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TITLE: An Evaluation of HIV and AIDS digital content for HCPs and the Public

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ABSTRACT

Child mortality in South Africa is rising, gender violence is rife and the HIV infections in the country are estimated to be at 11% of the population. 11% of the HIV infected population is estimated to have AIDS. While the National Strategic Plan for HIV/AIDS and STIs (2007-2011) has been presented, implementing the specifics of the plan prove a challenge to everyone working in the area of HIV and AIDS, and thus the Millennium Development Goals or reduction and reversal of infection.

The government of South Africa has identified ICT as a vehicle to address health challenges in the country. This mirrors the call by the WHO for member countries to put strategic plans and partnerships in place to create and sustain ICT in health projects.

Mindset Health is an organisation partnered with the South African Department of Health which provides specific and directed HIV and AIDS open content for distance learning to Health Care Professionals (HCPs) on site, on a voluntary, flexible and dynamic platform. Educational and awareness content is also broadcast into public health facilities for the public. This innovative ICT practice has provided a wide range of content in the area of HIV and AIDS to an audience that is distant, works diverse shifts and requires a flexible, open and accessible approach to learning. This paper presents a needs analysis of the HCPs and subsequent evaluations of the innovative technology used in the presentation of this free content as a means of communication and education for both the public and HCPs. This discussion provides a vehicle for providing lessons learnt in content development for open and distance learning.

INTRODUCTION

The government of South Africa has prioritized the areas of ICT and health in South Africa. Specifically, utilising ICT in the area of health has been identified as a challenge and priority area. Partnerships with government in this regard are identified, and have been established by Mindset Health, an ICT, not for profit organisation. While ICT provides an opportunity and a platform to deliver quality-assured educational and public service messages, specific knowledge content, awareness messages and sensitivity messages on health issues, this priority area requires an evaluation of the audience needs for full and efficient implementation.

E-Health (adopted at the 58th summit of the World Health Assembly) has been defined by the department of health as

"combined utilization of electronic communication and information technology to generate, transmit, store and retrieve digital data for clinical, educational and administrative purposes".

Thus, there are a wide range of applications with an essential element of partnerships with NGOs and the private sector (MRC, n.d.). The MRC (n.d.) argues that ICT connectivity needs to occur alongside the provision of health information infrastructure. This would go an extensive way to addressing the Millennium Development Goals of reducing poverty, providing universal primary education, gender equality, reduction of child mortality, improving maternal health and combating HIV and AIDS and other diseases.

Specifically, e-Health is defined as using electronic communication as well as information technology in the health sector. This is a broad definition with large implications. Added to this is the fact that the e-Health environment is dynamic and ever-evolving. However, one must constantly be aware that e-Health and ICT in the area of Health involves not only the use of technology but also an attitude and Mindset towards using ICT in order to improve healthcare in the country. Within this broad definition of e-Health in South Africa, telemedicine is a specific area. Telemedicine refers to using communication and information technology to deliver health care when distance separates stakeholders. This is of particular reference to South Africa where distance and diverse resources are the main distinguishing features among healthcare settings.

An MRC report (n.d.) outlines the areas that e-Health covers in South Africa. The highlighted bullets are the areas in which Mindset Health has particular relevance and applicability:

- Delivery of healthcare
- Surveillance of disease and services
- Health emergencies and hazards
- Management of healthcare institutions
- **Access to repositories of knowledge, applications and literature**
- **Education of the public and informal education of health service professionals**
- Research

Within the larger area of e-Health, Mindset has a clear and necessary role to play in professional development, public education, and outreach. In order to implement e-Health properly, certain areas need to receive attention:

- Long term strategies
- Infrastructure development
- Partnerships with non-profit and private sector institutions
- Reaching vulnerable groups
- Multi-sectorial collaboration
- Establishment of national centers of excellence
- Establishment and implementation of public health information centers

Most obviously, reaching vulnerable groups, partnerships with non-profit organisations and infrastructure development provide relevance to the impact that Mindset has. However, these areas also link to long term strategies, and establishing areas of excellence. As a whole, Mindset is able to provide impact on a number of levels for the e-Health strategy. In addition, having an effective e-Health system would address the “digital-divide” between richer and poorer portions of the population. While e-Health encompasses a wide variety of health care, Mindset Health is able to provide an avenue for education and public service awareness to the entire system.

