Developing the Southern African Development Community Epidemiology Network on Drug Use: methods and issues

C.D.H. PARRY*

A. PLÜDDEMANN

Alcohol and Drug Abuse Research Group, Medical Research Council, Cape Town, South Africa

J. STRIJDOM

Directorate for Social and Human Development and Special Programmes, Southern African Development Community, Gaborone

ABSTRACT

In 2000, the Southern African Development Community (SADC) commissioned the Medical Research Council of South Africa to establish the SADC Epidemiology Network on Drug Use (SENDU). The goal of SENDU is to improve the information base for policy makers in SADC member States to address the health, social and economic burden caused by the misuse of alcohol and other drugs. In the present article, the authors describe the methods being used to set up an alcohol and drug surveillance system in the 14 SADC member States, focusing in particular on areas such as training and technical support, the development of networks of stakeholders in each country, core indicators and data sources, data validation and collation and information dissemination. The article also discusses other issues of relevance to establishing community epidemiology networks on drug abuse in developing countries, including structural issues at the national and international levels, resource constraints, funding and concepts such as the need for flexibility and adopting a "small-wins" approach. While it is too early to assess the impact of the SENDU initiative, the authors believe that it is already proving to be of value.

Keywords: Southern Africa; surveillance; drug abuse; epidemiology; methods.

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Introduction

The Southern African Development Community (SADC) was established in 1992 and comprises 14 member States. Its member States differ greatly in terms of land area, population, income levels and official languages (see table 1). The region has a population of approximately 200 million and a land mass equal to that of the United States of America. Poverty reduction, managing the impact of the human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) and dealing with political instability are among the key issues currently facing SADC.

Table 1. Southern African Development Community member States: selected indicators

Member State	*Land area (sq km)*	*Population*[a]	*Gross domestic product per capita*[b] *(United States dollars)*	*Official language or languages*
Angola	1 246 700	10 366 031	1 000	Portuguese
Botswana	600 370	1 586 119	6 600	English
Democratic Republic of the Congo	2 345 410	53 624 718	600	French
Lesotho	30 355	2 177 062	2 400	English
Malawi	118 480	10 548 250	900	English and Chichewa
Mauritius	1 860	1 189 825	10 400	English
Mozambique	801 590	19 371 057	1 000	Portuguese
Namibia	825 418	1 797 677	4 300	English
Seychelles	455	79 715	7 700	English and French
South Africa	1 219 919	43 586 097	8 500	[c]
Swaziland	17 363	1 104 343	4 000	English and Siswati
United Republic of Tanzania	945 087	36 232 074	710	English and Swahili
Zambia	752 614	9 770 199	880	English
Zimbabwe	390 580	11 365 366	2 500	English
Total	9 296 201	202 789 533		

Source: United States of America, Central Intelligence Agency, *The World Fact Book 2001,* Washington, D.C.

[a] 2001 estimates.

[b] Purchasing power parity (2000 estimates).

[c] There are 11 official languages. English predominates.

In 2000, the Medical Research Council of South Africa was commissioned to establish sentinel surveillance systems in all SADC member States as part of the SADC Regional Drug Control Programme [1]. This initiative has been driven by the view that the burden of harm from alcohol and other drug use in Southern Africa is likely to increase with development and by the 1996 SADC Protocol on Combating Illicit Drugs, which highlights the importance of information and research to inform interdiction and demand reduction activities [2].

The regional network established in October 2000 was named the SADC Epidemiology Network on Drug Use (SENDU). SENDU has been modelled on the South African Community Epidemiology Network on Drug Use (SACENDU), an alcohol and drug surveillance system established in 1996 and comprising a network of researchers, practitioners and policy makers from five sentinel sites in South Africa [3]. In addition to providing information on trends in alcohol and drug use and abuse, SACENDU has been instrumental in building research capacity, stimulating alcohol- and drug-related research in new or underserved areas and in providing suggestions for substance abuse policy and practice [4].

The overall goal of SENDU is to improve the information base for policy makers in SADC member States with a view to addressing the health, social and economic burden caused by the misuse of alcohol and other drugs. Specific objectives include:

(a) Developing a network of stakeholders at one or more sites in each of the SADC member States;

(b) Reaching agreement on a set of indicators for measuring the nature, extent and effect of alcohol and drug use;

(c) Collecting data on alcohol and drug indicators at each site;

(d) Sharing, validating and collating the information collected every six months at each site and regionally;

(e) Disseminating information to policy makers and practitioners at the national and regional levels;

(f) Lobbying key decision makers to use the information provided by the surveillance system and to support its ongoing development;

(g) Evaluating the effectiveness of the project.

Methods

The above-mentioned objectives are being addressed through the tasks described in the sections below, which are to be undertaken between 2000 and 2005.

