

Healthcare Management System using Information, Communication and Technology

Presenter:

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Healthcare Management System using ICT

- Introduction
- Our institution
- HMS-ICT group
- Our Activities
- Collaboration



Introduction

Healthcare Management System using Information, Communication and Technology

Cost of Medical Care

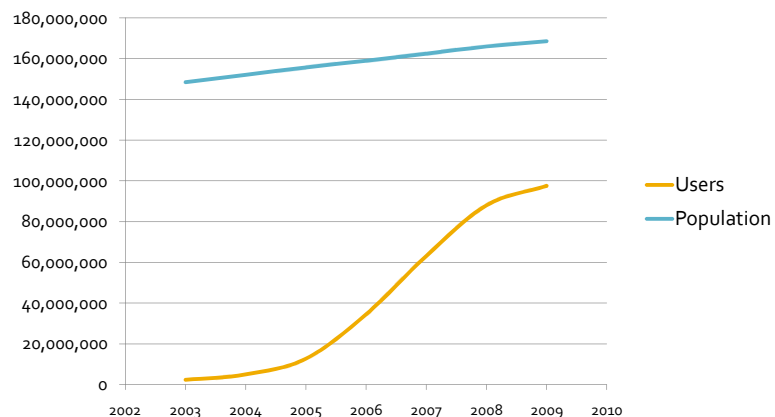
- The ever increasing cost of medical care and the lack of penetration of health facilities in the remote areas of the developing countries such as Pakistan are creating enormous problems for general population
- The public policymakers need to converge to new strategies for delivering far reaching and cost-effective health care to all citizens.

Telecommunication Growth

- On the other hand, the growth in the usage of mobile phone continues. According to UN Information Economy report 2009 , the number of mobile subscriptions reached four billion at the end of 2008.
- The growth rate is even higher in the developing countries that account for two third of the all the subscriptions

Growth in Pakistan

Population Vs Cellular subscribers in Pakistan



Growth in Pakistan

- According to the [UN Information Economy Report 2009](#), Pakistan was ranked as **3rd** most dynamic economy in South Asia in terms of increased mobile penetration as well as increased internet penetration between 2003–2008

Our Institution

Healthcare Management System using Information, Communication and Technology

University of Karachi



- University of Karachi is the largest public sector university in Pakistan
- It conducts teaching under eight faculties through over 80 departments and highly specialized research institutes.
- In-campus student population is about 25000.



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Existing Medical facilities at UoK

- The university provides medical services to its entire staff (over 4000) as well as their dependents (over 10000) through an in-campus clinic and a panel of hospitals.
- A new building for the clinic is also under construction.



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DarulSehat Medical College and Hospital { Affiliated wit UoK }



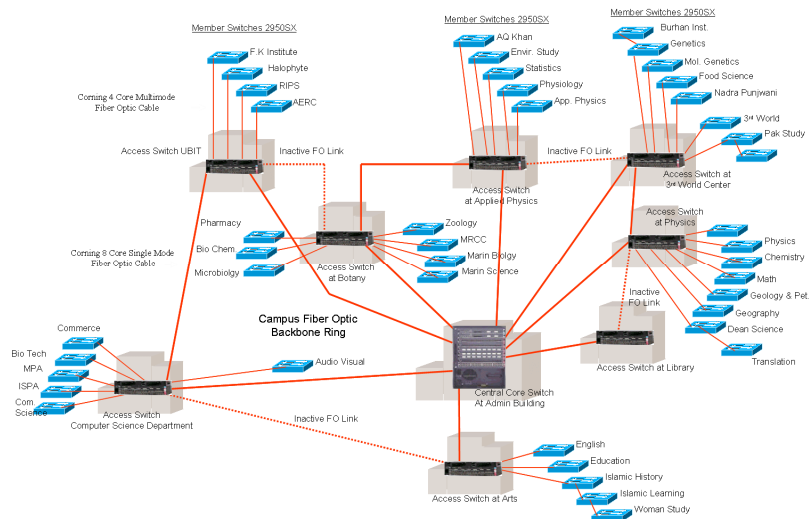
- Liaquat College of Medicine & Dentistry is recognized by P.M.D.C and affiliated with the University of Karachi. Its aims & objective is to impart quality education in health science & community with more dedication & determination.



