ICT: A TOOL FOR ADVANCING REPRODUCTIVE HEALTH AND FAMILY PLANNING

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Abstract

Information communication technology (ICT) can be seen as a tool to facilitate communication, the processing, transmission of information and the sharing of knowledge by electronic means. This encompasses the full range of electronic digital and analog (ICTs) from radio and television to telephones (fixed and mobile), computers and electronic based media such as digital text, audio-video recording, and the internet, including web 2.0 and 3.0, social networking and web based communities. The purpose of this study was to examine ICT as a tool for advancing reproductive health and family planning. The aspect discussed include the problem facing the availability and accessibility of reproductive health and family planning services in Africa, especially in rural areas and the impact of ICT. It was concluded that health sectors in Nigeria and Africa at large are still lacking behind in tapping into the advantages of ICT as a tool for promoting health concerns.

Key words: *ICT, Reproductive Health, Family Planning, Electronic health (ehealth).*

INTRODUCTION

Information and communication technology (ICT) can play an integral part in addressing family planning, reproductive health, HIV/AIDS, tuberculosis (TB), and many other health needs. ICT methods can be used to inform and educate family planning/reproductive health program planners, local clinic staff, community health workers, and other service providers, as well as clients. Appropriately applied, existing ICTs—particularly mobile technologies—have the capacity to improve access to family planning/reproductive health information and services for women,

men, and youth, as well as to increase their opportunities to more effectively engage in the economy, with the ultimate potential to better both their health status and their quality of life. These technologies could also play a role in an overall approach to addressing gender inequities if care is taken to purposely support and encourage their use for and by women.

The US Agency for International Development (USAID) and its partners have been working to ensure that family planning and reproductive health remain a priority in the face of competing global health demands since 2001. The growing field of information and communication technology (ICT) can play an integral part in supporting these efforts to address family planning, reproductive health, and other health programmes. "In a broader sense, the term characterizes not only a technical development, but also a new way of working, an attitude, and a commitment for networked, global thinking, to improve health care locally, regionally, and worldwide by using information and communication technology" (Pagliari 2005).

Advances in information and computer technology in the last quarter of the 20th century have led to the ability to more accurately profile individual health risk (Watson, 2003), to understand better basic physiologic and pathologic processes (Laufman, 2002) and to revolutionize diagnosis through new imaging and scanning technologies. Such technological development, however, demands an increased responsibility of practitioners, managers, and policy-makers for assessing the appropriateness of new technologies (Hofmann, 2002).

In the face of rapid and continuous change, many health and health systems needs remain constant, which includes: the need for reliable, accessible family planning methods and services; the demand for continuing education for health workers at all levels of the health system; the need to overcome gender inequities so women are able to take control of their own health; and the need for reliable health information.

Countries in Africa spend significant amounts of their GDP on delivering health services through systems that are often inefficient, costly and lacking in transparency. Information and communication technologies (ICTs) have the potential to transform the delivery of health services across the continent in ways that not only increase efficiency but also improve accountability (World Bank, 2004). The availability and quality of ICT services are growing rapidly across Africa,

with mobile network coverage rising from 16% in the late 1990s to over 90% of its population in 2011. Growth in this sector has led to increased investments, decreased costs and rapid growth in technology-enabled services. However, these gains in ICT infrastructure have not as yet benefitted the health programme and its sector in a systematic way.

This paper will examine the impact and relevance of the use of ICTs to advance reproductive health, family planning, and other health programs, and identifies the enabling conditions that will enhance its Increase.

Problems facing the availability and accessibility of Reproductive health and family planning services in Africa, especially in rural areas

Haile, S. and Stloukal, L. (2000), described this problems as follows;

a. **Lack of Strong Government commitment:**

   Despite recent positive signs that African governments are in favor of family planning, in most cases they still fail to play an active role in the promotion of the population program. African governments' contribution, both financially and in human resources for family planning programs is still a small fraction of the overall requirements and, except on rare occasions, government authorities almost never mention reproductive health and family planning as a priority concern. Yet, experience shows that without strong and active government support, the chances of success for any population program is minimal. In Africa, like in many developing countries, the most successful programs are those which enjoy strong government support. This is particularly true in rural areas, because authority plays an important role in the lives of the rural population. The opinion of the local administrators and community leaders can be a determining factor in their reproductive behavior. Unfortunately, in family planning, as in all major social development undertakings (health, education, communication, etc.), African governments invariably neglect rural areas in favor of the few urban sites. As a result, their development efforts,

when seen from a national perspective, becomes irrelevant for the majority of the population.

