HUMANITARIAN TELEMEDICINE

Potential Telemedicine Applications
to Assist Developing Countries in Primary
and Secondary Care

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ESPI

Guided by the belief that every life has equal value………

Average cost of bypass operation in US $: 75 345

Approximate cost of diarrhea treatment in Ghana: $ 20

Density of health workers:

Less than 25 per 10.000 in most of Africa

Over 100 per 10.000 in the US

How to bridge the divide??

Space must be modest: Is normally an enabler, not a goal in itself

A telemedicine link can connect doctors from well-served regions with patients in underserved regions.

A telemedicine link can allow those ready to help to do so!!

Preventing the deaths that can be easily prevented - the role of first diagnosis and primary care

Understanding the issues:

. The cultural difficulties

. Putting the patient and the medical need first!

. Technology is not a problem

. Maintenance and sustainable solutions are

. The fit with the local health system

. Do not create competition to local doctors

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Be cautious with good ideas: the need
for proto-typing and randomized
control trials

The ethics of trying!

Defining Humanitarian Telemedicine

Definition:

Humanitarian telemedicine can be understood as:

"the provision of telemedicine (primary and/or secondary) to developing countries in times of immediate and/or permanent medical need with the aim of improving personal health".

DEVELOPING COUNTRIES
- STATES
- INTERNATIONAL ORGANISATIONS
- NGOs
- PRIVATE ENTITIES

PARTNERSHIP OPPORTUNITIES

INDUSTRIALISED COUNTRIES
- STATES
- INTERNATIONAL ORGANISATIONS
- NGOs
- PRIVATE ENTITIES

DEVELOPING COUNTRIES
-> HUMANITARIAN SITUATIONS OF CRISIS
-> PERMANENT SITUATION OF HARDSHIP

Primary care

Secondary care

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Benefits and Opportunities of Humanitarian Telemedicine

FOR THE PATIENT

➢ Better access to medical care

➢ Improved quality of medical care

➢ Travel and hospitalisation costs are reduced (substantial especially in remote areas)

FOR THE HEALTH PROFESSIONALS

➢ De-isolation of health professionals

➢ Greater access and exchange of medical knowledge

➢ More accurate diagnostic and generally improvement of medical knowledge

CONSULTATION

Telecommunication satellites

Mobile units

Expert site
Shared telemedicine unit

Isolated and proximity sites [Care network]

English translation from CNES.fr, 2008

Benefits and opportunities of Humanitarian Telemedicine

GENERALLY

➢ Better health contributes to global development and empowerment of local populations

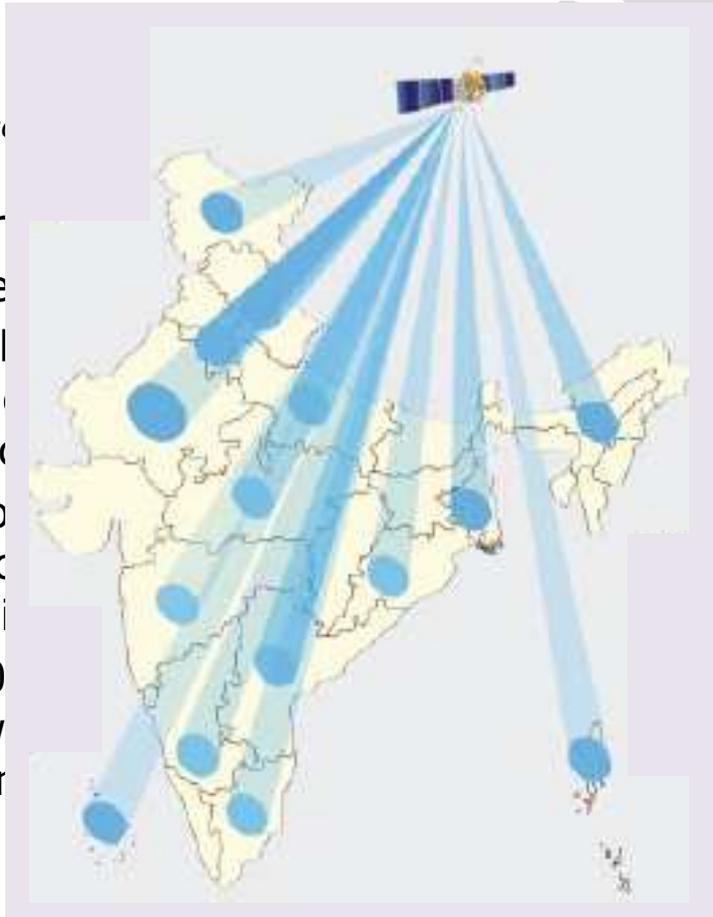➢ Increased access to health care is contributing to the needs of global health agenda

