SOUTHWEST TELEHEALTH TRC RESOURCE · CENTER™

2023

A Brave New World:

USING TELEMEDICINE TO ADDRESS CHILDREN'S HEALTH IN THE GLOBAL COMMUNITY

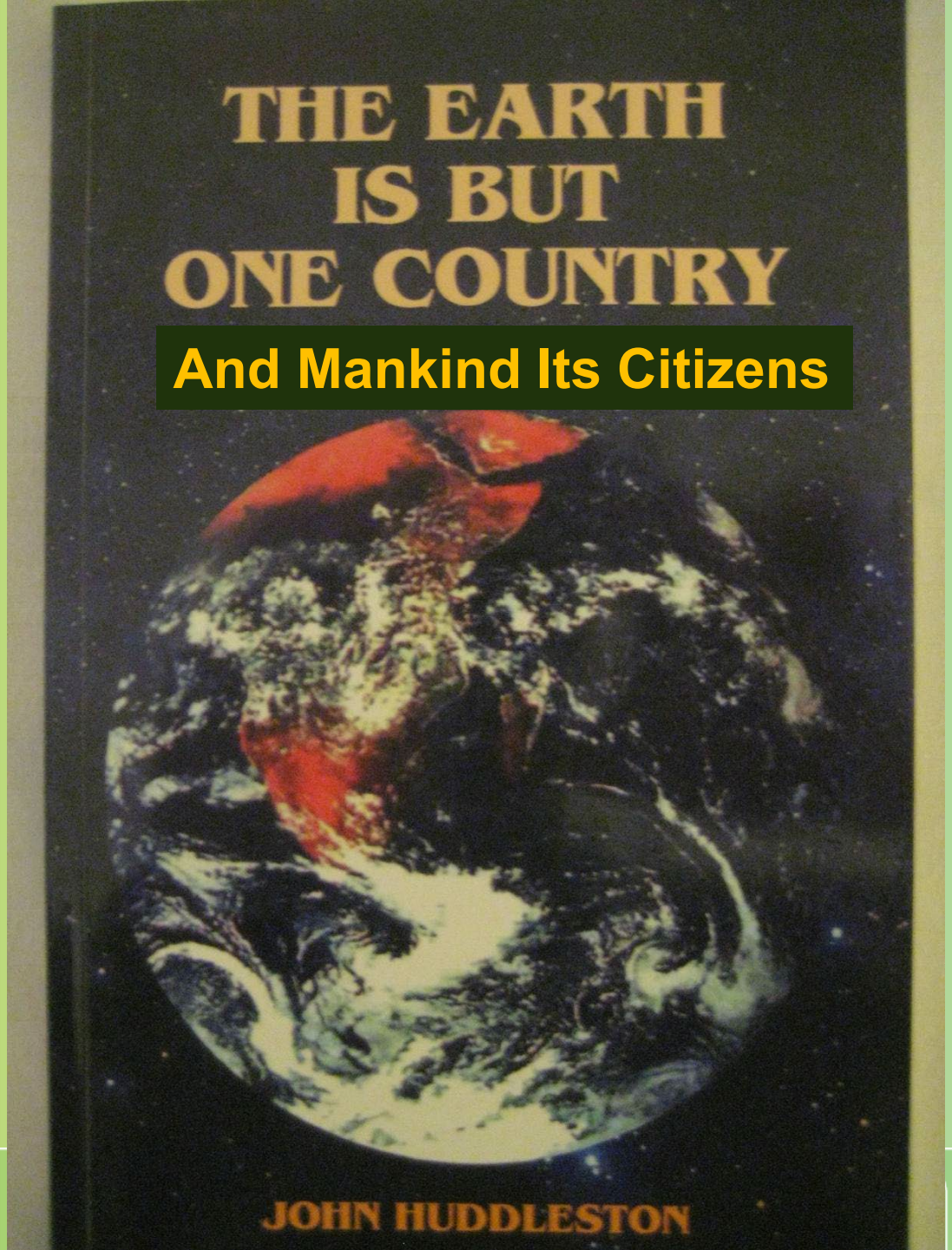
Dale C. Alverson, MD, FAAP, FATA

Professor Emeritus
University of New Mexico
CMIO, SYNCRONYS
Albuquerque, NM USA

International Telemedicine and eHealth: Transforming Systems of Care in the Global Community

