Democratizing HIV Testing and Linkage to Care

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Yesterday’s Approach Falls Short of Today’s Aspirations

Do not know HIV infected

2/3

1/3

Do not know HIV infected
Realities—No one likes to talk about

- We are doing a “narrow” public health approach
- We are failing in some regions and sub-populations of the world
- We--our provider attitudes and health systems--are barriers to testing/linkage
- People die before they link to care

West/Central Africa
2/3 do not know HIV status
Democratizing HIV testing

- **Right to know**— without coercion for a preventable treatable disease
- **Autonomy**— how when and where testing is done
- **Accountability**— that testing services link clients to care and prevention rapidly
Barriers to HIV testing

1. Lack of awareness of HIV risk and benefit of treatment for asymptomatic disease
2. Stigma, Discrimination
3. Cost and logistics
Re-Imagine the Public Health Package

Multi-disease testing and funding

Self Testing

Same Day Linkage to Care
Multi-disease testing and funding

- Move out… of health facilities
- Move on …more options: multi-disease testing and services
- Move to… new funding paradigm

Addresses Barriers:
- Awareness
- Stigma
- Cost
Moving Out of “Facility” =

Earlier Diagnosis

%Low CD4

Community Facility
High coverage Low coverage

Sharma, Nature 2015

Higher “Coverage”
Community engagement required:
All Genders, All ages. All in!

• Multi-disease
• Football matches
• Boat rowing competitions
• Moonlight hours
• Priority to couples
• Bands and theater groups
• Motorcycle driver mobilizers
• Advertised in bars, churches, mosques, beaches, weddings
• Raffles

MEN

YOUTH

• Involving in planning
• Paid to work in outreaches
• Social Media
• Activities appeal to youth
  – Sports and games
  – Peer advocates present at linkage and counseling
Multi-disease testing and services

ENABLE HIV testing

- Demand generation
- Stigma reduction
- Improved community health

- Sexual health—STD testing, counseling
- Other infectious diseases: TB, malaria, hepatitis B and C
- Hypertension and diabetes
- Cancer screening: cervical, prostate, breast
- Common conditions—skin/eye
- Reproductive health
- PrEP, PEP

Chamie, Lancet HIV, 2016
Multi-Disease testing around the world
SEARCH Testing Intervention: Annual Community-Based Testing

- **Goal:** >90% HIV testing
- **Approach:**
  - Community based, out of facility
  - Multi-disease: HIV, DM, HT, malaria, TB, sexual health, deworming, AMC, reproductive health
  - “Collapse the Cascade” - immediate link to public health services

1. Census/Mobilization
2. Two week Health Fair
3. Home testing for non-participants

UN AIDS 90-90-90 Target Achieved

Cascade Coverage Among Prevalent Adult HIV+

<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Follow Up Year 1</th>
<th>Follow Up Year 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>% HIV+ w/ Prior Dx</td>
<td>65%</td>
<td>94%</td>
<td>96%</td>
</tr>
<tr>
<td>% Prior Dx ever on ART</td>
<td>80%</td>
<td>91%</td>
<td>93%</td>
</tr>
<tr>
<td>% Ever on ART w/ Supp</td>
<td>86%</td>
<td>88%</td>
<td>90%</td>
</tr>
</tbody>
</table>

UNAIDS Target
SEARCH Adolescent testing coverage increase from 22-88% 

Kadede, AIDS, 2016

• Adolescents 10-24 years of age: 98,694
• HIV testing coverage increased from 28% to 88%
• 57% of HIV+ new diagnosis
• Predictors of HIV+ with no prior testing: Male, Uganda, unmarried

Kadede, AIDS, 2016
Q: Why do we need a new approach to funding?
A: Current Funding Model puts our continued success at risk

Investment in HIV testing based on “yield”
- As we move out from facility, yield goes down
- For low prevalence, non-concentrated epidemics, yield likely low
- As we succeed, yield decreases using current approaches
Looking at HIV testing through a new lens

What about multi-disease services with a new funding paradigm?

