An overview of addiction and HIV spread,

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AIDS travels through the fault lines of society

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Challenge to the Global Community
Develop Treatment Systems that can meet the needs of large scale and evolving problems of opioid dependence and other injecting drug use

HIV a major challenge in Prevention

- Emerging Epidemics
- Controlling Epidemics
- Downturning Epidemics
- Comprehensive Harm reduction provision of multiple interventions targeted at injection drug use are a key tool of HIV Prevention and Control
Drug Addiction: chronic relapsing disease

Drug addiction is a chronic, lifelong relapsing disease with frequent medical complications (e.g., HIV, HVC, TB) and a high fatality rate.

- Each detoxification is followed by 80-95% relapse.
- Long-term stable abstinence rates range between 10-25%.
- Estimated heritability of drug dependence is about 40%.
- Personal responsibility similar to other chronic diseases, e.g., diabetes.
- Biological substrates identified for drug seeking behavior and relapse.
- Pharmacological interventions quite effective in care for drug addiction.
- Treatment compliance similarly problematic as in other chronic diseases.

(With Van den Brix 2004)

Follow up studies

A study in Thailand (Celentano 2002) recruited over 1000 drug users entering treatment in Northern Thailand and followed the group for over 2 years after discharge from inpatient detoxification. Ninety six per cent of users relapsed to heroin use within two years and 82 per cent within six months.

The global response: UN support for good treatment


"Substitution maintenance treatment is an effective, safe and cost-effective modality for the management of opioid dependence. Repeated rigorous evaluation has demonstrated that such treatment is a valuable and critical component of the effective management of opioid dependence and the prevention of HIV among IDUs."

HIV infection rates in and out of substitution treatment (Metzger et al. 1993)
Drug Substitution Treatment

- Strong evidence for the benefits of oral methadone treatment RCTs +++ REASONABLE EFFECT SIZE
- REDUCES DRUG CRIME 0.70
- REDUCES OPIATE CONSUMPTION 0.35
- REDUCES INJECTING & RISK TAKING 0.22
- New good evidence for buprenorphine and LAAM RCTs ++ (LAAM CURRENTLY UNDER REVIEW)
- Use of injectable diamorphine and other drugs building evidence base for comparative effectiveness, more discussion on comparative cost effectiveness.

Drug Users in Substitution Treatment per 100,000 population

- Australia
- Spain
- United States
- Netherlands
- Italy
- UK
- Germany
- Denmark
- France
- Canada
- Sweden
- Thailand
- China
- India
- Nepal

Availability of substitution treatment

- Substitution treatment is available in few countries outside Europe, North America and Australia but include:
  - Argentina
  - China
  - Croatia
  - India
  - Indonesia
  - Iran
  - Kyrgyzstan
  - Malaysia
  - Vietnam
  - Nepal
  - New Zealand
  - Norway
  - Thailand
  - United States

Evolving treatment programmes

- It is estimated that there are over 67 treatment centres providing opioid agonist therapies and the overall number of patients in these centres is roughly 7000 patients in total.
- HONG KONG
- THAILAND
- IRAN
- MALAYSIA
- CHINA
- INDONESIA
**Background – HIV spread among IDUs**

- Australia: early methadone, rapid expansion
  low incidence of HIV in IDUs

- European Union: Increase in drug substitution services reduction in AIDS cases related to IDU
  Eastern Europe, Russia and new Independent Republics: New epidemics of HIV in IDUs

- South America – Long standing cocaine crack problem
  substantial contribution to HIV through risk behaviour and also less so through transition to injecting

- Africa evolving drug and injecting problem but drowned out by scale of general HIV and social infrastructure problems in many countries

- Central & Eastern Europe
  Rapidly evolving HIV problem in IDUs

**Other Major Infections**

- Tuberculosis, major problem where established HIV among IDU

- Hepatitis C over 90% plus in those with a long history of injecting drug use

**HIV in European IDUs**

- Generally well contained except for recent increases in Portugal

- Spain, France and Italy experienced major HIV epidemic in IDUs successfully contained through broad prevention strategy including expansion of substitution treatment,

**Substitution in prisons**

- Estimated that over 30 million imprisoned annually

- Major risk for blood borne virus spread

- In most countries where measured between one third and half have drug dependence

- RCT of methadone in prison (Dolan et al) demonstrates role in reduction of blood borne virus, and general improvement, and post release reduction in mortality for those who continue

- Rapid expansion in Europe in substitution in prisons

- Huge challenge for Asia pacific region where institutional incarceration standard response to opioid dependence

- Consistently 90% relapse to heroin use, no
Drug Overdose and Mortality

- Mean of 5+ non-fatal overdoses in heroin using cohorts
- Mortality 1 to 2%
- In methadone treatment down to 0.2%
- Recent Herer 33 year longitudinal study reports over 50% mortality in cohort
- Suicide completion rates high and significant contributor to overall suicide

Excess mortality ratio for different time periods post-release by cause of death (Singleton, Farrell, Marsden et al 2003)

Consequences of drug use within correctional settings

- Pressures on prison environment
  - health services
  - prison staff
  - security
- HIV, hepatitis B and C
- Tuberculosis
- Recidivism
  - use of drugs is a predictor of recidivism

In summary a 8-10 fold increased risk of mortality in the early release period

Other Changes to be considered
- Changes in the alcohol industry
- Other mood altering drug availability
- Changes in sexual behaviour around mood altering drugs including alcohol
- Reconsideration of role of alcohol and other drugs in high risk taking environments and individuals, from a health education perspective

BRADFORD HILL CRITERIA
LOOKING AT THE CRITERIA
- STRENGTH OF ASSOCIATION
- CONSISTENCY
- PLAUSABILITY
- COHERENCE
- EXPERIMENTAL EVIDENCE
- SPECIFICITY OF EFFECT

But does this evidence apply in developing countries?
- The majority of countries that have developed substitution therapies outside the United States have introduced the programmes as part of a pilot feasibility study where the main assessment has been to determine the capacity of the treatment system to operationalise the treatment within particular cultural settings, and to assess the impact of treatment on those individuals who undergo treatment

What sort of delivery system is required
- Needs integrated health care system
- Public Health Strategy to achieve maximum coverage
- Primary care training in delivery of treatment
- Family Practice Approach
- Prisons based care linked to community ongoing treatment
Direct Observed Therapy

- Enables implementation of Anti TB Therapy
- Enables delivery of HAART
- Enables future delivery of Combination therapies for Hepatitis C
- Complex multidisciplinary teams required to generate appropriate treatment programmes, much work to be done
- Agonist therapies are a critical component of the implementation of HAART as part of the International 3 by 5 initiative in many countries particularly in the Asia Pacific Region

Summary

- Evidence for major benefits of treatment in reducing spread of HIV
- Strongest evidence for maintenance agonist treatment with methadone or buprenorphine or other mu opioid agonists
- Strongest evidence for treatment in broader context of comprehensive social response to social problem of drug use, dependence and injecting.
- Belief systems are a greater obstacles to implementation in many countries that are resource limitations.

Further details.....

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