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A Brave New World: USING TELEMEDICINE TO ADDRESS CHILDREN'S HEALTH IN THE GLOBAL COMMUNITY

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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



*Engaging Communities to Prepare
for Pediatric Emergencies*



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



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

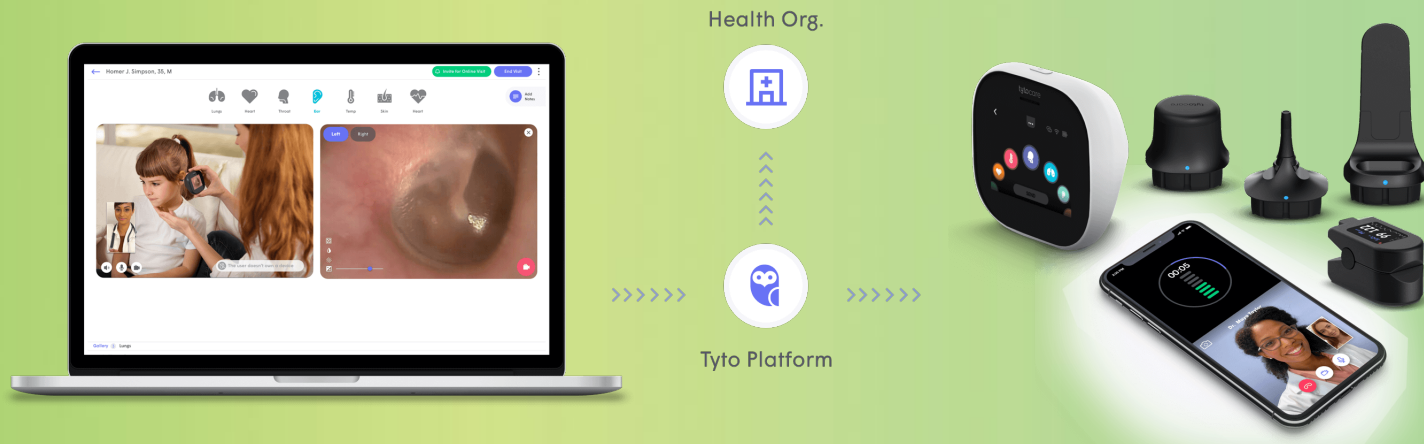


Direct to the Patient Telemedicine at Home

- 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



Clinician Dashboard



Exam Device and App

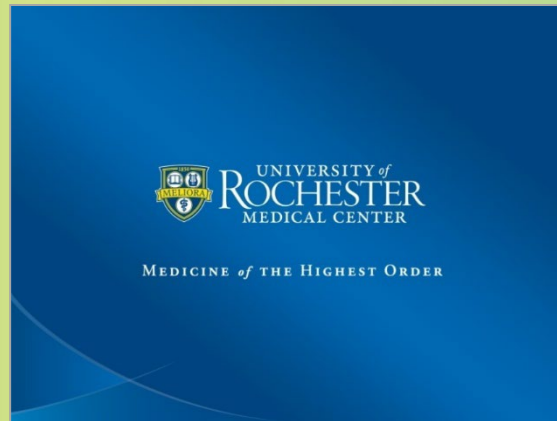


Video Family Visitation



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

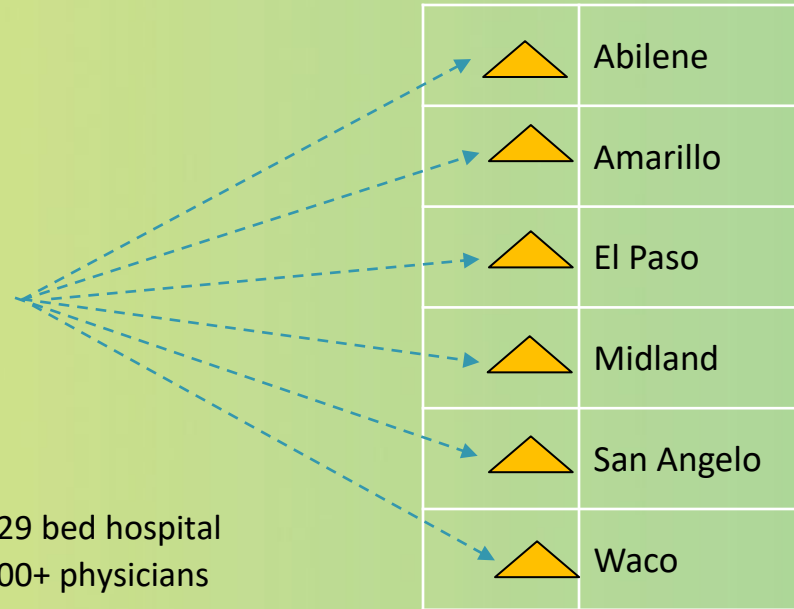


1.15.2002

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

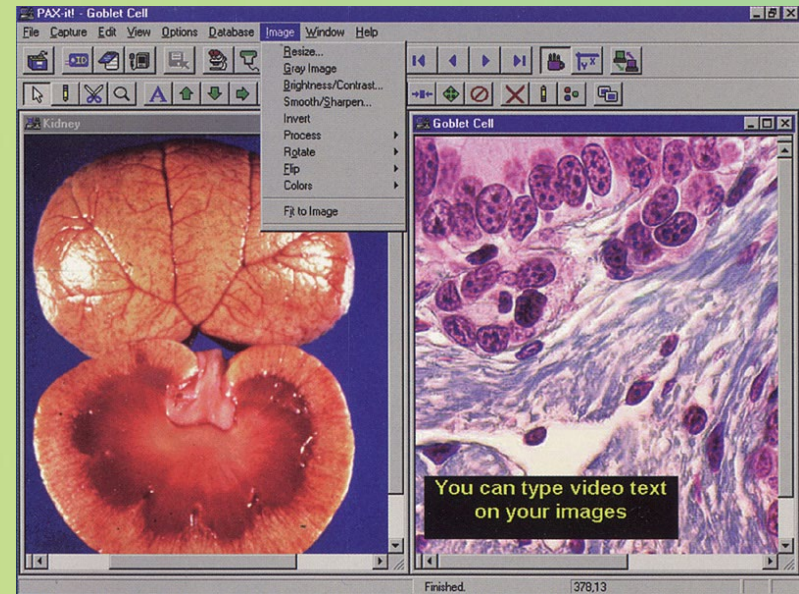


“Store and Forward”

- 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



[\(www.swinfencharitabletrust.org\)](http://www.swinfencharitabletrust.org)

[\(https://www.msf.org\)](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 \(southwesttrc.org\)](http://southwesttrc.org)



UKRAINE



<https://www.telehealth4ukraine.org>

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

World Telehealth Initiatives





Tele-Supervision/Tele-mentoring



Ecuador



La Lancha Medica en la Amazonia







**¡CUIDADO CON EL...
DENGUE
HEMORRÁGICO!**

**¡ELIMINE EL
MOSQUITO
QUE LO
TRANSMITE!**

ELIMINARLO ESTÁ EN SUS MANOS



MINISTERIO DE SALUD PÚBLICA

1. **APTE A LA BARRERA LOS
CONTENEDORES**

2. **COTE EL AGUA EN LAS
LUEGAS**

3. **TAPE BIEN
LOS TANGUES**

HEPATITIS

C EPIDEMIA SILENCIOSA



¿Tiene de los ojos o de la piel un color amarillento o anormalmente enrojecido de la piel?

¿Ha tenido transfusiones de sangre antes de 1992 en Quito y 1997 en Guayaquil o en el extranjero antes de 1990?

