

ABSTRACTS

SUSTAINABILITY IN HEALTH AS A POLICY-ISSUE IN PAKISTAN

The notion of 'sustainable development' attempts to create a synthesis of development for conserving economic, natural, environmental or social resources. Pakistan's economy is no exemption to resource scarcity. However, the problem is of missed opportunities, where periods of rapid economic growth in Pakistan were not translated into equally compatible human/ social development.

Pakistan's health sector is striving to improve health outcomes, not only in terms of improvement in the macro-level indicators, but in terms of improvement in access and utilization of healthcare services. Sustainability in health demands that access to healthcare facilities/services is not limited to those with access to resources. Everyone, without exception, should have access to knowledge and information that they need to have a healthy and productive life.

Sustainability in healthcare arena calls for maintaining good health within the scarce resources, that should result in increasing efficiency in attaining good health. Tele-health is a modern way of delivering cost-effective health services and its potential for increasing access to adequate healthcare, despite the distances being great. However, there are issues of outreach, regional differences in healthcare, and delivery. Acceptance by patients and providers of tele-health versus traditional healthcare systems is a challenge. Other problems relate to health related information-technology infrastructure in the country, patients' privacy and a more coordinated health policy that reinforces the use of tele-health as a new mode of healthcare service-delivery.

NATIONAL e-HEALTH POLICY: OPTIONS AND ISSUES

This paper reviews various issues regarding a sustainable e-Health Policy at National Level and various options pertaining to it. e-Health is an umbrella-term which envisages both modes of electronic health-data management, transmission and analysis for diagnostic, education and administrative purposes viz; Health Informatics & Telehealth. e-Health has become a necessity in the Pakistan's healthcare delivery system, in the backdrop of most of her populations living in rural and hard areas, with little or no access to expert healthcare, disparities in the healthcare delivery-facilities in urban and rural areas, neglected women & child health and poverty level above 30%.

There has been governmental, as well as professional group's, interest in eHealth implementation in Pakistan. And some pilot-project had been initiated. But generally it has been observed that these projects failed to produce a 'role model' impact because they either could not be sustained or worked without a clear goal and targets. The causes of such failure include lack of integration in policy-synthesis, among various pilot-projects for sharing of information and experiences and little project-planning documentation.

The author in this chapter points out some important issues relating to policy formulation in implementation e-Health in Pakistan, which include; policy-related issues, organizational and human capacities issues, financial and technical issues. Relevant questions to these issues have also been raised. More importantly, ethical and legal issues, though not discussed at length, yet they are significant at strategic level in current scenario, and need more attention during policy-synthesis.

As Pakistan's healthcare system is influenced by World Health Organization, reference to guidelines of e-Health development-plan at country-level has been made, as major health care advisory partner's perspective.

The author recommends a multidisciplinary approach in composition of Policy-synthesis forum and believes that assessment of user-need is of paramount importance. The exercise should aim at ultimate integrated systems, with standardization and quality elements as a base. Unified coding, health-database language, information-exchange lingua franca and consideration for including local language at some level through development of indigenous and customized solutions can pave the way for growth of effectiveness of e-Health in Pakistan.

PROSPECTS FOR IMPROVING HEALTH IN PAKISTAN, USING e-HEALTH: LESSONS LEARNED AND A PROPOSAL

E-Health, the application of information-technology to improve health and healthcare in less developed countries has great potential, as the infrastructure to support telecommunication increases. This chapter focuses on lessons learned from work done in e-Health in different parts of the world and contains a proposal for using mobile phones to improve healthcare-services in Pakistan.

As Kerr White, one of the founders of evidence-based medicine said, "Have a little statistical compassion and take a look at the evidence before providing inadequate care or wasting millions of dollars." He also said, "Good judgment

comes from experience. Experience comes from bad judgment.”

We want to share two lessons that we have learnt about e-Health from our experiences in the healthcare-system in different parts of the world. Those two lessons are:

- 1. Look first for simple solutions, using appropriate, available technology: there are e-Health solutions that can improve healthcare that are not dependent on high end-technology*
- 2. Evaluation is essential to e-Health. We must be certain that our e-Health solution really works.*

E-HEALTH — THE PANACEA FOR ASIAN HEALTHCARE

E-health can be defined simply as the use of Information and Communication Technology (ICT) in healthcare. The main uses of e-health in developing countries have been to improve access to healthcare services, and enhance the quality of care by making patient-data and other relevant information available to the healthcare providers at the point-of-care. E-health can also provide a medium for economically and socio-culturally appropriate technology solutions available at different points-of-care. The biggest problem at this time is the lack of scientific evidence to convince the decision-makers at the institutional and governmental levels about the benefits of e-health in the local context, and to prove if one technology is better than the other to address the same problem.

PAN Asian Collaboration for Evidence-based e-health adoption and application (PANACeA), is an initiative to generate evidence in the field of e-health within the Asian context, by forming a network of researchers from developing Asian countries. This paper highlights different aspects of this initiatives.

