Screening, Brief Intervention, and Referral to Treatment for Alcohol: India

Vivek Benegal
Centre for Addiction Medicine
National Institute of Mental Health and Neurosciences, Bangalore
India
Low per capita consumption

Figure 1. Total adult (15+) per capita consumption, in litres of pure alcohol, 2005a
Rapid increase in consumption

Total adult (15+ years) per capita consumption of pure alcohol (in liters) - Source: WHO

Year
Consumption (in Liters)
0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5
1.82 1.79 1.79 1.98 1.45 1.22 1.36 1.53 1.82 2.17 2.46 2.56 2.8 3.4 4.3
ALCOHOL AND HEALTH BURDEN
Alcohol related deaths reported over the years (Source: NCRB)
Alcohol Misuse and earlier age at death

Among all deaths in the past five years [usable data - 638 deaths above age of 25 years Male=538; Female=100]: both male and female alcohol users had a significantly lower age at death than non-users.

Benegal et al (2012) WHO –NIMHANS Study on Patterns and Consequences of Alcohol Misuse in India
ALCOHOL & NCDs

Disease requiring treatment in past yr

- HIV-test
- Cancer
- Asthma
- Stroke
- Sexual
- Fits
- Blood press
- Diabetes
- Cough-TB
- Gastroint
- Arthritis
- Skin
- Jaundice
- Gastritis
- Heart
- Injury_work
- Injuries
- Sleep

User [n=3692]
Non User [n=4641]

Benegal et al (2012) WHO – NIMHANS Study on Patterns and Consequences of Alcohol Misuse in India
Alcohol use in Indian men not protective against CHD ... associated with possible harm

1. No inverse association (J shaped curve) between alc consumption and CHD prev in Indian men.

2. Contrary association in reverse direction suggesting possible harm.

3. Observed in as occasional and regular as well as in light, moderate and heavier consumers of alcohol. Past users had a significantly higher prevalence of CHD.
The proportion of injuries ‘linked’ to alcohol use: 58.9% of all injuries reporting to the ER of the largest Govt. hospital in Bangalore over 3 calendar months.

Alcohol and psychological illness

Heavy alcohol users more likely to endorse poorer emotional and mental health.

Drinkers with heavier and more frequent drinking reported frequent/daily feelings of unhappiness or depression.

Benegal et al (2012) WHO –NIMHANS Study on Patterns and Consequences of Alcohol Misuse in India
ALCOHOL & ECONOMY – INDIVIDUAL, FAMILY, INDUSTRIAL COSTS (INCL H2O)
WHO Study on Impact of Alcohol in Urban Settings, 2010

Families of drinkers – spent lesser proportion of monthly expenditure on food

Proportion of Monthly Spending - on food
WHO Study on Impact of Alcohol in Urban Settings, 2010

Alcohol user families spent more on medicines and less on education.

<table>
<thead>
<tr>
<th>Nonusers [Mean]</th>
<th>Users [Mean]</th>
</tr>
</thead>
<tbody>
<tr>
<td>12771.09</td>
<td>11351.76</td>
</tr>
<tr>
<td>3152.93</td>
<td>4547.08</td>
</tr>
<tr>
<td>1259.91</td>
<td>12771.09</td>
</tr>
</tbody>
</table>

Spending on Health & Education
Expenditure / Annum in Rs
Household expenses on medication (any ailment) in last month

Users spend more on medication for any ailment

Not only do costs from illnesses fall on alcohol users but family members also at greater risk of illness or injury mounting additional health care costs.

Benegal et al (2012) WHO –NIMHANS Study on Patterns and Consequences of Alcohol Misuse in India
Financial difficulties in past year

**Significant at p<0.0005

Benegal et al (2012) WHO –NIMHANS Study on Patterns and Consequences of Alcohol Misuse in India
Alcohol related profits & losses in 2003-04
Projected national estimate

Costs do not include intangible costs like lost opportunities, developmental costs in children etc.!!!!!