Training and technical support

A consultation was held in Pretoria for four days in October 2000. It was attended by representatives of all SADC member States. Support was provided to the consultation by the SADC Drug Control Officer and United Nations International

Drug Control Programme (UNDCP) staff involved in the Global Assessment Programme on Drug Abuse [5]. Prior to the consultation, representatives had completed an audit form to assess the nature and extent of possible sources of information on alcohol and drug use in each country and identify avenues for improving the quantity and quality of such information. At the consultation, training was provided via lectures and participation in a national meeting on the SACENDU project. Training objectives included providing participants with information on *(a)* the need for ongoing monitoring of trends in alcohol and drug use; *(b)* different methods of monitoring trends in alcohol and drug use; and *(c)* the establishment of aggregate community-based epidemiology networks, the identification of the specific indicators used and the methods for collecting, analysing and reporting on data.

A second major component of training involves four- to seven-day technical support visits to each country. In 2001 and the first half of 2002, visits were made to Botswana, Lesotho, Malawi, Mauritius, Mozambique, Namibia and the Seychelles. Visits to the remaining countries will be completed by the end of June 2004 (see table 2). The objective of the visits is to learn more about patterns of alcohol and drug use in each country, to meet with government officials to inform them about the SENDU initiative, to assist countries in developing instruments to collect and collate information on alcohol and drug use and the associated consequences, support country coordinators in organizing an initial meeting of potential members of a network for the surveillance of alcohol and drug use, to conduct visits to agencies where data are to be collected and to identify other areas where technical or other forms of support are required.

Table 2. Proposed schedule for the development of SENDU sites

Member States	*Technical support visits*	*Official start of data collection*	*First report on data at regional meeting*
Lesotho, Mauritius and Seychelles	January-June 2001	July-2001	April/May 2002
Botswana and Namibia	July-December 2001	January 2002	October/November 2002
Malawi and Mozambique	January-June 2002	July 2002	April/May 2003
United Republic of Tanzania	July-December 2002	January 2003	October/November 2003
Zambia and Zimbabwe	January-June 2003	July 2003	April/May 2004
Swaziland	July-December 2003	January 2004	October/November 2004
Angola and Democratic Republic of Congo	January-June 2004	July 2004	April/May 2005

Note: South Africa's system for the surveillance of alcohol and drug use has been operational since July 1996, the first data having been reported in April 1997.

Additional training is provided via ad hoc training exercises (for example in data management and analysis techniques), biannual regional "report-back" meetings, one-on-one contact between Medical Research Council staff and site facilitators, and via biannual newsletters (*SENDU Update*) and reports.

Developing networks of stakeholders

The establishment of community epidemiology networks at one or more sites in each country is both an objective of the SENDU project and a means of achieving other objectives. Community epidemiology networks are multi-agency work groups with a public health orientation that study the spread, growth or development of substance abuse and related problems [6]. Network members access existing information from a variety of sources. They meet periodically to review, compare and draw conclusions from the data. The data are presented in standardized format to facilitate review and comparative analysis. Qualitative studies may be conducted to help members understand the quantitative findings from existing data sets [6]. Regional, national and local networks have been established in various parts of the world [7].

The primary objectives of network members are to identify patterns of drug use in defined geographical areas; identify changes in drug abuse patterns over defined periods in order to establish trends; detect emerging trends of drug abuse; and communicate and disseminate the information to appropriate community agencies and organizations so that it can be used in developing policies, practices, prevention strategies and research studies. Network members include individuals who are in a position to contribute and assess information about drug use in specific geographical areas. They may represent agencies and organizations that have some responsibility for addressing substance abuse problems or that directly benefit from acquiring information about drug abuse. Researchers and other individuals who have special knowledge about a particular drug-using population may also participate [6, 7].

In the SENDU project, the establishment of local networks is initially stimulated through one-on-one meetings and site visits set up as part of the technical support visits, as well as through a one-day workshop held during each visit. Further impetus for developing the network comes from the "report-back" meetings that take place at each site twice annually. New members can be added to the networks at any time.

Agreeing on core indicators and identifying data sources

At the consultation, country representatives were presented with a list of indicators of alcohol and drug use and the associated consequences, categorized by data source. Indicators and data sources included:

(a) Primary and secondary substances of abuse reported by clients on admission to facilities specialized in the treatment of alcohol and drug abuse;

(b) The proportion of admission and discharge diagnoses related to substance abuse, as reported by acute psychiatric treatment facilities;

(c) Deaths related to alcohol and drug use, as reported by mortuaries;

(d) Emergency department admissions related to alcohol and drug use, as collected via self-report measures and biological markers;

(e) Arrest, seizure, drug composition and price data obtained from narcotics squads and police forensic science laboratories;

(f) Behaviour related to alcohol and drug use and the associated consequences reported through surveys or focus-group interviews of secondary school students, persons attending rave parties, sex workers, street children, prisoners or persons attending primary health-care clinics;

(g) Crime related to alcohol and drug use via self-report and urinalysis from persons arrested for a variety of crimes.