PROPOSING A COMMUNITY-BASED HEALTH FINANCING (INSURANCE) MODEL INTEGRATED WITH E-HEALTH/ TELE-HEALTH

Pakistan’s healthcare system is facing many challenges today, including; poorly functional rural health-facilities, low quality of services, poor accessibility and management of service-delivery, low level of public-health allocations and expenditures as compared to regional trends and a higher level of out-of-pocket expenditures. To address these challenges, there is a need to revisit the healthcare policy and strategy. The focus of this paper is on alternate healthcare-financing to increase financing options for closing the resource-gap, encouraging public-private partnerships, accessing new resources and technologies, increasing

participation of community and developing strategies to help implement effective interventions at the local level.

One such intervention is to appropriately benefit from health-information technology and the proposed model is a community-based health financing/ insurance, integrated with health-information and communication-technology (e-health/telehealth). According to this model, the services will be provided through a health-card system. The advantages of the proposed model include; alternative forms of risk-pooling (informal sector) that will reduce economic barriers, reduce out-of-pocket payment, extend traditional arrangements, enhance community-empowerment and community mobilization, raise combined/ collective voice, start the process of dialogue with the community and reduce out-of-pocket expenditures, while increasing the utilization of services.

EXISTING EVIDENCE TO TELEHEALTH AND ITS SCOPE IN DEVELOPING COUNTRIES

Telehealth has been around for over 10 years. A lot of projects have been carried out and many evaluation studies have been undertaken related to telehealth. The studies have been in the domains of user-satisfaction, economic benefit and clinical outcome. Meta-analysis and reviews on these studies have been performed to obtain an overall understanding of the evidence from the evaluations. The evidence has shown to have either mixed or negative results of telehealth. There is a need of further evidence to prove that telehealth is beneficial. At the same time, however, we should understand that the context and objectives of telehealth projects undertaken so far have largely been in the developed countries, which tend to be different from those of developing countries.

POTENTIALS FOR THE FUTURE OF TELEHEALTH AND EXPERIENCES IN BALTISTAN

To those not familiar with our healthcare initiative in Baltistan: I assisted my late wife, Dr. Nasima Rahman, a Pakistani medical doctor to build up healthcare services since 1989, particularly for women and children. My services were first with a clinic, training, medical field-camps and a school health program, in Skardu, and since 1997 in Khaplu, District Ghanche. We (BHEF) took over in 2003 the management of the Abdullah Hospital of the Jabir-Bin-Hayyan-Trust at Skardu, where we established a telehealth facility 2004 (with the technical assistance of COMSATS) and financial assistance of the Canadian development agency, the International Development Research Centre (IDRC) our Telehealth

Clinic. The initiative has been fairly successful and beneficial for the people fo remote rural population. It has also led us to new learning and experiences making way for even better service quality and opportunities to explore.

TELE-HEALTH: A SUCCESSFUL EXPERIENCE IN NORTHERN AREAS OF PAKISTAN

COMSATS, an international and intergovernmental development organization, is the pioneer in Pakistan in the field of telehealth – the unique tool to provide healthcare when distance and time are a great challenge. Since 2001, COMSATS has been involved in initiating multiple telehealth ventures in different parts of the country, including the remote, cold and long neglected Northern Areas of Pakistan. These ventures have been most successful on both grounds – technical and cultural.

COMSATS' accomplishment of telehealth services is a major milestone in the provision of healthcare in a developing country like Pakistan especially while considering that, firstly, these projects were implemented in difficult terrain and weather conditions; secondly, the technical infrastructure was initially nonexistent; and thirdly, and most important of all, in an environment of extreme conservatism. Despite all odds, COMSATS' battle against poverty, disease and illiteracy carries on.

MAKING E-HEALTH BORDERLESS: EXPERIENCE OF TELE-RADIOLOGY LINK BETWEEN AGA KHAN UNIVERSITY, KARACHI, AND FRENCH MEDICAL INSTITUTE FOR CHILDREN, KABUL, AFGHANISTAN

The paper discusses an e-Health based project that is implemented at a tertiary health facility, the Aga Khan University Hospital, Karachi, Pakistan, as well as at the French Medical Institute for children, Kabul, Afghanistan. The fact that e-health can benefit people across geographic boundaries and have radiology services can be provided through the means of telecommunications are presented in the paper.

ROLE OF SATELLITE COMMUNICATIONS IN TELEMEDICINE DURING BAGH EARTHQUAKE IN PAKISTAN

The effectiveness of emergency, diagnostic and pre-operative telemedicine during disaster-relief operation is the major field of interest discussed in this paper. An example of the effectiveness of telemedicine is given, to emphasize the role

telemedicine can play to bridge the gap between the tertiary-level healthcare setups and the primary-healthcare facilities.

This paper highlights the role played by the remote telemedicine units in supplying the expert medical consultation during the post-disaster rehabilitation and medical follow up of the patients.