- Gururaj, Girish & Benegal (2006) Burden & Socioeconomic Impact of Alcohol; WHO-SEARO
ALCOHOL & HARMS TO OTHERS
Greater Harms to non-users in contact with alcohol using family members / friends

H2O

Benegal et al (2012) WHO – NIMHANS Study on Patterns and Consequences of Alcohol Misuse in India
Harms to children
(Monthly and more)

- No money for childcare: 22.7%
  - Contact Yes: 8.4%
  - Contact No: 10.7%

- Child witnessed severe violence: 29.5%
  - Contact Yes: 10.7%
  - Contact No: 12.4%

- Child physically hurt: 21.8%
  - Contact Yes: 12.4%
  - Contact No: 15.9%

- Child yelled at: 40%
  - Contact Yes: 11.4%
  - Contact No: 15.9%

- Child left in risky situation: 24.4%
  - Contact Yes: 11.4%
  - Contact No: 15.9%

Benegal et al (2012) WHO – NIMHANS Study on Patterns and Consequences of Alcohol Misuse in India
Harms due to strangers’ drinking – irrespective of personal drinking status

Benegal et al (2012) WHO –NIMHANS Study on Patterns and Consequences of Alcohol Misuse in India
Availability of Care


<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current dr</td>
<td></td>
<td>33.3</td>
</tr>
<tr>
<td>Problem dr</td>
<td>16.6</td>
<td>23.3</td>
</tr>
<tr>
<td>Identified</td>
<td></td>
<td>65.7</td>
</tr>
<tr>
<td>Advised</td>
<td></td>
<td>62.8</td>
</tr>
</tbody>
</table>

http://www.nimhans.kar.nic.in/deaddiction/lit/Mandya_distt_WHO.pdf
## Packages of care for AUDs.

<table>
<thead>
<tr>
<th>Low Resourced Settings</th>
<th>High Resourced Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunistic screening</td>
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</tr>
<tr>
<td>Stepped-care model, starting with brief advice and working up to extended brief interventions</td>
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</tr>
<tr>
<td>Community-based treatment of withdrawal (detoxification)</td>
<td>Treatment of withdrawal in community-based or specialized de-addiction/rehabilitation centers</td>
</tr>
<tr>
<td>Structured relapse prevention in self-help groups</td>
<td>Structured relapse prevention in self-help groups; specialized interventions including family based interventions</td>
</tr>
<tr>
<td>Pharmacotherapy with disulfiram where family monitoring is available and with newer medications where available/affordable</td>
<td>Pharmacotherapy with newer medications</td>
</tr>
<tr>
<td>Follow up and monitoring in the community</td>
<td>Follow up and monitoring in the community Follow up and monitoring in specialized centers</td>
</tr>
<tr>
<td>Preventive interventions</td>
<td>Preventive interventions</td>
</tr>
</tbody>
</table>


### Stepped Care Model

#### Interventions

<table>
<thead>
<tr>
<th>Intervention Category</th>
<th>Description</th>
</tr>
</thead>
</table>
| Tertiary and specialised Addiction Treatment Centres | Interventions:  
- Addictive dis + Harmful dr – comorbid Psych dis (Ext/ Int)  
- Skills: Detox-Pharm-Counsel-F/U  
- Psychiatrists, Nurses, Psychol, Soc Workers, CHWs |
| Referral to Secondary Health Facilities for Specialised Care | Interventions:  
- Addictive dis + Harmful dr – comorbid Psych dis (Ext Int)  
- Skills: Detox-Pharm-Counsel-F/U  
- Psychiatrists, Med Off, Nurses, Psychologists, Soc Workers, CHWs |
| Early detection-Brief Intervention – Primary Health Care | Interventions:  
- Harmful use – comorbid NCDs  
- Skills: ED/BI, Rx; MET; Referral & F/U  
- Doctors, Nurses, CHWs |
| Universal Interventions to reduce Alcohol exposure in the community | Availability – Taxes, monopolies, Demand Redn: delay first use; advertising, DWI prog |

### Availability

- Taxes, monopolies
- Demand reduction: delay first use; advertising, DWI program
A COMPARISON OF BRIEF INTERVENTION VERSUS SIMPLE ADVICE FOR ALCOHOL USE DISORDERS IN A NORTH INDIA COMMUNITY-BASED SAMPLE FOLLOWED FOR 3 MONTHS

HEM RAJ PAL¹*, DEEPAK YADAV², SARITA MEHTA³ and INDRA MOHAN⁴

Table 1. Change (main effects) in alcohol ASI scores⁵ across the three contact points at baseline, 1 month and 3 months

