Addressing the Fragility in Urban HIV, TB, and HCV Responses Revealed by COVID-19

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Overview

• Why Urban?

• What does fragility mean in the context of COVID-19?
  • Service disruptions

• Moving from Fragility to Resilience
  • Examples of maintaining essential health services from HIV, Hepatitis, STI and NCDs
  • #Build back better with healthier cities
Globally, as of 10:30am CEST, 9 September 2020, there have been **27,417,497 confirmed cases** of COVID-19, including **894,241 deaths**, reported to WHO.

https://covid19.who.int/
The majority of the world’s population lives in cities.

By 2030, six out of 10 people will be city dwellers, rising to seven out of 10 people by 2050.

Urbanization is associated with many health challenges related to water, environment, violence and injury, noncommunicable diseases and their risk factors like tobacco use, unhealthy diets, physical inactivity, harmful use of alcohol as well as risks associated with disease outbreaks.

https://www.who.int/health-topics/urban-health/urban-health-gallery
• **Use urban planning to promote healthy behaviours and safety**

• **Make urban areas resilient to emergencies and disasters**: locate hospitals in safe areas, strengthen health centres to withstand known dangers, prepare community emergency response, improve disease surveillance.

• **Build healthy, liveable cities.**
  - Integrate health into urban planning policies to deliver highly connected, mixed-use promote active living, sustainable mobility, energy efficiency, healthy diets and access to essential services.
  - Plan places that are more resilient to climate change and natural disasters.
  - Vision for social cohesion and health equity by adopting a people-centred “right to health” framework
  - Ensure cleaner air through
  - Provide well-managed water, sanitation and hygiene facilities, adequate waste management and access to safe and healthy food.

[https://www.who.int/health-topics/urban-health/urban-health-gallery](https://www.who.int/health-topics/urban-health/urban-health-gallery)
Urban focus of transmission and severe COVID-19

As of 1 August 2020

As of September 2020
• Why Urban?
• **What does fragility mean in the context of COVID-19?**
  • Service disruptions
• **Moving from Fragility to Resilience**
  • Examples of maintaining essential health services from HIV, Hepatitis, STI and NCDs
  • #Build back better with healthier cities
### Table 1. Health data in five fragile contexts compared to OECD average

<table>
<thead>
<tr>
<th>Country</th>
<th>Population (million)</th>
<th>Health expenditure (% of GDP)</th>
<th>N. physician/1 000 inhabitant</th>
<th>N. hospital beds/1 000 inhabitant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Democratic Republic of the Congo (2016)</td>
<td>84</td>
<td>3.8</td>
<td>0.1</td>
<td>0.8</td>
</tr>
<tr>
<td>Libya (2011)</td>
<td>6</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Afghanistan (2016)</td>
<td>37</td>
<td>10.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Niger (2016)</td>
<td>20</td>
<td>6.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yemen (2015)</td>
<td>28</td>
<td>5.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OECD average (2016)</td>
<td>1 302</td>
<td>8.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Fragile contexts\(^1\) are beginning to be hit by the Covid-19 pandemic. Most of these countries are insufficiently prepared to cope with the spread of the disease and its consequences across the multiple dimensions of fragility. The most vulnerable have difficulty in accessing hospitals and rely on poor public services. Confinement measures are hardly applicable and the mobilisation of security actors to enforce them creates further risks. The crisis highlights social inequalities and governance issues in many contexts. While the pandemic has created new peace dynamics, most conflicts continue unabated as peacekeeping missions and humanitarian response are extremely constrained.

Recovering from the crisis will require international support, but public systems such as health should not be supported in isolation as these public services are not weak in isolation. Covid-19 emphasises the need to help countries address the drivers of fragility in a holistic manner and for long-term engagement.
Fragile settings – Refugee Camps, Cox’s Bazar, Bangladesh

@WHO, COVID-19 Bangladesh, Cox Bazar’s Camp
Ghana metropolis – Maintaining RMNCH programmes during COVID-19
Approx. 2 times increased risk of death among PLHIV in S Africa (Davies et al)

Variable associations in the US and UK; may have an increased risk of hospitalization with low CD4 and due to comorbidities

People with viral hepatitis (B or C) do not appear to be at higher risk of severe illness unless they also have advanced liver cirrhosis.