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ICT infrastructure at UoK



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Dept. of Computer Science (UBIT)

- Department of Computer Science (UBIT) wants to integrate the two facilities to provide eHealth services to the university employees.
- It also wants to implement a HIS at the varsity.



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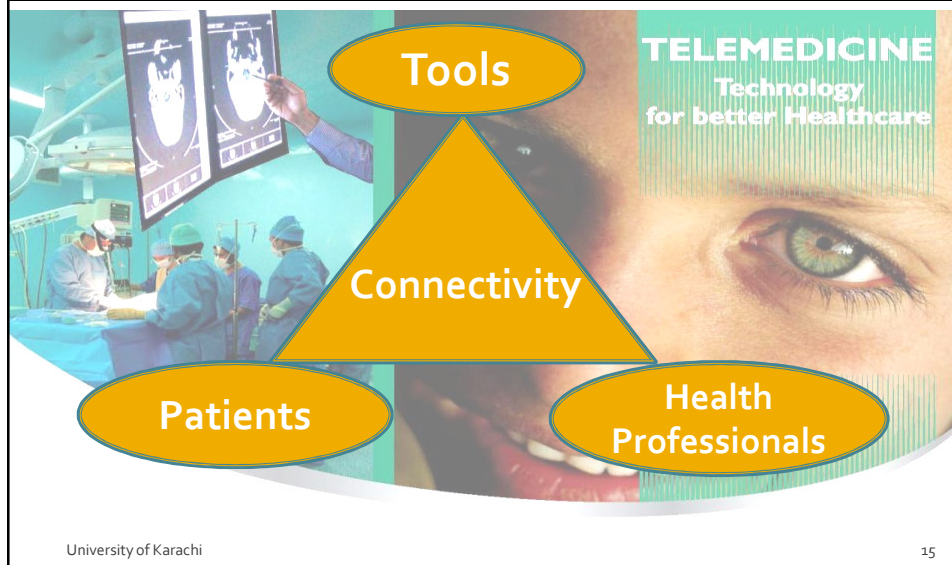
Opportunities

- Opportunities to network & build partnerships
- Capacity building
- Creating Communities of Practice
- Knowledge Translation
- Making an impact on policy-development
- Contribute to improved health outcomes

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Idea



Healthcare Management

- Healthcare management is the intersection of information science, computer science, information technology and health care.
- It deals with the resources, devices, and methods required to optimize the acquisition, storage, retrieval, and use of information in health and biomedicine

HMS-ICT Group

Healthcare Management System using Information, Communication and Technology

HMS-ICT Group

- The objective of the group is to utilize ICT in health care management system in the context of our country to provide effective health services at low cost through exploiting of information and communication technologies.

HMS-ICT Core Group

- Prof. Dr. S. M. Aqil Burney (Group Leader)
- Mr. Kamran Ahsan (Intl. Coordinator)
- Mr. Nadeem Mahmood (DCS-UoK)
- Mr. Zain Abbas (DCS-UoK)
- Dr. Zahid Bashir (SMDC)

HMS-ICT Group Members

- Mr. Asim Ali (DCS-UoK)
- Dr. Shoaib Rizvi (SIUT)
- Dr. Abid Azhar (KIBGE, UoK)
- Dr. Shakeel Farooqui (Genetics, UoK)
- Dr. Haider Abbas (Psychology, UoK)
- Dr. Ali Farhan (DarulSehat Hospital & Medical College, Affiliated with UoK)

Activities

Healthcare Management System using Information, Communication and Technology

Collaboration

- eHealth Association of Pakistan
- Aga University Hospital Karachi
- Darul Sehat Hospital Karachi
- Shalamar Medical and Dental College, Lahore
- VetraCom International FZ-LLC { in developing mHealth system for UoK }

International Conference

- [Presented a paper](#) the 1st International eHealth conference in Pakistan at the Aga Khan University in Jan-2010
- The main objective of this conference was to introduce & advocate eHealth as a viable & relevant option for improving public and private healthcare in Pakistan.



