
</tr>
<tr>
<td>Dijkstra (2020)(^{25})</td>
<td>2003-18</td>
<td>1071</td>
<td>Netherlands</td>
<td>STI clinic</td>
<td>Yes</td>
<td>0·70 (0·64-0·76)</td>
<td>54·0%</td>
<td>77·9%</td>
</tr>
<tr>
<td>Hoenigl (2015)(^{30})</td>
<td>2008-2014</td>
<td>8326</td>
<td>USA</td>
<td>Community-based screening program</td>
<td>Yes</td>
<td>0·70 (0·63-0·78)</td>
<td>58%</td>
<td>76%</td>
</tr>
<tr>
<td>Luo (2019)(^{31})</td>
<td>2009-16</td>
<td>1442</td>
<td>China</td>
<td>Unclear</td>
<td>Yes</td>
<td>0·63 (0·61-0·66)</td>
<td>Not reported</td>
<td>Not reported</td>
</tr>
<tr>
<td>Jones (2018)(^{32})</td>
<td>2010-14</td>
<td>562</td>
<td>USA</td>
<td>Recruited from venue-based time-space sampling and via Facebook ads</td>
<td>Yes</td>
<td>HIRI: 0·62 Menza: 0·51 SDET: 0·55</td>
<td>HIRI: 62·5% Menza: 41·1% SDET: 83·9%</td>
<td></td>
</tr>
<tr>
<td>Yun (2019)(^{33})</td>
<td>2009-16</td>
<td>999</td>
<td>China</td>
<td>VCT in hospital, recruitment from community</td>
<td>Yes</td>
<td>0·6 (0·45-0·74)</td>
<td>Not reported</td>
<td>Not reported</td>
</tr>
<tr>
<td>Beymer (2017)(^{34})</td>
<td>2009-14</td>
<td>9481</td>
<td>USA</td>
<td>LGBT Centre</td>
<td>No</td>
<td></td>
<td>75%</td>
<td>50%</td>
</tr>
<tr>
<td>Lead Author (Year of Publication)</td>
<td>Number of questions</td>
<td>Demographics</td>
<td>Symptoms and signs</td>
<td>Indicator conditions</td>
<td>Risk behaviours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------</td>
<td>--------------</td>
<td>-------------------</td>
<td>---------------------</td>
<td>----------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lin (2018)</td>
<td>7</td>
<td></td>
<td>fever, lymphadenopathy, weight loss</td>
<td>last 3 months: gonorrhoea, &gt; 3 partners, &gt;5 partners, condomless receptive anal sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lin (2018)</td>
<td>3</td>
<td></td>
<td>fever, myalgia, weight loss 14 days before testing encounter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dijkstra (2017)</td>
<td>7</td>
<td></td>
<td>fever, lymphadenopathy, oral thrush, weight loss</td>
<td>Last 6 months: gonorrhoea, condomless receptive anal sex, &gt;5 partners</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Scott (2020)</td>
<td>12</td>
<td>age, Black, Latino</td>
<td>fever, myalgia, weight loss</td>
<td>number of condomless receptive anal sex with HIV+ or unknown, number of receptive anal sex with condoms with HIV+ or unknown, number of condomless insertive anal sex with HIV+ or unknown, 1 HIV neg partner only, heavy alcohol use, methamphetamine use, popper use, Gonorrhoea/syphilis/chlamydia diagnosis</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wahome (2013)</td>
<td>6</td>
<td>age &lt;30</td>
<td>fever, diarrhoea, fatigue, symptomatic STI</td>
<td>discordant HIV test result</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sanders (2015)</td>
<td>7</td>
<td>age</td>
<td>fever, diarrhoea, fatigue, body pains, sore throat, genital ulcer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wahome (2018)</td>
<td>5</td>
<td>age</td>
<td>sex of partner in past 3 months, sex exposure and protection with condoms in the past week, RAI in past 3 months, group sex in past 3 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smith (2012)</td>
<td>7</td>
<td>age</td>
<td>In last 6 months: total number of male partners, number of male partners who have HIV, number of condomless receptive anal sex with any HIV status partner, times had condomless insertive anal sex with HIV+ partner, used amphetamines, used poppers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yin (2018)</td>
<td>12</td>
<td>Beijing resident, number of years living in Beijing</td>
<td>Drug addiction in past 3 months, alcohol before recent sex, years since first sex, lifetime male partners, number of male partners in last 3 months, number of receptive anal sex in last 3 months, number of insertive anal sex in last 3 months, recent anal/vaginal sex with a female partner, current syphilis, % of condom use during receptive anal sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dijkstra (2020)</td>
<td>4</td>
<td></td>
<td>In the preceding 6 months: condomless receptive anal sex with MSM +ve for HIV, condomless receptive anal sex with 3 or more partners, 5 or more male partners, bacterial STI diagnosis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoenigl (2015)</td>
<td>4</td>
<td></td>
<td>In the preceding 12 months: condomless receptive anal sex with HIV+ MSM, condomless receptive anal sex with &gt;=5 male partners, &gt;10 male partners, bacterial STI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luo (2019)</td>
<td>9</td>
<td></td>
<td>In last 6 months: number of homosexual partners (anal/oral sex), HIV+ homosexual partners, condomless anal sex with man, commercial male sex, STI diagnosis, sex role during anal sex with man, recreational drug use, group sex with men</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jones (2017) - HIRI</td>
<td>6</td>
<td>age</td>
<td>In last 6 months: total number of male partners, total number of HIV+ partners, number of episodes of condomless receptive anal sex, number of episodes of condomless insertive anal sex with HIV+ partner, amphetamine or popper use</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jones (2017) - MENZA</td>
<td>4</td>
<td></td>
<td>Gonorrhoea/chlamydia/syphilis diagnosis at baseline, methamphetamine or popper use in the past 6 months, number of male partners in the past 12 months, number of condomless receptive anal sex with a serodiscordant partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jones (2017) - SDET</td>
<td>4</td>
<td></td>
<td>In the past 12 months: 10 or more partners, any condomless receptive anal sex and at least 5 partners, any condomless receptive anal sex with an HIV+ partner, gonorrhoea/chlamydia/syphilis diagnosis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yun (2019)</td>
<td>4</td>
<td></td>
<td>Main venue for finding male sexual partners, condomless receptive anal sex, condomless insertive anal sex, used rush poppers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beymer (2017)</td>
<td>11</td>
<td>race, age group, race of the last partner, age of last sex partner</td>
<td>History of chlamydia/gonorrhoea/syphilis, receptive anal sex at last sex, number of sex partners in last 3 months, intimate partner violence, use of ecstasy in last 12 months, use of methamphetamines in last 12 months, use of inhaled nitrates in last 12 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Lessons learnt
Existing tools

