

The HIV/AIDS sector in Botswana: Communication, knowledge management, and use of information and communication technologies

Draft project outline

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December 2004

Background

The work on HIV/AIDS in Botswana has, for obvious reasons, core medical and public health foci, and the current situation in the HIV/AIDS “sector” can, accordingly, be characterized in specific ways. This includes issues like resource use and goal fulfillment.

The sector can be characterized and analyzed also from other points of view. While secondary in nature compared with the medical and public health foci, these are nevertheless aspects that it is important to address. This project is concerned with strategic communication and knowledge management. Communication is here understood as data and knowledge flowing between persons as well as between organizations. This concern with communication covers content, direction, receiver and sender, and means of communication. Knowledge management refers to processes for recording, storing, maintenance and retrieval of relevant data and knowledge.

Strategic communication and knowledge management is increasingly taking place by means of Information and Communication Technologies (ICTs). This development is pronounced in Botswana in comparison with other African countries, because of the relatively high use of modern ICTs. Within Botswana, the use of ICTs in the HIV/AIDS sector appears to be quite advanced. The latter has to do with the fact that this sector and its administrative set-up are recent, and moreover to a large extent is determined by the international nature of the overall exercise. The Govt. of Botswana has entered into a close relationship with Harvard University, and important aspects of the work on HIV/AIDS is done under the auspices of the Botswana-Harvard Partnership, with Harvard University playing a key role in providing resources as well as formulating premises. Domestically, all work on HIV/AIDS – as located within ministries and other public sector, private sector, and civil society bodies, as well as international agencies – is coordinated by National AIDS Coordinating Agency (NACA), a relatively new agency which reports directly to the President.

Information and communication technologies

Information and Communication Technologies (ICTs), specifically modern ICTs like the Internet, email and cell phones, have been of great help in the fight against HIV/AIDS in Botswana. Among the several advantages the following can be mentioned: (1) it connects key stakeholders in Botswana and abroad that otherwise would not have been able to be in touch on a regular basis, (2) it facilitates the transfer of very large amounts of data, (3) it speeds up communication many times, (4) dissemination of information is very simple, and (5) it is very cost-effective.

At the same time there are a number of potential problems or drawbacks with using ICTs. Mostly we do not realize that this is the case, and when we do, we tend to underestimate and rationalize them. The causes for the problems with utilizing ICTs have to be sought partly in priorities and funding, and partly in the internal logic of how education, differences in culture and language, and the power – and, conversely, lack of it – of different

stakeholders play out. In the case of Botswana, this difference would seem partly to go along the one established between traditional medical systems – including practice and authority – on the one hand, and the Western medical system on the other hand. Partly it also goes between rural and urban areas.

Model

The analytical approach and tool to be employed is "network analysis", which is somewhat akin to the tools of "social assessment" and "stakeholder analysis", as developed and used by, among others, the World Bank. In network analysis the focus is partly on the often-idiosyncratic position of each stakeholder, including their goals and means. But above all it is on tracing the connections between these stakeholders, that is, what flows between them, in what direction, and the character of this flow, as facilitated by various means of communication, including traditional face-to-face communication and ICTs. In this way it is possible to establish a network or flow chart of interacting stakeholders.

The data produced through network analyses helps understand differences between stakeholders and bottlenecks in communication. Typically, networks are characterized by a few stakeholders that are centrally located and several stakeholders that are more peripherally located. Network analysis provides the tools with which to quantify and visualize this. In this way network analysis can help in addressing problems and bottlenecks in communication.

Hypotheses

While heavy use of ICTs changes the communication between some stakeholders, and connect others (or connect them better), it at the same time tend to marginalize and sometimes even disconnect others. The following two general hypotheses deal with the implications of using modern ICTs in inter-personal and inter-organizational communication, as commonly organized in networks:

1. Networks have built-in imbalances that prevent free flow of information, and
2. ICTs tend to overlay such imbalances and reinforce them.

These general hypotheses, when applied to the use of ICTs in the HIV/AIDS sector in Botswana, lead to the following three specific hypotheses that guide the project:

1. ICTs overlies existing patterns and means of communication, with their traditional imbalances,
2. ICTs increase existing communication imbalances, and
3. ICTs obstruct and/or limit communication between stakeholders.

Hypotheses nos. 1 and 2 address the relationships between existing (including traditional) stakeholders, while Hypothesis no. 3 addresses the relationships between these existing stakeholders and new stakeholders. The new stakeholders would include, for example, NACA and the Botswana-Harvard Partnership, as well as national and international research and private sector companies like ANRS, Glaxo-Smith-Kleine, Harvard AIDS Institute, US Military HIV Research Program, and Wyeth Lederle Vaccines. All three hypotheses address the position of stakeholders in the overall network.