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Seminar

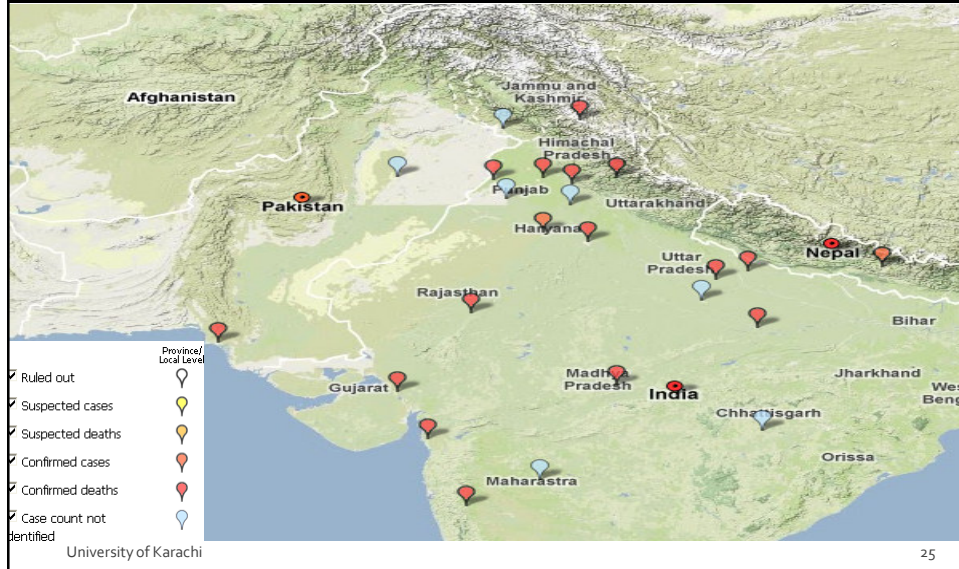
- A [seminar](#) on HMS & ICT in Developing Countries was held at DCS-UoK in Jun-2009.
- Speakers emphasized on the importance of ICT especially in service sector due to the increasing cost of medical care and lack of penetration of health facilities in the remote areas of Pakistan.



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Project on Swine Flu



Areas

- We are planning to target
 - Waterborne diseases
 - Airborne diseases
 - Skin diseases

Collaboration with FCET & Healthcare department, Staffordshire University

Healthcare Management System using Information, Communication and Technology

Problems

- Lack of infrastructure
- Brain Drain
- Poverty
- Illiteracy
- Environmental hazards
- Law and Order situation

Collaboration

- Capacity building
- Knowledge transfer
- Learning from your experience
- Long term collaboration
- Technology transfer

Core Research Questions

- Which e-health applications and practices have had the most beneficial outcomes for UK?
- What are the best ways for ensuring that beneficial outcomes can reach the population?

Core Research Questions

- What is the potential of using new pervasive technologies such as mobile phones / PDAs?
- What types of technologies / applications are best suited to help prepare for, or mitigate the effects of, disasters, pandemics and emerging and re-emerging diseases?
- How to build a Health Ontology?

HIS Degree Programme

- Healthcare informatics (HCI) is a rapidly growing branch of the massive health-care industry.
- DCS-UoK wants to take lead in Pakistan to develop such a programme on healthcare informatics with the help of Staffordshire University.
- Its objective will be to produce professionals who have a background of healthcare as well as sound knowledge of information systems.

Long term partnership



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Staffordshire University

Thank you...

For further information, please visit our website:
<http://hmsict.uok.edu.pk>



Questions and Discussion