Reasons to do International Telehealth

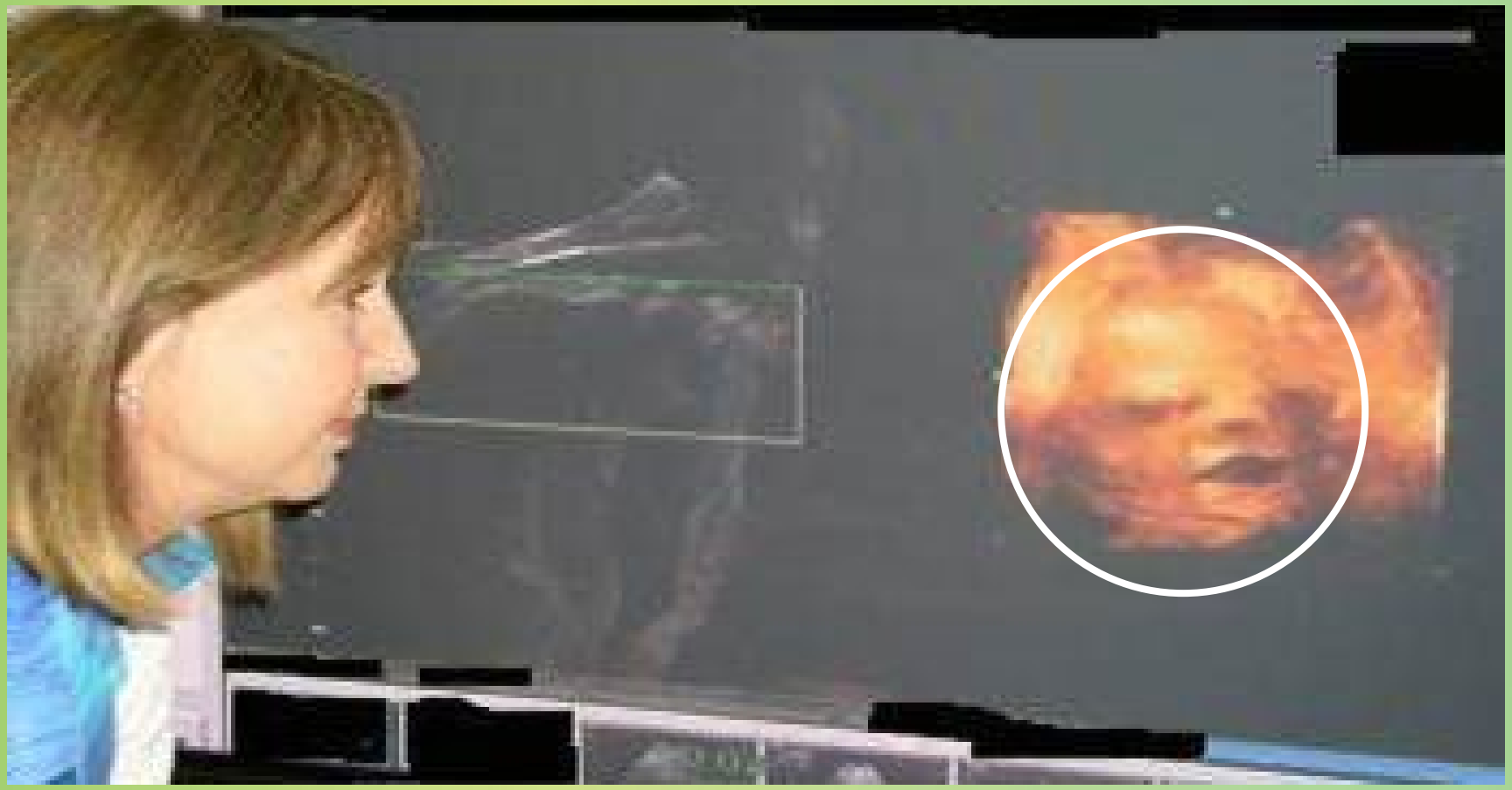
Most health issues are global!


THE EARTH
IS BUT
ONE COUNTRY
And Mankind Its Citizens
JOHN HUDDLESTON

The Brave New World

- During this remarkable period of health system transformation advanced broadband communication networks of networks along with the advances in technologies will be critical in supporting expanding health applications:
  - telemedicine,
  - health information exchange,
  - remote monitoring,
  - knowledge sharing, education, training
  - research
  - public health
  - disaster preparedness and response

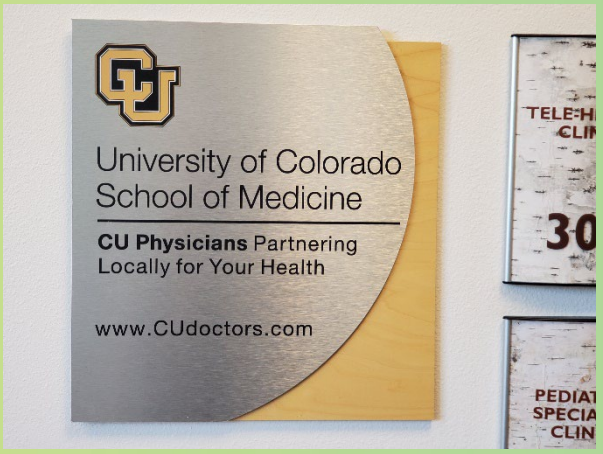
Direct Patient Care



Maternal Fetal Medicine-High Risk Pregnancy

Providing Specialty Services

- In the Office: The “Durango Model” complementing in-person specialty care and consultation with virtual care (Taos, NM)