– Demand generation increases; stigma decreases
– Success: Yield of all diseases, not just HIV
– Community Health Worker movement
– Move towards Sustainable Development Goals
– New Funding Paradigm: Multi-funded for Multi-disease with shared costs

That is not possible. You do not understand funding streams and politics

1 Chang, JAIDS, 2016
HIV Self testing

Addresses Barriers:
- Awareness
- Stigma

HIV Self Testing 2 fold higher than standard care:

<table>
<thead>
<tr>
<th>Study or Subgroup</th>
<th>HIV self testing</th>
<th>Standard of care</th>
<th>Risk Ratio M-H, Random, 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gichangi 2016</td>
<td>327</td>
<td>297</td>
<td>3.08 [2.58, 3.69]</td>
</tr>
<tr>
<td>Thirmurthy 2016</td>
<td>257</td>
<td>148</td>
<td>1.77 [1.57, 2.00]</td>
</tr>
<tr>
<td>Wang 2016</td>
<td>193</td>
<td>109</td>
<td>1.77 [1.54, 2.04]</td>
</tr>
<tr>
<td><strong>Total (95% CI)</strong></td>
<td><strong>987</strong></td>
<td><strong>993</strong></td>
<td><strong>2.12 [1.51, 2.98]</strong></td>
</tr>
</tbody>
</table>

Heterogeneity: Tau² = 0.08; Chi² = 32.88, df = 2 (P < 0.00001); I² = 94%
Test for overall effect: Z = 4.33 (P < 0.0001)

Distribution pathways: Community lay workers, mail, storefronts, home, health fairs, events (AMC), share among young adults, men, sex workers
UNITAIDS Self testing Africa (STAR)

- 4.8 million HIV ST distributed across Malawi, Zambia, Zimbabwe, South Africa, Lesotho and Swaziland by 2020.
- Distributed 380,000 HIV self test kits in first year
- Door to door, lay-workers, sex worker peers, men workplace, VAMC
- Outcomes—12-26% first time use
- Increased uptake in youth and men
“A hora e agora” Brazil

• “The time is now”
• Secure web based platform
• Free HIV oral ST
• Online tutorials/24 hour hotline
• Confirmatory testing at clinic
Expectations

• Adds an option for testing
• Not the option for everyone
• Limitations
  – Does not detect acute HIV
  – May be cost prohibitive
  – Susceptible to counterfeits
Same day Linkage

“We should be measuring linkage to care in minutes not months from time of HIV diagnosis ”

Why?
• Subgroups—youth and men no linkage= no treatment
• Delay can = death

Barriers
Geography
“Activation” energy
Costs
Clinic behavior
HOW? RAPID San Francisco:
Treatment on Diagnosis

HIV Test sites for new Diagnosis

Client Friendly

Referral as Needed
RAPID program

HIV Treatment Sites

Magnet/Glide
AHP/DPH
37%

Private/UCSF
STM/CPMC
22%

SF City
Clinic
14%

SFGH
13%

Kaiser
9%

Other
9%

Private/UCSF
STM/CPMC
32%

SF City
Clinic/DPH
Clinics
12%

SFGH
26%

Kaiser
14%
RAPID San Francisco: Treatment on Diagnosis

HIV Test sites for new Diagnosis

- Magnet/Glide AHP/DPH 37%
- Private/UCSF STM/CPMC 22%
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- Kaiser 9%
- Other 9%
- Private/UCSF STM/CPMC 32%
- SF City Clinic/DPH Clinics 12%
- SFGH 26%
- Kaiser 14%

Median time from HIV Diagnosis to viral suppression: 75 days
How: Malawi Same Day Linkage with HIV Self Test at Home!

MacPherson, JAMA, 2014

HIV testing without same day linkage/ART start options

More research to get there
Way forward: Democratizing HIV testing and linkage

ACT NOW

Public Health Package: Multi-disease, multi-funded

Self Testing Same Day Linkage

PUSH FORWARD INNOVATION/EVIDENCE

- Data and technology tools
- Assays: Acute HIV, other diseases
- Human centered design
- Community health workers
- Research multi-disease funding models

More Doors and More Open Doors - Leave Fewer Behind
Acknowledgments

Begin, be bold and venture to be wise

Horace

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