

Information Communication Technology Policy Analysis on Healthcare in Ghana

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Abstract

Health policy is defined as an agreement or consensus on the health issues, goals and objectives to be addressed, the priorities and the directions for achieving them (WHO, 1999). It is afforded a central role in the government's agenda due to accounting for one of the largest areas of expenditure and the increasing pressure on the economic climate. The fundamental aim of health policy development is that it is able to be implemented, sustainable and useful in practice to the people who are in receipt of it. The translation of policy to practice is paramount for it to be worthy of attention (Buse, et al, 2005). Health policy is also referring to decisions, plans, and actions that are undertaken to achieve specific healthcare goals within a society (WHO, 2016). An explicit health policy can achieve several things: it defines a vision for the future which in turn helps to establish targets and points of reference for the short and medium term. It outlines priorities and the expected roles of different groups; and it builds consensus and informs people. The National Health Service (NHS) was established to provide a comprehensive service with an egalitarian ideology: "We start with our values – the values of a health service funded by all of us, available to each of us, free at the point of treatment, with care based on our need and not our ability to pay. These egalitarian values seem to be echoed by both major parties when they have been in power but within a competitive market which has given rise to numerous concerns regarding the 'selling off' of the NHS to the private sector; e.g. the use of private contractors (Arie, 2005) and privatization plans (Carvel, 2006).

Keywords: ICT Policy Analysis, Healthcare in Ghana

1.0 INTRODUCTION

Health information is an integral part of a functioning health system. Health information systems (HIS) provide evidence for policy and program decisions to support better health outcomes for individuals and for populations overall. Reliable information and effective communication are crucial elements in individual health institutions, disease monitoring and prevention, public health systems, and health care generally. Information communication technologies (ICTs), therefore, can in many ways be vital tools in combating disease, promoting individual health and making health systems more effective and efficient. They can be particularly powerful in monitoring the outbreak and spread of disease, disseminating health information (including information about health promoting and disease preventing individual behaviour), and providing training, information and long-distance support to health care practitioners. A particular challenge for developing countries is ensuring that ICTs are effectively mobilized to improve health outcomes and combat disease among the poorest and most remote populations. This is an area where the potential for effective use of the full range of Information communication technologies (ICTs) (including radio and television) is particularly great.

2.0 POLICY ANALYSIS

The purpose of policy analysis is to study the characteristics of the policy, how it came to be and what the consequences of that policy might be or are (Collins, 2005). It is concerned with outcomes and the effects on people, who are the main recipients of policy. Health policy analysis is central to health reforms (Walt, et al, 2008). It is a means to inform future policies by considering the pros and cons of getting health policy issues high on the government's agenda and to contextualize issues in time and place. This is a retrospective analysis of policy which involves looking at a policy already written and using a method of considering its content, stakeholders, (those influential in devising the policy), how it was implemented and any evaluation as a result of it. In order to conduct the analysis a policy analysis tool

will be utilized. Eugene Bardach's 'eightfold path' was a tool that was developed and could be used for policy analysis regardless of the specialist area of work. The tool has been refined over the years and published work has demonstrated it is generic and sensitive to health care policy analysis (Bardach, 2009). For the purpose of this analysis I am using the Collins adaptation of the Bardach tool (Collins, 2005) because this version has more of an emphasis on linking the policy to health outcomes. It hones down in the relevant areas and provides a framework to examine the policy in a structured detailed way. The synthesis of the information and supporting research informs the policy at macro (national), meso (organisational) and micro (department / stakeholder) levels. Both versions of the tool are stagiest which means they are interrelated and it is possible to return to steps when new evidence appears. This iterative approach remains a thread throughout the analysis and allows for heuristic learning through new knowledge and past experience.

3.0 STEPS IN ANALYSING ICT POLICY

3.1 In July, 2010, the Government of Ghana launched the national e health strategy.

The key strategies under the national e-health strategy; Streamlining the regulatory framework for health data and information management, building sector capacity for wider application of eHealth solutions in the health sector, increasing access and bridging equity gap in the health sector through the use of Information and Communication Technology, and Towards a paperless records and reporting system. This paper intends to undertake a policy analysis on: *The Ghana Information Communication Technology for Accelerated Development (ICT4AD) policy: promotion of national health*. This is of particular interest to me because the Ghana Information Communication Technology for Accelerated Development (ICT4AD) policy represents the vision for Ghana in the information age. Also, another rationale behind the choice of Information Communication Technology for Accelerated Development (ICT4AD) policy for Ghana is to improve the quality of life of the people of Ghana by significantly enriching their social, economic and cultural well-being through the rapid development and modernization of the economy and society using information and communication technologies as the main engine for accelerated and sustainable economic and social development.