- Subspecialty consultations between specialists and filling gaps for unusual medical problems and limited local resources or capacity UNM-CU: “The Bone Marrow Patient”

Combining Training and Education along with Direct Patient Consultation and Triage

https://emed.unm.edu/pem/programs/child-ready-program/program-information/index.html

CHILD READY

Engaging Communities to Prepare for Pediatric Emergencies

- At the University of New Mexico, the Virtual Pediatric Emergency Department Telehealth Network program connects hospitals, providers, and patients
  - Education and simulation
  - Triage and consultation

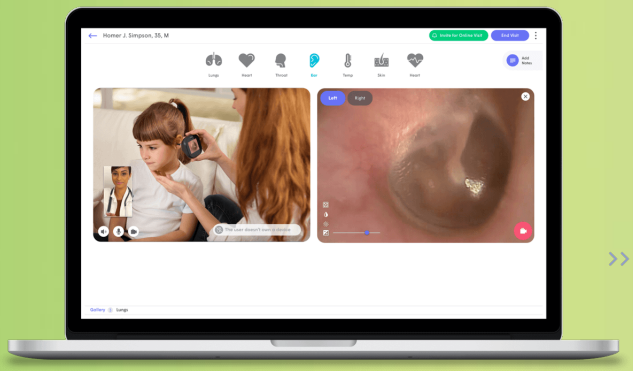
Other Triage Models

- Neonatal Transport and The Mayo Model
  - Triage and stabilization for NICU consults or transfers/transports

Direct to the Patient Telemedicine at Home

- Using direct videoconference links for patient evaluation and management
- Need to Follow Reasonable Standards of Care similar to an in-person exam
- Need to educate parents in assisting the examination

Smart Phone “Snap-Ons” or Blue Tooth to Mobile Devices



Health Org.

Tyto Platform

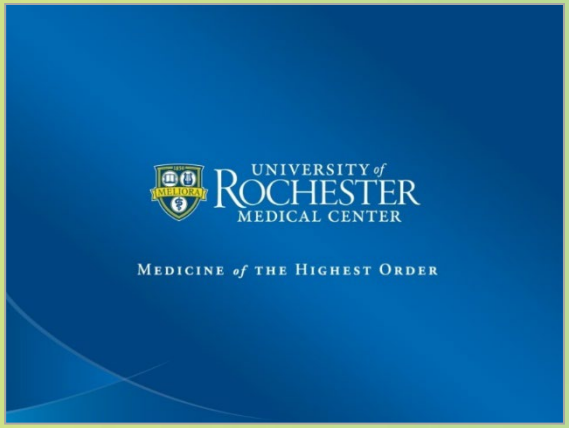
Clinician Dashboard

Exam Device and App

Video
Family Visitation

School-Based Health Centers

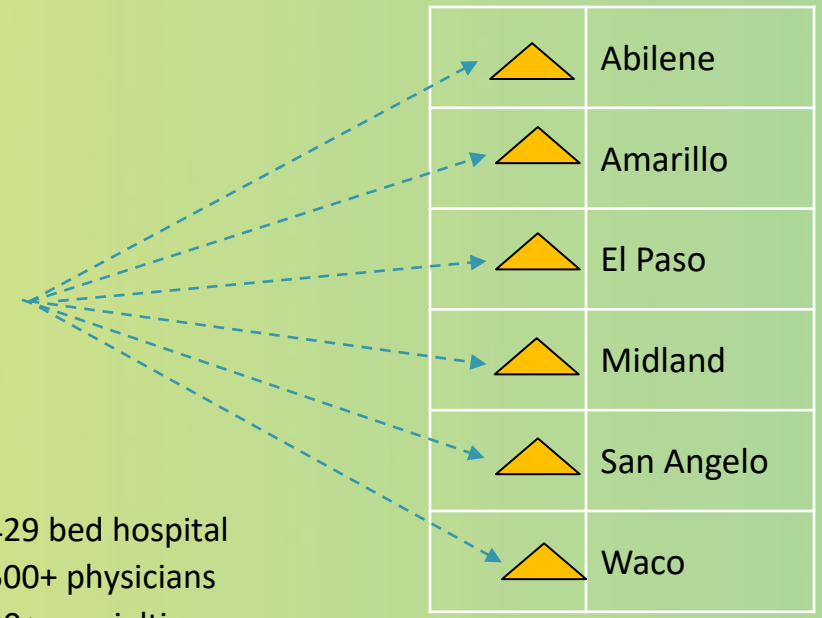
- Telehealth assistants at the school or child care center provide the link to examine the eyes, ears, throat, lungs, and skin
- Videoconferencing provides the “face-to-face” interaction
- “Getting providers to think of their desktop computer as an exam room is the trick”