• Good* tools exist for
  • Acute HIV amongst MSM
  • Serodiscordant couples

• Variable performance
  • MSM
  • AGYW
  • Women
  • Paediatrics

* Externally validated, high AUC, feasible to implement, ‘simple’ variables
Potential benefits of using risk-based screening tools

• Determine who is at risk – strategic/focused testing services
  • Esp valuable in low HIV prevalence settings
  • Even in high HIV prevalence settings with resource limitations
    • prioritize “high risk” populations

• Patients may not be forthcoming about risk factors / clinicians may not routinely ask
  • Algorithm may prompt process of HTS
Potential benefits of using risk-based screening tools

• Resource allocation
  • Allocative efficiency – highest yield (test positivity) for lowest cost
    • Streamlining testing / resource in settings with shortage of staff / kits
  • Inform prioritization of resources
    • Testing e.g. p24 Ag, RNA
    • PrEP
      • Identify individuals with highest risk of HIV to receive costly interventions
        • https://www.who.int/hiv/pub/prep/prep-implementation-tool/en/
  • Those with higher scores have higher prevalence
Potential benefits of using risk-based screening tools

• Can be used by non-professional health workers

• Used to communicate about risks to clients
  • Used as part of counselling
  • Improving awareness / perception of risk e.g. SDET
    • Improved awareness/normalization in healthcare staff too - prompt testing
  • Used by users directly to improve accurate risk-perception
  • Often a mismatch between perceived and actual risk
Potential challenges/harms

• Potentially stigmatizing
  • Nelwan-2016, Indonesia, narcotic prison, male inmates
    • High refusal rate: 1 in 3 inmates identified as high risk declined to test
    • Suspicion of under-reporting of IDU

• Time-consuming, difficult to implement
  • Difficult when healthcare settings already with heavy workload and limited resources
Potential challenges/harms

• Missed cases
  • E.g. Kennedy-2010, USA, Veteran Affairs Medical Centre, 2000-07, N=319,542, 38-55% of PLHIV do not have one of 13 risk factors used for “targeted testing”
  • Muttai-2020, Kenya, outpatients, 2017-18 – can reduce testing by 75% but miss 50% of cases

• Generalizability
  • External validation to local contexts is critical
  • Incl. acceptability / feasibility
The ideal HIV-risk based tool
1) Tools must be accurate

• High AUC
  • Ideally > 0.8
2) Tools must be externally validated

• Wide variations in AUC
  • Variations in HIV epidemiological profiles (even within the same country)
  • New risk factors to include or adapting to local measurements
    • How risk factors relate to one another (co-variance) and importance will change in different settings and over time
    • Not all risk factors are routinely collected
    • Different HIV epidemics – e.g. concentrated among gay men or not
  • Risk factors may change over time
3) Tools must be reliable

- Self-reported behaviours vs. objective measures
- Language construction and wording
4) Tools must be feasible

• Implementation
  • Simple, concise tools
  • Acceptable to providers and users
  • Clinic flow
  • Ongoing monitoring
Ways forward – more data needed

• More economic evaluations needed – outside US/Europe EDs

• Batista-2018
  • 2015-16, USA, ED
  • Universal testing vs. targeted approach (“risk behaviors”)
  • ICER $17,759 per additional HIV case for universal (vs. targeted)

• Dowdy-2011
  • Targeted HIV screening in ED, USA
  • Improves QALYs and saves money (compared with non-targeted)

• Gomez-Ayerbe
  • Spain, 2014, ED and primary care
  • Targeted testing was cost-saving
    • Cost per new diagnosis of HIV
      • 1977 Euros (non-targeted)
      • 1112 Euros (Targeted)
      • 5032 Euros (clinician decided who should be tested)
Ways forward – more data needed

• More validation studies
  • Local contexts - ‘different’ epidemics
  • Measurement bias

• Monitoring of implementation experience

• Linkage to care data
Conclusions

• Wide interest and use of ‘screening tools’
  • Mixed evaluation findings

• **Screening in** tools may be useful in settings where it is not feasible or recommended to routinely offer testing

• Caution is needed for **screening out** tools
  • Trade-off between reducing costs of testing with missing cases of people living with HIV
  • Must be locally evaluated
Thank you

@DrJasonJOnge

Jason.Ong@monash.edu
Implementation highlights and considerations for adult and pediatric HIV screening tools in East and Southern Africa
Despite progress towards 1\textsuperscript{st} 95 goal, limited resources and increasing numbers of PLHIV on treatment often means countries have fewer resources available for testing.

As we work towards 95% of PLHIV being aware of their status, testing yields are declining, leading countries and donors to shift resources away from large-scale testing efforts. Programs are required to balance HTS with increasing needs to prioritize other HIV activities and HCW investments (e.g. retention, quality of care).

**Global Progress Towards 95-95-95**

<table>
<thead>
<tr>
<th></th>
<th>Millions</th>
</tr>
</thead>
<tbody>
<tr>
<td>PLHIV</td>
<td>38M</td>
</tr>
<tr>
<td>Know their status</td>
<td>5.3M</td>
</tr>
<tr>
<td>Accessing ART</td>
<td>8.9M</td>
</tr>
<tr>
<td>Virally Suppressed</td>
<td>10.2M</td>
</tr>
</tbody>
</table>

Remarkable progress in ART scale-up, but still **14.2M PLHIV unaware of their status or not effectively linked to ongoing care**.

**Donor Government Disbursements for HIV, 2002-2019**

Since 2008, donor funding for HIV has plateaued while absolute costs for HIV treatment are expected to increase as patient numbers continue to rise.

Source UNAIDS; Donor Government Funding for HIV in Low- and Middle-Income Countries in 2019, Kaiser Family
In response, there has been a push to make testing more targeted for both adults and children, resulting in accelerated efforts to expand the use of screening tools.