Analysis

In the overall network that comprises the Botswana HIV/AIDS sector three separate sub-networks are identified:

1. *Local sub-network* – Comprises all stakeholders that are located at, or otherwise operate on, the local level. This includes traditional healers (*dingaka*) and prophets (*baprofiti*),

2. *National sub-network* – Comprises all stakeholders that are located at, or otherwise operate on, the national level, as found in the public sector, civil society or private sector, and/or that mediate between the local and national sub-networks, and
3. *International sub-network* – comprises all stakeholders that is located at, or otherwise operates on, the international and national levels, and/or that mediate between international and national sub-networks. This includes international agencies, organization and firms that, typically, are based or represented in Botswana.

It appears that there are built-in constraints to a free or unconstrained flow of knowledge and data within and, more importantly, between these sub-networks. This leads to communication divides between the sub-networks. This is, specifically, the case when it comes to communication between the international sub-network and the local sub-network, and between the national sub-network and the local sub-network, with the national sub-network playing a key mediating role. As a result of these communication divides, some stakeholders are marginal and are located at the receiving end, while others are located more centrally located in the overall network.

The preliminary findings are based on analysis of informal and open-ended interviews with a small number of persons working on HIV/AIDS issues in Botswana, together with some preliminary data on the traditional health sector. These findings, as regards communication between the multiple stakeholders working on HIV/AIDS in Botswana, would seem to indicate that strong use of modern ICTs is becoming the dominant means of communication in the international and national sub-networks. In doing so modern ICTs appear to be replacing, at an accelerating rate, more traditional means of communication, including fax, letters, face-to-face contact, posters, radio, TV, and telephone that used to be the rule in the national and local sub-networks.

As regards the local sub-network, ICTs are much less commonly used, and certainly not among the more traditional and poorer stakeholders. However, the type of replacement of traditional means of communication with modern ICTs as discussed for the national sub-network would appear to take place also here, albeit at a slower rate. This applies, in particular, to traditional healers (*dingaka*) and priests (*baprofiti*) that have a strong interest in the causes of, and remedies for, HIV/AIDS (if largely contrary to that of western medicine).

Above a distinction is made between communication by means of ICTs, on the one hand, and knowledge management by means of ICTs, on the other hand. So far the emphasis has been largely on the former. As regards knowledge management, use of ICTs is likely to have similar drawbacks. Data and knowledge are increasingly likely to be done by means of ICTs. That is, data types like correspondence, databases, statistics, etc., are stored in data programs and will often be available only online (that is, they reside on computers and servers located elsewhere, including abroad).

It is, moreover, possible that the powerful relational (and thus integrative) nature of modern knowledge management by means of databases remains to be explored to its full potential.

Discussion

Depending upon the perspective applied, these arguments may or may not be considered to be important. However, if one is concerned with transparency and participation, if it matters that all stakeholders be involved in a communicative process and be listened to, and contribute to charting a way forward in addressing a problem (namely HIV/AIDS), it matters a great deal that one understand how communication flows between stakeholders, and how use of modern ICTs tend to overlay and reinforce such imbalances. In short, it is essential that one is acutely aware of both the advantages and problems with a heavy utilization of modern ICTs and, based on such insight, use the available forms of communication –

including traditional and modern ICTs, traditional ICTs and face-to-face communication – selectively and adapted to the situations where they are optimally suited.

The data that this analysis is based upon are few, and thus the conclusions drawn are tentative. In addition, some of the data come out of data collection exercises with a different rationale. Thus, a more exhaustive and specific set of data would be needed in order to determine the exact nature of communication within the HIV/AIDS sector in Botswana, and its implications.

Organization and staffing

This is so thought of as a joint project between NACA and Supras Consult, Norway. An Advisory Committee, comprising selected persons that represent key stakeholders in Botswana should be formed. The responsibility of this committee would be to give guidance throughout the implementation, partly based on progress reports.

Within NACA it is envisaged that relevant social science / statistics staff should be involved throughout the project, including the preparation, the data collection, evaluation and report writing. Further local partners should be sought.

Funding

The Norwegian Research Council has made available funding for a networking and project planning trip. During my discussions with Ms. Khan and Mr. Chela we discussed the possibility of ACHAP locating funds for the actual implementation.

Timetable

The initial project planning visit should take place as soon as possible, that is, in January-February 2005. A detailed timetable would be prepared at that time, in collaboration with NACA.

Publications

The following presentations, papers and questionnaires connected with this proposed project are available:

1. *Presentation* – “ICT and communication : A network model and an exploratory application to the HIV/AIDS sector in Botswana”. Presented at the Annual Conference of the Norwegian Association for Development Research & the Norwegian Network on ICT and Development, Trondheim, Norway, 14-15 November 2002. With June Jacobsen Steen.
2. *Paper* – “ICTs and communication : a network analysis of the HIV/AIDS sector in Botswana”. 2003. Draft.
3. *Questionnaire 1* – Main questionnaire. 2003. Draft.
4. *Questionnaire 2* – Adresses in detail Questionnaire 1, Part C (concerning the nature of the identified relationships). 2003. Draft.
5. *Questionnaire 3* – Adresses in detail Questionnaire 1, Part B (concerning organizational / NGO affiliation). 2003. Draft.