School Based Health Centers

Cook Children's: Tele-Genetics

- 429 bed hospital
- 500+ physicians
- 30+ specialties
- Regional clinics hours away



“*Tele*-psychiatry”

Involving the Adolescent Patient

Reaching the Young Patient

Engaging the Younger Patient

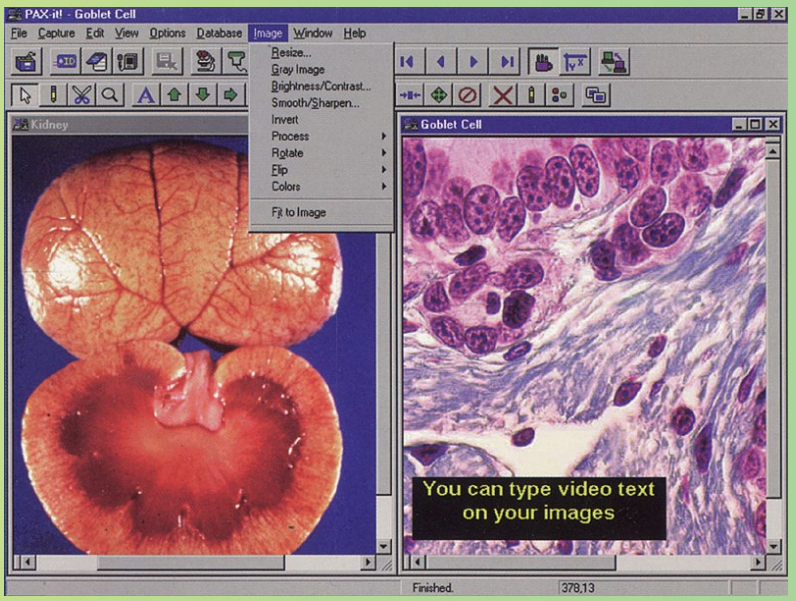
The Child and the Family

Case Reviews for Consultation and Education

“Store and Forward”

- Capturing an image and ***storing*** it to then be ***forwarded*** for review by a medical specialists
- Examples include teleradiology, telepathology and teledermatology, tele-ophthalmology and retinal scans

Teleradiology and Image Transfer



Web-Based Portals

Store and Forward Tele-dermatology

Diabetic Retinopathy, Retinopathy of Prematurity and Retinal Scans

Web-based Solutions:

Swinfen Charitable Trust (SCT)
Medecins Sans Frontieres (MSF)

Local healthcare providers can send clinical photos, a patient's history and any other relevant material (such as X-rays, Ultrasound. photos). A secure web-based messaging system is used (see example below). This allows referring practitioners access to a panel of specialists in a wide range of disciplines to obtain possible diagnoses and management recommendations

Example from SCT

(www.swinfencharitabletrust.org)

(https://www.msf.org)

Cell Phone Applications

Child Ready Home Safety App

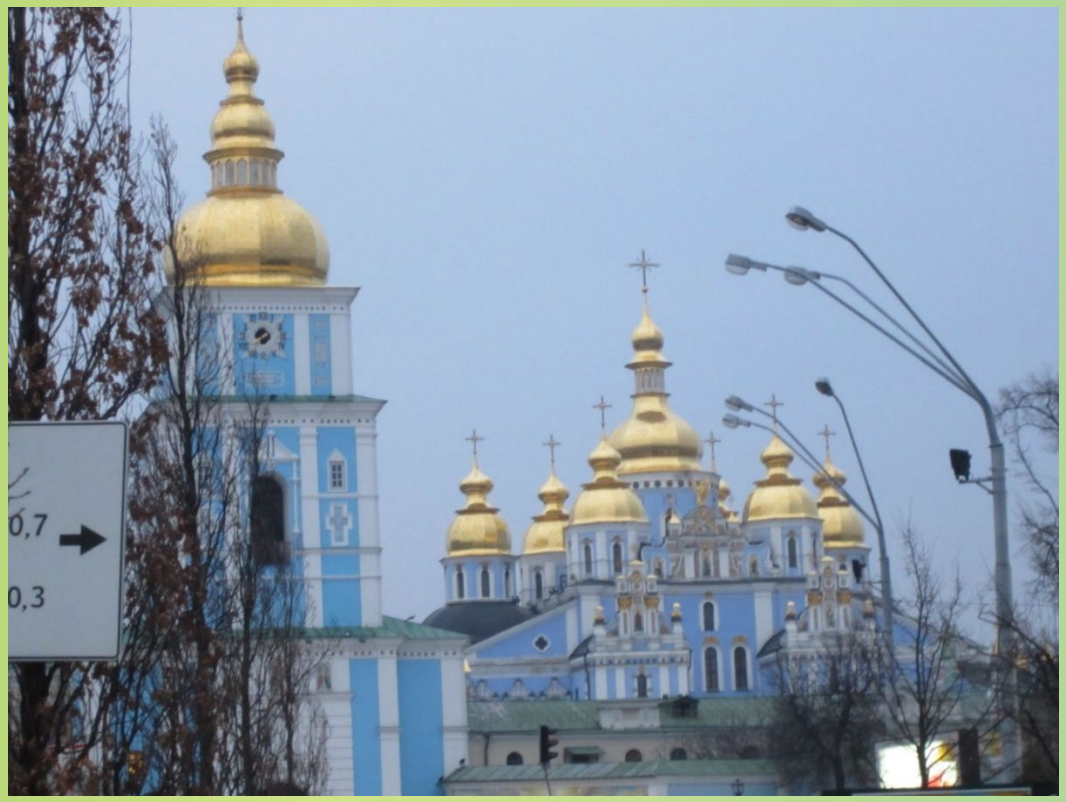
Distributed Medical Intelligence
Sharing Knowledge and Experience