TB mixed evidence and possible small risk of increase death from S Africa

STIs reported declined
Indirect effect of COVID-19 Impact on deaths from HIV and TB

The impact of interruption of treatment for 6 months on AIDS-related deaths in sub-Saharan Africa in 2020-2021

- 1.0 million deaths (including an excess of 560,000 deaths from 100% treatment interruption)
- 580,000 deaths (including an excess of 110,000 deaths from a 20% treatment interruption)


World Health Organization
COVID19 public health ‘earthquake’ on paediatric HIV

- Reduced uptake of facility-based services due to lockdowns
  - Fear to return to the facility even where lockdowns are not in place
  - Challenges to reach facilities due to lack of transportation

- Fewer women attending antenatal services leading to less HIV testing
- COVID19 testing competing for time and resources
- ARV stock outs of paediatric formulations

Graphs: John Stover et al. 2020, unpublished
Source: Virtual consultations with the 21 AIDS FREE priority countries
Countries reporting on ARV disruptions due to COVID-19, 2020

36 countries have reported disruption in provision of ARV services since April. In these countries 11.5 million people were receiving ART (45% of the global number)

Source: Global HIV, Hepatitis and STIs Programmes (HSS), WHO, 2020
### Disruptions in other services due to COVID-19

#### Number of countries facing disruption in other services (n = 61)

<table>
<thead>
<tr>
<th>Service</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV testing</td>
<td>38</td>
</tr>
<tr>
<td>HIV Viral load monitoring</td>
<td>23</td>
</tr>
<tr>
<td>Key population services</td>
<td>17</td>
</tr>
<tr>
<td>Voluntary medical male circumcision (VMMC)</td>
<td>16</td>
</tr>
<tr>
<td>Condom provision</td>
<td>12</td>
</tr>
<tr>
<td>Hepatitis B testing</td>
<td>10</td>
</tr>
<tr>
<td>Sexually transmitted infection (STI) services</td>
<td>9</td>
</tr>
<tr>
<td>Enrollment on ARVs</td>
<td>8</td>
</tr>
<tr>
<td>Pre-exposure prophylaxis (PrEP)</td>
<td>7</td>
</tr>
<tr>
<td>Hepatitis C treatment initiation</td>
<td>6</td>
</tr>
<tr>
<td>Needle and syringe exchange for PwID</td>
<td>5</td>
</tr>
<tr>
<td>Harm reduction</td>
<td>5</td>
</tr>
<tr>
<td>Contraceptive/Family planning</td>
<td>5</td>
</tr>
<tr>
<td>PMTCT HIV/ EID</td>
<td>4</td>
</tr>
</tbody>
</table>

Prevention programs for VMMC and PWID are in selected countries, so disruption may be in most countries where there is a program.

Source: WHO HIV/HEP/STI COVID-19 Questionnaire
ARV multi month dispensing

- ARV MMD policy is adopted in most countries.
  
- Data available for 144 countries:
  - 129 (90%) adopted MMD policy

- Country cases suggest COVID-19 effect on MMD is double-edged:
  - Sufficient ARV stock → intensified MMD (Namibia, Malawi...)
  - Uncertain ARV stock → shorter MMD (Indonesia, Botswana..)

MMD for other HIV/Hepatitis/STI drugs

Number of countries implementing MMD

- **Opioid Substitution Therapy** (MAT, Buprenorphine, methadone) (n=62)
  - Yes: 24
  - No: 36
  - Not applicable: 2
  - Don't know: 1

- **Prophylaxis medicine** (CTX, ITP, TPT) (n=41)
  - Yes: 28
  - No: 14
  - Not applicable: 0

- **Hepatitis B drugs** (n=35)
  - Yes: 19
  - No: 17
  - Not applicable: 0

- **Hepatitis C drugs** (n=34)
  - Yes: 7
  - No: 23
  - Not applicable: 4

Source: WHO HIV/HEP/STI COVID-19 Questionnaire
ARV stock availability of first line stocks

- Data available for 84 countries
- 24 countries reported ARV stocks availability for major first line drugs (TLE/TEE/TLD) of three months or less

ARV 1st line stocks among WHO regions (n=84)

Source: WHO HIV/HEP/STI COVID-19 Questionnaire
Countries reporting disruptions (partially or completely) across 25 types of health services

Percentage of countries reporting at least partial disruption in at least 75% of services (by income group) (n=105)

- Global (n=105): 23%
- Low Income (n=22): 45%
- Lower Middle Income (n=28): 30%
- Upper Middle Income (n=28): 13%
- High Income (n=27): 4%