b. Medical Barriers:

The provision of reproductive and family planning services in Africa is full of barriers that are unnecessary and often discouraging to potential users. Such barriers include age and parity requirements for certain methods, requirements of husbands' consent, refusal to serve unmarried women, opposition to outreach program by health professionals who believe that family planning should be provided only in a medical set up, and unnecessary and time-consuming medical and laboratory examinations. In Zanzibar, for example, health professionals refuse to provide contraceptives to unmarried women. In Botswana, Burkina Faso and Senegal on the other hand, it is easier for unmarried women to get a contraceptive method than for married women because of requirements for husbands' consent for those who are married. In some countries (Kenya, Burkina Faso) there is a strict parity requirement to have an IUD (Population Council 1998). In Zimbabwe, many service providers set minimum age requirement despite guidelines that allow the provision of family planning services to all without restriction (Rosen and Conly 1998). The effect of these barriers is more severe on rural women than on urban dwellers. A rural woman in Africa takes a long time weighing her reproductive options.

She has to take into consideration not only her personal feelings but those of her husband and the extended family. It is after a lot of thinking and consultations that she finally decides to see a health professional. In order to do so, she will have to travel long distances and give up her household responsibilities for the day. An unwelcome reception of any nature from the clinic will definitely discourage her to return back for services. Given the paucity of alternative service delivery mechanisms in the rural areas, this usually means exposure to unwanted pregnancy and child-birth.

c. Socio-cultural barriers:

As indicated earlier, human reproduction is viewed in most of rural Africa as a natural process that should not be interfered with artificially. The lack of culturally-appropriate

information and education reinforces this belief. And the fact that family planning services are almost exclusively targeted towards women excludes men who are, in most cases, responsible for making reproductive health decisions. For lack of adequate information and because of many unfounded rumors, rural African men are generally not in favour of family planning. Also, in most rural areas, women marry at a young age and start having children very early. By the time they are in their late twenties, they already have several children. For all these reasons, the environment for modern family planning in the rural areas is not always favourable.

d. **Lack of communication between urban centers and rural areas**:

In most African countries communication facilities (transport, telephone, radio or television) between the decision making urban centers and the vast majority of people who live in rural areas are extremely poor. As a result, health information and education programs do not reach the rural population in time, if at all.

The reverse is also true: due to limited communication between urban centers and rural areas, there are strong beliefs among the urban elite that rural African populations are opposed to family planning services. This, however, is not completely accurate, as is demonstrated by the introduction of successful outreach family planning programs in many rural areas in recent years.

e. **Lack of adequate resources:**

Because of the rapid expansion of family planning services, the resources necessary to address the demand are not always available. Such resources include not only finances but also commodities, medical equipment and trained personnel. This is especially true in recent years because of significant cut in outside funding for family planning and reproductive health services because of new and urgent priorities including the HIV/AIDS epidemics.

When resources for social sector activities are reduced, those who suffer the most are the rural population because it's their share of the resources which is cut first. Most health

activities in urban centers have incompressible costs in the form of staff salary and other recurrent costs.

In spite of these problems, however, significant progress has been achieved in many African countries in reaching the rural population with family planning information and services through a variety of outreach programs.

Impact of ICT on Reproductive Health and Family Planning Programmes:

In theory, any available ICT could be used to directly or indirectly to support family planning, reproductive health, and HIV/AIDS activities and help build the capacity of health providers and clients alike. An ICT that "improves the ability of a person or entity to carry out stated objectives" (LaFond, 2002) can be viewed as an element of capacity-building and systems strengthening. The variety, availability, and the cost of ICTs directly affect usefulness and uptake. How well people can use them depends on ICT literacy and operability.

ICT can play a vital role in training and updating the knowledge and practices of health care students and professionals—in nursing and medical schools, health facilities, urban settings, and particularly rural areas, where it is often needed the most. For example, ICT can support healthcare workers in remote hospitals, health centers and dispensaries, which are typically under-staffed and service hard-to-reach populations.

