

# INTERNATIONAL TELECOMMUNICATION UNION

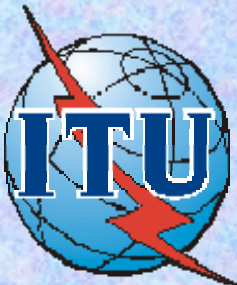


Improving access to and delivery of Health  
services in developing countries

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# TOPICS

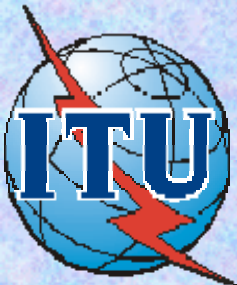
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- ✓ Telecommunication Infrastructure
- ✓ Project definition of ICTs application  
in health
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# Brief Overview

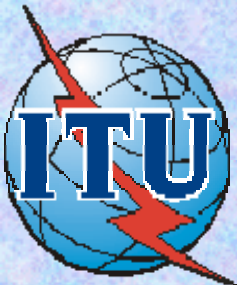
- Improvement of the processes of;
  - consultation
  - diagnostics
  - treatment
  - distant learning
  - prevention of epidemics, etc
- Delivery of medical services remotely
- The delivery of e-health services where distance is a critical factor.



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## Brief Overview cont'd

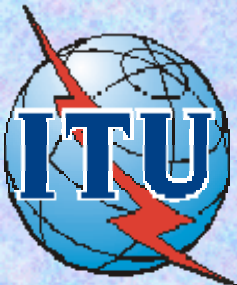
- The electronic tools used;
  - low-tech tools include telephone, fax, video cameras and monitors;
  - High-tech tools include computers, digital imagery and Internet.



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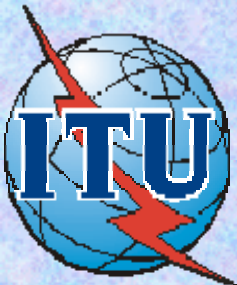
- Everybody needs ICTs application in health unfortunately it is still considered outside the mainstream of health care.
- Demands differ in different countries; **second medical opinions and information for citizens**, for others may be primary care, basic health education and medicine in emergency situations or in remote areas.
- Developing countries face various problems in the provision of medical service and health care.



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# Brief Overview cont'd

- Some of the problems in developing countries include;
  - Funds, expertise, resources, shortage of doctors and other health professionals. Roads and transportation are inadequate, insufficient basic medical facilities in villages and rural areas, traveling long distance to receive medical help, concentration of competent specialists in capital cities, etc.

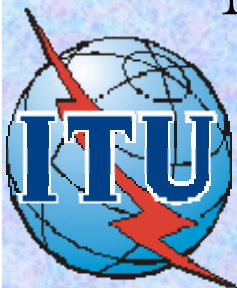


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## Brief Overview cont'd

### Developing countries – common and most urgent problems

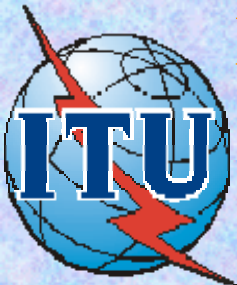
- Severe shortage of health care professionals.
- Insufficient or even absence of health care for rural and remote areas population.
- High maternal and prenatal mortality rate.
- Very few doctors (particularly in rural and remote areas) have access to medical journals after graduation.
- Most hospitals have a poor internal telephone system.



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# ITU's Contribution

- First question of telemedicine in developing countries was addressed in March, 1994, WTDC-1994, Buenos Aires – **potential of telemedicine to meet some of the needs of developing countries for improved access to health care services.**
- Decisions of two WTDC (**Buenos Aires, 1994 and Valletta, 1998**) undertaken various activities – potential benefit of telemedicine applications in health sector in developing countries, - **pilot projects.**



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# ITU's Contribution

- Decision of WTDC (Doha – Qatar, March 2006) Resolution 17; Implementation of regionally approved initiatives at the national, regional, interregional and global level ( complementing the WSIS Geneva Plan of action and Declaration of Principles and the Tunis Agenda and outcome.
- Initiative; ICTs Application

# ITU's Contribution

- ICTs Application - Objectives

- (i) Provision of coherent applications in accordance with national e-strategies, making it possible to use modern data transmission networks to provide electronic services for health and other sectors)
- (ii) To share identical medical expertise by saving factor-related costs and skilful human resource deployment-related costs in e-health projects.

# ITU's Contribution

## ICTs Application – Expected outputs

- (i) Qualified medical assistance and appropriate quality care provided to the population;
- (ii) Timely response in major public-health crisis with establishment of early-warning systems and confirmation of diagnosis in the event of communicable diseases;
- (iii) Improved prevention of chronic diseases such as malaria and tuberculosis and support to HIV/AIDS initiatives.

# ITU's Contribution

## PILOT PROJECTS

- Ethiopia
- Mali
- Mozambique
- Senegal
- Kenya (project proposal using satellite as telecommunication platform)

# ITU's Contribution

e-health/telemedicine policy – telemedicine services can be an economical means of achieving national health policy objectives with regard to medical and health care in rural and remote areas.

- Telemedicine applications in the framework of national health policy need to consider;-
  - quality and efficiency of health care services;
  - medical education for both medical staff and citizens;
  - enhancement national e-health structures;
  - e-health administration;
  - the role of the telecommunication infrastructure in the above four aspects.



