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**E- Participation of Social Groups as Means for Social Inclusion:  
Persons with Disabilities and Older Persons**

**“With out your health you have nothing”** (Augusten Burroughs)


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**Communication is the** 




COMMUNICATION


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**PROVIDING GLOBAL  
HEALTH CARE  
“POOR-ELDERLY-DISABLED”**

**An Economic Dilemma**


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In most countries of the world, the elderly do not enjoy a decent status in society



- **World’s elderly (≥65 years of age) population increases 795,000 each month**
- **Developing countries growing the fastest (77% of the 795,000) = 612,150 each month**

**By 2050, 2 billion individuals over 60 years of age are projected to be alive**



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## THE MANY PROBLEMS

- ✓ Growing Aging Population
- ✓ Increase in Life Expectancy, comes Chronic Disease, Disabilities and many times Isolation
- ✓ Shortage of Health Care Resources (physicians, nurses, community health workers, etc.)
- ✓ Lack of ICT Connectivity Especially for Rural Populations and the Poor
- ✓ International Digital Divide Continues

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## Developed Countries

E Health Technology / Electronic Medical Record

Physician Assistants, Nurse Practitioners, Nurses, CHWs, Physical and Occupational Therapists

Primary Care Physician Office

Urban or Rural

Technology Managing Patients 24/7

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Applying information and e-health technology to the appropriate communities can reduce healthcare costs

Health Care Management

Community Health Workers + e-Health Technology = Health Care Dollars

Return on Investment (ROI)

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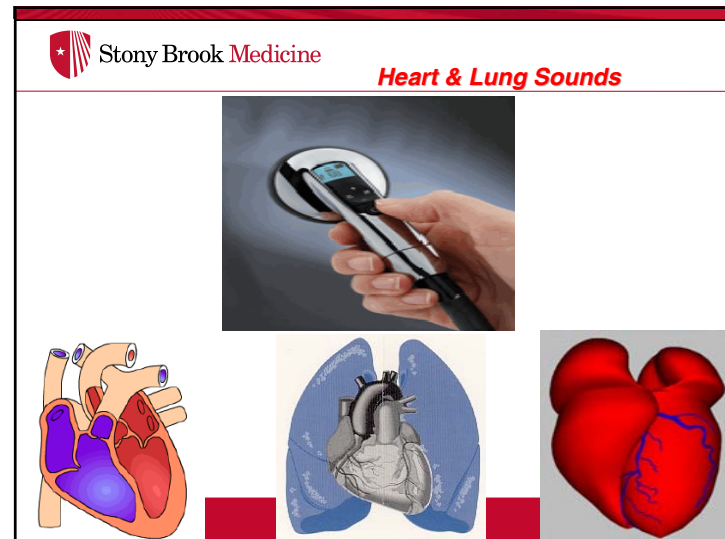
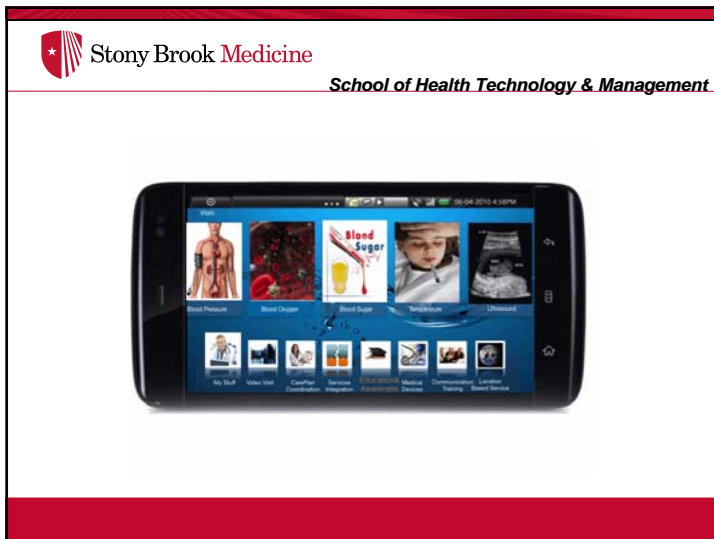
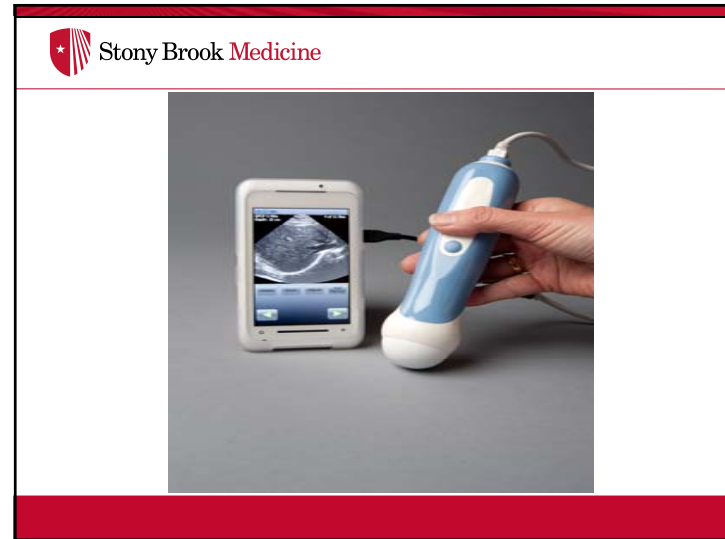
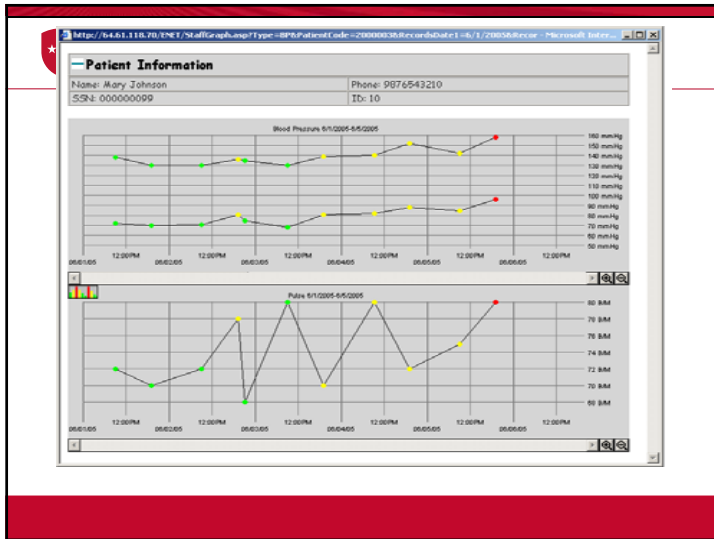
## Point of Care Technologies