The emerging information and knowledge age and the new technological revolution are heralding a new economic and social order characterized by the development, and exploitation of information communication technologies (ICTs) within all spheres of human endeavor. This era is giving rise to the emergence of information and knowledge-based economies with traditional economic, industrial and commercial activities moving towards knowledge driven processes with most of the advanced economies progressively being transformed into knowledge based technology-driven services dominated economies. These economies are increasingly laying emphasis on economic activities with intellectual content and knowledge.

A number of countries are recognizing the need to rapidly develop their knowledge base through massive investments in human resource development laying emphasis on improving, and broadening universal access to higher and quality education and training avenues including on-the-job and in-service skill updates and life-long learning. Also the need to massively invest in research and development (R&D) efforts to create new products, and services as a way of gaining competitive advantage in an increasingly competitive global economic environment has been given a priority by most nations as part of their effort to develop their information economy and society. The use of these emerging technologies to transform government machineries to facilitate efficiency in operations and service delivery has also been a priority area of Governments worldwide.

There is therefore no doubt that Government world-wide have recognized the crucial role that information communication technologies (ICTs) can play in facilitating and accelerating socio-economic development. A number of countries in both the developed and developing world have in place relevant policies and strategic plans that will enable them transform their economies into information and knowledge-based economies. Ghana like other developing countries is equally placed to take advantage of these technologies to facilitate her socioeconomic development to aid the process of transforming the nation's economy and society into an information-rich and knowledge-based economy and society. The emerging information and knowledge economy is no doubt generating opportunities across all sectors in both developed and developing countries. It is a new source for the creation of quality jobs, wealth

generation and redistribution, rapid economic development and prosperity as well as a means for facilitating global competitiveness. With the emerging information age, information communication technologies (ICTs) are seen by a number of countries as a key factor for achieving progress in economic and social development. These technologies are offering developing countries like Ghana a window of opportunity to leap-frog the key stages of industrialization and transform their subsistence agriculture dominated economies into a service-sector driven, high value-added information and knowledge economy that can successfully compete on the global market. It is acknowledged that in the new information age, although the mere use of *information, knowledge* and *technology* can improve the socio-economic development fortunes of a given nation. Evidence shows that those nations who in addition are involved in the development as well as the sale of information (and information products), knowledge (and knowledge products) and technology (and its products), are moving faster on the socio-economic development scale compared to others. There is no doubt that in the new emerging economic order, the fundamental basis for wealth creation and national prosperity are information and knowledge and that Ghana cannot afford to be without either of these.

3.2 Health policy analysis must be led by the issue under scrutiny.

The statement of the problem must be clear in order to inform the gathering of evidence and the seeking of alternatives (Collins, 2005). The policy provides clarity about the problem it addresses. It introduces the issue immediately and provides adequate and appropriate data to support the problem. The old vertical management structure of the Health Service has led to a situation where information is largely organized within departments and along programme lines to satisfy specific requirements. This may be viewed as a legacy of the old civil service system where managers collect information at lower levels for the purpose of transmission to the centre. This has brought with it a number of constraints in the way information is handled and used: the proliferation of data collection tools which managers at higher levels find not very relevant; an uncoordinated information system which is overwhelmed by data demands from higher levels with virtually no feedback; the very little priority given to data for planning and decision making at lower levels; the very poor linkage between the various systems for data collection; leading to duplication and inability to assess performance (Emmanuel, 2003).

Besides these broad constraints, information management in the Ministry suffers from other setbacks. These include: poor communication between users and producers of health statistics; the Centre for Health Information Management operates not in support of planning activities, but as a unit which produces statistical information as an end in itself; feedback within institutions and between levels is also virtually non-existent; shortage of statistical manpower at each level of the health management hierarchy makes for the lack of integrated health information (Emmanuel, 2003).

The social perspectives and 'drivers' that have influenced the policy include information communication technologies (ICTs) as a Social-Enabler (Education, Health, Poverty-Reduction, Income-Distribution); information communication technologies (ICTs) as an Enabler of rapid Socio-Economic development; information communication technologies (ICTs) as an Enabler of Government Administration and Service Delivery; information communication technologies (ICTs) as a Facilitator of Electronic Government and Electronic Commerce Initiatives; information communication technologies (ICTs) as an Engine of the Service Sector; information communication technologies (ICTs) as an Enabler of Knowledge-driven Industrial development; information communication technologies (ICTs) as an Enabler of the Agriculture Sector; information communication technologies (ICTs) as a Driver of Private Sector Development; information communication technologies (ICTs) as an Agent for Wealth Creation and information communication technologies (ICTs) as a Tool for Bridging the Gender inequality Gap in Social, Economic and Political development.

3.3. Once the problem has been identified then it is important to collect meaningful data to support and drive the policy construction.