<table>
<thead>
<tr>
<th>ASI</th>
<th>Intervention</th>
<th>Baseline mean(SD)</th>
<th>1st FU mean(SD)</th>
<th>2nd FU mean(SD)</th>
<th>F</th>
<th>df</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Days used alcohol in last 30 days</td>
<td>BI</td>
<td>24.71 (8.37)</td>
<td>9.67 (9.31)</td>
<td>10.07 (9.81)</td>
<td></td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>SA</td>
<td>26.07 (6.47)</td>
<td>2.73 (9.92)</td>
<td>19.05 (10.63)</td>
<td>88.07</td>
<td>2</td>
<td>0.000</td>
</tr>
<tr>
<td>Experienced problems (days)</td>
<td>BI</td>
<td>2.02 (6.75)</td>
<td>4.22 (9.51)</td>
<td>4.33 (9.64)</td>
<td></td>
<td></td>
<td>0.075</td>
</tr>
<tr>
<td></td>
<td>SA</td>
<td>4.7 (9.97)</td>
<td>4.48 (8.38)</td>
<td>7.90 (11.5)</td>
<td>2.63</td>
<td>1.59⁶</td>
<td>0.075</td>
</tr>
<tr>
<td>Composite ASI⁷</td>
<td>BI</td>
<td>0.36 (0.18)</td>
<td>0.22 (0.19)</td>
<td>0.18 (0.22)</td>
<td>41.22</td>
<td>1.85⁶</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>SA</td>
<td>0.42 (0.19)</td>
<td>0.28 (0.21)</td>
<td>0.33 (0.24)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ASSIST-LINKED ALCOHOL SCREENING AND BRIEF INTERVENTION IN INDIAN WORKPLACE SETTING: RESULT OF A 4-MONTH FOLLOW UP

Jaison Joseph, Karobi Das, Sunita Sharma, Debasish Basu

Table 2: Pre post univariate changes of ASSIST variables with paired t test results

<table>
<thead>
<tr>
<th>Variables</th>
<th>Score Range</th>
<th>Mean Pre score/SD</th>
<th>Mean Post score/SD</th>
<th>Paired t</th>
<th>Sig. (p)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol consumption over 3 months - ASSIST (Q.2)</td>
<td>0 - 6 (Never - Daily)</td>
<td>4.90 / 1.30</td>
<td>3.42/1.34</td>
<td>8.032</td>
<td>.001*</td>
</tr>
<tr>
<td>Strong desire / urge to use alcohol ASSIST (Q.3)</td>
<td>0 - 6 (Never - Daily)</td>
<td>5.03 /1.89</td>
<td>3.58 / 1.45</td>
<td>6.698</td>
<td>.001*</td>
</tr>
<tr>
<td>Health social legal problems due to alcohol - ASSIST (Q.4)</td>
<td>0 - 7 (Never - Daily)</td>
<td>3.94 /1.46</td>
<td>1.94 / 2.34</td>
<td>5.155</td>
<td>.001*</td>
</tr>
<tr>
<td>Failed to expectations due to alcohol - ASSIST (Q.5)</td>
<td>0 - 8 (Never - Daily)</td>
<td>1.84 / 2.53</td>
<td>0.71 / 1.89</td>
<td>2.146</td>
<td>.040**</td>
</tr>
</tbody>
</table>

*p < 0.01, **p < 0.05

Table 5: Profile of reduction & increase in ASSIST scores

<table>
<thead>
<tr>
<th>Change in ASSIST scores</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced ASSIST Score</td>
<td>24</td>
<td>77%</td>
</tr>
<tr>
<td>No change</td>
<td>05</td>
<td>16%</td>
</tr>
<tr>
<td>Increased ASSIST Score</td>
<td>02</td>
<td>7%</td>
</tr>
</tbody>
</table>
Narvekar et al (unpub)

3 month F/U of BI - Goa

- Typical occasion
  - Pre: 7.7
  - Post: 6.2
  - p = 0.003

- Heaviest use
  - Pre: 9.6
  - Post: 11
  - p = 0.01

- Min. spend
  - Pre: 460
  - Post: 613

- Max. spend
  - Pre: 418
  - Post: 557

Rs.
Screening and brief intervention to reduce harmful alcohol use among coal mine workers in West Bengal

• Ongoing intervention study funded by ICMR

• ASSIST screening to identify patterns of tobacco, alcohol and cannabis use

• Brief intervention for “hazardous and harmful” users – with referral as appropriate