But most importantly, **it saves lives!**

Examples of Sucessful Secondary Care Humanitarian Telemedicine Projects

ISRO
In collaboration with the Apollo Hospitals Network

(Rése...   e)

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➢80...
now...
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carried out *Source: http://raft.globalhealthforum.net/, 2014*

Source: isro.org, 2005

Need and Opportunity for Primary Care

Burden of communicable and non-communicable diseases

+

Unequal distribution of health professionals

=

Permanent situation of medical hardship

+

Technological availability

=

Opportunity for Primary Care Humanitarian Telemedicine

AID
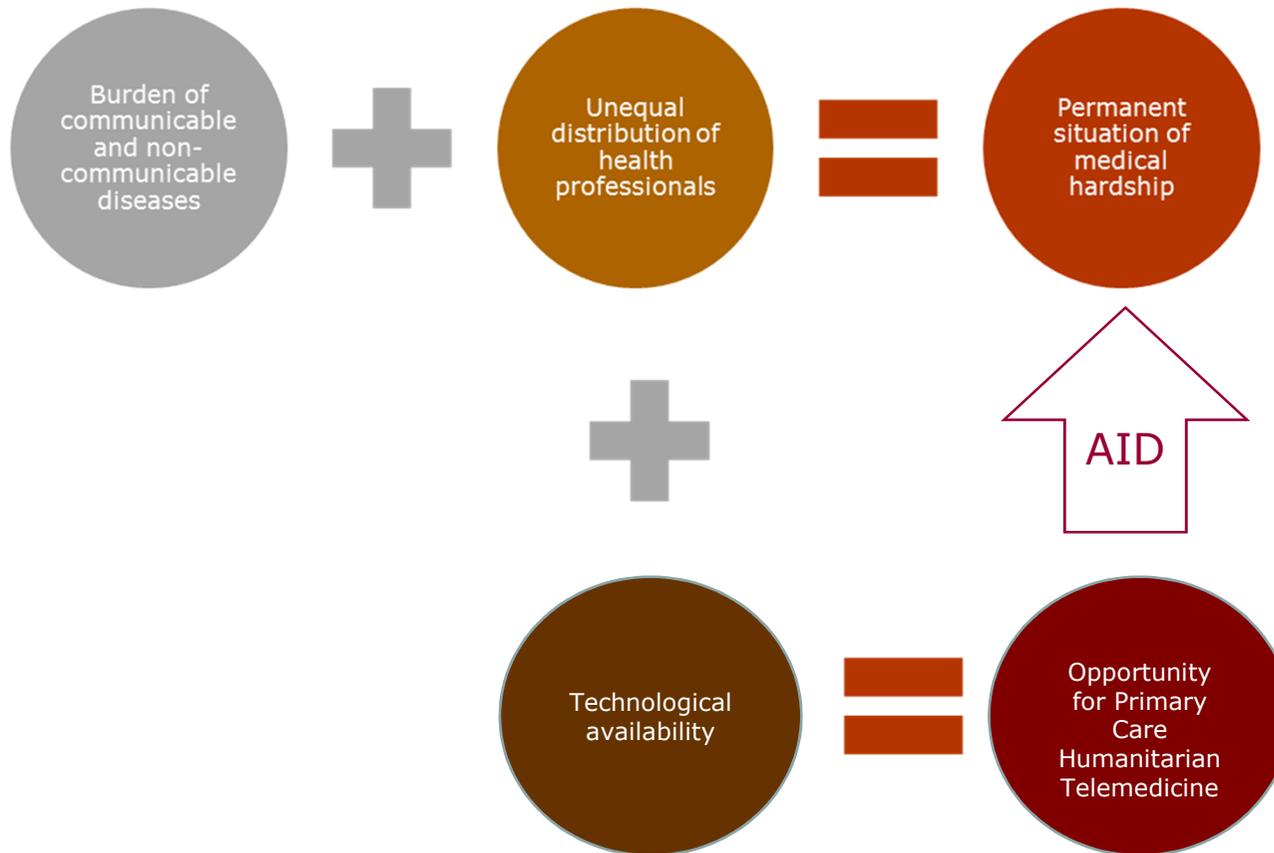
Potential pilot projects in the field of Primary Care Humanitarian Telemedicine

