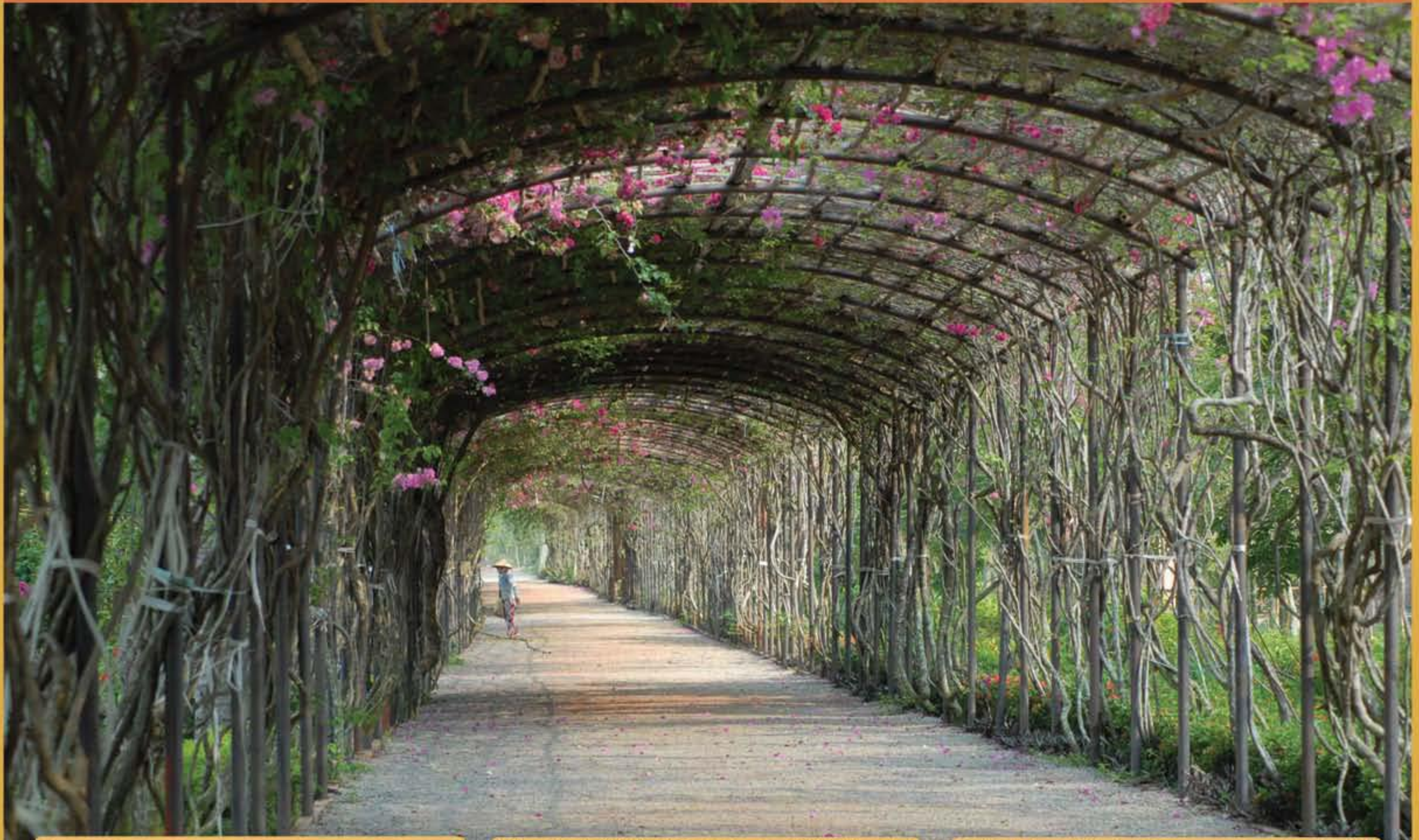


R ❁ I ❁ C ❁ E

Reconstructive International Cooperation Exchange
Remote Interaction Consultation Epidemiology