¿Ha trabajado de la salud y se ha pinchado accidentalmente o ha manipulado derivados de la sangre?

¿Se ha realizado tatuajes en instalaciones sospechosas?

¿Se ha inyectado con agujas compartidas?

¿Se ha perforado las orejas o se ha colocado "piercing" en cualquier parte del cuerpo?

¿Ha compartido cachibolas de afeitarse o cepillos de dientes?

¿Ha tenido múltiples compañeros sexuales o ha padecido de Hepatitis B o SIDA?


Si usted está dentro de alguno de estos grupos de riesgo, consulte a su médico e insista en que le realicen un examen de laboratorio para Hepatitis por Virus C (HVC)

COMUNIQUESE PARA MAYOR INFORMACION: 022505607 ext 144 / 158

Cruz Roja Ecuatoriana

EL PALUDISMO

Es transmitido por el Mosquito ANOFELES



En la sangre de los pacientes existen los parásitos de este enfermedad.

Los mosquitos se infectan picando a los pacientes.

Luego los mosquitos infectados al picar a las personas hacen las transmitir el paludismo.

¿CÓMO HACER?

- A las primeras fiebres y escalofríos que hay o si más tarde a las Casas de Salud Hospital o al Laboratorio de Servicio de Diagnóstico.

EXÁMENES

En las Casas de Salud hacen un examen rápido, sencillo y seguro, para saber si los fiebres y escalofríos son causados por el PALUDISMO.

TRATAMIENTO

Si los exámenes indican que tiene paludismo, las enfermos reciben tratamiento adecuado y eficaz para la curación completa.

EXÁMENES, Y TRATAMIENTOS SON GRATUITOS.

¡PERO HAY DOS PROBLEMAS!

1. Las personas con fiebres y escalofríos, no van a tiempo a recibir atención médica. Esto sucede porque y agrava mucho más la salud de los enfermos. Además, muchas veces el PALUDISMO se va curar por completo. - La respuesta es seguir atento y buscando el perfeccionamiento y la calidad.
2. Los enfermos creen que tomando solamente los primeros pastillas ya están curados, y no continúan con el tratamiento. - La respuesta es seguir atento y buscando el perfeccionamiento y la calidad.

(Nota: El texto continúa con más detalles sobre el diagnóstico y tratamiento, pero está parcialmente ilegible.)

ALGODON PUMA - TUBERCULOSIS

INKUARKAS "ALGODON - PUMASHKA" UNKUY, SHUK
ALI-MIKUSHA TAK RUNA AKHAY IKUSHA MANA MIRARINCHO
CHAIKA ANMI ALGODON PUMA PUNURAY
CHASNA TUNKY TINNA USHAN QUILAUNARA HUATAUNARA
SHINCHI RUNA AKPIKA CHAY UNKUY MANA
INAURASPAS LIKCHARINKACHU

SHU RUNA MANA ALI MIKUSHA SHINCHITA TARABAKPI
MANA ALI HUASITA CHARIKPI, SHUK SHAMI HUAKLICHIK
SAMPAYACHIK UNKUKUNATA CHARIKPI CHAY UNKUY
ZHAS MIRARIK O LIKCHARISHAKA ASHAGA
UNKUCHIN, HUAKLICHINMI PAIHUA SILLUKUNAHUA.

ALGODON PUMA NISHKA UNKUITA CHARIKPIKA SINTICHINMI:

- MANA ALI YACHIN SAMPAYACHIN
- TUTAUNA UMPICHIN
- ANSA CALENTURA SHAMUNTUTAUNA
- IROQUITUCUN
- UTKHIN VERDE SAMIRIKURUK LUMA RASURA CACHAMUN
- CH UNKUY SHINCHINA TIGRASHAGA JAHURDA TOKACHIN.