Family planning services can use ICT to enhance provider skills and take health care worker productivity to the next level, helping them to update their knowledge and also maximize their direct interaction with patients. The technology already exists to deliver on-site, high-quality educational opportunities to health care workers in remote and rural areas through individual handheld devices and computers receiving relevant data directly from satellite feeds. (USAID, 2011)

The use of ICTs in health is not merely about technology; ICTs are a way to achieve a series of desired outcomes, for example:

- Health workers making better treatment decisions;
- Hospitals providing higher quality and safer care;

- Governments becoming more responsive to health needs;

- National and local information systems supporting the development of effective, efficient, and equitable health systems;

- Policymakers and the public becoming more aware of health risks;

- People having better access to the information and knowledge they need to make informed choices for their own better health (infoDev, 2007).

Overall enabling conditions for ICT use and proportional increase in family planning and other health programs:

According to (USAID, 2011) they include the following:

1. **Appropriate Infrastructure:** While the ICT infrastructure in Africa has dramatically improved during the last decade, the Internet is said to still be in its infancy in sub-Saharan Africa. Efforts to advance broadband capacity are just beginning, and fiber optic cables have been put in place around the African continent. A recent report on ICTs indicates that the next major challenge on the horizon for policy makers in this region is the delivery of broadband Internet access at a reasonable cost to consumers.

2. **Cost:** Health systems have competing priorities, and some people within the system consider ICT a luxury, particularly the current mobile and digital versions. In addition to the costs related to broadband Internet access, hardware and software quickly become obsolete, necessitating additional investments and adding further financial burdens to already stretched health budgets. "The cost of hardware, software, telephone connections, and Internet service providers (ISPs) is high in low- and middle-income countries, both in absolute terms and relative to the income people have available" (K4H 2010). Civil society organizations, nongovernmental organizations (NGOs), the public sector, and other stakeholders should join forces to leverage their collective power to negotiate lower rates from private sector telecom providers.

3. **ICT Literacy:** Overburdened health workers may view ICTs as just another work requirement for which they must struggle to make time. Many health workers may not have received basic computer training, and some from rural areas may never have used a computer. Lack of experience with electronic health (eHealth) can sometimes result in

decision makers and frontline users feeling uncomfortable with its use or intimidated by ICTs that require solid computer literacy. Even in countries with far more exposure and access to modern ICTs, there are still reluctant adopters. Those who did not grow up in the information or digital age may not embrace the technology for a variety of reasons, including a preference for face-to-face exchanges or traditional learning methods. In addition, "information technology professionals who can maintain computer systems and trouble shoot problems are [also] in short supply in some countries outside of capital cities," (K4H 2010) leaving those willing to try the new technologies with apprehension over how to move forward if they run into problems. Successful engagement with health workers is crucial to the integration and scale-up of ICTs in family planning and reproductive health efforts, and that engagement is much easier when there is a clearly perceived value and sufficient training and support.

4. **Standards and Interoperability:** The proliferation of digital and mobile ICTs has created systems that, though well intentioned, are often incapable of sharing information. Research indicates the need for interoperability standards in health information systems that would allow different ICT applications to be shared, replicated, and scaled up. Applications based on open source, as well as open standards, can further ICTs that can be more broadly shared, more effectively evaluated, and more cost effective for resource-poor countries.

5. **National Policies and Regulations:** In the past, leaders did not need to put much focus on telecommunications in crafting national health policies and regulations. With the exponential growth in electronic Health, officials and policy makers must now distinctly consider ICTs in their official approaches. Many countries in Africa must also overcome the challenge of restrictive telecom regulations that hinder ICT progress.

6. **Contextual Understanding:** Sociocultural contexts shape behavior and attitudes toward family planning, and much of family planning counseling takes place outside the formal health sector, delivered by local community health workers (CHWs). Marrying the complexities of counseling with the resources available to locally based service providers

requires a focus on the needs of the community members themselves, including support to adopt and adapt new technologies.

7. **Sound Management:** The influx of huge volumes of information created by ICTs presents a challenge for managers who need to decide what technologies are most appropriate for their staff, which are most cost effective, and which will increase productivity. Building the capacity of health workers and other intermediaries to be able to effectively use, work with, manage, adapt, and develop appropriate ICTs is an ongoing task.