- Knowledge Sharing Networks/Just in Time/On Demand
- Evidence based-Best Practices
- Put into Realistic Context
- Based on Available Resources
- Addressing Mutual Needs and Interests
- Applying the most Appropriate Technologies

Additional Pediatric Telehealth Initiatives

- **SPROUT**: Supporting Pediatric Research on Outcomes and Utilization of Telehealth
  - Collaborative Telehealth Research Network
- **SEARCH**: Society for Education and the Advancement of Research in Connected Health
- **American Telemedicine Association**: **http://www.americantelemed.org**
  - Pediatric SIG,
  - International SIG
- **American Academy Of Pediatrics**:
  - Section On Telehealth Care (SOTC) and
  - Council On Clinical Information Technology (COCIT)
- **HRSA Regional Telehealth Resource Centers**:
  • Southwest Telehealth Resource Center | Your Connection to Telehealth in the Southwest (southwesttrc.org)

UKRAINE



https://www.telehealth4ukraine.org

AIMEE/Vsee(Providing Free Telehealth for Ukraine Soldiers, Civilians, and Refugees)

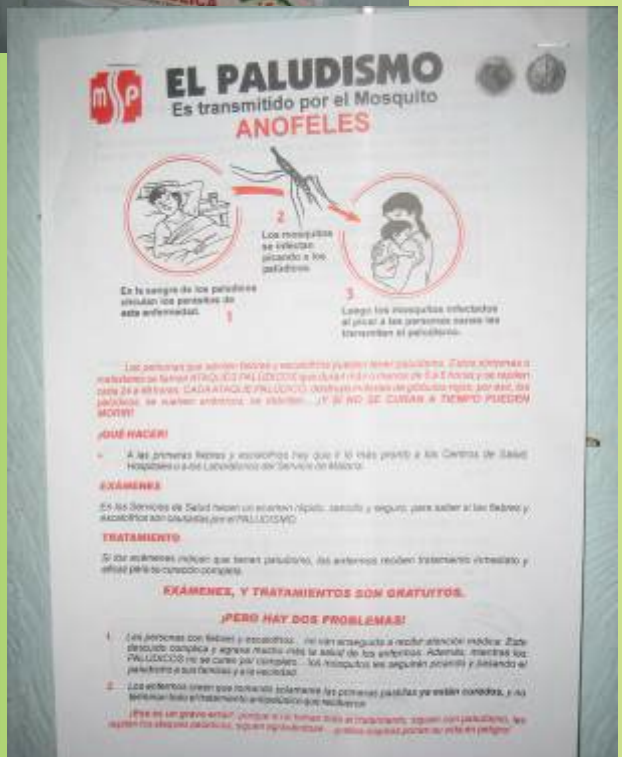
World Telehealth Iniatives

Tele-Supervision/Tele-mentoring

Ecuador

La Lancha Medica en la Amazonia

Enduro



UNION

International Union Against TB

Preventive Medicine and Integrating Community Health Workers/ Promotores de Salud