¿MATA BANAMA SHUK UNKUSHKA PUNAHUA?
SHUK RUNA ALGODON PUMA NISHKA UNKUYTA CHARIK TUNU
RIKURINKAPA, PROMOTOR DE SALUD PAKMA O SUBCENTRO SALUDMA
RINA USHAN MANASHKA EXAMENKUNATA RURANKAPAK.



**International
Union
Against TB**

Preventive Medicine and Integrating Community Health Workers/ Promotores de Salud









San Cristóbal, Galápagos

1350 Km.



UTE

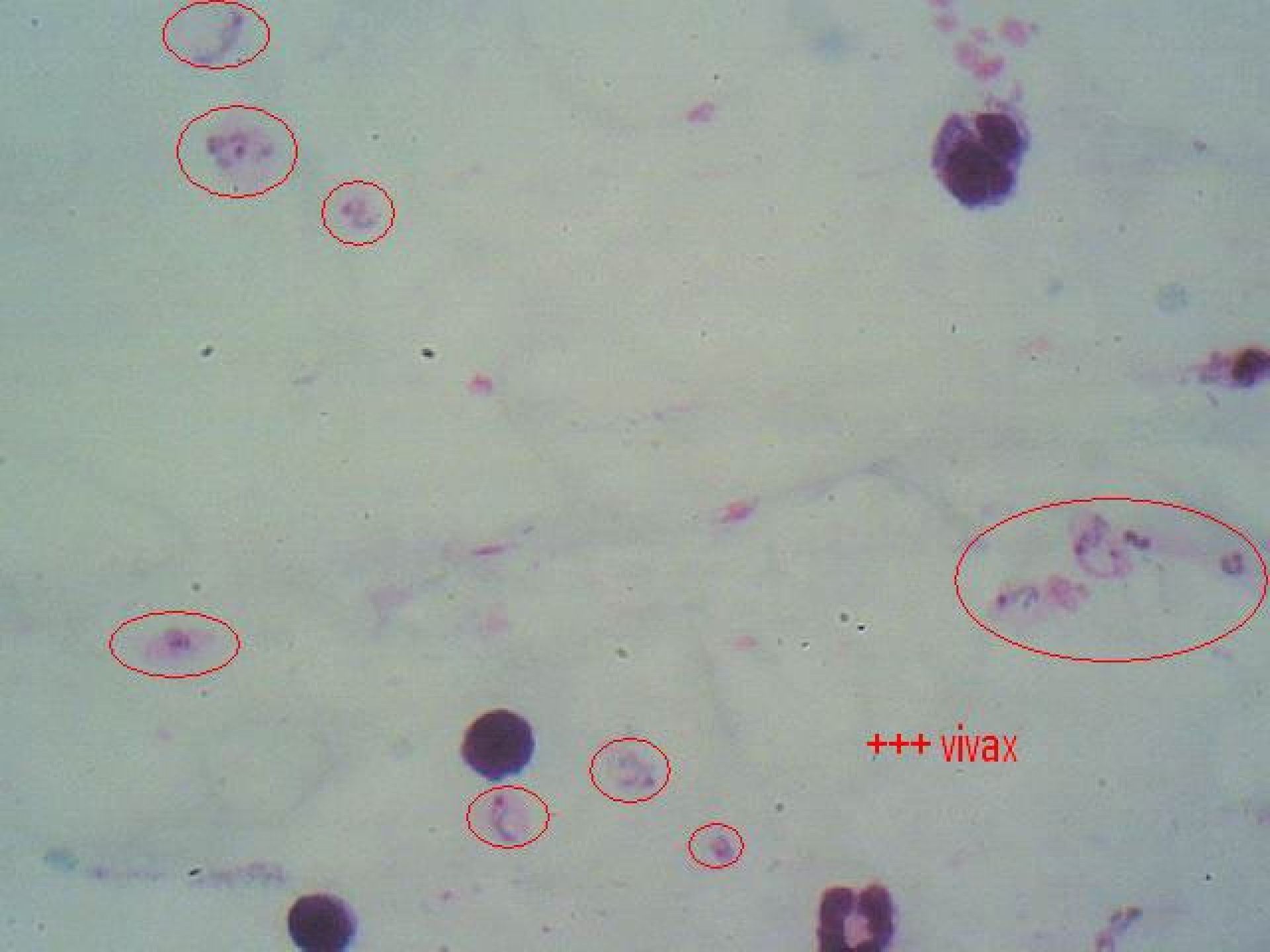


NUEVO ROCAFUERTE

850 Km.







+++ vivax



Exchange of Students and Faculty



NEPAL

















Nepal's network



Putting a Grid Antenna



Chhukung Relay at 5,100 m



Mustang Network



IRAN



بیمارستان الکترونیکی، بیمارستان آینده

سمپوزیوم بین المللی بیمارستان الکترونیکی و تله مدیسین و جشنواره برترین بیمارستان الکترونیکی



خانه امتیاز بیمارستانی



دانشگاه پزشکی دانشگاه تهران
۱۹ و ۲۰ مهر ماه ۸۹



Dr. Karen Rheuban Alice Watland Dr. Guntam Ickenstein Jonathan D.Linko Dana Paskin Dr. Nicos Antonioti Dr. Dale Alverson
رئیس هیئت مدیره بیمارستان الکترونیکی تهران
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ثبت نام پیامکی: لطفاً نام و محل خدمت خود را به شماره ۰۳۵۹۷۰۰۳۶۱-۰۹۳۵۹۷۰۰۳۶۱ پیامک (SMS) کنید
تلفن دبیرخانه: ۸۸۸۳۲۷۷۷-۰۳۶۱-۰۹۳۵۹۷۰۰۳۶۱ ثبت نام اینترنتی: www.ehconf.ir