There has been an increased focus on more targeted testing to identify remaining PLHIV, including:

- Shifting investment towards the scale-up of highly targeted strategies like index testing
- Scale-up of innovative strategies like HIV self-testing to reach PLHIV who are not accessing testing services
- Efforts to reduce volumes and increase yield rates within facilities, including through implementing screening tools

As countries look to increase efficiency in HTS, it will be critical to consider both yield AND absolute identifications to ensure they are on track to meet treatment scale-up targets.
While evidence suggests that risk-based screening tools for adults can increase yield, large portions of PLHIV are often screened out

Screening in Adults

- Large focus on **decreasing testing volumes** and increasing testing efficiencies

- For adults with ongoing risk of HIV infection (e.g. high burden settings), WHO recommends annual retesting

- **Screening-out approach**, where offering a test during facility visits is the default and screening is meant to remove clients from the testing pool (e.g. on ART, recent negative test, low behavioral risk)

- Even highly sensitive tools will screen out undiagnosed PLHIV, **reducing the overall number of PLHIV identified**

Scaled nationally, this would result in 22k fewer HIV diagnoses each year!
Innovative and efficient approaches for screening adults that INCREASE diagnoses are required. **HIV self-tests** can be used as highly sensitive screening tools that can drive efficiencies in facility-based HTS while increasing access, testing coverage, and identifications.

### HR and commodity costs for current standard of care compared with screening in OPD

*Based on national testing volumes, 2018*

<table>
<thead>
<tr>
<th></th>
<th>Standard of Care</th>
<th>Screening in OPD</th>
<th>Screening tool savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total # of tests (A1)</td>
<td>10.5M</td>
<td>8.9M</td>
<td>1.6M</td>
</tr>
<tr>
<td>Total cost</td>
<td>$23.6M</td>
<td>$22.1M</td>
<td>$1.5M</td>
</tr>
<tr>
<td>Commodity costs</td>
<td>$13.7M</td>
<td>$11.7M</td>
<td>$2.0M</td>
</tr>
<tr>
<td>Human resource costs</td>
<td>$9.9M</td>
<td>$10.4M</td>
<td>-$0.5M</td>
</tr>
</tbody>
</table>

Resulting reduction in testing would yield only modest cost savings, likely to be offset by the need to identify the missed PLHIV through other, more expensive channels.

![Cost per PLHIV identified in Uganda, by strategy](chart)

- Facility: $69.05
- Index testing: $58.14
- Community-based HIVST: $181.36
Differences in the prevalence, ongoing risk of infection, and testing coverage children requires screening needs to be approached differently for children

**Screening in Children**

- **1 in 303 children** 0-14 years are living with HIV vs. **1 in 27 adults** 15 years+ in SSA

- New child infections **driven largely by MTCT**, with minimal ongoing risk until adolescence; no retesting recommended beyond PMTCT

- **Screening-in/opt-in approach**, where screening is meant to identify well & sick children who slipped through the cracks in PMTCT (e.g. HIV exposure, clinical risk factors)

- A targeted testing approach is needed particularly in **high volume settings (e.g. OPD)** to maximize identifications where coverage is typically low

**Zambia Children <15 Testing Uptake & Yield**

(38 Facilities, Apr-Dec 2018)

- OPD (n=38): 15.7% Uptake, 0.9% Yield
- IPD (n=10): 30.0% Uptake, 2.8% Yield
- TB (n=31): 70.4% Uptake, 19.6% Yield
- Nutrition (n=28): 58.6% Uptake, 8.1% Yield

**Sources:**
1. CHAI analysis using World Bank Population 2019, UNAIDS 2019
2. Zambia HMIS
CHAI supported a pilot on pediatric HIV symptomatic screening in OPD, demonstrating 2.2x greater yield among children screened.

Piloted tool previously validated in Zimbabwe (Bandason, 2016)

Tool adopted in National Operational Service Delivery Manual; task-shifting, screening at point-of-contact and HCW mentorship considered to strengthen implementation.

Source: CHAI Pilot Data (facility registers & group discussions)
Relying on risk-based and clinical screening tools can miss CLHIV before they are symptomatic. Exposure screening is another viable approach that can even incorporate maternal retesting.

**Malawi MOH Pediatric Screening Tools**

- No clinical questions, just testing history
- Relies on maternal testing status
- Operationalizes maternal retesting and catch-up testing
- Re-engages previously identified HEI who have missed EID test
- High acceptability from screening personnel (easy and quick to use)

---

**Results from 2019 pilot. Validation delayed due to COVID-19**
Pediatric screening tools should be carefully considered and scaled to reduce the testing gap, while additional innovations for adult screening are critically needed to maintain progress towards 1st 95

While **pediatric screen-in tools can increase coverage and identifications**, current evidence and experience suggests **adult screen-out tools are much less effective**

**Continuous monitoring of design, implementation, and outcomes** is critically needed to ensure tools are implemented with fidelity and have the intended impact on both yields **and** identifications in real world settings

Implementers should consider **operational feasibility** (time, resources) and appropriate **screening questions/risk factors** based on context

Efforts are needed to **maximize screening coverage** in order to see full impact of tools

With declining resources yet ongoing need for HIV testing, it is critical to look for effective and efficient **innovations in testing** (e.g. facility-based HIVST)
FHI 360 experience using HIV risk screening tools among key populations

Innovations in peer- and self-administered online approaches

Presenters: Andrew Lambert & Benjamin Eveslage (FHI 360)
Framing

FHI 360’s HIV programs use various types of risk assessments to help programs tailor service delivery and improve targeting.