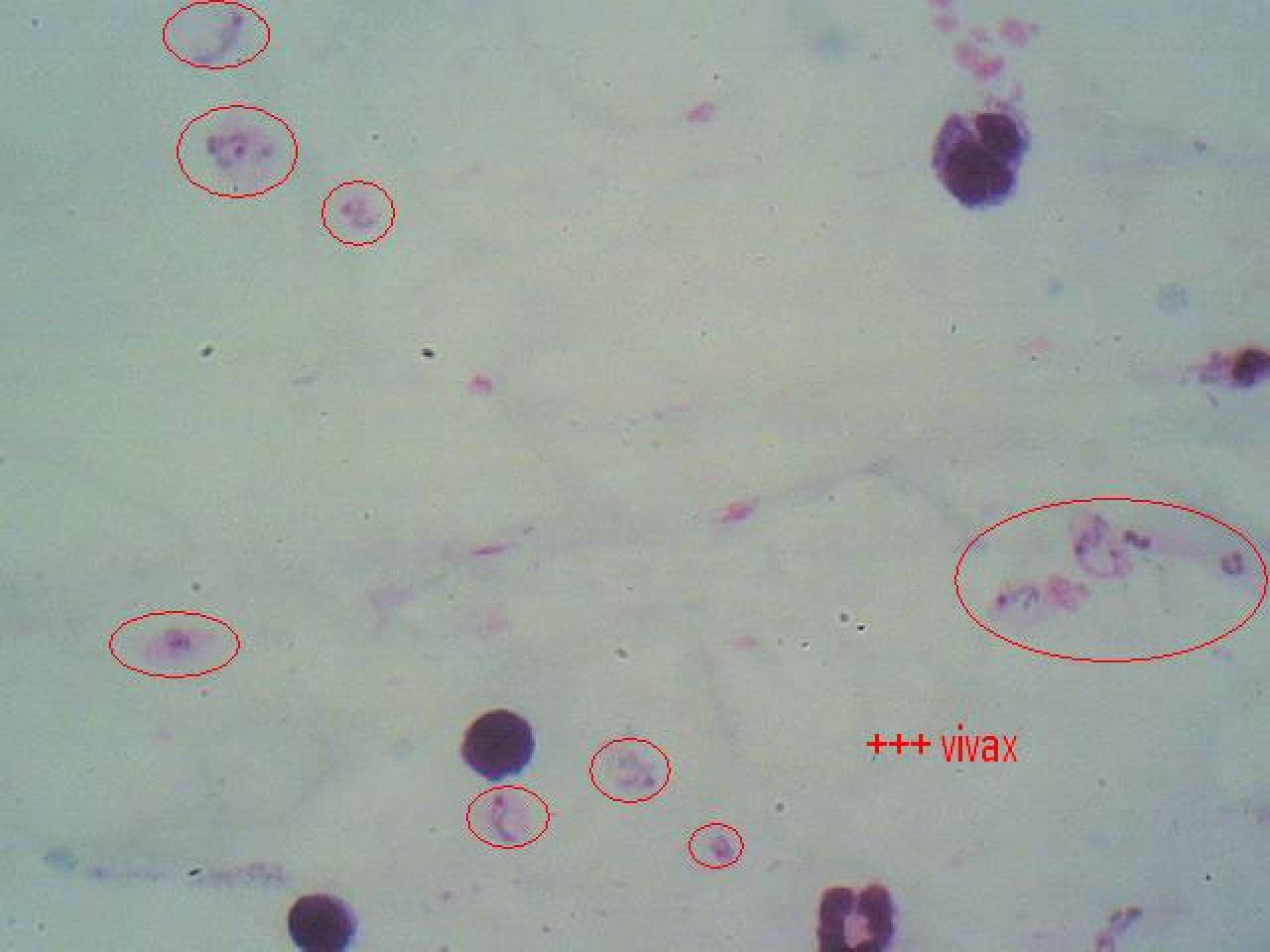
San Cristóbal, Galápagos

1350 Km.

UTE

NUEVO ROCAFUERTE

850 Km.


+++ vivax

Exchange of Students and Faculty

NEPAL

DHULIKHEL HOSPITAL
KATHMANDU UNIVERSITY
TEACHING HOSPITAL
DHULIKHEL, KAVRE

FAR ET
SUCTION

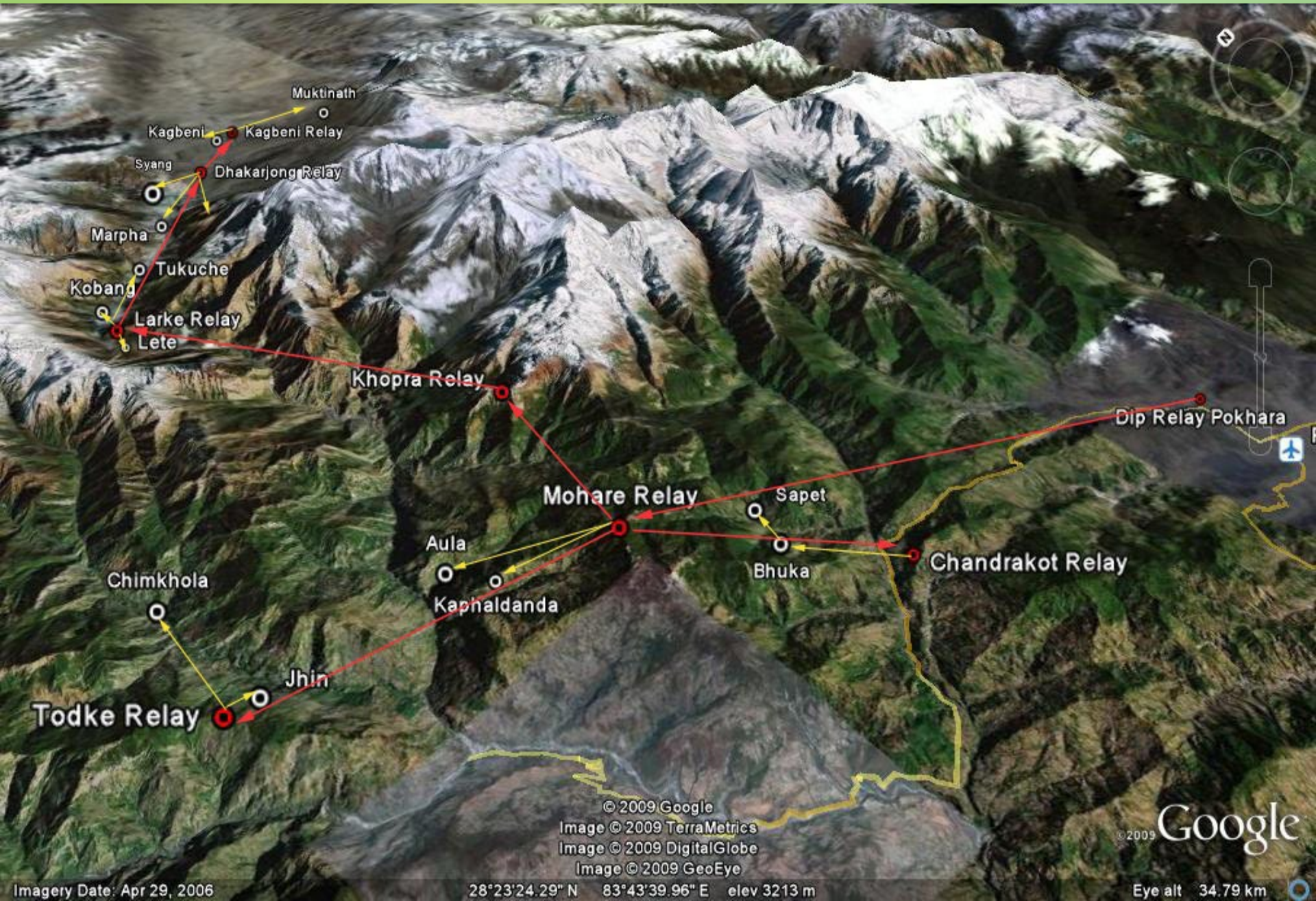
adidas

Nepal's network

Putting a Grid Antenna

Chhukung Relay at 5,100 m

Mustang Network



IRAN

Azerbaijan
BAKU
Caspian Sea
Turkmenistan
Uzbekistan
ASHGABAT
Turkey
TEHRAN
Semnan
Mashhad
Esfahan
Khorasan
Afghanistan
Iraq
BAGHDAD
Yazd
Kerman
Shiraz
Fars
KUWAIT
Saudi Arabia
Pakistan
Sistan va Baluchestan
Bandar Abbas
Persian Gulf
DOHA
Qatar
ABU DHABI
United Arab Emirates
Gulf of Oman
Arabian Sea
Oman
MUSCAT
Shia
Sunni
Persian
Azeri
Kurd
Arab
Lur
Baloch
Qashqai
Turkmen
Gilaki
Mazandarani
Talysh
Other
Sparsely populated
Province boundary

بیمارستان الکترونیکی، بیمارستان آینده
سمپوزیوم بین المللی
بیمارستان الکترونیکی و تله مدیسین
و جشنواره برترین بیمارستان الکترونیکی
۱۹ و ۲۰ مهر ماه ۸۹
دانشکده پزشکی دانشگاه تهران
Dr. Karen Rheuban
Alice Watland
Dr. Guntram Ickenstein
Jonathan D.Linko
Dena Paskin
Dr. Nina Antoniotti
Dr. Dale Alverson
ثبت نام پیامکی: لطفاً نام و محل خدمت خود را به شماره ۱۰۰۰۰۲۹۷۲۳۹۸۱۰ پیامک (SMS) کنید
تلفن دبیرخانه: ۸۸۸۳۲۷۷۷ - ۰۹۳۵۹۷۰۰۳۶۱ ثبت نام اینترنتی: www.ehconf.ir
design: f.dowodi

