

Review Article

Information Technology Systems in Public Health and Clinical Care: The Way Forward from an Information Technology Perspective

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Abstract |

Information Technology (IT) is an enabler; it is not a panacea. We need a coherent health delivery strategy at the provincial level dovetailing with one developed at the national level. Information Technology strategy would then be developed such that it aligns with the healthcare reforms process. Turkish health delivery model is worth replicating in Pakistan.

Keywords | Information technology, healthcare reforms, Turkish health delivery model

Introduction

The fundamental design of health delivery system in Pakistan is quite good: Basic Health Units (BHUs) feeding into Rural Health Centres (RHCs) and proper medical facilities at Teshsil (Tehsil HQ hospitals) and District (DHQ hospitals) levels. Large cities have Tertiary Care Facilities that boast of specialized care and linkage to medical colleges.

The conceptual design, however, does not, unfortunately, translate into quality care because most BHUs are poorly staffed. The same applies to many RHC facilities. The THQs and DHQs, barring some exceptions, are also understaffed and lack quality facilities. That said, there has been some improvement in the past three years. The lack of a referral mechanism means that patients gravitate to tertiary facilities in the large cities thereby excessively burdening them.¹

IT Systems for Health Delivery

IT is an enabler; it is not a panacea. We need a coherent health delivery strategy at the provincial level dovetailing with one developed at the national level.² IT strategy would then be developed such that it aligns with the 'business' strategy and shall be cost

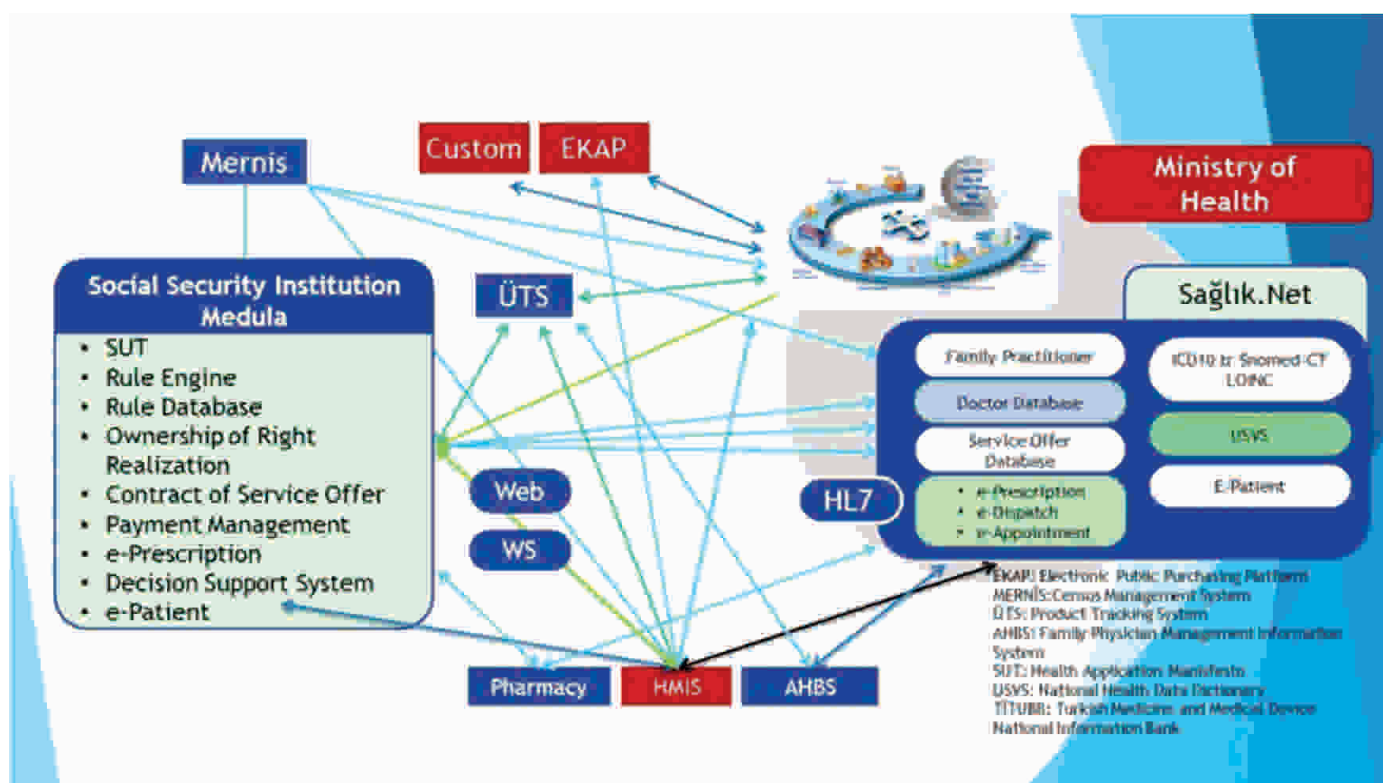
effective. Given that nothing of the sort has happened, most of the IT interventions have been bottom-up, tinkering on the edges, endeavours.^{3,4}

PITB has, however, tried to take the bull by the horns and initiated meaningful efforts consisting of automation at various departmental levels (Drug Testing Labs, Disease Surveillance efforts); Biometric attendance at BHU, RHC, THQ and DHQ levels; Electronic Medical Record automation at BHU and RHC level, and; Hospital Management Information Systems (HMIS) deployment a THQ and DHQ level in many facilities (eventually around 33) in Punjab.^{5,6}

While laudable, these initiatives are isolated activities and do not form part of a larger 'grand' plan; the proper health strategy alluded to above.

The Turkish Model

It is recommended that the Pakistani health establishment look at the successful model of a country that showed dramatic improvement in healthcare delivery in little over a decade: The Turkish Model. While the current health indicators of the Turkish health system are very close to those of OECD, the problems faced by Turkey in early 2000s was very similar to the ones being faced by Pakistan: skewed patient load, poor distribution of medical doctors, inadequate paramed-



dical staff, lack of data for proper decision making, etc.

While a plethora of processes and mechanisms needed to be put into place, IT played a critical role in strengthening various aspects of this health delivery revolution: legalese providing privacy of patient records; linkage between various HMIS solutions; conflating myriad insurance systems; centralized procurement of medical supplies and equipment; referral system all the way from family practitioner (basic clinics) to tertiary care with a 'gate keeper' body ensuring read-only access to patient medical records. Presence of comprehensive databases of doctors, etc. The following illustration provides some idea about the way the health eco-system functions:

Conclusions

The Turkish health eco-system should be studied at great depth and it should be adopted as best as possible. The various IT systems that are critical in making that system work should be put into place in a coherent manner; not a knee jerk, piecemeal fashion, as is the norm now.

Each IT solution would then be like a piece of a jigsaw puzzle that will help in forming the full picture.

The provincial government engaged extensively with the Turks. We need to continue that effort and put a comprehensive health eco-system into place.

Key points

Currently, most health-sector specific IT interventions tend to be of the knee-jerk, tinkering-on-the-edges, variety

Improvement in staffing, facilities and infrastructure of current health facilities is needed. That said, such enhancements need to be part of a larger strategic scheme rather than ad hoc tactical responses

There is need for a coherent health delivery strategy to be put into place.

IT, as an enabler, can play a major role in both service delivery improvements and assist in data driven decision making at the highest levels

The Turkish health delivery model is worth replicating in Pakistan.

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