- **Framing**
  Andrew Lambert (2 minutes)

- **KP Risk Assessment Screening Tools (RAST)**
  9-minute presentation by Andrew Lambert on the in-person peer administered RAST deployed in Lesotho and South Africa

- **Online client-led risk assessment**
  9-minute presentation by Ben Eveslage on a risk assessment deployed within the Online Reservation and Case Management App (ORA) used in 27 countries as an optional screen-in step before service booking
Programmatic use of risk assessment screening tools for HIV testing and PrEP prioritization: MSM in Lesotho and South Africa

FHI 360 EpiC/LINKAGES Program

Andrew Lambert, Senior Technical Advisor
alambert@fhi360.org
KP HIV testing context

- Generalized → Localized → Targeted (Key Populations)
- Reduction in HIV case findings and rates, over-testing, and not reaching the “right” KPs
  - KP 3-month testing frequency guidelines (PEPFAR, In-Country)
  - Health seeking behavior change → “routine HIV testing behavior change”
  - Large cohorts of KPs repeat testing;
    - Saturation reached or just not testing the right people?
- Need for more targeted testing and reaching those not accessing service.
- Targeting Key Populations = Targeting risk/vulnerabilities within KPs
Need for improved risk screening tools: Target risk/vulnerabilities of younger KP and increases reach into older populations
The changing world of MSM: Younger vs. Older

Younger MSM
Less and less bound to cultural traditions and masculinity norms

Older MSM
More tied to cultural traditions and masculinity norms
KP risk assessments:

- Identify both
  - **Primary (exposure risk)** – Condom-less sex and/or sharing injecting equipment
    - Risk Multipliers: receptive anal sex, STI, certain drug use
    - Risk “Reducers”: appropriate PrEP use, circumcised
  - **Secondary (vulnerability risk)** – May lead to condom-less sex and/or sharing injecting equipment
    - e.g., Intergenerational sex, substance use/abuse/addiction, mental health, GBV

- Uses a simple scoring system that screens-in individuals for a range of services identified under Primary and/or Secondary risks

- Those who screen-out of HIV testing and PrEP services (low risk) can still opt-in
- Pose questions in a way to try and reduce social desirability bias
- Conducted using motivational counseling – “a conversation about risks”- Contemplation
More accurate screening for HIV exposure risk

<table>
<thead>
<tr>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>How do you take PrEP?</td>
<td>Daily</td>
</tr>
<tr>
<td>Event Driven (2-1-1)</td>
<td></td>
</tr>
<tr>
<td>Was there a day (before, during and/or after) where did not take pills and had unprotected sex?</td>
<td>Consistent (no)</td>
</tr>
<tr>
<td>Not consistent (yes)</td>
<td></td>
</tr>
</tbody>
</table>

**E1. Are you currently on (taking) PrEP?**

<table>
<thead>
<tr>
<th>No</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>H</td>
</tr>
</tbody>
</table>

**E2. Since your last HIV negative test, or if never tested:**

Did you have sex with anyone where a condom wasn’t used, or a condom broke?

| No | H |
| Yes | H |

If yes or don’t want to say, (and Cis male, TG female) ask questions A and B below:

A. Was your semen in someone else?
   | No | H |
   | Yes | H |
   | Don’t want to say | |

B. Was there semen in you?
   | No | H |
   | Yes | H |
   | Don’t want to say | |

- Discusses PrEP use, how using, and assesses for accurate (consistent) use
- Questions to reduce social desirability responses/biases such as Condom use
- Attempts to further segment risk levels such as sexual route of transmission for MSM
- Uses a proxy indicator for heightened risk or vulnerability such as “Don’t want to say”, “Refuse to answer”.
Risk “multiplier” – Intergenerational sex

- “Sugar Daddy”/intergenerational sex increased HIV infections in studies with AGYW in South Africa
- Question: Do you have sex with people who are younger, same age, older age group?
- Use with MSM and with SW in regard to their paying clients
KP risk assessment screening tool (RAST)

1. **Co-Creation**: FHI 360 Optimization MSM Summit 2019 – First draft developed by African countries
   - Simple 7 questions with skip patterns
   - Field worker instructions
   - Easy non-numerical scoring/prioritization system (H/M/L)

2. **Field tested** in Lesotho, Feb/Mar 2020

3. **Roll out** in Lesotho, April 2020 to date

4. **Risk prioritization for PrEP** in South Africa using Ready, Able and Willing (RAW) counselling with higher risk MSM

5. **Updated version 2.0** for all KPs types, PrEP, and Vulnerability risk exposure
### Original Lesotho RAST findings (Feb/Mar 2020)

<table>
<thead>
<tr>
<th>Risk variable</th>
<th>HIV Pos</th>
<th>HIV Neg</th>
<th>Total</th>
<th>% HIV cases</th>
<th>Fisher's exact test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Priority (risk) Score</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Zero HIV case in Low priority group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 89% (25/28) of HIV cases in High priority group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>0</td>
<td>139</td>
<td>139</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>3</td>
<td>134</td>
<td>137</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>25</td>
<td>408</td>
<td>433</td>
<td>6%</td>
<td>P&lt;0.001</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 82% (23/28) of newly diagnosed MSM were 30+</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 80% (4/5) of under 30 infections from sex with older MSM, Intergensex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;18</td>
<td>1</td>
<td>13</td>
<td>14</td>
<td>7%</td>
<td>P&lt;0.001</td>
</tr>
<tr>
<td>18-29</td>
<td>4</td>
<td>411</td>
<td>415</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>30+</td>
<td>23</td>
<td>257</td>
<td>280</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td><strong>Time since last HIV test</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 0.5% (4/709) Never tested for HIV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-6 months</td>
<td>4</td>
<td>321</td>
<td>325</td>
<td>1%</td>
<td>P= 0.001</td>
</tr>
<tr>
<td>7-12 months</td>
<td>6</td>
<td>104</td>
<td>110</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>more than 12 months</td>
<td>18</td>
<td>252</td>
<td>270</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td><strong>Condom Use</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 66% reported condomless sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 96% (27/28) positives reported condomless sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Condomless sex (YES)</td>
<td>27</td>
<td>443</td>
<td>470</td>
<td>6%</td>
<td>P= 0.001</td>
</tr>
<tr>
<td>Condomless sex (NO)</td>
<td>1</td>
<td>215</td>
<td>216</td>
<td>0.5%</td>
<td></td>
</tr>
<tr>
<td>Refused to answer</td>
<td>0</td>
<td>23</td>
<td>23</td>
<td>0%</td>
<td></td>
</tr>
</tbody>
</table>

Cross-generational analysis – Majority of under 30 infections from sex with older MSM.
Lesotho MSM RAST Roll Out: Apr 2020 – Jan 2021