These indicators have considerable overlap with the core indicator package identified by a group of technical experts in Lisbon in January 2000 at a meeting sponsored by UNDCP on the principles, structures and indicators necessary for effective drug information systems. This indicator package later served as the basis for the redrafting of part II of the revised United Nations annual reports questionnaire of UNDCP.

At the consultation meeting, broad agreement was reached on the suitability of the indicators and sources listed above. Further refinement of the core indicator set ("basic system") and additional elements has taken place during technical support visits to different countries. Where appropriate, it has been recommended that data should be reported by defined age category and by gender. The "basic" system comprises data on treatment demand from specialist substance-abuse treatment facilities, if available, and psychiatric hospitals, as well as information from the police on arrests, seizures and drug prices (table 3). Additional components might include school studies, mortuary or emergency department studies or data collected from non-governmental organizations (for example, agencies that work with youth). Additional components can be added as the data collection system develops at a particular site. The intention is to look for agreement across indicators collected from different sources to understand alcohol and drug abuse behaviour and the associated consequences.

Collecting data on alcohol and drug indicators at each site

Following the establishment of site-specific networks and having reached agreement on the indicators and data sources to be accessed at a specific site, country facilitators are encouraged to start collecting data twice annually from each source, starting either from 1 January or 1 July. Where required, further assistance is given to stakeholders. For example, in most countries, workshops have been held to assist staff from centres for the treatment of alcohol and drug abuse and the responsible government department in preparing a standardized

data-collection instrument and in reaching agreement on mechanisms for collating information across centres. Model data-collection instruments have been developed and made available in various areas, for example, for centres for the treatment of alcohol and drug abuse, police narcotics units, primary health-care centres, prisons and psychiatric facilities.

Table 3. Main data sources likely to be used in selected countries during phase 1

Source	*Botswana*	*Lesotho*	*Mauritius*	*Mozambique*	*Namibia*	*Seychelles*	*South Africa*
Health, social service sector							
Specialist treatment centres		x	x	x	x	x	x
Psychiatric units	x	x	x	x	x	x	x
Mortuaries	x				x	x	x
Emergency rooms							x
General wards				x			
Law enforcement, justice, prisons							
Drug unit or forensic science laboratory	x	x	x	x	x	x	x
Prison data			x		x		
Probation services	x					x	
Traffic department	x				x		
Other							
Alcohol production			x			x	
Other non-governmental organizations	x			x	x	x	
School counsellors						x	

Sharing, validating and collating the information collected

The intention is for each local network to hold biannual "report-back" meetings, at which information will be presented by data source. Persons hosting the meetings are encouraged to allow sufficient time for discussion, so that members of the network can "interrogate" the data, that is, look for similarities, dissimilarities and changes over time and find explanations for them. It is then the job of the site facilitators to collate the information across the different sources (and over time, once trend data are available) and to prepare site reports according to a model format. Site coordinators are also encouraged to highlight issues to monitor, issues requiring more in-depth research and implications or suggestions for policy and practice.

Biannual "report-back" meetings are also held at the regional level to facilitate the presentation of country reports and discussions on similarities, dissimilarities, trends, and so forth. The Medical Research Council has been commissioned to prepare regional reports twice a year, collating the information obtained from the country reports and undertaking further trend and predictive analyses.

Information dissemination and advocacy

Information dissemination is a vital component of the SENDU initiative. Dissemination focuses on various audiences. At the national level, it includes members of the network at each site, the media, the general public and policy makers who are not part of the network. At the international level, it includes network members from other national or local networks, the SADC Drug Control Committee and United Nations entities such as UNDCP and the World Health Organization (WHO). In order to reach such diverse target audiences, a variety of technologies are employed, ranging from briefing documents and press releases to reports of varying length. These are sent by post and put on a web site.[1] Radio and television interviews have been held in most of the countries that have joined to date. Special briefings have also been made to parliamentary committees and to selected policy makers in South Africa using data derived from SACENDU. To date, presentations on both the South African and regional networks have been given at international meetings held in the United States of America and in Europe. Ongoing advocacy for SENDU is required to ensure that the data generated are fed through to policy makers and to facilitate financial support for the national and regional networks.