design: f.davodi

krheuban

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here for your friends to

Personalize

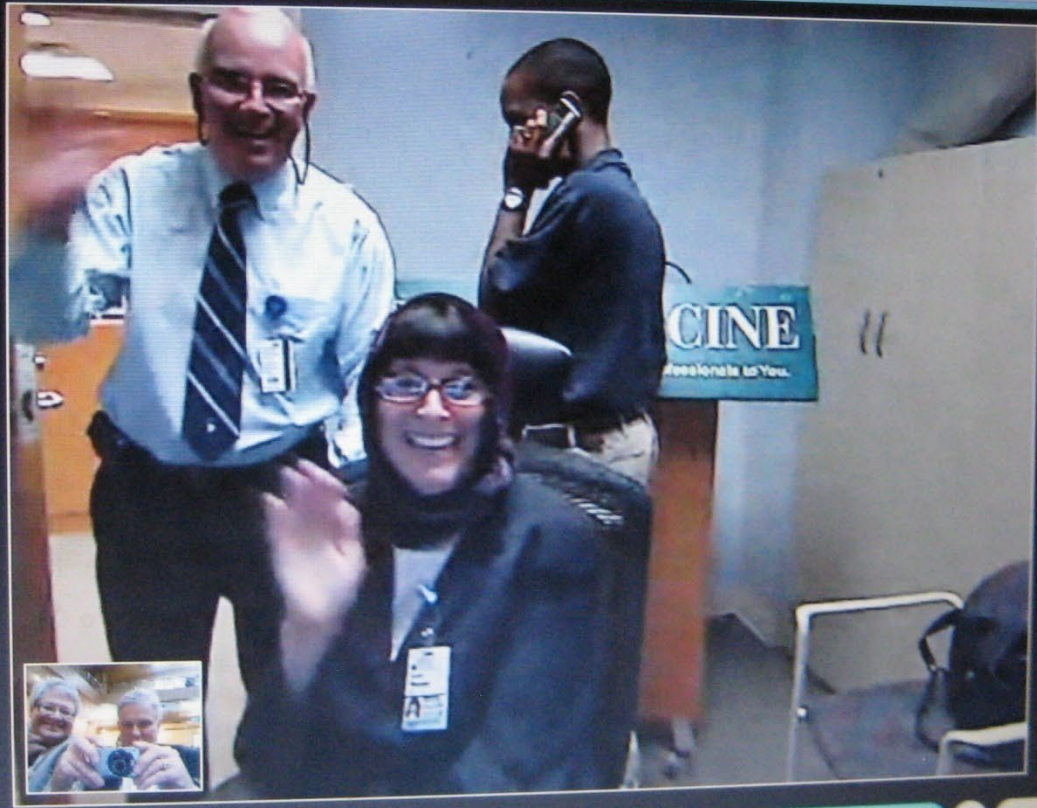
Conversation Topics

6 new

07:34

y Desarrollo - Instituto Z...

6 new



End call

07:34

Mute

Turn off video

Check settings

Dave C. Alverson

Can u hear us?

5:56 AM

Be quiet for now and don't use thumbs up (not good in Iran)

5:57 AM

krheuban

I could tell it was nina even before you moved the camera

5:58 AM

Send message

Share Extras

Type a message to krheuban here

om \$2.99 a month. Get a

INDIA





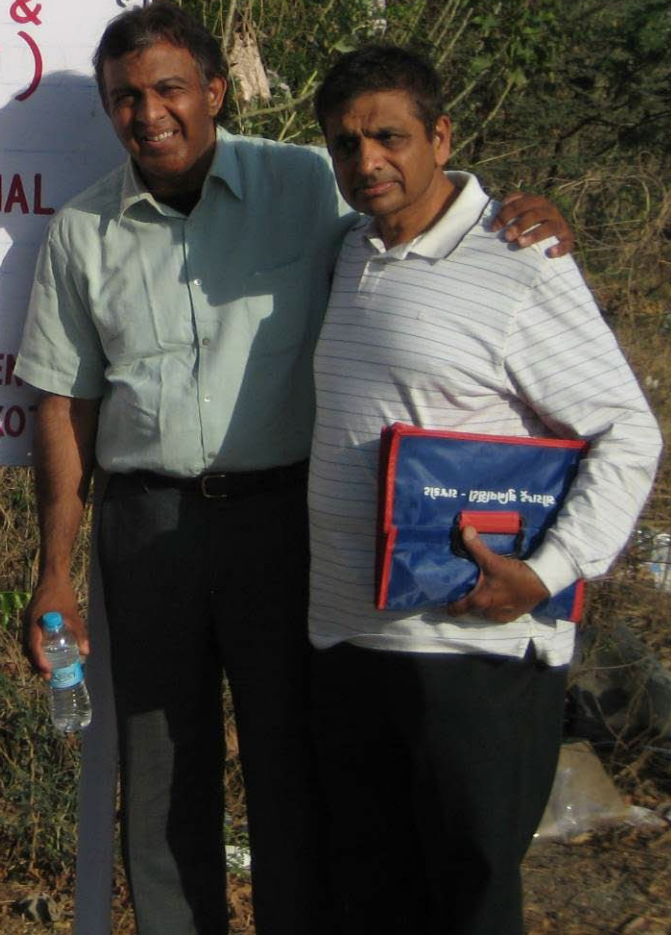




Traditional Medicine



**INTER UNIVERSITY MEDICINAL
PLANT FOR NURTURE &
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(2004 - 2007)
FUNDED BY: NATIONAL MEDICINAL
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DEPARTMENT OF PHARMACEUTICAL SCIENCES
SAURASHTRA UNIVERSITY-RAJKOT**