### Risk segmentation April 2020 – Jan 2021

#### Risk variable

<table>
<thead>
<tr>
<th>Risk variable</th>
<th>HIV Pos</th>
<th>HIV Neg</th>
<th>Total</th>
<th>% HIV cases</th>
<th>Fisher's exact test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority (risk) Score</td>
<td>1</td>
<td>79</td>
<td>80</td>
<td>1%</td>
<td>P&lt;0.0001</td>
</tr>
<tr>
<td>- One HIV case in Low priority group</td>
<td>5</td>
<td>273</td>
<td>278</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>- 91% (59/65) of HIV cases in High priority group</td>
<td>59</td>
<td>651</td>
<td>710</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>69% (45/65) of newly diagnosed MSM were 30+</td>
<td>40% (8/20) of under 30 infections from sex with older MSM. Intergensex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- &lt;18</td>
<td>0</td>
<td>49</td>
<td>49</td>
<td>0%</td>
<td>P&lt;0.0001</td>
</tr>
<tr>
<td>- 18-29</td>
<td>20</td>
<td>545</td>
<td>565</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>- 30+</td>
<td>45</td>
<td>409</td>
<td>454</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Time since last HIV test</td>
<td>3-6 months</td>
<td>10</td>
<td>324</td>
<td>334</td>
<td>3%</td>
</tr>
<tr>
<td>- 7-12 months</td>
<td>14</td>
<td>348</td>
<td>362</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>- more than 12 months</td>
<td>41</td>
<td>331</td>
<td>372</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Condom Use</td>
<td>56% of the tested reported condomless sex</td>
<td>82% (53/65) positives reported condomless sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Condomless sex (YES)</td>
<td>53</td>
<td>548</td>
<td>601</td>
<td>9%</td>
<td>P&lt;0.0001</td>
</tr>
<tr>
<td>- Condomless sex (NO)</td>
<td>8</td>
<td>293</td>
<td>301</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>- Refused to answer</td>
<td>2</td>
<td>53</td>
<td>55</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>- Blank</td>
<td>2</td>
<td>109</td>
<td>111</td>
<td>2%</td>
<td></td>
</tr>
</tbody>
</table>
More than one H priority identified: HIGHER

H/M/L Segmentation

- Number of MSM:
  - High priority: 710
  - Medium Priority: 278
  - Low Priority: 80

- Case finding rate:
  - High priority: 8%
  - Medium Priority: 2%
  - Low Priority: 1%

HIGHER (HH) Further Segmentation

- Number of MSM:
  - Higher priority: 81
  - High priority: 629
  - Medium Priority: 278
  - Low Priority: 86

- Case finding rate:
  - Higher priority: 23%
  - High priority: 6%
  - Medium Priority: 2%
  - Low Priority: 1%
## Engage Men’s Health MSM Data: EpiC South Africa Risk Segmentation, RAW Counselling, and PrEP Outcomes

<table>
<thead>
<tr>
<th></th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Total PRE</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Total POST</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV Negative</td>
<td>854</td>
<td>554</td>
<td>460</td>
<td>1868</td>
<td>685</td>
<td>675</td>
<td>783</td>
<td>2143</td>
</tr>
<tr>
<td>Total PrEP Starts</td>
<td>198</td>
<td>184</td>
<td>178</td>
<td>560</td>
<td>333</td>
<td>337</td>
<td>399</td>
<td>1069</td>
</tr>
<tr>
<td>% PrEP Starts Total</td>
<td>23%</td>
<td>33%</td>
<td>39%</td>
<td>30%</td>
<td>49%</td>
<td>50%</td>
<td>51%</td>
<td>50%</td>
</tr>
<tr>
<td>% PrEP Starts (H Risk)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>76%</td>
<td>81%</td>
<td>77%</td>
<td>78%</td>
</tr>
<tr>
<td>Returned within 60 Days</td>
<td>41</td>
<td>39</td>
<td>30</td>
<td>110</td>
<td>92</td>
<td>187</td>
<td>216</td>
<td>495</td>
</tr>
<tr>
<td>% Returned Total</td>
<td>21%</td>
<td>21%</td>
<td>17%</td>
<td>20%</td>
<td>28%</td>
<td>55%</td>
<td>54%</td>
<td>46%</td>
</tr>
</tbody>
</table>

### Aug – Oct:
- NO risk segmentation and NO PrEP Ready, Able and Willing counselling

### Dec – Feb:
- Intervention to segment exposure, vulnerability risk
  - Higher risk MSM Screen-in for PrEP RAW counselling
  - Return rate calculated at 60 days after dispensing as marker for use:
    - Delay from dispensing to taking pills
    - ED PrEP used but not approved for in country
    - Real life 1-month return translates into come when need refill
VULNERABILITY Risk: V2.0 Added screen-in priority for PrEP regardless of, and in combination with exposure risk

1. Intergenerational sex
2. GBV
3. Drug use
4. Stigma and Discrimination
5. Mental Health (sense of self)
KP RAST take-aways and next steps

• “Validating” risk assessments and risk questions to improve prioritizing HIV testing and PrEP can easily be done within regular HIV programming and operations.

• Strategies to risk segment increases capacity of peers to think less about target driven reach and focus more on finding those most vulnerable and at-risk.

• Guided discussion on risk and vulnerabilities may improve individual risk perception (contemplation) and subsequent health/help seeking actions and behaviour.

• Screening-out low risk/priority individuals with an option to opt-in for HIV testing/PrEP services creates a safeguard not to miss HIV positive cases or deny PrEP.

• Need exists to better identify exposure and vulnerability risks of younger KP.

• Use of longitudinal KP client level data may allow programs to begin measuring exposure risk/behaviour/vulnerability change over time (individual, population, sub population, etc).

• Cohort level tracking of risks may be able to support measuring impact (HIV incidence).

