Telemedicine – Planning, Execution and Future

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WHY MOST TELEMEDICINE SYSTEMS FAIL?
THE PRIMARY REASON IS THAT THE SYSTEMS WERE NOT DESIGNED TO MEET A VALID NEED
Planning

- Strategy
  - Goals and Objectivities

- Program Organization
  - Relationship to Specialist and clinicians
  - Hierarchy

- Nature and Scope of Services
  - Clinical / Education and Training / Awareness

- Impact of Services
  - Level of usage and impact on the Programme

- Financial Plan
Planning

- Legal Issues
- Time Line
- Future plans (Near and Long term)
  - Improve service and equipment
  - Plans to expand type of services offered
Scope of Services

- Patient Care
- Education
- Awareness
- Research collaboration
Patient Care

- Home care
- Community care
- Primary care
- Screening
- Secondary care
- Tertiary care
Education

- CME for Physicians, Specialists and Paramedics
- Training for Technicians
- Higher education - International and National Connectivity
- Surgery broadcasting

Planning
Awareness

- Patients
- General Public
Research Collaboration

- Connectivity among Research Centers
Future Plans

- Future plans (Near and Long term)
  - Improve service and equipment
  - Plans to expand type of services offered
  - Miniature of Equipments
  - Creating HL7 and DICOM Standard software (Low Cost)
  - Tele-mentoring
Execution

- Finance and Grants
- Site preparation and vehicle design
- Connectivity and Network Protocol
- Software and Standards (DICOM & HL 7)
- Computer Hardware
- Selection of Equipments and Instruments
- System products and its standards
- Personnel and Training
- Management Information systems
- National & International Collaboration
Finance

- Budget for the Project
- Self Sustenance of Project
  - Capital Purchase
    - Grants?
  - Revenue Expenditure
  - Income?
  - Plan for next five years

Execution
Site Preparation

- Size and type of the Room
- Lighting
- Electricity and back-up with required safety
- Background and Audio Engineering
- Air Condition
- General Ambience
Vehicle Design

- What do you need to do with the Mobile unit
- Selection of Chassis and body works
- Air Condition and Dust proof
- Vibration due to Road conditions
- Power Back-up facilities (Dual System)
- Teleconsultation - Connectivity options – VSAT / ISDN / Wireless?
Connectivity and Network Protocol

- Available bandwidth in your area
- Estimate the general quality /frequency of information transmission required
- **Remember**, determine what you need to do from your available bandwidth. Then and only then, start researching hardware and software to meet those needs.
Software and Standards

- Software
  - Internet or Server and client
  - Chatting Utility
  - Desktop video Collaboration
  - Picture Acquiring
  - Electronic Medical Records
  - In-house development or Select the vendor
  - Standards (DICOM & HL7)
Computer Hardware

- Computer Hardware
  - Servers
  - Clients (Desktop)
  - Grabbing Cards for Audio and Video
Equipment and Instruments

- Equipments and Instruments
  - Analog to Digital output
  - Digital output
  - Video Camera
  - Digital Still Camera
  - Support from the Vendor
System Products

- Video Collaboration
  - Desk top
  - Personal Systems
  - Small – to – medium Group Conference
  - Medium – to – Group Conference
  - Support from the Vendor
  - Standards

Execution
The key person of the Project is “Telemedicine Administrator”

Training for the doctors is very important.

Personnel in the Vehicle must be multi-skilled.

Provide for short-term replacements necessitated due to leave / sickness.
Information systems

- Management Information systems
  - Financial details
  - Monthly - Projected and actual
  - Periodic reviews of the Project
Future

- Internet2
- EDUSAT
- Newer Instruments and Equipments
- Higher bandwidth (OFC)
- Faster Computers
- Price ↓
- More jobs in Telemedicine
Related Areas

- Virtual Reality
- Robotic Surgery
- Virtual Class Room
FUTURE OF TELEMEDICINE IN INDIA IS BRIGHT AND WE CAN MAKE IT BRIGHTER
My grateful thanks to

Dr S S Badrinath,
Chairman, Sankara Nethralaya

for his guidance in developing this concept
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Thanks