Percentage of countries reporting disruptions across entire service groups (n=105)

- Communicable Diseases: 31% All services at least partially disrupted, 18% No services disrupted
- Non-Communicable diseases: 48% All services at least partially disrupted, 24% No services disrupted
- RMNCAH: 30% All services at least partially disrupted, 19% No services disrupted
- Emergency and critical care: 62% All services at least partially disrupted, 15% No services disrupted
### Countries reporting disruptions (partially or completely) across 25 types of health services

#### Percentage of countries reporting service disruptions (n=99)

<table>
<thead>
<tr>
<th>Essential health services</th>
<th>Percentage of countries reporting disruptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental services</td>
<td>61%</td>
</tr>
<tr>
<td>Rehabilitation services</td>
<td>60%</td>
</tr>
<tr>
<td>Routine immunization (outreach)</td>
<td>53%</td>
</tr>
<tr>
<td>NCD diagnosis and treatment</td>
<td>65%</td>
</tr>
<tr>
<td>Family planning and contraception</td>
<td>59%</td>
</tr>
<tr>
<td>Routine immunization (health facilities)</td>
<td>51%</td>
</tr>
<tr>
<td>Treatment for mental health disorders</td>
<td>59%</td>
</tr>
<tr>
<td>Implementation of planned ITN campaigns</td>
<td>41%</td>
</tr>
<tr>
<td>Implementation of SMC</td>
<td>36%</td>
</tr>
<tr>
<td>Antenatal care</td>
<td>54%</td>
</tr>
<tr>
<td>Implementation of planned IRS campaigns</td>
<td>37%</td>
</tr>
<tr>
<td>Cancer diagnosis and treatment</td>
<td>49%</td>
</tr>
<tr>
<td>Sick child services</td>
<td>51%</td>
</tr>
<tr>
<td>Palliative services</td>
<td>44%</td>
</tr>
<tr>
<td>Management of moderate and severe malnutrition</td>
<td>45%</td>
</tr>
<tr>
<td>Outbreak detection and control (non-COVID)</td>
<td>43%</td>
</tr>
<tr>
<td>Malaria diagnosis and treatment</td>
<td>44%</td>
</tr>
<tr>
<td>Facility based births</td>
<td>32%</td>
</tr>
<tr>
<td>Continuation of established ARV treatment</td>
<td>20%</td>
</tr>
<tr>
<td>Others*</td>
<td>31%</td>
</tr>
<tr>
<td>Urgent blood transfusion services</td>
<td>19%</td>
</tr>
<tr>
<td>Inpatient critical care services</td>
<td>16%</td>
</tr>
<tr>
<td>24-hour emergency room/unit services</td>
<td>20%</td>
</tr>
<tr>
<td>Emergency surgery</td>
<td>18%</td>
</tr>
</tbody>
</table>

*includes postnatal care, school-based services, elective surgeries, sanatorium treatment, screening programs, blood donation and collection, and polio services

**Partially disrupted:** 5% to 50% of patients not treated as usual

**Completely disrupted:** more than 50% of patients not treated as usual

**Preliminary - not for distribution**
123 countries reported that NCD services are disrupted.
30 Countries reporting

- In all but two countries large, **sustained decreases in HIV testing services were seen**. This reduction started for most countries in April.

- **Testing positivity rates were largely stable** over time. Increases could be explained if testing services were preferentially made available to those most at risk.

- **Distribution of HIV self-testing kits declined** in Lesotho and Zimbabwe dramatically after March, although by June, **services rebounded** in Zimbabwe.

Source: UNAIDS HIV services tracking tool, 2020

Notes: Monthly data are reported by country teams, with UNAIDS, Unicef, and WHO support. Historical data may be revised during each monthly submission; thus results may change.
30 Countries reporting

- 5 countries reported monthly declines in the numbers of people on treatment between January and June 2020
- And new people are not starting treatment
- Confirmed through qualitative surveys among PLHIV

Source: UNAIDS HIV services tracking tool, 2020
Notes: Monthly data are reported by country teams, with UNAIDS, Unicef, and WHO support. Historical data may be revised during each monthly submission; thus results may change.
## Impact of COVID-19 on HIV services – Afghanistan

