Challenges of Rural Telemedicine

An experience from Myagdi, Nepal

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Nangi, Myagdi, Nepal

Contents

Overview

Telemedicine as a system allows the integration of technology and sharing of information, **enhances accessibility of health service to people and health providers, increases efficiency of treatment, lower health related costs, and improves patient care**.

WHO, "Information Technology: In Support of Health Care," 2009.

Telemedicine may in fact have a more profound impact in developing countries than in developed countries.

Steven M Edworthy. (2001, September) BMJ. [Online] http://www.bmj.com/content/323/7312/524.extract

The Role of ICT to Achieve the UN Sustainable Development Goals (SDG)

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ICT must play a significant role if the SDGs should be achieved as projected in 2030.
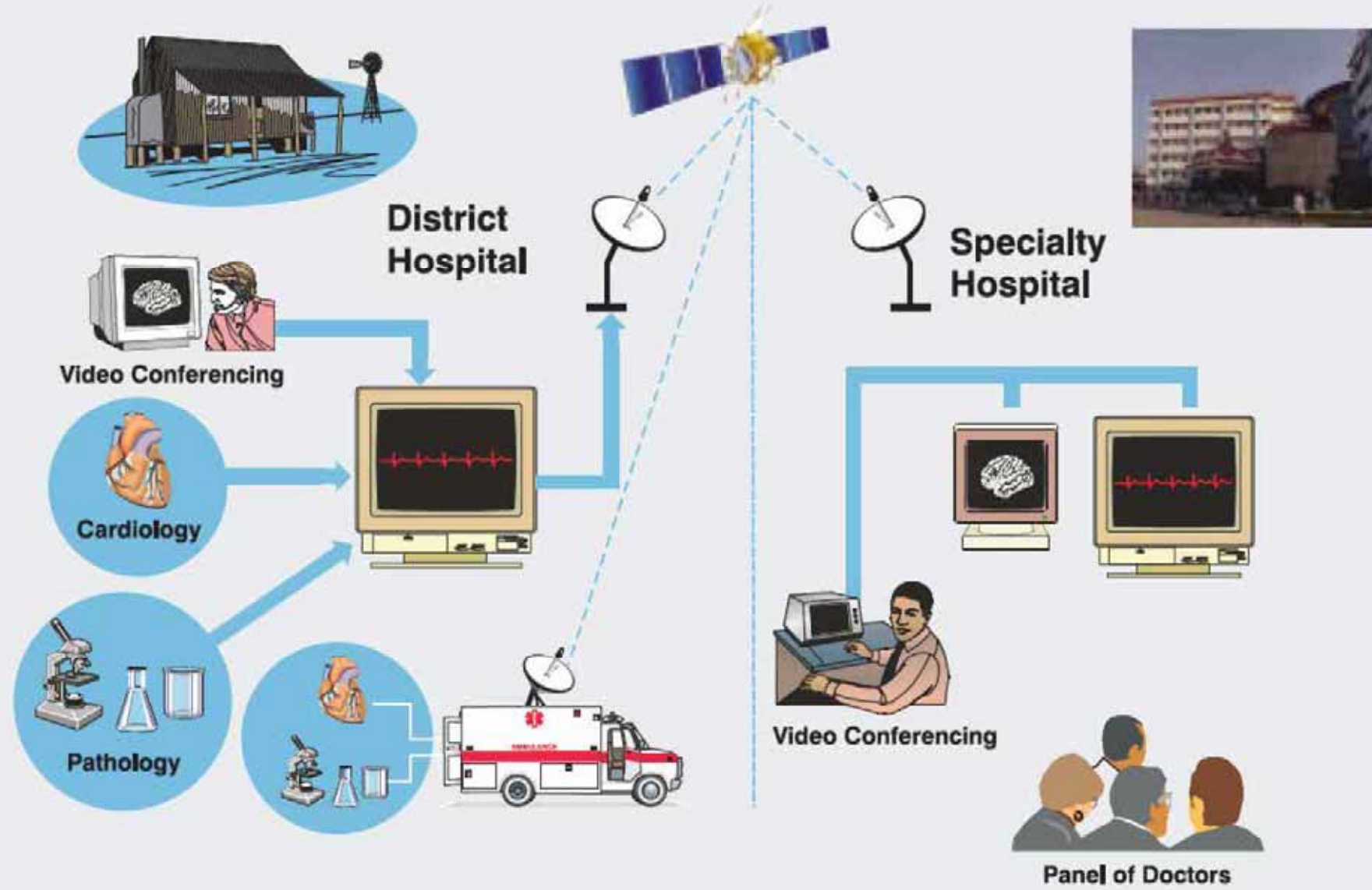
Universal Health Coverage

World Health Organization describes it as a situation where citizens can access health services without incurring financial hardship.

determined by three critical dimensions:

