HUMANITARIAN TELEMEDICINE REPORT

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

UN COPUOS

Scientific and Technical Subcommittee
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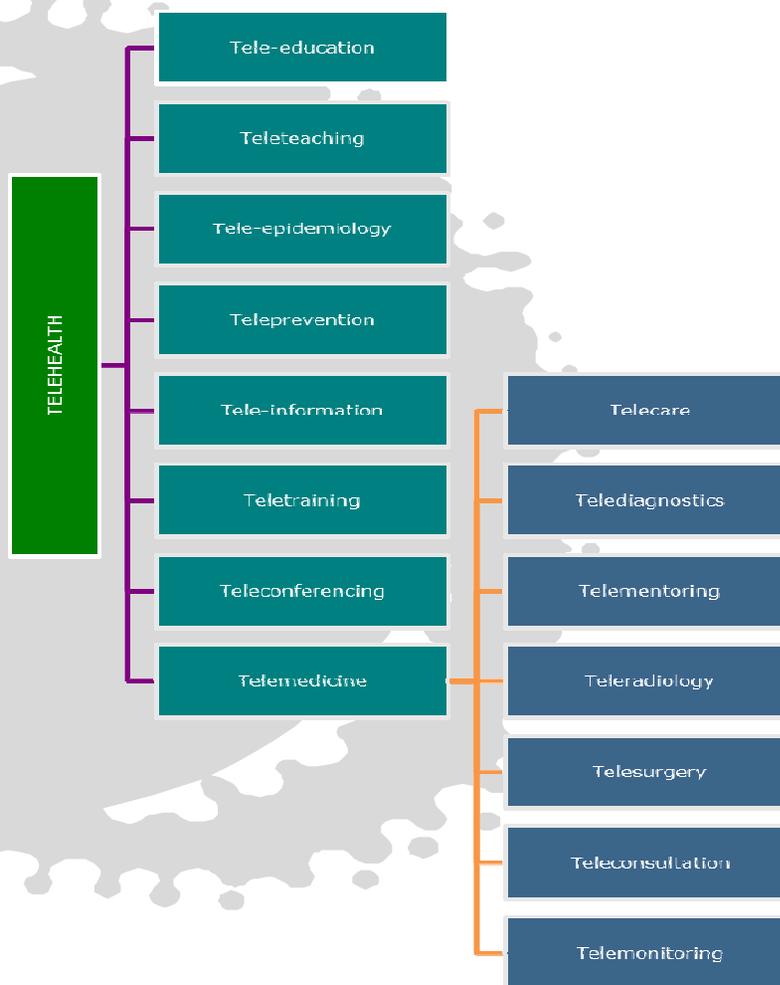*Vienna, Austria*

From Telemedicine...

Definition:

"The delivery at a distance of primary and/or secondary care between a medical professional and a patient or between two or more medical professionals by way of synchronous or asynchronous transmission and communication".

Where:

Primary care consists of medical treatment provided by medical generalists directly to patients, and
Secondary care refers to a treatment dispensed by specialised doctors.

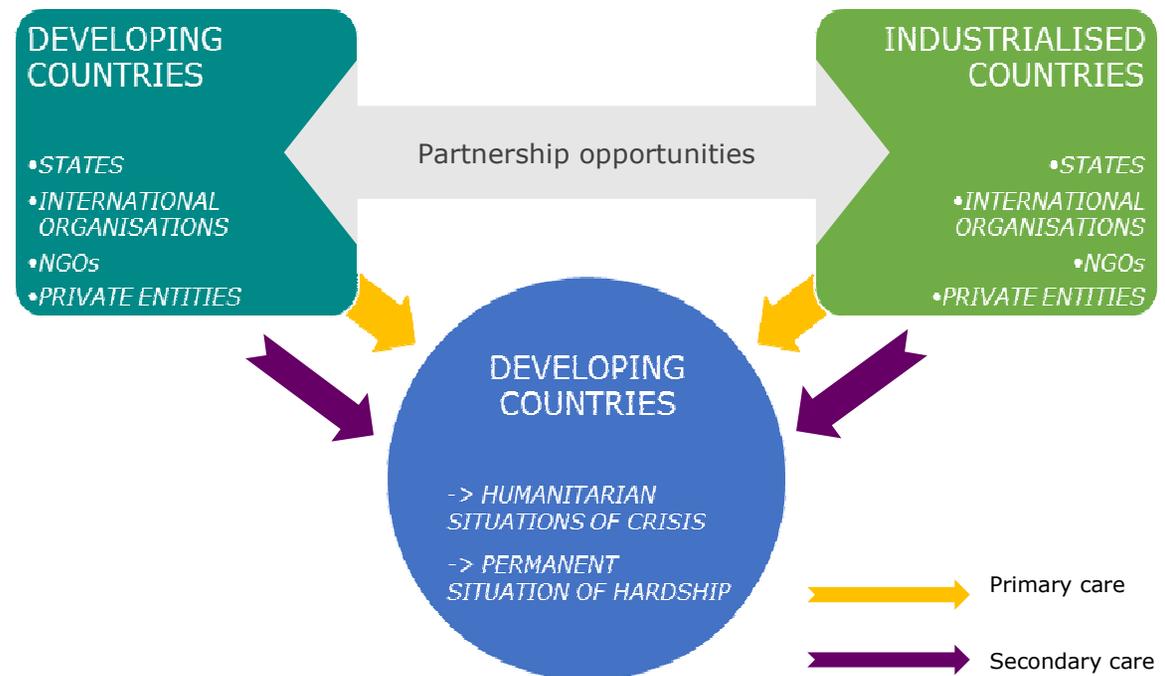Telemedicine is part of a wider concept referred to as telehealth, and includes applications.