• Currently converting paper-based RAST to DHIS2 eTracker for real-time program use.
Online Client-led HIV Risk Assessments

Ben Eveslage, Technical Advisor, FHI 360
1 June 2021
Where our HIV programs reached people

OUTREACH

1.0

Physical spot and social-network-based outreach using in-person communication

See more at fhi360.org/GoingOnline
Risk assessments within Going Online

See more in Going Online: A Budgeting and Programming Aid for Virtual HIV Interventions available for download from: https://hivpreventioncoalition.unaids.org/resource/3332/
ORA client-led risk assessment

- Offers clients more private and confidential risk assessment
- Provides clients with relevant service recommendations
- Disaggregates appointment and service access data by population
- Aims to calculate risk more accurately (based on “exposures”, PrEP use, and VL suppression, and not just risky practices)
- Differentiates HIV-, HIV+, and STI risk

Test the risk assessment here: https://quickres.org/100
Structure and skip logic

1. Age
   - Open response

2. Testing history
   - <3mos
   - 3-6mo
   - >6mos
   - Never

3. HIV status
   - HIV+
   - HIV-
   - ?
   - Never tested

4. PrEP status
   - Do not take
   - Pill only when I need it
   - Pill every day

5. ART status
   - Pill every day
   - Adherence issues
   - LTFU
   - Not yet

6. PrEP care
   - Yes
   - No

7. Viral suppression
   - A: Viral load is suppressed or undetectable
   - B: Last VL test not suppressed
   - C: Not sure

8. Gender
   - Female
   - Trans
   - Male
   - Not say

9. Sex at birth
   - Male
   - Female
   - Trans
   - Not say

10. Sex with
   - Men
   - Women
   - Both
   - Not yet

11. Possible Exposures
    - Unprotected sex
    - Share needle
    - Received sex for money or goods
    - Sex without my consent
    - Alcohol or drugs before sex
    - Had an STI recently or STI symptoms
    - I paid for sex
    - Emotional or physical abuse or violence from a sexual partner
    - I joined a sex party
    - Was in prison or jail

12. PrEP care
    - Yes
    - No

Minimum age applies and can block user from completing a risk assessment.

If the client skips this risk assessment, questions with a star symbol will be asked on the final appointment confirmation page and will also include a question to disclose HIV status and Key Population type.

These letters represent different pages that the client will be directed to after the risk assessment that will contain a unique service recommendation.
Risk assessment result page

With tailored service recommendations for clients who are HIV negative, not on PrEP, and potential exposure to HIV and STIs.
## Services offered after risk assessment

<table>
<thead>
<tr>
<th>HIV</th>
<th>Co Infections</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV testing</td>
<td>STI testing</td>
<td>Hormonal Therapy</td>
</tr>
<tr>
<td>HIVST</td>
<td>STI Tx</td>
<td>Post-Violence Services</td>
</tr>
<tr>
<td>PrEP</td>
<td>Hep B</td>
<td>Family planning</td>
</tr>
<tr>
<td>PEP</td>
<td>Hep C</td>
<td>Home-based services</td>
</tr>
<tr>
<td>HIV treatment (ART)</td>
<td>TB</td>
<td>Virtual doc</td>
</tr>
<tr>
<td>Viral load testing</td>
<td>Genital Wart Services</td>
<td>OST</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

See more at fhi360.org/GoingOnline
### Risk calculation equation

\[(h \times t) \times ((u + i) \times (1 + r_1 + r_2 + r_3 + r_4 + r_5 + r_6 + r_7 + r_8 + m + s + g + d))\]

**How to interpret HIV risk values:**
1. One value is produced which may range from -10 to +10;
2. Negative numbers are for HIV negative or unknown status and positive for HIV positive clients;
3. The higher a negative number the higher the HIV acquisition risk;
4. The higher a positive number the higher the HIV transmission risk;
5. A value of 0 can be for HIV- or + with no risk of transmission/acquisition.

**How to interpret STI risk values:**
1. Numbers are always positive indicating risk of STI acquisition;
2. Higher values mean higher risk;
3. STI risks relate to blood and sexual fluid transmissions (not touch).

### Tables

<table>
<thead>
<tr>
<th>HIV &amp; Treatment Status</th>
<th>Transmission routes (HIV-)</th>
<th>Transmission routes (HIV+)</th>
<th>Other risk multipliers</th>
<th>KP status multipliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>h=HIV Status</td>
<td>u=unprotected sex</td>
<td>u=unprotected sex</td>
<td>r1=multi sex partners; r2=rape/force sex; r3=STI; r4=alcohol drugs; r5=high fun; r6=group sex; r7=paid for sex; r8=violence</td>
<td>M=MSM S=SW G=TG D=PWID</td>
</tr>
<tr>
<td>t=Status</td>
<td>i=injecting</td>
<td>i=injecting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H=HIV negative or unknown = (-1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H=HIV positive = (+1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never tested = (-1.1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T=VL or PrEP=0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>T=all other=1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unprotected sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U=no=0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U=yes (GP)=1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U=yes Insertive only = 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U=yes Insertive/buth = 1.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Injecting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I=no=0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I=yes=1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk multiplier (R1-8)</td>
<td>Each risk has a 0.2 value assigned</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Prevalence rates**
- M=0.4
- S=0.2
- G=0.5
- D=0.7

**India only:** If OST=yes, then d=0
How risk data is shown to program staff

<table>
<thead>
<tr>
<th>Client Details</th>
<th>Token / Code</th>
<th>Phone</th>
<th>Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI</td>
<td>100 / 20200604305554</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Outreach worker: crw</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case manager: dallen</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ben test</td>
<td>999999 / 20200604383939</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Outreach worker: crw</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case manager: rhewitt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jess</td>
<td>999999 / 20200604607914</td>
<td>-</td>
<td>1.4</td>
</tr>
<tr>
<td>Outreach worker: crw</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case manager: rhewitt</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ben test 4</td>
<td>100 / 20200604220811</td>
<td>-</td>
<td>2.3</td>
</tr>
<tr>
<td>Outreach worker: crw</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case manager: dallen</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Appointment Details

- **Dr. Tina Hylton-Kong at Nuttall Medical...**
  - Date: Thu 10 Mar
  - Time: 16:00

- **Dr. Nembhard at Health Plus Associates**
  - Date: Thu 11 Jun
  - Time: 14:30

- **Dr. Clive Anderson at Nuttall Medical Ce...**
  - Date: Fri 5 Jun
  - Time: 14:30

Clinic Actions

- HIVST
- HTS
- Co-Inf
- PReP
- ART
- Index
- Other

Case Management

- ART
- Index
- ART Clients

See more at fhi360.org/GoingOnline
Risk result pages

- 78% clients who book an appointment (N9907) skip the risk assessment
- Of those who completed a risk assessment (N2134), 57% are HIV-unknown, not on PrEP, with potential HIV/STI exposure (result type LX)