<table>
<thead>
<tr>
<th>Service</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harm reduction services</td>
<td>Functional</td>
</tr>
<tr>
<td>Condom/lubricant programming</td>
<td>Partial disruption</td>
</tr>
<tr>
<td>PMTCT services</td>
<td>Functional</td>
</tr>
<tr>
<td>Outreach services for key populations</td>
<td>Functional</td>
</tr>
<tr>
<td>HIV testing services for key populations</td>
<td>Partial disruption</td>
</tr>
<tr>
<td>Facility-based HIV testing (TB, ANC, inpatient, etc.)</td>
<td>Functional</td>
</tr>
<tr>
<td>ART services</td>
<td>Functional</td>
</tr>
<tr>
<td>Viral load testing for treatment monitoring</td>
<td>Total disruption</td>
</tr>
</tbody>
</table>

Data reported in May 2020
Overall impact of COVID-19 on HIV services in Afghanistan

**Context**

Overall coordination and management
Some of the program staff were taken COVID related tasks, affected program’s daily activities

**Input**

1 case of COVID-19 and 1 death among NAP staff members
Genexpert machines fully deployed to COVID-19 diagnosis

**Process**

Less accessibility to services
No access to viral load testing due to deployment of PCR and GeneXpert machines for COVID-19 diagnoses
No stock out of medications or diagnostics reported
Multi-month dispensing of ARVs (3 months) and take-home methadone doses for PWID on MMT

**Output**

**HIV Testing**
Drop of 40% in the no. of the tests in Q2 compared to Q1
Drop of 80% in tests in 2020 compared to 2019
Drop of 56% in number of cases identified in Q2 compared to Q1

**Care and treatment**
- 62 PLHIV diagnosed Jan-June 2020, 61 initiated on ART
  [Comparison with before?]
- 5 patients lost from care and treatment, 2 Q1, 3 Q3

**Viral Load testing**
PLHIV tested for viral suppression in 2020 = 53% of the number in 2019

**Outcome**

% diagnosed
- No major drop but small numbers
- Increase in diagnosed cases in the first 6 months of 2020 follows the same trend as in previous years

% on ART
As opposed to steady annual increase in ART coverage of 1% since 2017, 1st 6 months of 2020 show ART coverage will remain the same as in 2019 (10%) due to small numbers

% virally suppressed
Indicator not available. Assumption is that suppression should be stable as treatment continued

**Impact**

Mortality and Incidence
Need to be modelled.
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Increasing demand from multiple sources

Demand for health services will increase dramatically

- Health system capacity (max surge)
- Accumulated demand for essential services
- Health system capacity (basic)
- Temporary crowd-out of essential services
- Demand for more services due to economic crisis

COVID-19 outbreak peaks

Public health surge capacity
Primary health care in the core
Elasticity in acute and intensive care
Protect the vulnerable

World Health Organization

HEALTH EMERGENCIES programme
Recommends practical actions that countries can take at national, sub regional and local levels to reorganize and safely maintain access to high-quality, essential health services. It also outlines sample indicators for monitoring the maintenance of essential health services and describes considerations about when to stop and restart services as COVID-19 transmission waxes and wanes.

Divided into two parts

- Part 1: Operational Strategies for maintain essential health services
- Part 2: Life course and disease considerations
- Annex: Sample indicators for monitoring EHS

https://www.who.int/publications-detail/10665-332240

Vietnam (USAID/PATH Healthy Markets): Client-directed online HIVST

Step 1: Online reach & risk assessment
- View HIVST advertisement
- Complete online risk assessment
- Self-identify HIV testing needs

Step 2: Online test order
- Select/fill out online HIVST delivery order (mail, grab, self-pick up)

Step 3: HIVST kit delivery
- HIVST kits delivered to clients within 48h
- Client confirms receipt through Zalo/SMS

Step 4: Follow-up HIVST
- Perform HIVST, using instructions-for-use and/or video
- Provide feedback to distributors via telephone, Zalo, SMS within 7 days
- If no feedback, distributor calls the client.