-who is covered,

- what services are covered, and

-how much of the cost is covered

TELEMEDICINE CONCEPT

District Hospital

Specialty Hospital

Video Conferencing

Cardiology

Pathology

Video Conferencing

Panel of Doctors

Public Health Concern Trust (phect-Nepal)

An Non-profit, NGO

Runs Kathmandu Model hospital, Kirtipur hospital & others

Vision: Empowerment of people through health action

Mahabir Pun

Prof.Dr.Saroj Dhital

Rural Health Care and Telemedicine (CRHT)-2017
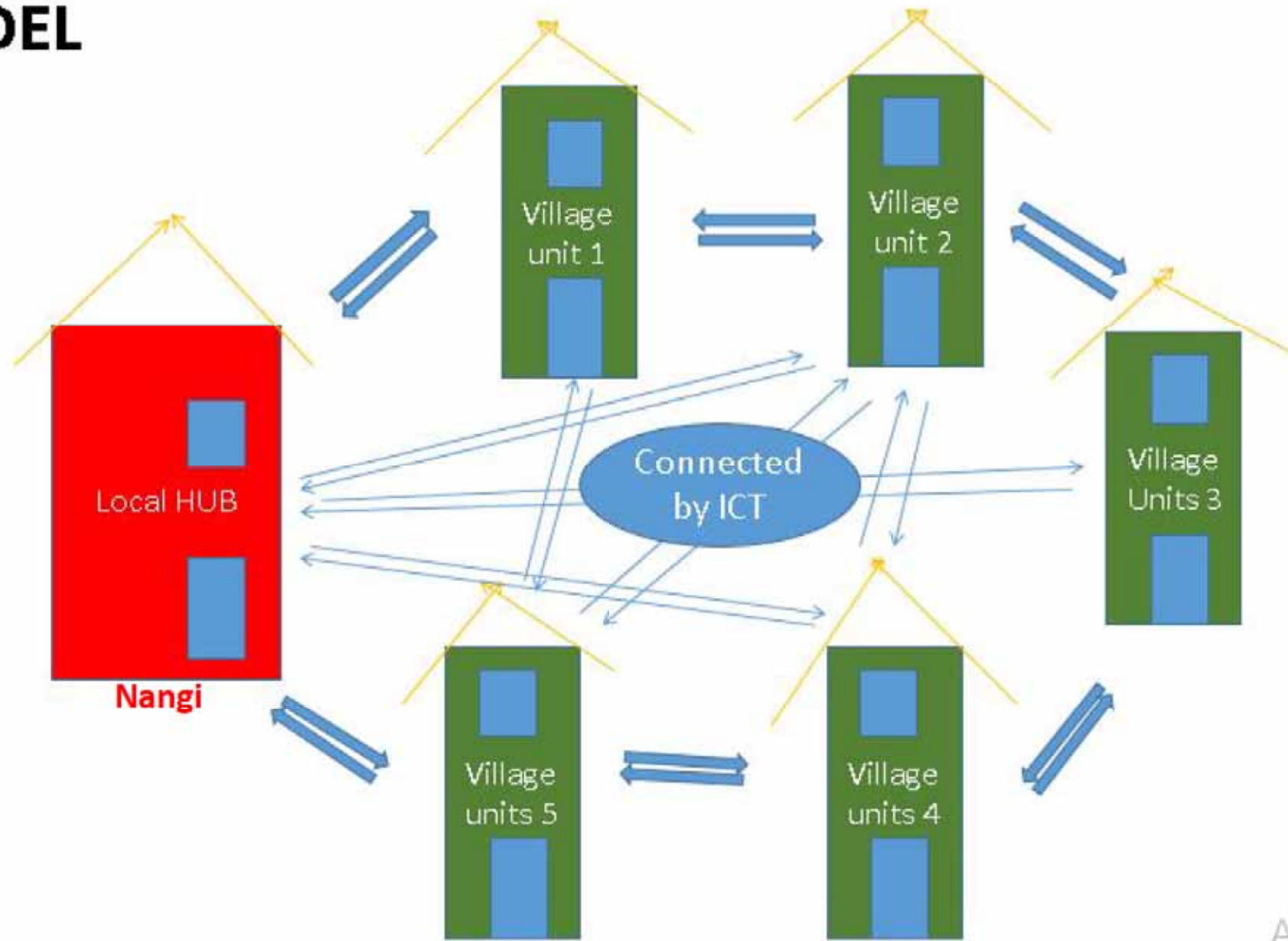## Nangi, Myagdi

Nangi Village, Myagdi, Nepal
2300 m height
Sparsely populated terrains, **'centerless territories'**

MODEL

Telemedicine (TM) and teleconferences (TC)
Polycom device
Cellphones- Viber

Telemedicine (TM) and teleconferences (TC)

APAN47 Conference

Technical challenges

Establishing set-ups: Difficult

Transportation

Connectivity

Power supply

Maintainance

Transportation

Transporting technical items/Medicines/instruments/Patients etc.
Hours of walk across diff villages.