Cholesterol, HDL, Triglycerides

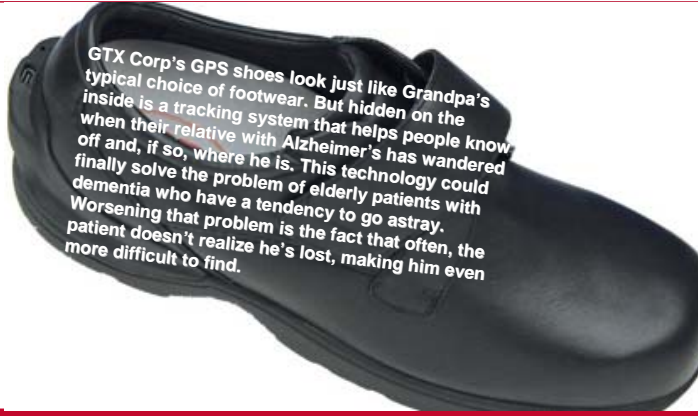
PT-INR

HbA1c monitor

Samples of Bluetooth enabled medical devices





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*GTX Corp's GPS shoes look just like Grandpa's typical choice of footwear. But hidden on the inside is a tracking system that helps people know when their relative with Alzheimer's has wandered off and, if so, where he is. This technology could finally solve the problem of elderly patients with dementia who have a tendency to go astray. Worsening that problem is the fact that often, the patient doesn't realize he's lost, making him even more difficult to find.*

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- Medication Event Monitoring Systems (MEMS)
- Real Time Medication Monitoring Systems (RTMM)
- Short Message Service (SMS)

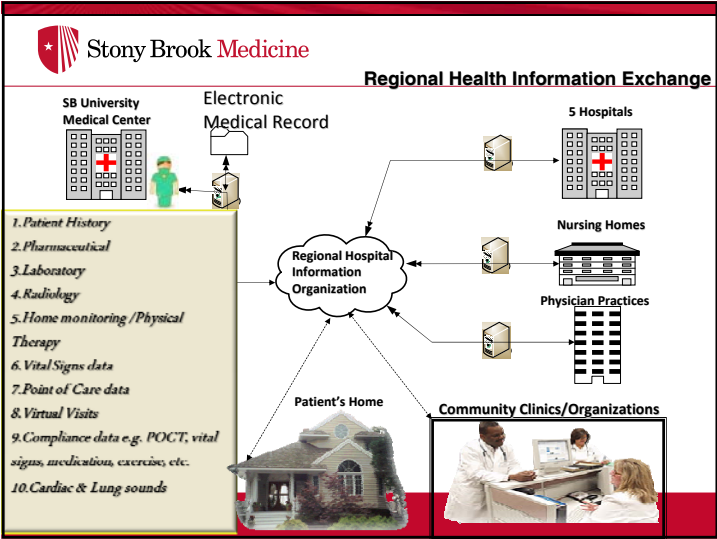
The Talking Rx bottle

<http://www.rxtalks.com/audio/rx.wav>

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**All-in-One Design**  
**Virus-Resistant!**  
Email  
Video Chat  
Web Browsing  
Wireless (WiFi) ready  
DVD/CD Player  
Games: Built-in and Online  
**Custom Interface + Built-in Apps**  
**Free lifetime updates!**  
Photo Viewing thru Facebook  
MS-Compatible Word Processor  
Calendar with notifications  
Address Book with Easy-Connect  
Adobe Flash Support  
Supports HP Printers