8. **Language:** With the exception of radio and television programming, the issue of language is frequently ignored in ICT programs, most of which offer very little content in local languages. Improving health workers' capacity to deliver effective family planning or other health services involves providing these workers with updated information and guidance in a language they can easily understand—preferably their own.

9. **Evaluation:** Many technologies look like sure successes while in the planning stage, but fail to deliver what they promised when implemented. Evaluation measures impact and allows corrective measures to be taken where necessary and offers opportunities for sharing lessons and exchanging knowledge.

According to Charles Kenny of the Center for Global Development, he notes that Technology is at the center of global improvements in the quality of life. At the same time, the relationship between technology and development is a complex one, and many technologies that look wonderful on paper fail miserably in the field.

Conclusion

This paper has looked at the information communication technology and its impact, importance in the health sector, reproductive health programmes and family planning, it also looked at the problems facing the availability and accessibility of reproductive health and family planning services in Africa, especially in rural areas. The Health Sectors in Nigeria and Africa at large is not presently taking all the advantages that are possible through the use of ICT within the nations presently because there is no coordinated program, appropriate infrastructure, cost, ICT literacy

among many not put in place. It is hoped that the enabling conditions stated and outlined in this paper in other to help improve ICT use and proportional increase in family planning services and other health programs are urgently implemented.

Reference

Global Alliance for ICT and Development (GAID), (2010). "Information and Communication

    Technologies for Development: Health." White paper.

    http://www.scribd.com/doc/35120854/GAID-White-Paper-on-ICT4D-Health

Haile S. and Stloukal L. (2000), provision of reproductive health services in sub-saharan Africa:

    lessons, issues, challenges and the overlooked rural majority. January, 2000.

    http://www.fao.org/sd/wpdirect/wpan004.htm

Hofmann, B (2002). Is there a technological imperative in health care?. Int J Tech Assess Health

    Care 18(3):675-689

*info*Dev. (2007). "ICT in Health: The Role of ICTs in the Health Sector in Developing Countries."

    InfoDev Activity File #1254. http://www.infodev.org/en/Project.38.html LaFond, A. B.

    "Mapping capacity in the health sector: A conceptual framework." *International Journal of*

    health Planning and Management, 17:3–22.

K4Health (2010) "Mobile Outreach Service Delivery." Community Based Family Planning–Technical

    Update No. 8,

    http://www.flexfund.org/resources/technical_updates/No8_MobileOutreachServiceDelive

    ry.pdf

Laufman, H (2002), Are engineers unsung heroes of medical progress?: The historic bond between physics, engineering and medicine. Biomed Instrum Technol 36(5):325-334

Ngurukwem, J. (2005). Information and communication technologies and teacher education in Australia. Technology. *Pedagogy and Education*, 12 (1), 39-58.

Nwachukwu, P. O. (2006). Appraising the relationship between ICT usage and integration and standard of teacher education programs in developing economy. *International Journal of Education and Development, 2(3), 70-85.*

Open Clinical (2011) "eHealth." Open Clinical: Knowledge Management for Medical Care: http://www.openclinical.org/e-Health.html#applications

Pagliari, Claudia, David Sloan, Peter Gregor, Frank Sullivan, Don Detmer, James P Kahan, Wija Oortwijn, Steve MacGillivray. "What is eHealth? A Scoping Exercise to Map the Field." J Med Internet Res. 2005 Jan-Mar; 7(1): e9

.http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1550637/?tool=pubmed (accessed June 12, 2011).

Population Council, (1998): Clinic-Based Family Planning and Reproductive Health Services in Africa: Findings from Situation Analysis Studies. Population Council, New York.

Rosen, J. E. and Conly, S. R. (1998). Africa's Population Challenge: Accelerating Progress in Reproductive Health. Country Study Series No. 4, Population Action International, Washington, D.C.

USAID, (2011). The Use of Information and Communication Technology in Family Planning,

Reproductive Health, and Other Health Programs: A Review of Trends and Evidence. An

AIDSTAR-Two Project.

Watson, A (2003). The future role of diagnostic testing. Management Informer, International

Hospital Federation. Available at:

http://www.hospitalmanagement.net/informer/management/diagnostics1/index.html

World Bank, (2004). *World Development Report: Making Services Work for Poor People*

http://www.worldbank.org/wdr