Medical drones
Motorbikes

Connectivity

Frequent break down of connections due to technical problems.

Network ports, radios, routers,

power supply etc.

Lack of expertise

Weather interferences
Forests impede as well
Connection modality: Speed of connections

can improve well with updating and augmentation

Relay Towers at Dip (1,025m), Mohare (3,320m), Lumpek

Power shortage

we rely on solar panels; Grid line to charge batteries.

Financial Challenges

Lack of sustainable funding & reimbursements.

Stakeholders perception and vision towards policy making and investement.

Not enough investment from Gov/NGOs/Private org.

Local gov tend to show off services : in health camps; aids and compensations.

Government trust and support must be incurred.

Need to develop self sustainable or minimally supported models.

Human resources

Bringing health care workers to remote is not an easy task.

Very less number of trained Health care workers

Lesser trainings and orientations locally

Need to eliminate shyness and hesitancy/technophobia

Need of 'multitasking' human resources

Mid-level paramedics be trained/mobilized

Incentives and support to health care workers.

'Trust' issue- Reluctance & Hesitancy

Health workers as well as other people

Perception and attitude towards Telemedicine

A survey (50 participants- Teachers/Students)

   conducted in school-

almost all hope/believe/dream of TM

Inertia of traditional healthcare system: Health care 'in person'.

Technophobia

Fear of loss of professional autonomy among health care workers.

? Medico-legal issues

High adherence and compliance
Just bring people to telemedicine once !!

Need of more orientation and applicability programmes/trainings.

Advocacy & Co-operation with community/authorities/local gov.

86% 86% of consumers who have access to online portals use these platforms for some or all of their communication with their healthcare provider, while 91% will use mobile apps when they're available

80% 80% of customers who have communicated real-time via a mobile app prefer this method to a traditional office visit

Image Source: West Monroe Partners

Local authorities

Local concerned community people

Self-sustainability

Micro insurance/ micro-finance- Reluctance, lack of faith & initiative

Co-operation with local gov bodies/other NGOs/ private organizations

? Public-Private-Prterniship (PPP) model

Training local manpower

Promoting and motivating community and local gov participation and support

'Act timely for self and own children'.

Fund raising

Opportunities and Challenges of a Rural-telemedicine Program in Nepal

Bhatta R,[1] Aryal K,[1] Ellingsen G[1]

[1] The Arctic University of Norway, Norway.

Methods:

interpretive case study approach.

Fifteen stakeholders were interviewed from central level and program sites namely Darchula, Sindhupalchowk and from Patan hospital.

Results:

Findings suggest : **rural-telemedicine programme does offer some benefits**, however **there are still many challenges;**

 infrastructure problems, lack of human resources, competence and financing.

Conclusions:

Overall attitude of the stakeholders involved in delivering telemedicine services was favorable however several loopholes were reported in the existing system.

Telemedicine for Rural and Underserved Communities of Nepal

Ramesh R. Subedi, Carrie B. Peterson, and Sofoklis Kyriazakos

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Carrie Beth Peterson on 23 May 2014

Other major hindrances , **apart from power supply**, are due to:

Technological development,

remote and inaccessible geographic terrains,

non-uniformity in the construction of infrastructure over all the regions,

lack of skilled human resources

lack of timely supply of required man powers,

lack of motivation to the available human resources (lack of incentives, trainings etc.), and

political conflicts.

5 years of e-Health at the IDRC: **Lessons Learned Workshop Report**
Colombo, Sri Lanka , October 26, 2010
15 participants from India, Pakistan, Philippines, Malaysia, Indonesia, Sri Lanka and Canada

The human aspect of eHealth is as important as the technology aspect	• Success lies with the "people" who plan, implement, use and benefit from eHealth projects • Understanding health worker needs is crucial to create readiness, change management and buy-in
Collaboration amongst stakeholders is key to success	• Partner selection should be made based on organizational ability (not individual) – taking into account commitment, capacity, integrity and interest to see project succeed
Government involvement improves the chance for scale and sustainability	• Obtaining government support for eHealth is critical to developing and influencing policies required to achieve scale
Mobiles phones have shown to be an important part of eHealth	• This has shown to be true particularly for real-time access to patient data, data collection and alerting and notification
Enough time for needs assessments and evaluations should be allocated	• The needs assessment phase is crucial to obtain buy-in from research subjects – which may have different needs and requirements

Conclusion

For successful implementation and best use of Telemedicine :

Telemedicine is still evolving in Nepal, Long way to go.

We need more funds and supports before government *really* invests/incorporates TM into health care system.

Human factors are as important as technological barriers.

Assessment of need and sustainability barriers should be done, planned and addressed timely.

Human factors should be addressed in a best pragmatic approach

People are waiting !!

Thank You