Hanoi, Vietnam



March 8-22, 2008

O V E R V I E W



& G o a l s



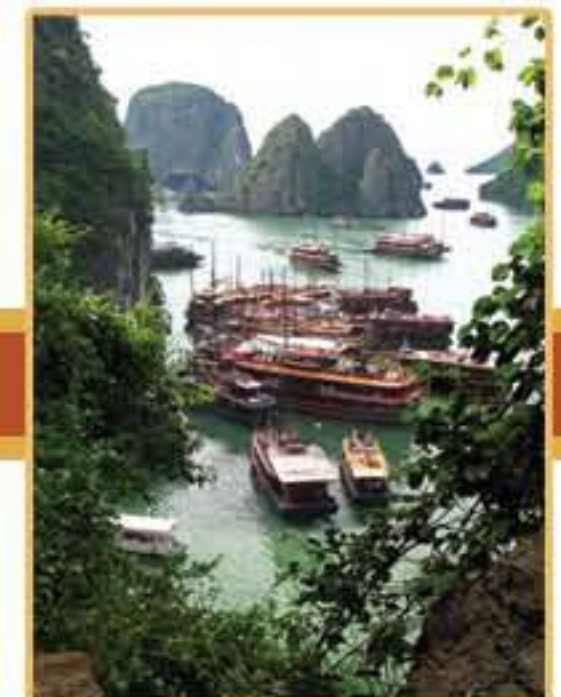
The March 2008 trip to Vietnam is the culmination of months of planning from a team of surgeons and telemedicine experts. As such the trip is divided into surgical and telemedicine components. The surgical component during the first week involves a team of nurses and surgeons from the Dartmouth Hitchcock Medical Center, Walter Reed, and VCU participating in advanced complex surgical reconstructions at the National Hospital of Pediatrics (NHP) in Hanoi, Vietnam.

[Procedures include head and neck craniofacial surgery, upper extremity congenital surgery, and surgery on acquired deformities from trauma and burns. The goal is to the exchange knowledge and skills in these areas with the physicians at NHP.]

The telemedicine component during the second week involves the implementation of a network-centric healthcare system via smart phones provided by the corporate sponsor Microsoft- using the Remote Interaction Consultation and Epidemiology (R.I.C.E.) model.

The goal of the R.I.C.E. model is to integrate information resources and services into the Vietnamese healthcare and healthcare education systems. An essential component of this is the integration of evidence-based medicine as the guide to practice, which is led by staff at the Dartmouth Biomedical Libraries.

The project partners include the National Pediatric Hospital in Hanoi, Thai Nguyen Central General Hospital, Dartmouth-Hitchcock Medical Center, Dartmouth Medical School, The Dickey Center for International Understanding at Dartmouth, Thayer Engineering School at Dartmouth, Dartmouth Biomedical Libraries, and corporate sponsor Microsoft, as well as private donors.



O V E R V I E W



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The Remote Interaction Consultation and Epidemiology (R.I.C.E.) project aims to shift the current hospital-centered paradigm to a network-centered paradigm. A network-based health care system maximizes the delivery of care and minimizes the cost to provide this care. This approach allows patients to receive the highest quality of care as close to home as possible. In some cases this is telemedicine and training with simulation to the rural clinic facility, while in other cases it allows faster transport of patients to the central hospital facility through more efficient patient-specific information transfer.

Transporting patients from rural communities to central hospitals has a high cost, both financial and morbidity. Patients, themselves, routinely bypass district and regional hospitals believing they will receive better treatment at the central hospitals.

To curtail this problem, the R.I.C.E. project aims to implement a network-centered system via smart phones, provided by the Microsoft Corporation.

Overview

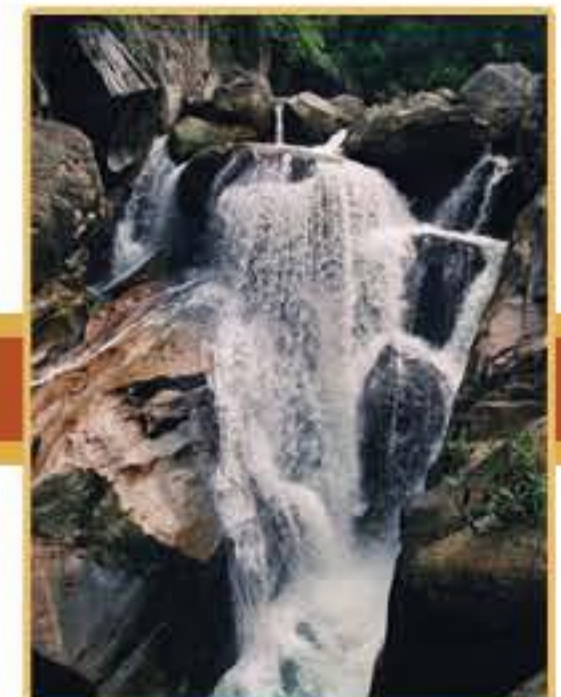
1. Electronic Patient Chart
Cellular-phone based electronic medical record
2. Remote Consultation
Connecting doctors in rural areas to doctors in major cities
3. Epidemiology
4. Medical Education including
Evidence-Based Medicine

