A reflection on the SACENDU (1996-2016)
epidemiological network system.

3rd October 2017
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OUTLINE
1. Background
2. Alcohol and other Drug Use in South Africa
3. Emerging concerns
4. Data Sources
5. SACENDU
   - Data collection
   - Bi-Annual Processes
   - Dissemination
   - Advantages
   - Challenges and Limitations
Republic of South Africa (RSA), is the southernmost country in Africa.

It is bounded on the south by 2,798 kilometres of coastline of Southern Africa stretching along the South Atlantic and Indian Oceans; on the north by the neighbouring countries of Namibia, Botswana, and Zimbabwe; and on the east and northeast by Mozambique and Swaziland; and surrounds the kingdom of Lesotho.

- 56 million people
- Upper Middle Income Country (but poverty and inequality remain widespread, with about a quarter of the population unemployed and living on less than US$1.25 a day)
- Access to basic resources still problematic for most
- Multi-ethnic society
- Post-apartheid
  - 9 provinces
  - 11 Official Languages
Post 1994 (after sanctions were lifted) saw an increase in illicit drug trade.

Prior to 1994 – Alcohol, Marijuana, Methaqualone

Subsequent ↑ in research initiatives

In his opening address in parliament in 1994, President Mandela signaled AOD abuse as a major problem, calling for concerted efforts to address the growing epidemic.

Since 1994, there have been a number of ad-hoc descriptive, analytical and intervention (last 10 years) studies – evidence base.
**Alcohol and Other Drug Use Is South Africa – Brief Overview**

- **Alcohol** is the primary substance of use, followed by tobacco and cannabis.
- **Provincial Variations in Drug Use**

- 13.3% lifetime prevalence of substance use disorders (SASH Survey).
- Alcohol was responsible for 7.1% of all deaths and 7.0% of all DALYs lost in South Africa in 2000 (Schneider et al., 2007).
• **Nyaope** (officially defined as a cocktail of cheap/low grade heroin mixed with cannabis and smoked)
  - first emerged in the townships of Durban about a decade ago, but it’s really starting to get the attention now that it has spread to other big townships around the country.

• **Desomorphine (krokodil)** (an opioid derivative of codeine. Like heroin and other opioids, it has a sedative and analgesic effect, is highly addictive, and potentially harmful).
  - Anecdotal reports (GP); Not seen in treatment

• **New Psychoactive Substances (NPS)** e.g. synthetic cannabinoids/synthetic cathinones:
  - global concerns - the effects of NPS use on the human body not fully understood
  - safety data regarding toxicity not available and long-term side effects not known (WDR, 2016).
  - To date not picked up in treatment centres/ methcathinone stabilized

• **Codeine and other OTC/Prescription meds**
  - Children and Codeine syrups
  - Methylphenidate Use (Used to treat attention deficit disorder (ADD), attention deficit hyperactivity disorder (ADHD), and narcolepsy (university students)
  - microdosing
## ALCOHOL AND DRUG DATA SOURCES – SOUTH AFRICA

<table>
<thead>
<tr>
<th>Country</th>
<th>Treatment data</th>
<th>Hospital data</th>
<th>Mortality/Mortuary reports</th>
<th>POLICE arrestee data</th>
<th>Psychiatric admissions</th>
<th>Other (Forensics)</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>X</td>
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### SURVEYS

- Ad-hoc national household surveys (not dedicated to AOD use)
- Youth Behavior Risk Survey (was more regular – last was in 2011)
- Community Surveys and province wide surveys

Not routinely collected at this stage – challenges
SOUTH AFRICAN COMMUNITY EPIDEMIOLOGY NETWORK ON DRUG USE (SACENDU)

ESTABLISHED IN 1996 SOUTH AFRICA (21 years)

- An alcohol and other drug (AOD) sentinel surveillance system operational in 9 provinces of South Africa
- Monitors trends in AOD use and associated consequences on a six-monthly basis from specialist AOD treatment programmes

• Modelled after the Drug Surveillance systems established by the Pompidou Group in Europe and US Community Epidemiology Work Group
• Established in 1996 (MRC, UKZN, Nick Kozel)
• Funded initially by WHO later by NDoH and the SAMRC
SACENDU OBJECTIVES