TELEHEALTH
- Tele-education
- Teleteaching
- Tele-epidemiology
- Teleprevention
- Tele-information
- Teletraining
- Teleconferencing
- Telemedicine
  - Telecare
  - Telediagnostics
  - Telementoring
  - Teleradiology
  - Telesurgery
  - Teleconsultation
  - Telemonitoring

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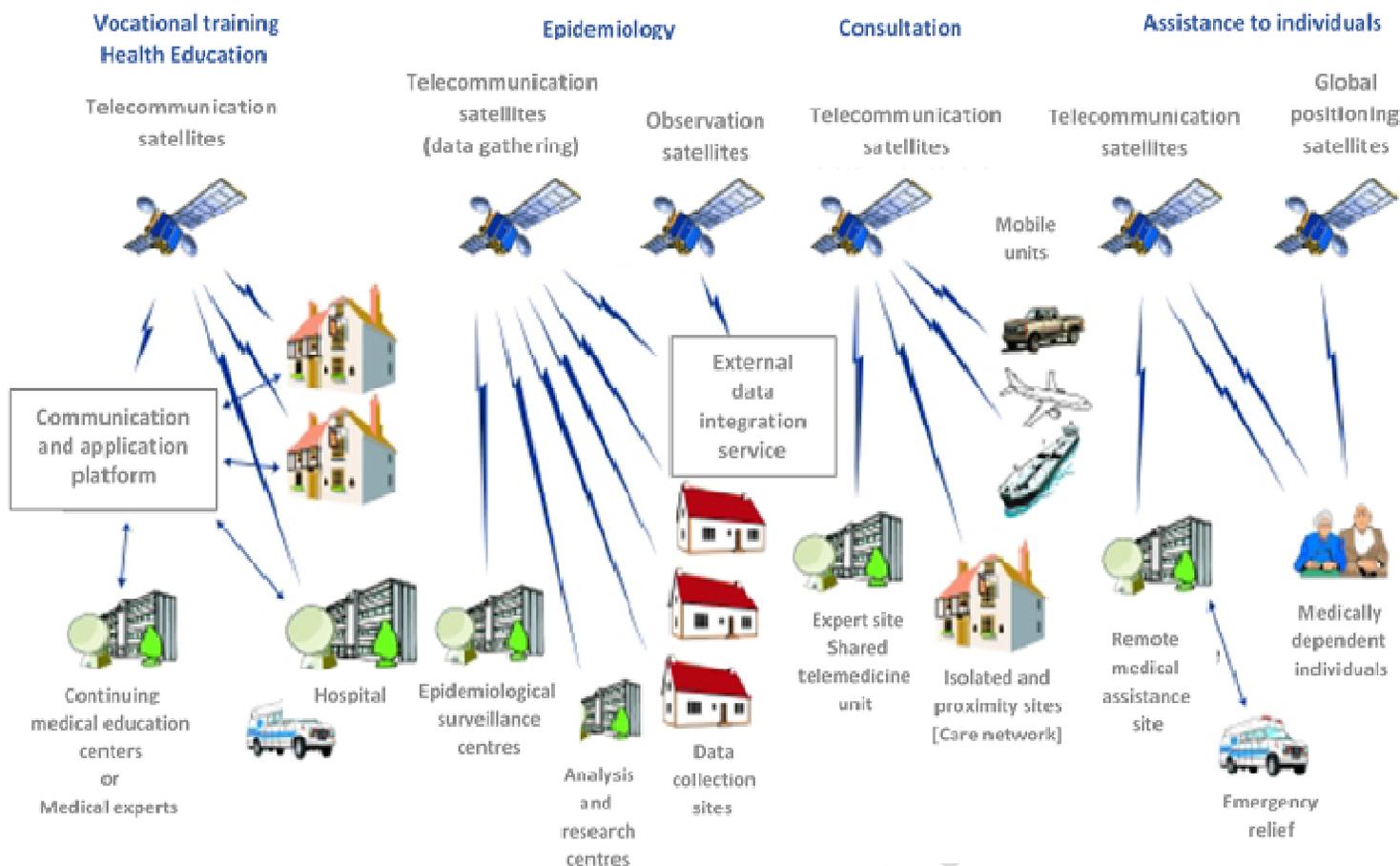European Space Policy Institute

… To 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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Role of Satellites and Space in Telehealth and Telemedicine