PROTOTYPE OPTION 1	PROTOTYPE OPTION 2	PROTOTYPE OPTION 3
Fully mobile unit	Unit operating independently in rural settings	Unit operating alongside local healthcare facilities
≫ Best patient reach	≫ Good patient reach	≫ Poorest patient reach
≫ Technological autonomy	≫ Possibility of technological autonomy	≫ Technological dependence
≫ Highest costs	≫ High costs	≫ Lower costs
≫ Risk of difficult integration	≫ Risk of difficult integration	≫ Possible adverse bias in local health system

Practical Challenges

- ➤ TECHNOLOGICAL
  - ➤ The robustness, availability, compatibility and reliability of technology can prove problematic
  - ➤ Technologically demanding projects can raise project costs

- ➤ LEGAL
  - ➤ Data privacy (confidentiality, protection and integrity of information) can be at risk when it is shared by multiple actors
  - ➤ Responsibility, and liability of doctors. Which law is applicable?

- ➤ CULTURAL
  - ➤ Culture differences between patient and doctor; i.e.: Language, culture regarding health, perception issues
  - ➤ Aversion to not having a face-to-face contact with the patient

- ➤ SUSTAINABILITY
  - ➤ Lack of evaluation and assessment in many projects
  - ➤ Sustainability issues, especially if the local actors are not involved enough

Evaluations & potential partnerships

➢ The key component of the prototype phase is to quantify the effects of the project, and to evaluate whether it is scalable and replicable.

➢ Each type of unit presents advantages and disadvantages with regards to evaluation.

➢ Research partnerships will need to be established in order to successfully evaluate the carried out prototype.

➢ Medical partnerships will aim to ensure the best possible care provision for the host population of the project.

  ➢ One such partnership would link patients with expatriate doctors native of the same countries, but who are practicing in Europe or North America

Conclusions and recommendations

OPPORTUNITIES

➢ Primary care humanitarian telemedicine should be further explored

➢ Humanitarian telemedicine, fostered by technological advances, should continue to be utilised to improve health care for those the most in need

➢ Every low-hanging fruit should be considered

➢ To test the validity of primary care humanitarian telemedicine, pilot projects need to be developed

CHALLENGES

➢ As humanitarian projects based on partnerships with local actors are generally more successful and sustainable, humanitarian telemedicine projects should follow this lead.

➢ A number of important cultural considerations, from host to donor populations, should be accounted for.

➢ In order to make such projects successful, the medical needs of end users must be prioritised.

➢ Evaluation is critical for the success of such projects.

An event will be organised at ESPI to explore the three types of prototypes proposed, and ultimately go forward with one of them.

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Thank you for your attention.

We will gladly address any questions and/or comments

Visit www.espi.or.at for the full Humanitarian Telemedicine report