The policy refers to how it has connected up with other strategies and aligned policies relevant to this area. Innovative work had already been ongoing in relation to the use of information communication technology (ICT) in healthcare delivery in Ghana and the strategy was leading on and supporting findings and proposals from the Ministry of Health, Ghana Health Service, College of Health Sciences, Tertiary

Health Institutions, University and Health Research Institutions, Nugochi Memorial Institute for Medical Research, Ghana Medical Stores, The Council for Scientific and Industrial Research and Private Sector Businesses and Establishments of which issues with health information has addresses.

The policy mentions learning from other areas and localities and the importance of sharing knowledge and experiences. The Ghana information communication technologies for Accelerated Development (ICT4AD) Policy was released in March, 2003 and has been extremely beneficial in developing Ghana's information society and economy, pursuing a multi-sectorial information communication technologies (ICT)-led socio-economic development goal and developing Ghana's information communication technologies (ICT) sector and using information communication technologies (ICTs) as a broad-based enabler of development goals.

Uncommonly the strategy is supported by good quality research evidence which included national and international research; e.g. a review of Ghana's e-health strategy in Journal of health informatics in Africa (Afagbedzi, 2013). The study reviewed the Ghana's e-health strategy which stated that Ghana has been faced with weak health systems leading to preponderance of communicable diseases, under-nutrition, and poor reproductive health resulting in difficulties in meeting some of the targets of the sustainable development goals (SDGs). There are also increasing incidence of non-communicable and chronic diseases, and severe inequities in access to health services resulting in large disparities in health outcomes across the country.

In light of these, the Ministry of Health and Ghana Health Service in 2007 developed a National Health Policy which has three broad objectives. These are: (a) to ensure that people live long, healthy and productive lives and reproduce without an increased risk of death. (b) To reduce the excessive risk and burden of morbidity, mortality and disability, especially in the poor and marginalized groups (c) To reduce inequalities in access to health, reproduction and nutrition services. However, achieving these objectives require a change in the way health business is run and that the health sector must find new and innovative ways of reaching more people with information and resources to help them make informed decisions. Under these circumstances the Ministry of Health and its agencies have identified e-health as the best means to achieve the above objectives and hence formulation of Ghana's e health strategy in 2010 (Afagbedzi, 2013).

3.4 No policy should be based on one option.

There should be depth and breadth association with considering the alternatives which may also include a compilation of one or more (Collins, 2005). To facilitate the process of transforming Ghana into a predominantly information-rich and knowledge based society and economy, the following priority areas constituting the 14 pillars of the information communication technology for accelerated development (ICT4AD) Policy were targeted:

- Accelerated Human Resource Development
- Promoting information communication technologies (ICTs) in Education – The Deployment and Exploitation of information communication technologies (ICTs) in Education
- Facilitating Government Administration and Service Delivery – Promoting Electronic Government and Governance
- Facilitating the Development of the Private Sector
- Developing an Export-Oriented information communication technology (ICT) Products and Services Industry
- Modernization of Agriculture and the Development of an Agro-Business Industry
- Developing a Globally Competitive Value-Added Services Sector – A Regional Business Service and information communication technology (ICT) Hub
- Deployment and Spread of information communication technology (ICTs) in the Community
- Promotion of National Health
- Rapid information communication technology (ICT) and Enabling Physical Infrastructure Development
- Legal, Regulatory, and Institutional Framework Provisions
- R&D, Scientific and Industrial Research Capacity Development

- Promoting Foreign and Local Direct Investment Drive in information communication technology (ICTs)
- Facilitating National Security and Law and Order

Each pillar of the information communication technology for accelerated development (ICT4AD) was needed in the implement and deployed the policy. Each pillar had details as well as specific action that were required to implement. Each pillar addressed the benefits of information communication technology (ICT) in that sector. The emphasis is on information communication technology (ICT) in healthcare delivery in Ghana. In view of this review, the Government is committed to implementing a number of initiatives aimed at facilitating the widespread deployment and utilization of information communication technologies (ICTs) to support the activities and the operations of the health delivery system throughout the country. Specific initiatives will include implementing a national telemedicine programme to support nation-wide health service delivery including rural and community based health services as well as to support community-based continuing medical education of health professionals. The Government as part of this commitment shall invest in information communication technology (ICT) based healthcare systems to ensure that Ghanaians have access to appropriate healthcare delivery. This will include networking healthcare institutions to collate information, share data and communicate online, establishing internet connectivity and access to healthcare professionals, and making information communication technology (ICT) skills acquisition mandatory for all healthcare professional.