• To establish a network of researchers, practitioners and policy makers
• To identify changes in AOD and emerging trends
• To identify any changes in AOD negative consequences
• Inform policy, planning and advocacy efforts at local and other levels.
• Stimulate further research into new and under-researched areas
• Ensure participation in internal and international for a
• Facilitate completion of ARQ in SA
• Provides data on treatment demand
• Operational in 9 provinces (with some provinces combined)
• ± 80 treatment centres (nationally) are part of the SACENDU network covering approximately 80% of treatment population and 75% of treatment centers
  - Includes state funded private and non-governmental organisations
• ± 10K persons seen in treatment every 6 months

<table>
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<tr>
<th></th>
<th>WC</th>
<th>KZN</th>
<th>EC</th>
<th>GT</th>
<th>NR (2)</th>
<th>CR (3)</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Treatment centres</td>
<td>38</td>
<td>9</td>
<td>6</td>
<td>17</td>
<td>5</td>
<td>6</td>
<td>78</td>
</tr>
<tr>
<td># of patients</td>
<td>2674</td>
<td>1171</td>
<td>471</td>
<td>3570</td>
<td>1247</td>
<td>546</td>
<td>9510</td>
</tr>
</tbody>
</table>
• All AOD treatment centres, located within a given site, are requested to join the network. Participation within the network is voluntary.

• They are provided with SACENDU data collection forms.

• Specialist AOD treatment centres tend to be more urban based (GP + WC) and access tends to be biased towards:
  – White, mixed race and Asian South Africans.
  – Some private centres cater largely for foreigners (international clientele).
  – However access to treatment for HDC is increasing.
THE PROCESS

Data Collection
- Completion of questionnaires (online or manually)
  - e.g. July-December or Jan-June

Collection from Tx Centres
- Regional reps in each province

Data Captured
- Data entry throughout the year
- In preparation for analysis data is cleaned

Analysis
- Data analyzed for all regions and nationally

Disseminated
- Bi-annual Meetings in April or October in CTN, PE, JHB, DBN
- Speakers invited to share research
DATA COLLECTION
A standardized one page form was completed on each person treated by a given centre during a particular 6-month period. The form consists of forced-choice responses.

- Completed for each patient at first intake.

Demographics: Gender, Age, Race, Suburb, Education, Employment, marital status

Substance abuse info: 1-2nd substance of abuse, mode of use, frequency of use, age of 1st use, prior treatment

HIV Testing in the past 12 months

Referral Sources, sources of payment, types of treatment received.
Data Collected two ways

Online
Manually inputted

Hard copies are collected from centres

Both online and manual copies entries are checked
SACENDU BI-ANNUAL PROCESSES
Jan- June
July December
(Of every year)

Feedback Meetings:
April October
FIGURE 1: TREATMENT ADMISSIONS TRENDS - % OF PATIENTS <20 YEARS
Figure 3: Proportion of persons in treatment with heroin as their primary drug of abuse (%)
FIGURE 4: TREATMENT DEMAND TRENDS: METHAMPHETAMINE (%) AS PRIMARY DRUG AND SECONDARY SUBSTANCE OF ABUSE (WC)
SACENDU TREATMENT DEMAND DATA BASED ON DATA FROM 9 PROVINCES (PRIMARY + SECONDARY DRUGS): 2016B

BACKGROUND

The SACENDU Project is an alcohol and other drug (OD) sentinel surveillance system implemented in 9 provinces in South Africa. The system, operational since 1996, monitors trends in OD-related harm, as well as the impact of specific AOD treatment programmes. The first half of 2016 saw 320 more new AOD-related cases reported compared to the corresponding period in 2015. The road accident rate was 2.6% lower than in 2015.

LETTER OF SUBSTANCE ABUSE

One trend that stands out is alcohol abuse. The letter of substance abuse in the first half of 2016 shows a significant increase compared to the same period last year. The number of cases involving alcohol increased from 31.6% to 33.2%. This increase is particularly pronounced in the Western Cape, where the number of cases involving alcohol increased from 31.6% to 33.2%.

Generally, treatment admissions for alcohol-related problems in patients younger than 20 years are less common. However, during the first half of 2016, there was a significant increase in the number of patients younger than 20 years admitted for treatment of alcohol-related problems. This increase is particularly pronounced in the Western Cape, where the number of patients younger than 20 years admitted for treatment of alcohol-related problems increased from 31.6% to 33.2%.