Project evaluation

An external evaluation of the SENDU initiative is planned by SADC. It is expected that this will be undertaken towards the end of the first five-year funding cycle and will include an assessment of the project in terms of the level of participation of the stakeholders, the completeness and quality of the information obtained, the usefulness of the process and the information obtained by network participants and policy makers and the appropriateness of indicators. A good evaluation will be a major boost to ensuring ongoing support for the initiative by SADC member States.

Key issues

The section on methods contained an outline of the broad strategies to be used to achieve the specific objectives detailed in the introduction to the present article. There are, however, other issues that need to be discussed to give a fuller picture

[1]The South African health knowledge network (www.sahealthinfo.org/admodule/sendu.htm).

of what has been implemented in Southern Africa and those ingredients believed to be of value in establishing community epidemiology networks in developing countries.

Structural issues

At the national level, it is essential to have a strong lead agency that can nurture the development of the surveillance system. The lead agency should be an institution with a stable funding base. Ideally, there would be more than one "champion" within each country to drive the process. Each country has been encouraged to establish a small steering committee comprising persons from different sectors with diverse skills to oversee the development of local networks. The functions of the steering committee include determining the data sources to be included in each surveillance system; liaising with the various persons or agencies responsible for collecting data to ensure that they are willing and equipped to start data collection; assisting the lead agency in collecting, collating and analysing the data generated at each phase and in preparing country reports at the end of each phase of data collection and in preparing presentations for the regional "report-back" meetings; supporting the lead agency in preparing for biannual "report-back" meetings; and ensuring the ongoing functioning and expansion of the surveillance system.

International support is also useful in developing national surveillance systems. Having the cooperation of the SADC secretariat, in particular, has facilitated the establishment of SENDU. The technical support visits by the Medical Research Council team (accompanied by the SADC Drug Control Officer) have been a useful catalyst in establishing such systems at the country level. Furthermore, the regular regional "report-back" meetings that are also attended by the members of the SADC Drug Control Committee facilitate the ongoing functioning of the national surveillance systems. The support given by the Global Assessment Programme has also been of value, particularly in terms of the technical support given by the regional epidemiology advisers. Both the National Institute on Drug Abuse of the United States and UNDCP have provided opportunities for the SACENDU and SENDU initiatives to be represented at international forums and for project staff to observe how other national and regional surveillance systems operate.

Capacity development and resource constraints

Countries differ greatly in their capacity to set up the kinds of surveillance systems outlined in the present article. In particular, they differ in human and other resources. Some have most of the elements in place and only need encouragement to establish the network and start collating the information already being collected from various sources. Others, however, lack resources such as laboratory equipment needed by the police to test for drugs, computer hardware and software and

the personnel to enter, analyse and collate data. UNDCP, through the Global Assessment Programme, has been very supportive in providing computer hardware and software to several SENDU member States and in organizing a workshop on data management and analysis.

Funding

Community surveillance systems are a relatively cost-efficient way of monitoring alcohol and drug abuse [4]. Funds are, however, required to support regular "report-back" meetings (at the local, national and regional levels), dissemination activities and ad hoc studies. The SACENDU project initially received funding from the United Nations Development Programme (through WHO) and later used that to leverage funding from various national and provincial government departments. The SENDU initiative has been supported by a five-year grant from SADC (through the European Union). The funds are being used to pay for training and consultation meetings, technical support visits (including the first in-country network meeting) and biannual regional "report-back" meetings and to facilitate the writing of reports and the dissemination of information. It is hoped that, at the end of this period, the project will be supported largely by individual SADC member States.

Flexibility

In establishing SENDU, the intention has been to build a surveillance system that will allow for comparisons across countries. However, such a system cannot be rigidly imposed. It is recognized that countries may differ in such aspects as the lead agency, data sources and whether the focus is the country as a whole or sentinel sites within the country. Local networks must also be willing to adapt should they become aware that something is not working (for example, if data are no longer available from a particular data source).

Small wins

Building a city, country or a regional network is likely to take time. Setbacks are sometimes experienced, for example, when data are not released in time for a "report-back" meeting. The key is to build on the successes and work around the obstacles, always striving to move forward and improve the system.

Conclusion

It is too early to assess the impact of the SENDU initiative. The view of the authors is that, thus far, country-level facilitators and their political leaders have shown a substantial commitment to supporting the project. It has stimulated networking between countries and with international agencies such as UNDCP, as well as between stakeholders within countries working across different sectors. Capacity

within countries has been strengthened to facilitate the monitoring of alcohol and drug use and the associated consequences, baseline information on the drug abuse situation and resources for data collection has been obtained and seven countries have started to systematically collect data according to the SENDU format. Information coming out of the first "report-back" meeting, held in Cape Town, South Africa, in April 2002, reinforces the view that the burden of alcohol and drug abuse differs greatly among SADC member States and that the profiles of drugs being used in the region and of drug users are changing.

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