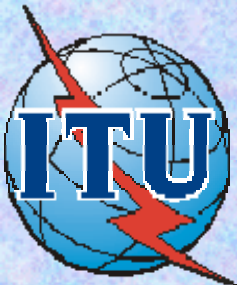
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# ITU's Contribution

## Standardization Activities;

Main stakeholders participation is essential as the standards have to satisfy at least the following points;

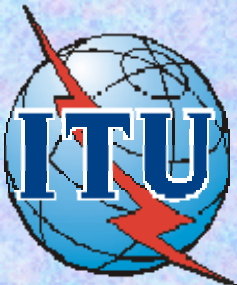
- To serve various business models, as standards are essential for the open market
- To consider the needs from the political side (e-health cards in the European Union)



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# ITU's Contribution

- To keep in mind the requirements of the global application Health actions taking care of;
  - a) Implementation of user friendly, validated and interoperable infrastructure;
  - b) enhanced interoperability between systems;
  - c) quality criteria for health-related websites;
  - d) Identification and dissemination of best practices in e-health

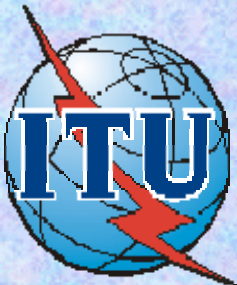


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# ITU's Contribution

- e) Establishment of a series of data networks assisting e-health planning.
- f) Clarification of legal aspects of e-health and to take into account other global policies and local legislation.

An e-health Standardization Coordination Group (eHSCG) was formed at ITU in October, 2003.



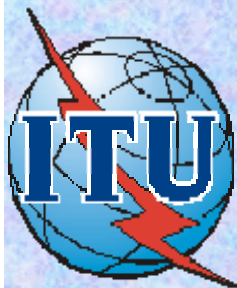
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# ITU's Contribution

## Strategic objectives;

- act as a coordination group on all aspects of telemedicine/e-health standardization;
- to strengthen cooperation amongst the SDOs;
- to focus on technical aspects, taking into consideration regulatory, economic, medical and social issues;
- to consider requirements for development paths for existing standards from different sources;
- to act as supervisor for implementation and case studies, especially in developing countries
- to increase awareness of existing standards;



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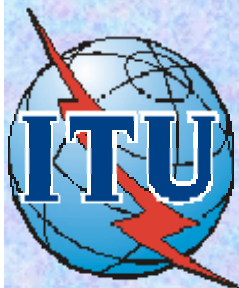
# Telecommunication Infrastructure

The platform for any kind of e-health application.

- Satellite
- PSTN
- ISDN
- Videoconferencing
- VoIP and other

# Telecommunication Infrastructure

- Most ICTs applied to health sector are common with other sectors.
- Most simple telecommunications set up can be applied for some e-health services.
- Existing transmission telecommunication technologies can be used to deliver medical information with regard to speed.
- Optical fibre links are an ideal medium for broadband communications but **satellite communication is the most effective way for reaching isolated, remote and rural areas.**

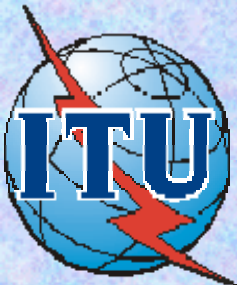


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# Project definition of ICTs application in health.

## Challenging;

- often combine state of the art technology;
- long term implementation and application;
- market uncertainties
- bound to political decisions;
- funds

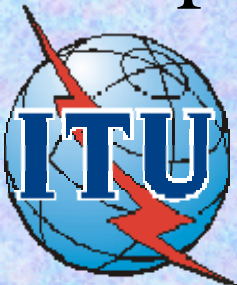


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# Project definition of ICTs application in health.

For resource mobilization, every project proposal must follow some specific rules or design template.

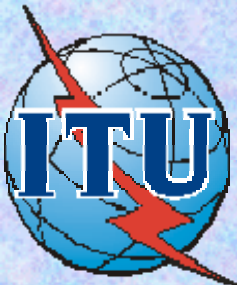
- ITU continues its contributions in e-health with assistance to developing countries in preparation of specific tailored outlines for project preparations.



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# Conclusion

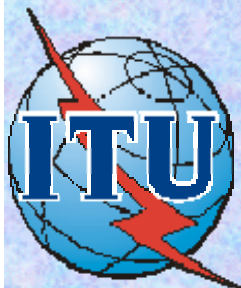
- Since telemedicine/e-health relies heavily on telecommunication/ICTs, including Internet, it is necessary to promote e-literacy among users.
- Effective governance in telemedicine/e-health requires codes, regulation and standards to ensure consumer satisfaction.
- Issues in governance include legal liability, ethical standards, privacy protection, cultural and social standards.



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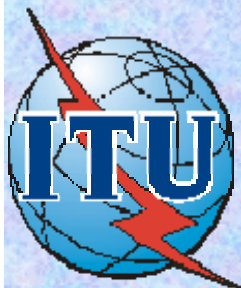
- The variations of medical culture and practice between countries have to be considered.
- For a successful resource mobilization, both domestically and internationally, for e- health, a clear and precise proposal is essential.
- Satellite-based communication is the most effective way of providing the necessary communication links in isolated, rural and remote areas.



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THANK YOU VERY MUCH FOR  
YOUR ATTENTION

**Lusaka-Zambia, June 2006**



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