Mindset Health – an open educational resource

In the arena of Health in South Africa, challenges in terms of diverse resources, under-resourcing, under-financing and over-crowding exist in health facilities. Continued training of HCPs and education of the public is essential. In order to reach these under-serviced areas, free quality content is broadcast into clinics and waiting areas.

BOX. Health challenges in South Africa:

- HIV and AIDS:
 - 5.5 million people are affected by HIV; 11% of the population (Dorrington, Johnson, Bradshaw & Daniel, 2006)
 - Of the 11% of the population infected with HIV, 11% have AIDS (ibid)
 - 2369 sites provided Voluntary Counseling and Testing in 2004 (USAID, 2006)
 - Weak infrastructure and under-capacity human resources (ibid)
 - 14,6% of pregnant women are receiving Antiretrovirals (ARVs) to reduce mother-to-child-transmission (ibid)
 - 21% of HIV-positive people are receiving ARVs (ibid)
- Hospitals and Clinics in SA:
 - 3182 clinics and hospitals in South Africa in 2003 (Reagan, Irlam and Levin, 2004)
 - 36% of these serve urban areas (ibid)
 - 44% serve rural areas (ibid)
 - 20% serve both urban and rural (ibid)
 - There are 2,5 doctors (or equivalent) per 100,000 people in 2003 (ibid)
 - There are 33.2 nurses (or equivalent) per 100,000 people in 2003 (ibid)
- Training:
 - In 2003, only 9% of nurses had received training in post-exposure prophylaxis in the past 12 months, 27% received training in prevention of mother to child transmission, and 22% on infant feeding in HIV (ibid)
 - 17% had a computer in the facility and only 3% had internet access (ibid)

Mindset Health provides open digital content that is broadcast into public health facilities. A number of health related content areas are broadcast with the primary focus being HIV and AIDS. While this service is free and direct in reaching health care facility audiences, it also provides a challenge in terms of meeting the needs of a diverse and vast audience. Mindset Health has implemented this public system in 307 health care facilities in South Africa, and this paper outlines the strengths and challenges of implementing and developing appropriate mass media in an innovative manner in the ICT arena.

The specific aims and objectives of Mindset Health are the following.

Aims:

- Through delivering uplifting education in health, Mindset Health aims to educate health care providers and the general public in order to:
 - Facilitate a systemic, supportive environment which encourages positive health behaviour change
 - Increase the success of government/public prevention, care, management and treatment programmes of HIV/AIDS and other major diseases. Success relates to both increased uptake of health services by patients and improved health service delivery by health care providers
 - Address inequalities in public and professional education in health and communication by using technology to reach rural areas

STUDY 1: A needs analysis of the public audience

Key evaluative questions:

- What is the demographic profile of the public channel audience?
- What other characteristics describe this audience?
- What characteristics best describe the average hospital or clinic waiting room?
- What are the expressed needs and preferences of the public regarding health channel content offering and packaging (including issues such as language, programme duration, format etc)?

Method:

A final total sample of 388 participants were obtained (78% response rate). Participants were asked to complete a quantitative questionnaire. At each site the site manager was interviewed and the waiting room was observed for fifteen minutes each morning and evening. A site visit lasted four days.

Results:

Most of the respondents came from Gauteng (42.4%) and Kwa-Zulu Natal (37.7%). A large majority of the respondents were female (71.3%), have never been married (69.7%), and were between the ages of 15 and 35 years (73.4%). The youngest respondent was 15 years of age and the oldest was 67 years of age. Overall, it seems that the Mindset Health public channel audience is relatively young, but mirrors the most affected age of the population.

More than half (59.4%) of the respondents were unemployed, 24.3% were employed and 9% were scholars or students. Just under half of the respondents (48.4%) had completed their education up to grade 11, and 27.7% had completed grade 12. A total of 16.3% of the sample had a grade 7 level of education or less.