Data from QuickRes, a global ORA platform shared by 10 countries (June 2020-May 2021)

Risk assessment results by category (excluding "skipped") – QuickRes June 2020-May 2021
HIV testing history results

- 53% were tested more than 6 months ago
- 10% never tested

Data from QuickRes, a global ORA platform shared by 10 countries (June 2020-May 2021)
Risk score results

Scores range from -3 (high HIV- risk) to +3 (high HIV+ risk)
Mali - Volume of risk assessments, by population

Data from Ibadon.com (Mali) through April 9, 2021

- Approximately 48% of users completed a risk assessment*
- 72% of risk assessments were among KP
- Repeat users may not complete a risk assessment

Populations taking the risk assessment (N=1,264)

- MSM 35%
- SW 25%
- TG 11%
- PWID 1%
- General 28%

Data from Ibadon.com, an ORA platform used in Mali (March 2020-May 2021)
Mali - Using risk scores for program improvement

Data through 9 April 2021

- Scores are used to understand the level of risk among and between key population members
- The program uses scores to see if there are different levels of risk between clients who book online and arrive, compared to those who only take the risk assessment (RA) or who made a reservation and did not arrive.

<table>
<thead>
<tr>
<th></th>
<th>General Population</th>
<th>MSM</th>
<th>SW</th>
<th>TG</th>
</tr>
</thead>
<tbody>
<tr>
<td>All risk</td>
<td>Mean: -0.97, Median: -1.20</td>
<td>Mean: -0.99, Median: -1.40</td>
<td>Mean: -1.50, Median: -1.80</td>
<td>Mean: -1.28, Median: -1.70</td>
</tr>
<tr>
<td>Risk, arrived</td>
<td>Mean: -0.75, Median: -1.20</td>
<td>Mean: -1.04, Median: -1.40</td>
<td>Mean: -1.75, Median: -1.90</td>
<td>Mean: -1.18, Median: -1.70</td>
</tr>
<tr>
<td>Risk, RA only or booked but did not arrive</td>
<td>Mean: -0.84, Median: -1.20</td>
<td>Mean: -0.78, Median: -1.40</td>
<td>Mean: -1.03, Median: -1.20</td>
<td>Mean: -1.58, Median: -1.70</td>
</tr>
</tbody>
</table>

Risk increases the higher the negative number

Data from ibadon.com, an ORA platform used in Mali (March 2020-May 2021)
Nepal - HIV testing history results

- 46% were tested more than 6 months ago
- 35% never tested
- N=936
Next steps

- Inconsistencies in using results for predicting case finding and arrival rate
- Further data analysis of risk scores will help refine risk calculation and scoring
- Train teams on how to use risk scores to triage support to clients, help those with higher risk to get in for services
Thank you!

EpiC is a global cooperative agreement dedicated to achieving and maintaining HIV epidemic control. It is led by FHI 360 with core partners Right to Care, Palladium, Population Services International (PSI), and Gobee Group.
See more at fhi360.org/GoingOnline

Reach out for assistance, email GoingOnline@fhi360.org
Click here to join Going Online WhatsApp group chat.
Validated screening tools in optimized HIV testing services programmes

Implementation Considerations and Reflections on the way forward
Cheryl Johnson (on behalf of HTS team)
WHO Webinar - 1 June 2021
Key highlights: Screening tools for HTS evidence

**Screening-in tools** evidence generally supporting that they can prompt testing in key settings and groups that might be missed otherwise:

- **SDC, MSM and Children** (potentially other populations at high ongoing risk)
- **Acute infection & PrEP referral** (SDC & MSM)
- Targeted offer of HIVST
- **Decentralized assessments** (self-assessment, lay providers, peers etc)
- Integrated into virtual interventions
- Settings where routine offer of HTS is not feasible
- Can lead to more or less testing - but will likely make this more efficient and effective.

Opportunities for using screening-in tools
- Optimize retesting
- Reduce missed opportunities
- Improve targeting and demand generation for specific interventions
Key highlights: Screening tools for HTS evidence

**Screening-out tools** limited evidence, with mixed results:

- Many identified in programmes not validated
- Some increase efficiency (↑ positivity), but miss people with undiagnosed HIV and linkages to ART and prevention
- Reductions in HTS volume, and increases in positivity, are not guaranteed
  - Some tool had no to little impact, reduced uptake and may not be considered ‘worth it’
- Potential **feasibility and implementation challenges**: stigma, increased complexity, training and monitoring needs

Potential opportunities for using screening-out tools:
- Adapting for identifying and reaching PLHIV who need to be re-engaged or initiated on ART

Source: Ehrenkranz 2021
Weighing the risks and benefits of screening tools for HTS?

**Risks**
- **Missing undiagnosed PLHIV**
  - ↑ cost of missing cases (e.g. advanced disease, transmission)
  - Slows progress toward 95-95-95
- **Potentially stigmatizing**
  - ↓ HTS uptake among those at highest risk (e.g. KP); privacy & confidentiality challenges
- **Implementation challenges**
  - Lengthy and complex to implement
  - Additional training and costs
- **Adaptability challenges**
  - Tools are population & context-specific
  - Challenging to externally validate and routinely monitor

**Benefits**
- **Reaching those at risk**
  - Reaching those who might be missed otherwise (screen-in)
- **Improved targeting & efficiency**
  - ↑ positivity + ↑ targeting
  - Maximizing limited HTS resources
- **Improved risk knowledge**
  - Provide information and counselling messages that increase awareness and knowledge of risk and HTS

**Missing undiagnosed PLHIV**
- **Risks**
  - ↑ cost of missing cases (e.g. advanced disease, transmission)
  - Slows progress toward 95-95-95

**Potentially stigmatizing**
- **Risks**
  - ↓ HTS uptake among those at highest risk (e.g. KP); privacy & confidentiality challenges

**Implementation challenges**
- **Risks**
  - Lengthy and complex to implement
  - Additional training and costs

**Adaptability challenges**
- **Risks**
  - Tools are population & context-specific
  - Challenging to externally validate and routinely monitor
Implementation considerations