Compared to the previous quarter, treatment admissions for other substances, such as cannabis and cocaine, showed a decrease across all provinces. The percentage of patients admitted for cannabis-related problems decreased from 10.7% to 9.3%, while the percentage of patients admitted for cocaine-related problems decreased from 6.4% to 5.9%.

TREATMENT ADMISSIONS FOR OTHER SUBSTANCES

In terms of other substances, the proportion of patients admitted for heroin-related problems remained relatively stable across all provinces, with a slight increase observed in the Eastern Cape. The percentage of patients admitted for heroin-related problems increased from 5.2% to 5.3%.

The proportion of patients admitted for amphetamine-related problems also remained relatively stable across all provinces, with a slight decrease observed in the Western Cape. The percentage of patients admitted for amphetamine-related problems decreased from 4.8% to 4.7%.

TREATMENT ADMISSIONS FOR MIXED SUBSTANCES

In terms of mixed substance admissions, the proportion of patients admitted for mixed substance-related problems decreased across all provinces. The percentage of patients admitted for mixed substance-related problems decreased from 9.3% to 8.9%.

The proportion of patients admitted for mixed substance-related problems decreased across all provinces, with a slight decrease observed in the Western Cape. The percentage of patients admitted for mixed substance-related problems decreased from 9.3% to 8.9%.
DISSEMINATION
**BI-ANNUAL MEETING AGENDAS**

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**SACENDU (South African Community Epidemiology Network on Drug Use)**

Programme of the Gauteng, Northern & Central regional report back meeting

Tuesday, 11th April 2017
South African Medical Research Council, Soutpansberg Road, Pretoria

<table>
<thead>
<tr>
<th>Registration</th>
<th>08:30 - 09:00</th>
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<tbody>
<tr>
<td>Session Chair: TBA</td>
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Prof Charles Parry
Welcome and Introduction
09:00 - 09:10

Ms Siphokazi Dada
SACENDU Treatment Data
09:10 - 09:40

Ms Jodilee Erasmus
SACENDU Northern Treatment Data
09:40 - 10:10

Prof Charles Parry
Support for alcohol policies from drinkers in Tshwane: data from the IAC study
10:10 - 10:45

TEA
10:45 - 11:05

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**SACENDU (South African Community Epidemiology Network on Drug Use)**

Programme of the Western Cape Regional report back meeting

Thursday, 20th April 2017
South African Medical Research Council, Francie van Zijl, Tygerberg

<table>
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<tbody>
<tr>
<td>Session chair: Ms Kim Johnson</td>
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</table>

Prof Charles Parry
Welcome and Introduction
09:00 - 09:10

Ms Jodilee Erasmus
SACENDU Western Cape Treatment Data
09:10 - 09:50

Ms Lara van Nunen
Combating craving with contingency management: Neuroplasticity and methamphetamine abuse in South Africa
09:50 - 10:20

Mr Jaco Louw
Prevalence rates of Fetal Alcohol Spectrum Disorder (FASD) in three areas
10:20-10:50

Tea
10:50 - 11:20

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| Session chair: Dr Nadine Burnhams |             |

Dr Samantha Brookes
Psychological intervention with working memory training increases basal ganglia volume: A VBM study of inpatient treatment for methamphetamine use
11:20 - 11:50

Ms Monique Davidson
The economic behaviour of poly-drug users in the Western Cape: an analysis of pathways, prices, location and gender
11:50 - 12:20

Prof Charles Parry
Western Cape High Court judgment on home use and cultivation of cannabis
12:20 - 12:50

Dr Nadine Burnhams
Discussion and closing
12:50-13:00

Lunch
Outputs

• 3 comprehensive reports provide trends over time (by province and nationally) on substance abuse by gender, age, primary substance of abuse, NCDs on a 6 monthly basis.
• Included in the reports are a list of:
  – Policy Implications emanating from the data
  – Selected issues to monitor
  – Future research needs (often used to formulate new research questions).