English translation from CNES.fr 2008

Examples of Sucessful Secondary Care Humanitarian Telemedicine Projects

RAFT

*(Réseau en Afrique Francophone pour la Télémédecine)*

- First established in 2001
- Developed by the Geneva University Hospitals, under Professor Geissbuhler
- Focuses on telediagnostics and tele-education
- Now present in over 20 countries in Africa, and the concept is being replicated on other continents
- 80 percent of the consultations are now carried out to, and from, African countries directly

ISRO

In collaboration with the Apollo Hospitals Network

- First project launched in 1998
- Started with the establishment of a secondary care hospital in a rural setting linked to a Chennai-based hospital via VSAT connectivity
- ISRO has now established a satellite-based telemedicine network (through INSAT):
  - 400 nodes (330 remote/rural hospitals connected to 52 specialty hospitals, and 14 mobile units)
  - Over 400,000 teleconsultations carried out (data from 2009)

Need and Opportunity for Primary Care

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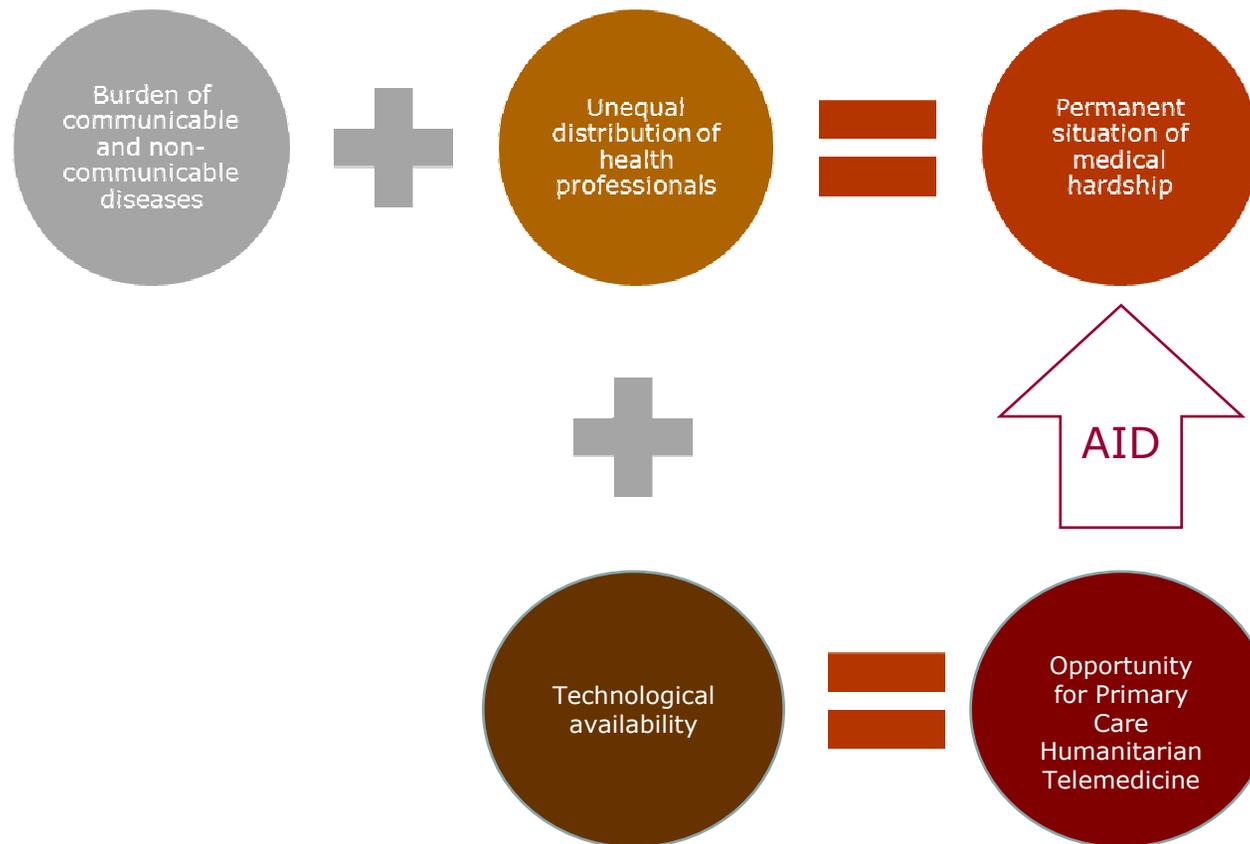
Potential pilot projects in the field of Primary Care Humanitarian Telemedicine

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

Evaluations & potential partnerships

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

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

3. Partnerships will need to be established in order to successfully carry out and evaluate the prototype.

Conclusions and recommendations

Sample of the recommendations found in the report:

1. HTM, fostered by technological advances, should continue to be utilised to improve health care for those most in need.

2. In order to make such projects successful, the medical needs of end users must be prioritised, and partnerships with local health actors must be established.

3. Primary care Humanitarian Telemedicine represents a field that should be further explored. Moreover, to test the validity of primary care HTM, pilot projects need to be developed and evaluated.

Future ESPI developments:

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