From Addiction to Infection: Drug users in the world of HIV

Dr. Taiwo Akindipe
MBBS, FWACP, FMCPsych, MPhil (Addictions)

Biomedical HIV Prevention Forum
Abuja, Nigeria
November 19, 2013
Africa...evolving drug-using continent

Source: Country level details can be found in Tables 2-10 and (Degenhardt, et al., 2007)

- Orange: Meth/amphetamine use documented, no reports of meth/amphetamine injection located
- Pink: Meth/amphetamine injection documented
68% of people living with HIV in the world are on the African continent, a region with only 12% of the global population (UNAIDS)
HIV most at risk populations (MARPs)

1. Men who have sex with men (MSM)
2. Injecting drug users (IDUs)
3. Sex workers & their clients
4. Prisoners

(UNAIDS)
There are approx. 16 million injecting drug users worldwide, with about 3 million being infected with HIV (UNAIDS)
Addictions?

Addiction is a **chronic relapsing disease** characterised by compulsive, often uncontrollable, drug seeking and drug use in the face of negative Consequences. (National Institute on Drug Abuse)
- Drug addiction facilitate HIV transmission?
- Drugs of abuse & HIV vulnerability?
- Drug abuse & HIV progression?
- Interactions between drugs of abuse and ARV medications?
- Does drug treatment prevent HIV infection?
Getting High, Getting infected

1. Direct (IDU): sharing injecting equipment

2. Indirect:
   - Impaired judgment (Unprotected sex)
   - Multiple Sexual partners
   - Transactional sex
   - Comorbid mental illness
   - ↑↑Libido (‘Meth’, Cocaine, Alcohol)
   - Prolonged & traumatic sex (Cocaine)
HIV filters out of MARPs

- IDUs are sexually active
- Many sex workers also inject drugs
- Most male clients of sex workers have other sexual partners, including wives and steady girlfriends.
Drugs of Abuse & HIV Vulnerability

- Are drugs of abuse permissive of viral entry, replication and latency?
- Cocaine alters immune cells /renders ‘quiescent CD4T cells more susceptible to the virus, and increased proliferation of the virus (Kim et al, 2013)
- Methamphetamine & Cocaine increased ease with which HIV virus entered immune cells in lab. Cultures & its viral replication (Nair et al, ...
Drugs of abuse & HIV Progression

- ↓ Adherence to HIV treatment
- ↓ appetite for food, nutritional deficits and impaired immune system.
- ↓ fund for medical care and food.
- Crack cocaine increases the risk of progression to AIDS by accelerating the decline of CD4 cell count independent of adherence to ARVs (Baum el al 2009, Journal of Acquired Immune Deficiency Syndrome 50(1): 93-99, 2009)
Drugs of abuse interact with ARVs

<table>
<thead>
<tr>
<th>Drug</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amphetamines</td>
<td>may ↑ level 2-3 fold with <strong>ritonavir</strong></td>
</tr>
<tr>
<td>Methamphetamine</td>
<td>↑ HIV replication, fatal OD with <strong>ritonavir</strong>/saquinavir</td>
</tr>
<tr>
<td>Cocaine</td>
<td>↑ HIV replication, ↓ immune system function</td>
</tr>
<tr>
<td>Ecstasy (MDMA)</td>
<td>overdose or death with <strong>ritonavir</strong></td>
</tr>
<tr>
<td>GHB (liquid X)</td>
<td>↑ levels with <strong>ritonavir</strong> or saquinavir</td>
</tr>
<tr>
<td>Heroin</td>
<td>levels may ↓ or ↑ with <strong>ritonavir</strong></td>
</tr>
</tbody>
</table>

Antoniou, Henry, Harrington, Roth, Bagasra, Peterson 1991 & 1992, Ellis, Gavrilin, Urbina, Hales
Smoking ARV medications

- ‘Whoonga’ – media frenzy in SA
- Same old ‘brown sugar’, low-grade heroin
- ‘Whoonga’ does not contain ARV (UKZN Lab)
- ARV smokers are a minority.
- Effects of smoking ARVs remain doubtful.
- Oral Efavirenz- initial side effects (dizziness, double vision, vivid dreams)
...drug users do not utilise Primary care services

1. Lack of access
2. Disorganised lifestyle
3. Discrimination
4. Cost / No insurance

......also systematically underutilise HIV-specific medical services.
Detox

Out-Patient Tx
IOP

“Continuing care”
“After Care”
- Group Tx,
- Self-Help Groups

In-Patient Residential

Services for co-occurring disorders

Px Placement Criteria

Continuation Criteria

Continuum of Care in Addiction
HIV Prevention strategies for drug users

1. Education about HIV transmission
2. HIV counseling and testing
3. Access to sterile injections, condoms and PEPs
4. Drug treatment
5. HIV treatment
Treatment of Drug Addiction. What are the goals?

- Abstinence / Non-use?
- Reduction in problematic use?
- Improvement in quality of life & functioning?
- Reduce Harms?

Are these goals client-driven or provider driven?

Where is the client in treatment?

Do we think we know best?
What about people who do not seem to respond to any type of treatment?

Is an abstinence-driven philosophy appropriate or should we focus on reducing/minimising harms and help them to live / use their drugs better?

Harm Reduction recognises abstinence as an ideal outcome, but accepts other alternatives.
Harm-Reduction is more than Substitution

Methadone

Buprenorphine
Harm-Reduction is more than Substitution

1. Safe, stable dosing
2. Drug use monitored
3. Drug counseling
4. Access to other services
Drug treatment impacts on HIV infection and transmission

1. ↓ Frequency of drug use

2. ↓ Drug-related risk behaviours

3. Fewer new infections

1. ↑ Access to HIV treatment

2. ↑ Adherence to HIV medication

(Sorensen J. & Copeland A. 2000)
The treatment of drug addiction is an effective HIV prevention strategy.
To do list...........

1. More drug abuse prevention & treatment programs (+harm reduction)

2. Train personnel in the field of drug addiction.

3. Provide reproductive health-care services for drug users.
Thank you for listening