Impact

• Replicated in 11 countries in Sub-Saharan Africa and more recently Nigeria
• Links specialist treatment centre practitioners and policy makers to research
• Shares latest research findings
• 12 publications in peer-reviewed journals
• Informs the UN Annual Research Questionnaire (ARQ)
• Has helped the NDSD to strategically allocate resources (i.e. tx centres) for substance abuse and therefore improved accessibility for all sectors of the community.
• Has aided formulation of substance abuse policy documents for the NDOH (i.e. the Mini Drug Master Plan) and the country (national Drug Master Plan)
• Training of MA and PhDs
• Linked to Service Quality Measures initiative
IMPLICATIONS FOR POLICY AND FUTURE RESEARCH

Selected implications for policy/practice
During the Phase 40 regional report back meetings of SACENDU a number of recommendations were made with regard to specific interventions needed to address substance abuse and substance abuse policy in general:

- Consider addressing common NCDs experienced by clients in treatment (e.g. mental health problems).
- Give more attention to phenomenon of teens buying codeine containing cough syrups and taking it with alcohol.
- Increase HIV testing among persons coming to treatment in Gauteng (GT) and the Northern Region (NR).
- Upscale interventions to address the increasing injection-use among young, Black African nyaope users in GT.
- Address gaps in access to treatment for Black Africans in the Western Cape (WC).

Selected issues to monitor
Phase 40 of the SACENDU Project highlighted several conditions/factors that need to be carefully monitored over time:

- Increase in Fentanyl abuse in SA.
- Increase in heroin/nyaope use, including in ≤20s.
- Increase in injection use of heroin in GT and elsewhere.
- Decrease in age of people coming to treatment in NR and KZN.
- Sharing of needles (“Flashflood” – individual injects himself with blood extracted from another drug user) to get a high in GT.
- Decrease in Black African patients coming to treatment in GT.
- Availability of synthetic cannabis (Spice/K2) in KZN.
- Treatment demand by 15-19 years olds related to codeine use in the WC.

Selected topics for further research/investigation

- Extent of people moving from smoking to injecting heroin in GT and precipitating factors.
- Suitability of treatment modalities for very young patients.
- Directionality of linkage between NCDs and drug use.
- Investigate prevalence of HCV among drug users.
- What types of mental health comorbidity are experienced by drug users and how is it being addressed?
- How is cannabis use affecting the lives of teenagers?
- To what extent are medical aids being used to cover substance abuse treatment. Is it falling short of the need?
- Impact that rehabilitation has on employment of patients.
- Need for more treatment options for whoonga users in KZN.
- Gaps in substance abuse treatment among older persons.
- Should we increase provision of female only treatment programmes/centres?
- What is the effect on treatment retention and outcomes?
ADVANTAGES OF TREATMENT DEMAND SURVEILLANCE
Treatment demand data provides insight into the extent of:

- Substance abuse and the need for treatment
- Emerging trends
- Assists governments efforts to strategically allocate resources for substance abuse and improve accessibility for all sectors of the community.
- Assist in planning intervention strategies that ensure adequate provision of services to communities.
OTHER ADVANTAGES

- Strengthens local networks (Researchers/Practitioners)
- Capacity building
- Strengthens collaborations among researchers
- Informed the NDMP (I, II, III)
- Provides a model for Africa

We use SACENDU data to highlight:
* Implications for policy; Implications for practice; Issues to Monitor, topics for further research
CHALLENGES AND LIMITATIONS
LIMITATIONS AND CHALLENGES

- Ensuring participation by all treatment centres during each phase of data collection is in some instances difficult.
  - Data collection is dependent mainly on the enthusiasm of individuals who receive no remuneration for their efforts → institutionalize SACENDU.
- Changes in staff at treatment centres.
- Treatment centre data may reflect admission policies, differential access to services based on socio-economic status and the limited availability of treatment services for marginalized groups rather than potential AOD treatment demand.
- Difficult to determine the extent to which findings reported in SACENDU can be extrapolated to the general population.
- Funding challenges.
- Difficulty in accessing ongoing data from sources other than treatment centres.
FUNDING MODEL

Expenses

- Overall Project Management: 40
- Bi-Annual Meetings: 40
- Collation and dissemination: 20

Funded by the NDOH
Cross-subsided by the SAMRC (staff salaries)
nadine.harker@mrc.ac.za