Most of the respondents reported understanding English (74.2%), isiZulu (28.6) and isiXhosa (22.7%) as well as SeSotho (23%) as other than a first language. Further, most respondents were able to understand at least two languages in addition to their home language.

Many of the respondents came from urban or peri-urban areas. Most were repeat patients, visiting a clinic or hospital once or twice each month. According to observation notes and responses, both formal and informal, many of the patients seemed malnourished and thus tired and weak. In addition, at some sites patients were very ill and found it difficult to take part in research.

The average time it takes patients to reach the clinic/hospital is 37.9 minutes, with a range from two minutes to four hours. The majority of the sample travel to the clinic/hospital by minibus taxi (55.9%) and a relatively large number walk (27.6%).

Many of the respondents spent at least two and a half hours of time traveling to the clinic/hospital and waiting to be seen by a professional. A total of 37.7% of the sample reported waiting for more than two hours once at the clinic/hospital and 27.5% wait for between one and two hours.

Just over half of patients (56.1%) came alone to the clinic/hospital on the day of their interview while the remainder came with family members, predominately. Of those, approximately one third had children between the ages of one and ten years old to look after while waiting. Whilst waiting, patients noted that they commonly talked to other patients (54.1%), watched TV (43.3%) or just sat quietly (19.6%). A total of 96.9% of the sample reported that they were glad to have a TV in the waiting room.

Most participants (75.1%) feel that children's programmes should be included as part of the morning programming. Adults prefer for themselves programmes that are related to health (73.2%), education (28.6%) and news (20.1%). With respect to health topics specifically, although a wide range of

possible topics were noted by patients, HIV and AIDS (69.9%) remains the dominant preference, followed by TB (31.7%) and exercise and nutrition (21.7%).

The majority of patients chose a combination of educational and entertaining programmes (57.7%), with very few selecting entertaining programmes only (3.4%). When watching health programmes most patients (65.3%) would prefer to have some form of facilitation. This would enable patients to ask questions regarding information that comes across as unclear or confusing.

True stories (68%) and explanation of topics by an expert (57.5%) were the most commonly selected programme formats, followed by group discussion (42.8%) and story/drama (35.1%). Music was the first choice of topics to show in between programmes, followed by advertisements (19.4%) and frequently asked questions (16.3%). Most respondents (63.4%) reported that they would prefer programmes to last more than 20 minutes. This may be due to the fact that they are already used to watching programmes on television that are commonly 30 minutes long as some of the respondents voiced. Participants also stated that programmes should be repeated at least once a week (40.3%).

STUDY 2: An evaluation of the Mindset Health system

Key evaluative questions:

Research questions for Health Care Givers

- To what extent has there been understanding and use (“uptake”) of the Health Channel by the HCPs?
- How have the HCPs benefited from access to the Health Channel, with respect to their self-reported knowledge, attitudes and behaviour?

Research questions for Patients

- Do patients show interest and enthusiasm with respect to use of the Health Channel?
- To what extent has there been “uptake” of the Health Channel content by patients?
- What factors affect this “uptake”?
- How have patients benefited from watching the Health Channel, with respect to self-reported knowledge, attitudes and behaviour?

Method:

- Interviews with patients, site managers and site facilitators.
- Questionnaires for patients
- Self administered questionnaire interviews for HCP’s and lay health workers
- Direct observations

Sample:

The design for patient evaluation was an experimental post-test only, control group design. Final numbers were 180 participants in the experimental group and 239 in the comparison group.

The design for the HCP’s and lay health workers divided the sites into National Department of Health (NDoH) sites and CATHCA (Catholic Health Care Association) sites. The NDoH sites focused on uptake and response to the Mindset Health channel while CATHCA sites focused on content evaluation. All HCP’s and health workers at NDoH sites had access to the health channel while none of those at CATHCA sites did. At NDoH sites the design was interviews/questionnaire interviews, non experimental and qualitative. At CATHCA sites the design was pre-test, post-test and quantitative.

Patients' opinions:

Slightly over half (53.1%) of all the respondents had previously seen the Mindset Health Programme and those who lived in informal settlements and townships had seen it most frequently (59.1% and 58.3%, respectively). It had been least often seen by those in urban regions (41.0%). In keeping with the results given below, almost half (47%) thought the Mindset Health Channel programme educational. Overall 94% of the viewers "enjoyed watching" it and the same percentage agreed that they would watch it if it were available on another commercial, entertainment TV station.