- There are likely missed opportunities to use ‘screening-in’ tools to optimize programmes
  - Programmes should be thinking about whether screen-in tools make sense for their setting and priority populations
  - Self-assessment, virtual tools and retesting optimization are key areas to consider
- Programmes using ‘screening-out’ tools need to consider reviewing and adjusting tools
  - Acceptable, Simple, Stigma-free, Accurate, Reliable and Validated for the setting and populations where they are used (a tool for one population or setting cannot be assumed to work for another)
  - Routinely monitored and improved; Evidence is limited and knowledge gaps need to be filled
  - Caution must be exercised where there is a trade-off between reducing HTS costs with missing PLHIV – and future implications on 95-95-95 goals
Way forward

1. Set clear about objectives and how screening tool plans fit into 95-95-95 goals
   - Planned within broader HTS and linkage programming
   - Engaging with communities and providers

2. Follow the evidence on screening tools
   - Adapt what is most relevant for populations and settings
   - Validation and routine monitoring of implementation will remain critical

3. Adjustments and innovations
   - Reduce missed opportunities for reaching undiagnosed PLHIV remains a priority
   - Quality improvement approaches
   - How can tools can be part of “welcome back” services and re-engaging PLHIV?
   - Decentralized (e.g. self-assessment, virtual, HIVST)

Thank you!

Email: johnsonc@who.int

Acknowledgements:

Rachel Baggaley, Muhammad Jamil, Maggie Barr-DiChiara, Céline Lastrucci, Anne Bekelynck, Emmanuel Fajardo, Peter Cherutich, Purvi Shah, David Maman, Belen Dinku, and Anita Sands
PEPFAR COP 21 Guidance on HIV Risk Screening Tools


Vincent Wong, vwong@usaid.gov
Branch Chief
USAID Office of HIV/AIDS, Behavioral and Structural Interventions Branch
COP21: Targeted HIV Testing

In generalized epidemic settings, targeted HIV testing and counseling should also be implemented in medical outpatient department (OPD) facilities utilizing an HIV screening tool.

[References to HTS and risk screening included since COP19]

Programs should aim to reduce unnecessary testing using the following strategies:

- Aligning counseling messages on retesting to include retesting based on exposure and not a one-size-fits-all three-month window period.

- Not retesting those on ART or previously diagnosed PLHIV with a documented status.
Definitions within COP21:
An HIV risk screening tool is a set of questions (behavioral, demographic, symptom-based, etc.) used to determine a client’s eligibility for HIV testing.

A **validated** HIV risk screening tool meets four conditions:

1. **Decreases** the number of persons needing to be tested
2. **Is non-Stigmatizing**
3. **Has high Sensitivity**
4. **Simple**: must be easy and quick to administer

Symptoms include, but are not limited to: Significant/rapid weight loss, cough, fever/night sweats, unexplained fatigue, swelling of lymph glands, sores, etc.

(Source: COP21 Guidance, p288-90; 299)
HIV risk screening tools can be useful in low prevalence settings in identifying those who are at higher risk & decreases the # needed to test to identify one positive, improves PITC testing yield, and ensuring that people with risk factors are tested.

Countries, geographic areas, or facilities with generalized epidemics with consistently low number needed to test may be missing HIV cases and may need to re-evaluate their testing strategy.

Considerations on children and adolescents (≤ 19 years old):
• Risk screening tools should be appropriate for the setting and accurately predict children at risk for HIV, identify children in need of HIV testing, and do not miss undiagnosed CLHIV.
• Optimize use of risk screening tools in OPD settings to reduce number needed to test (NNT).
• For adolescents and youth presenting to OPD, programs should include adolescent and youth HIV risk factors on adult risk screening tools.
• Adult risk screening tools should be validated and used for older adolescents (15-19 years old).

(Source: COP21 Guidance, p288-90; 299)
Considerations on how to leverage risk screening tools for maternal retesting

- Programs may adapt or use existing PITC/outpatient screening tools already available.
- These tools be incorporated into the HIV prevention package for maternal retesting during pregnancy and postpartum visits.
- Requires improved documentation approaches to track women who have previously screened negative and need to be re-screened for eligibility.

(Source: COP21 Guidance)
Risk screening tool considerations for programs

- Currently limited data on tool impacts through PEPFAR MER: basic positivity
- With new evidence and WHO guidelines, existing screening tools may need to be re-assessed or re-calibrated to achieve program aims.
- Considerations on screening-in (maximizing diagnoses) vs. screening out (maximizing positivity)
- Keeping tools Simple, Sensitive, non-Stigmatizing, Private/Confidential
- Considerations around HRH impacts - training, personnel time needed; client flow impacts
- Population appropriate: KP, OPD, ANC, Peds will req specific applications

Example: Some countries with increased positivities in PITC, but also reduced overall positive volumes. HTS_Positve targets have also reduced since FY20 impacting POS.
Presentation of systematic review findings: Risk-based screening tools to optimize HIV testing services
Dr Jason ONG (Central Clinical School, Monash University)

Programmatic implementation highlights of pediatric HIV screening tools in east and southern Africa
Christian STILLSON & Stephanie DOWLING (Clinton Health Access Initiative)

FHI 360 experience using HIV risk screening tools among key populations: innovations in peer- and self-administered online approaches
Andrew LAMBERT & Benjamin EVESLAGE (FHI 360)

Implementation considerations for including robust and validated screening tools in optimized HIV testing services programmes
Cheryl JOHNSON (WHO), Vincent WONG (USAID)

Register in advance: https://who.zoom.us/webinar/register/WN_gl3PlnB-Qtqp61AVcOFCxw
Questions? Cheryl Johnson: johnsonc@who.int
Lignes directrices en matière de services de dépistage du VIH pour une épidémie en pleine évolution

Nouveau: en Français !
https://www.who.int/fr/publications/i/item/978-92-4-155058-1
Webinar
Virtual interventions: global innovations and approaches across the HIV cascade for key populations

29 Jun 2021: 12h00 – 13h30 (CEST)
Language: English with simultaneous translation in French

Register in advance: https://who.zoom.us/webinar/register/WN_KZbZ7hxhTD2BRlIlXVW4SoQ
Questions? Purvi Shah – shahp@unaids.org
WHO HTS Guidelines for a changing epidemic

HTS Info on the Go: https://apple.co/2LAB8vt
WHO HTS Data Dashboards: http://hts.hivci.org/