The Problem

- Lack of access to health care in rural areas
- High cost of patient transportation: financial and morbidity
- Emerging infectious diseases: SARS, Avian Flu-
- Wired internet access limited and expensive to expand

Cellular Infrastructure

- Ubiquitous (versus wired internet)
- Growing industry without healthcare investment
- Wireless (easily developed)
- Devices relatively inexpensive and portable
- Existing cell phone familiarity and simplified interface (versus Personal Computers)





V I E T N A M H e a l t h c a r e



Government (Central Level)

The government's role is to formulate national strategies and policies for healthcare development. It is also responsible for allocating the budget and personnel for the Ministry of Health (MOH).



Ministry of Health

The MOH is also involved in health care strategic planning and policy making. It also allocated the budget and personnel for the national institutions, as well as supervises healthcare activities of the national institutions and provincial health service.



National Institutes (Central Level)

Institutes

Nutrition
Epidemiology
Cardiology

National Hospitals

Tuberculosis
Obstetrics
Gynecology
Etc.

Medical Schools

Medical and Secondary Medical Schools

Pharmaceutical Companies



Provincial Healthcare Level (Local Level)

Overseen by the Provincial People Committee

Provincial Hospitals- Centers for Preventative Medicine (epidemics, vaccination)
Center for Protection of Mother and Child health and Family planning
Center for Control of Social diseases (tuberculosis, leprosy, trachoma)
Center for Health Education and Communication
Secondary medical school



District Healthcare Level (Local Level)

Overseen by the District People Committee

Team for Preventative Medicine
Team for Protection of Mother & Child Health and Family Planning
Mobile Team for HC in High and remote areas



Commune Health Center

Overseen by the Commune People Committee

Hygiene, vaccination, treatment, antenatal care, delivery, family planning, health education, etc.

STATISTICS

No. patient beds increased from 400 (1981) to 580 (2005)

28% referrals from Hanoi

72% referrals from provinces



O V E R V I E W

N a t i o n a l

H o s p i t a l o f P e d i a t r i c s



The National Hospital of Pediatrics is located in Hanoi, Vietnam and is the main tertiary referral center for pediatrics in the country.

The NHP has three functions:

1. Treatment
Serves a population of about 28 million
2. Training
Every year the NHP coordinates with Hanoi Medical University to carry out training for medical doctors, continuing education centers for pediatric staff, and national and international medical students.
3. Research
The NHP conducts targeted research on pediatric preventative care, diagnosis, and treatment for childhood illnesses. The hospital also applies new advanced techniques and protocols in diagnosis and treatment.
4. Guidance and Outreach Activities
The Center for Outreach Activities deals with primary childcare. Every year the center carries out the following activities:
 - Updating and providing protocols for the diagnosis and treatment of pediatric patients for provincial hospitals
 - Updating the policies guiding pediatric care in Vietnam
 - Organizing training courses at the communal, district, and provincial levels
 - Expanding childcare programs on the community level

New Achievements

New technological advancements have contributed to the following achievements at NHP:

Colon Endoscopic surgery:

Laparoscopic and Thoracoscopic surgery

Gastroscopy

Tracheobronchoscopy

Open-heart surgery

Separation operations of conjoined twins

Kidney transplants have been performed successfully

First liver transplant in NHP

Hemodialysis

Cardiac Intervention

Biomolecular laboratory

Genetics laboratory





VIETNAM TRIP

Schedule



Date

Activity

Saturday, March 8

Team arrival in Hanoi

Sunday, March 9

Surgical team pre-op clinic day

Monday, March 10 – Friday, March 14

40 operations in 2 operating rooms during the day
Discussion and Presentations in the afternoon

Saturday, March 15 – Saturday, March 22

Reconstructive International Cooperative Exchange

Remote Interaction Consultation Epidemiology
Discussions and Presentations at NHP

Meet with technology personnel at NHP to assess
the status of the smart phones- computer connectivity

Strategic meeting with NHP staff to discuss the
technology component of R.I.C.E.

Visit to regional hospital in Thai Nguyen and rural
clinics to assess the requirements to successfully