‘Grab’ delivery

Slide courtesy Dr. Kimberly Green, Global Director – HIV & TB, PATH
DSD and MMD to maintain ART, OST, DAAs and comorbidity treatments

- Clinically stable populations (including key populations) benefit from simplified ART delivery models including multi month prescriptions (3-6 month supply)
- Take-home doses of methadone or buprenorphine for stable people on opioid substitution therapy (OST)
- Required adequate supplies of medicines to treat HIV, coinfections and comorbidities including substance dependence
COVID-19: a stress test for change
Reframing the way we deliver care and support to children and adolescents

Policies to support multi-month dispensing for children and adolescents

Source: Validated country survey compiled through input from WHO, PEPFAR, CHAI, EGPAF and IAS
Sustaining HIV testing, treatment and care for children and adolescents during COVID-19

Adaptation of the Zvandiri model of DSD for 38,094 CAYPLHIV by 1043 CATS during COVID-19

Adaptations to HTS
- CATS identify ALHIV in need of testing through virtual support and collaborate with community based Zvandiri Mentors to take HIV self test kits to an agreed meeting point

Support to MMD
- Rapid baseline assessment conducted in March 2020 among 25,045 CAYPLHIV to ascertain what proportion of clients had access to ART. CATS then partnered with the health facilities to arrange MMD

Virtual Case Management
- CATS adapted home visits to virtual case management to sustain information sharing, counselling, referrals, linkage and support through phone calls, SMS and WhatsApp.

Taking ART Refill to the Community
- Targeted community outreach by Zvandiri and MoHCC for those unable to access the clinic for ART Refill
Sustaining HIV testing, treatment and care for children and adolescents during COVID-19

Community Viral Load Monitoring
- Line listing of CAYPLHIV due for VL by Zvandiri and MoHCC; then travel to the community to conduct test

Supporting access to second line
- Zvandiri collects 2\textsuperscript{nd} ART line from the central hospital and delivers to the family

Virtual Support Groups for children, adolescents and their caregivers
Development of peer-led IEC materials to cascade developmentally appropriate information

Zvandiri-ECHO Hub
- Virtual training, mentorship and case management to support service delivery for CAYPLHIV with governments, IPs and youth in 8 partner countries.
Decentralising service delivery to decongest facilities - PrEP

- Mobile units parked outside of clinics so clients could access services without entering the clinic
- Additional external medicine pick up points identified and patients registered for CCMDD and PrEP delivery
- Targeted high yield AGYW entry points –testing and initiation at TVET and university residences, aligning to school re-opening and providing services to grade 12 learners
- Conducted health talks on HIV testing and adherence to ART, SRH, PrEP and COVID-19 at clinic and non-clinic sites
- Mobile clinic van drives around demarcated streets loud hailing and handing out promotional flyers about SRH services (including PrEP)
IPC through zoning and triaging at fixed and mobile clinics - minimize COVID-19 risk for staff and beneficiaries
Increased GBV and mental health awareness and information sharing during COVID-19

Messages through social media content highlights various GBV hotlines and platforms to encourage reporting and seeking GBV help.
Self-sampling collection for CT/NG during COVID-19 Outbreak

Self-collection sampling during COVID-19 outbreak (March 02 – May 15, 2020)

187 CLIENTS = 131 MSM + 56 TGW

Conducted self-sampling collection for CT/NG

Acceptability varied by anatomical sites:
- 100% for urine collection
- 100% for rectum
- 100% for neovagina, and
- 78.6% for oropharynx.
- No invalid test results

Tested positive for CT/NG
- 63.4% of MSM and TGW on PrEP
- 14.2% engaging in sex work
- 10.4% using injecting substances
- 52.8% had inconsistent condom use
- 8.3% had condomless sex
- 30.3% tested syphilis reactive
Different approaches to implement simplified Hepatitis service delivery models to achieve elimination

- **Micro-elimination** projects in specific populations (prisoners, PWID, HIV-infected)

- **Rural setting/gen population**: Comprehensive prevention, test-and-treat model for high prevalence rural settings

- **Hard to reach**: Mobile/Same-Day HCV + HBV test and treat

- **Model for cities/urban settings?**

- **Role of Self-testing**
Pakistan and Thailand – Urban COVID-19 responses need urban solutions
Conclusions

• Essential health services need to be maintained and restarted safely

• HIV/Hep/STI, Malaria and TB and NCD gains at risk during COVID-19

• Resilient responses includes: DSD models and multi-month provision of meds, community pickup, use of ehealth and mhealth technology, & strong community engagement

• Subnational planning and governance

• ACT-Accelerator, training resources and multi-stakeholder initiatives preparing the terrain to #BuildBackBetter within Healthier Cities
Thank you

- Michel Beusenburg
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- Rachel Baggaley
- Cheryl Johnson
- Annette Verster
- Virginia McDonald
- Teresa Babovic
- Riomardo Sitorus
- Kathy O’Neill
- Bente Mikkelsen
- Teri Reynolds
- Mary Mahy
- Kim Marsh