3.5 The alternative should be assessed for projected outcomes in order to consider their worth.

The policy stated the intended effects. The Policy Statement reflects the nation's total commitment to transform Ghana into an information-rich knowledge based society and economy to ensure that Ghana and its people fully participate in the information age and enjoy the social, cultural and economic benefits of the emerging information revolution. The Government and the People of Ghana are wholeheartedly committed to the implementation of the provisions of the Policy to facilitate the process of establishing a prosperous society, with an economy that is globally competitive, dynamic, robust and resilient with respect to the rapid changes and advances that are taking place in the global economy to be dominated by technology-driven information and knowledge economies.

To implement the Policy a number of 4-year rolling plans shall be developed and implemented within the life span of the Policy. It is envisaged that the Policy will have an operational life of between fifteen to twenty years. And as a working and living document, it is anticipated that, necessary periodic revisions will be made in relation to its key elements to meet changing developmental objectives and priorities as well as changes in the global economy and advances in the technological environment.

3.6 Collins (2005) identifies specific criteria for evaluation of all options.

Relevance: the policy is consistent with the aims. The pillars serve to address the policy to greater extent. It is ensuring that Ghana's development process can be accelerated through the development, deployment and exploitation of information communication technologies (ICTs) within the economy and society of Ghana. The policy is extended to all sectors of the economy of Ghana.

Progress: the actual result is compared to the projected results that the Policy will have an operational life of between fifteen to twenty years. And as a working and living document, it is anticipated that, necessary periodic revisions will be made in relation to its key elements to meet changing developmental objectives and priorities as well as changes in the global economy and advances in the technological environment. Though several revisions have been done but still there are existing gaps in the development, deployment due to information communication technology (ICT) products needed for services.

Efficiency: The Policy Statement reflects the nation's total commitment to transform Ghana into an information-rich knowledge-based society and economy to ensure that Ghana and its people fully participate in the information age and enjoy the social, cultural and economic benefits of the emerging information revolution. The Government as part of this commitment shall invest in information communication technology (ICT) based healthcare systems to ensure that Ghanaians have access to appropriate healthcare delivery. This will include networking healthcare institutions to collate information,

share data and communicate online, establishing internet connectivity and access to healthcare professionals, and making information communication technology (ICT) skills acquisition mandatory for all healthcare professional.

Effectiveness: the policy has achieved its purpose. This is because Ghana is now transformed to information age. Information communication technology (ICT) in healthcare policy is now working which most directorates and facilities are using information communication technology (ICT) for administrative purposes, personal health information records, mobile apps for data collection and analysis. Example is DHIMS for Ghana health service, PAN AFRICAN eNETWORK and others.

Impact: The biggest challenge identified is managing change. Resistors include people who believe change is forced on them and they have had no part in its construction. The Government and the people of Ghana are wholeheartedly committed to the implementation of the provisions of the Policy to facilitate the process of establishing a prosperous society, with an economy that is globally competitive, dynamic, robust and resilient with respect to the rapid changes and advances that are taking place in the global economy to be dominated by technology-driven information and knowledge economies.

3.7 After applying the evaluative criteria the next step is to weigh up the outcomes.

It was obvious that the options were heavily dependent on integrated information communication technology (ICT)-Led Socio-economic Development Policy and Plan Development Framework for Ghana. This would determine the way it progressed and the benefits of information communication technology (ICT) in healthcare delivery in Ghana. In the area of public health information, it is acknowledged that information communication technology (ICTs) can be used to facilitate the collection, analysis and the dissemination of information to support health education and awareness creation as well as for supporting decision making related to health and population-wide issues. In the policy on information communication technology (ICT) in healthcare in Ghana, the Government of Ghana is committed to invest in ICT in the nation as well which will benefit the healthcare delivery. The government and the people are ready to develop, implement and deploy information communication technologies (ICTs) in the nation in order to lift the image of the healthcare systems.

Electronic health is one of the most popular applications of information and communication technologies and it has contributed immensely to health delivery through the provision of quality health service and ubiquitous access at a lower cost. Even though this mode of health service is increasingly becoming known or used in developing nations such as Ghana, these countries are faced with a myriad of challenges when implementing and deploying e-health services on both small and large scale. It is estimated that the Africa population alone carries the highest percentage of the world's global diseases despite its certain level of e-health adoption.

4.0 CONCLUSION

The decision making was transparent in the final conclusion. The policy involved all participants. The impact statement showed the process of decision making involving most stakeholders. There has been progression in achieving targets but there remain problems relating change and availability of information communication technology (ICT) products. It has been acknowledged that for Ghana to move her industrially weak, subsistence agriculture based economy towards information and knowledge economy she will need to develop and implement comprehensive integrated information communication technology led socio-economic development policies, strategies and plans. With the right sets of policies and action plans it will be possible for Ghana to facilitate its socio-economic development process through the development, deployment and exploitation of information communication technologies (ICTs) within the economy and society without first going through an extensive industrialization process.

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