• Supervised brief intervention with add-on pharmacological intervention by Primary care doctors for “likely dependent” alcohol users
### Blended Learning Platform at NIMHANS

#### E-Learning

<table>
<thead>
<tr>
<th>NAME OF MODULE</th>
<th>TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Addiction Pharmacology (January - February 2015)</td>
<td># Alcohol (Withdrawal and Complications) by Dr. Deepak Jayarajan</td>
</tr>
<tr>
<td></td>
<td># Relapse Prevention by Dr. Prabhat Chand</td>
</tr>
<tr>
<td></td>
<td># Management on Opioid Use Disorder - I by Dr. Prabhat Chand</td>
</tr>
<tr>
<td></td>
<td># Buprenorphine Maintenance Treatment (BMT) by Dr. Atul Ambekar, NDDTC</td>
</tr>
<tr>
<td></td>
<td># Benzodiazepine by Dr. Lekhansh Shukla</td>
</tr>
<tr>
<td></td>
<td># Stimulant by Dr. Bharath Holla</td>
</tr>
<tr>
<td></td>
<td># Cannabis by Dr. Aniruddha Basu</td>
</tr>
<tr>
<td></td>
<td># Personalized Addiction Treatment by Dr. Prabhat Chand</td>
</tr>
</tbody>
</table>
Nimhans Bihar ECHO

STATE HEALTH SOCIETY, BIHAR
An ISO 9001:2008 Certified Institution

NIMHANS BIHAR ECHO BLENDED TRAINING AND e-HANDHOLDING

BACKGROUND

Skill Building in treatment of Alcohol and Tobacco use Disorders for Doctors and Counsellors from State Health Society, Government of Bihar: A blended training.

In the year 2016, the State Health Society, Government of Bihar approached the Centre for Addiction Medicine (CAM), NIMHANS for training and handholding the primary health physicians and counselors in the area of alcohol and tobacco use disorders. In this context, CAM, NIMHANS has trained twenty eight doctors and counselors in the area of alcohol and tobacco use disorders from 22nd February till 7th of March 2016. These trained health professionals will be the master trainers for their state, in addition to providing de-addiction services at the district hospitals in Bihar. After on-site training, each district team will be supported by handholding and co-managing through online “Virtual” Knowledge Network NIMHANS ECHO (vic.nimhans.ac.in) for the next six months and more. We strongly believe that this blended training as well as handholding will increase the confidence of doctors and counselors and will translate to better patient care in their community.
OBJECTIVES

1) **IDENTIFY** alcohol addiction as a medical risk factor

2) **INTERVENE** to manage problems related to alcohol use

3) **INVOLVE** other health care providers i.e. counsellors and work as a team to offer help *(Adapted from Training manual for medical officer on Reducing the risk factors for NCDs in Primary care NIMHANS WHO 2015)*

This will serve as a treatment algorithm for their clinical practice at the district hospital. We would like to extend our sincere thanks to all the faculty and staff of the Centre for Addiction Medicine NIMHANS for their support and contributions.

PLAN

**ONSITE** training 22nd February 7th March 2016 at Centre for Addition Medicine, NIMHANS: Epidemiology, Assessment, Counselling Skills, Motivational Enhancement and Clinical Practice Guideline for Alcohol and Tobacco. Details can be accessed [link]....

**ONLINE** VKN NIMHANS ECHO fortnightly case presentations by District addiction centre by BIHAR by the trained participants and guided practice by multidisciplinary team from Centre for Addiction Medicine, Department of Psychiatry, NIMHANS.

The details, reporting form, treatment guidelines are attached. **LINK**
Himachal Pradesh- 2014-6

• Training of Medical Officers and Psychologists/Social Workers in Management of Alcohol and substance related problems

• Continued hand-holding and tele referrals through internet based VKN platform

• Booster training
Kolar district project

• Epidemiological observatory from 2015
• Pop 1.5 million
• Training of a] Health workers, b] Accredited social health activists (ASHAs), c] Medical officers, d] Specialist doctors & e] psychiatrists
• Stepped care intervention and referral structure
Future Directions

• Ambitious NCD Agenda of GoI (Flexipool)
  – Staff and funding
• NGOs in MFI and Development
• H2O
• Building up Training Resources for Online training & certification