28% of patients rated Mindset Health as excellent and 52% as good (80% positive). These are very positive findings which indicate that the channel can be of importance in disseminating health information. There was an overwhelming desire to learn more about HIV and AIDS (96.1%) and to receive appropriate education (74.2%).

Patient's HIV knowledge:

The extent of knowledge of both patient groups ("subjects" and "controls") varied greatly for different aspects of HIV and AIDS.

General knowledge questions about HIV are well understood. However, higher order aspects such as side effects, biological aspects of the disease and when to start medication is not well understood. Few (< 28%) knew what side effects of any medication were, as no answer was given to a general question about the meaning of side effects.

An overwhelming number of all patients stated they were encouraged to discuss HIV and AIDS issues with others (93.1% and 89.0% for "subjects" and "controls" respectively). Almost all patients (> 80%), of both groups, would disclose their own HIV+ status (if they were HIV+) to family members, but only about half would want a family member to disclose their status to the community.

HCP's and lay health workers:

The respondents indicated that 63% of the total had previously taken part in prior HIV and AIDS training and 24% indicated that they had received this training during the previous 6 months. Furthermore, 75.5% reported that HIV and AIDS materials are available in their workplace but only 57.5% indicated that they had used the Mindset materials. Even though the Government is moving forward with HIV and AIDS training and making HIV and AIDS materials available for its HCPs a very large majority of them (98%) has expressed a great need for more training.

Of this group 58% reported having used the Mindset Health Channel while 42% had not. The latter were asked why they had not used the channel, or why they were not currently using it. Among those who have used the health channel, 76% (54) were HCPs compared to 24% (17) who were lay health workers. For those who had not used it, 80% (41) were HCPs and 20% (10) were lay health workers. Most common reason was "I don't know" and HCP's also noted lack of time.

The preferred medium was watching on a TV screen, followed by watching videos on the computer, followed by multimedia and lastly print materials. The overall rating of Mindset Health was high with a percentage of about 85% generally accepting that the programme is making a positive impact on society. Also ratings of the specific materials showed very good results. The participants were also asked about their views on the specific types of content of the Mindset Health materials. 82% of respondents reported that the material was interesting, 80% rated the pace of presentation of the channel's health materials as "just right", 90% reported that the material was "easy to understand" while 83% reported that channel was "clear".

When asked whether Mindset Health had made the respondents think personally more about HIV and AIDS issues, 82% responded “Yes”. The majority 51% also stated a great increase in understanding about HIV patients.

GENERAL CONCLUSIONS

Mindset Health has been consistently and systematically evaluated each year from 2004 onwards. HCPs found the system to be useful and of exceptional quality but it was being under-utilised. Strategies to include an incentive to use the system need to be stressed and implemented with care and consideration. The strategy of aligning the system with the National Qualifications Framework and the South African Qualifications Authority (and the relevant SETAs) is noted and should be explored. The Mindset Health programme is well located to bridge this gap and provide continuous professional development that is economically attractive and does not take large amounts of time away from the professionals’ working day.

Mindset Health provides well-received and useful open educational materials and content to the public. The public profile provides an excellent base from which to draw the needs and relevance of materials for future content development.

REFERENCES

Dorrington, R.E., Johnson, L.F., Bradshaw, D. and Daniel, T. (2006). *The Demographic Impact of HIV/AIDS in South Africa: National and Provincial Indicators for 2006*. Centre for Actuarial Research, Medical Research Council, The Actuarial Society of South Africa: Cape Town.

MRC. (n.d.). *eHealth: The South African Context*. Medical Research Council, South Africa.

Reagan, G., Irlam, J. and Levin, J. (2004). *The National Primary Health Care Survey 2003*. Downloaded on the 18th January, 2008 from: <http://www.hst.org.za/publications/617>.

USAID. (2006). *South Africa*. Retrieved 10th March 2008 from http://www.usaid.gov/locations/sub-saharan_africa/countries/southafrica/.