Help
krheuban
Add people
Personalize
6 new
07:34
CINE
End call
07:34
Mute
Turn off video
Check settings
Can u hear us?
Be quiet for now and don't use thumbs up (not good in Iran)
I could tell it was nina even before you moved the camera
Send message
Share
Extras

INDIA

Traditional Medicine

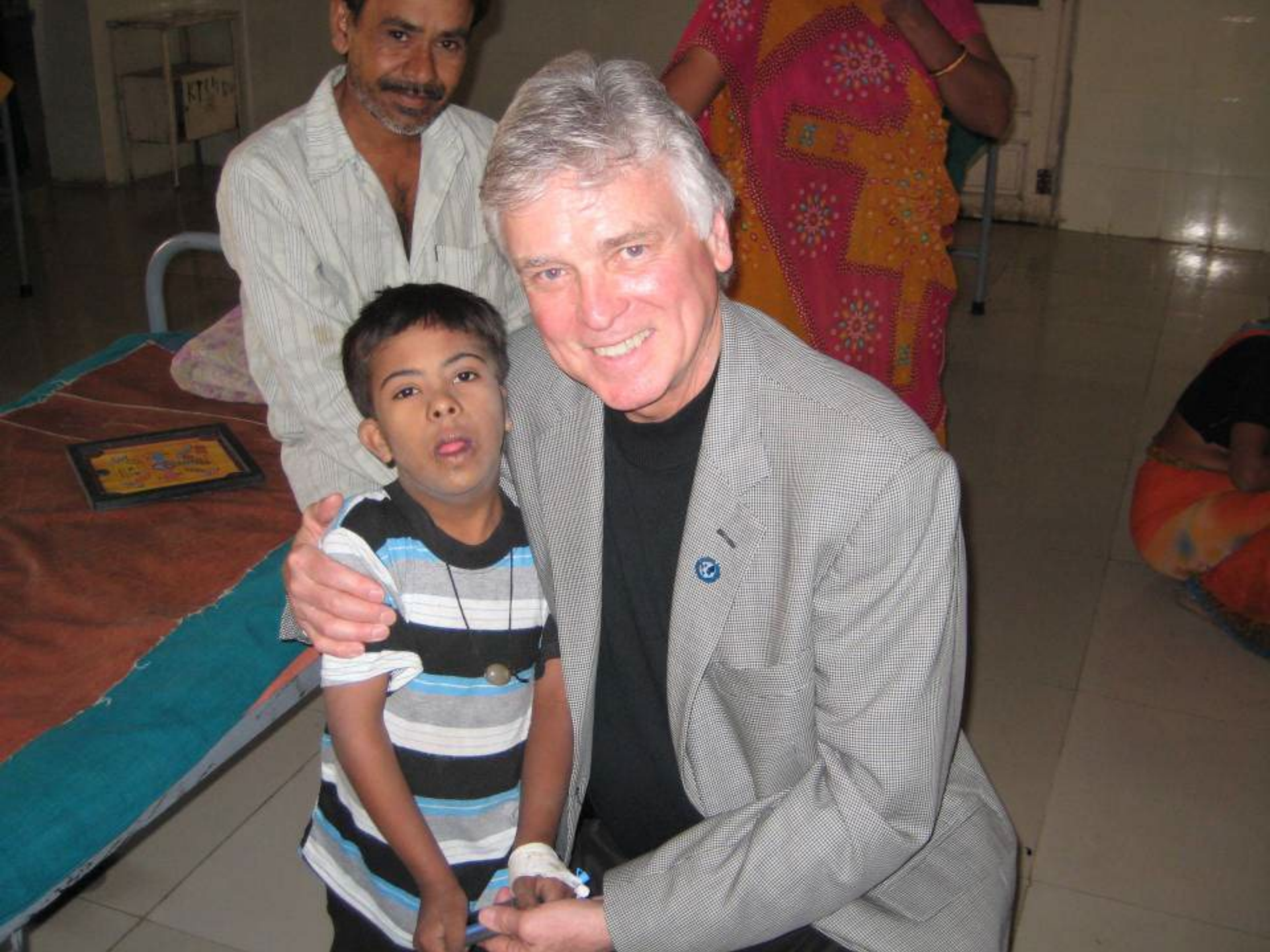
Next Steps

- Develop Concrete Programs where Telehealth adds value and mutual benefit
- Utilize emerging new information communication technologies that can provide systems for global connected health and cultural exchange.

Conclusions

Together we have opportunities to integrate Telehealth in a manner that can provide platforms for greater continuity in collaborative efforts within and between countries:

- Clinical service and consultation
- Public Health
- Education and training
- Research



Questions?

dale.c.alverson@gmail.com