Next Steps

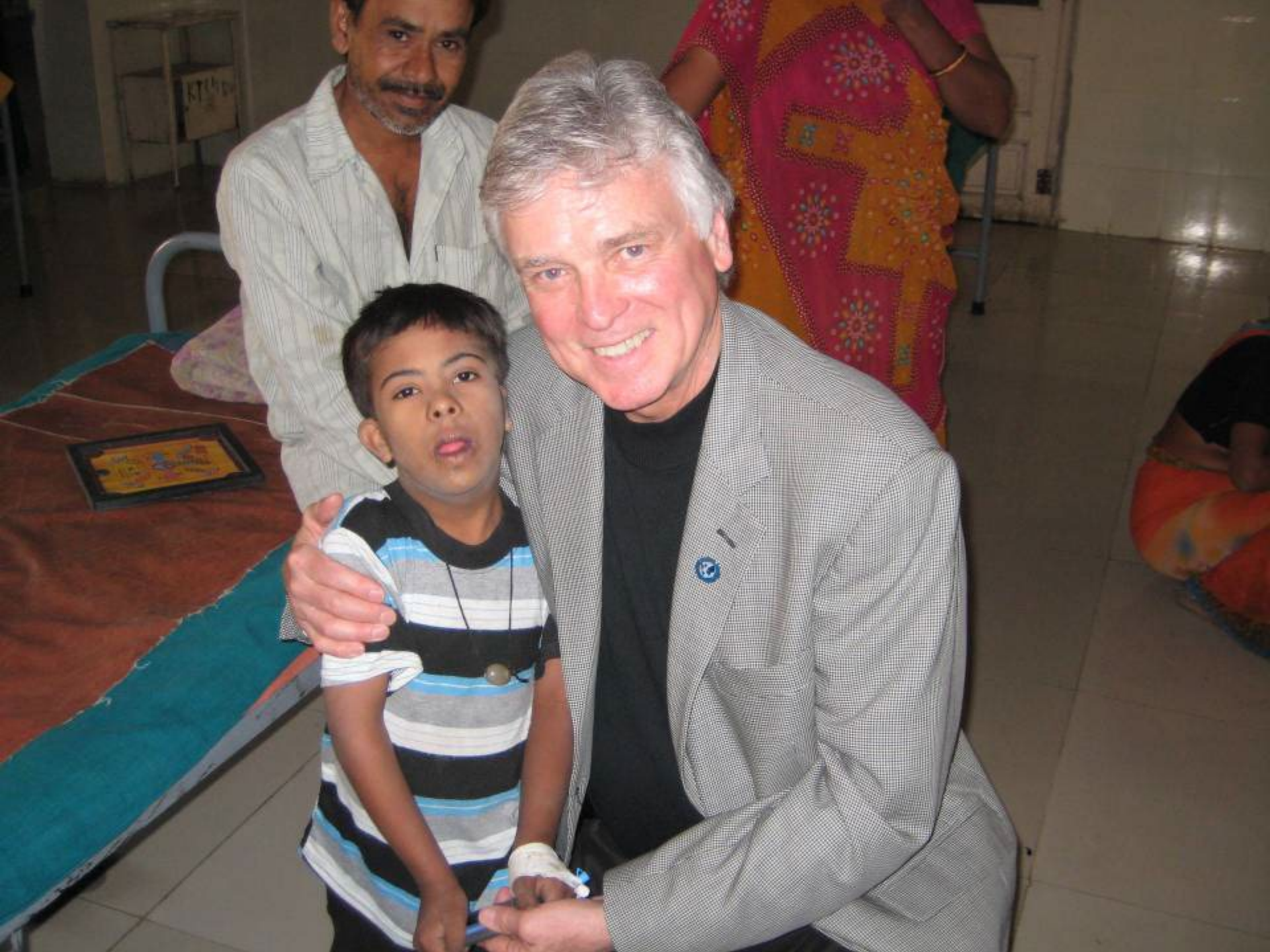
- Develop Concrete Programs where Telehealth adds value and mutual benefit
- Utilize emerging new information communication technologies that can provide systems for global connected health and cultural exchange.

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?



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