18"

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### Electronic Health Record

**Problems**

Name	Coding Scheme	Code	Status	Source	Onset Date
Typhoid fever	ICD-9	002.0	ACTIVE	Southampton Hospital	4/28/2011
Constitutional adenoid anemia	ICD-9	284.8	ACTIVE	Stony Brook University Medical Center	4/28/2011
Iron deficiency anemia	ICD-9	280	ACTIVE	Stony Brook University Medical Center	4/28/2011

**Allergies**

Name	Type	Reaction	Source	Start Date
Multiborn	Drug allergy	Difficulty Breathing	Southampton Hospital	4/28/2011
Peanuts	Food/Insect allergy	Vomiting	Stony Brook University Medical Center	4/28/2011

**Procedures**

Date	Description	Procedure Type	Physician	Source
11/28/2007	Cast Removal with Examination		Dejak Shah	Stony Brook University Medical Center
10/27/2007	X-Ray Interpretation & Consultation		Dejak Shah	Stony Brook University Medical Center
10/22/2007	Cast Application - Lower Arm		Dejak Shah	Stony Brook University Medical Center
09/11/2007	X-Ray, Forearm		Dejak Shah	Stony Brook University Medical Center
04/27/2007	Variola-Zoster Immunization, Intramuscular		Lisa Kim	Stony Brook University Medical Center
04/27/2007	Map-A Vaccine, Pediatric/Adult, 3 dose		Lisa Kim	Stony Brook University Medical Center
04/27/2007	MMR Vaccine		Lisa Kim	Stony Brook University Medical Center
04/27/2007	H-B3 Vaccine, 4 Dose Sided, Intramuscular		Lisa Kim	Stony Brook University Medical Center
04/27/2007	IPV4 Vaccine, Inactivated		Lisa Kim	Stony Brook University Medical Center
10/26/2006	DTaP2 Vaccine, Intramuscular		Lisa Kim	Stony Brook University Medical Center

**Medications**

Name	Dose	Route	Frequency	Status	Source	Start Date	End Date
Hydroxizine tartrate capsules	2.5 mg, 1 - 10 DAYS	ORAL	QD	ACTIVE	Stony Brook University Medical Center	4/28/2011	6/8/2011
Amoxicillin capsules	250 mg, 1 - 1 MONTHS	ORAL	BID	ACTIVE	Stony Brook University Medical Center	4/28/2011	5/28/2011
Methamphetamine tablet	200 mg, 1 - 1 MONTHS	ORAL	BID	ACTIVE	Southampton Hospital	4/28/2011	6/28/2011
Amoxicillin oral suspension	875.125 mg/ml, 1 - 1 MONTHS	ORAL	BID	ACTIVE	Stony Brook University Medical Center	4/28/2011	5/28/2011

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### Next Generation

The second-generation Motorola Golden-1 incorporating Kopin's Cyber Display, a micro-display that offers 800 × 600 pixel resolution and is claimed to look like a 15-inch monitor when positioned close to the eye.

This device uses Bluetooth 2.0 radio and 802.11g WiFi to make a wide area connection via a cellular phone or other host devices, and is designed to provide physicians and physician extenders information access connect to experts in remote locations. The headset will operate for more than eight hours using a single 1200mA rechargeable battery.



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- Physician
- Nurse
- Hospital
- Specialist
- Health Care Worker

**Construction of Maternity Ward in Turkana Basin, Kenya**

Using a \$40,000 donation from the Stony Brook University (SBU) Schools of Health Technology and Management, Dental Medicine, and Nursing, TBI expanded the Ileret health centre by constructing a 6-bed maternity ward and delivery room.

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- ▣ **Present death rate is 121 deaths per 1000 -Nairobi slums 254/1000**
- ▣ **In 2008 the total number of maternal deaths was 7,700, along with more than 15,000 women who die each year from pregnancy related complications. Another 300,000 to 500,000 women have long and short term disabilities caused by pregnancy related complications.**
- ▣ **Hemorrhage (35%) and hypertension (18%) “preeclampsia“ together represent 53% of maternal mortality.**
- ▣ **(Blood Pressure Cuff \$90 + Ultrasound \$2,500 per community could save 70-80% of deaths)**

Source: Tracking Progress in Maternal, Newborn and Child Survival.

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**Production of health care technologies**

**ONE SIZE FITS ALL**

x10091306 fotosearch.com

## Sudden Unexpected Infant Death (SUID)

- Leading cause of death world wide for children less than one year of age.
- The incidence of SUID is 25 times higher in underdeveloped countries than in developed countries
- In rural parts of the world 12 out of every 100 newborn babies die in the first year of life



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Proposed Solution

### HEALTH PROMOTION / DISEASE PREVENTION

A Information Communication Technology  
Innovative ITU Educational Program for  
Developing Countries Health Care Providers

“Train the Trainer”