Preparing for International Humanitarian Outreach

American College of Surgeons
Clinical Congress
October 13, 2009
Konbit Sante

A Model for Humanitarian Surgical Outreach in Haiti
Haiti is two hours by air from Miami
The Facts

• 700 miles from Miami
• Poorest country in Western Hemisphere
• More than half of its citizens are undernourished
• Highest HIV and Tuberculosis infection rates in the Western Hemisphere
The Facts

• 80% of Haitians live in poverty if not misery
• Nearly 70% of the Haitian workforce is unemployed
• 40% of the population have no access to healthcare
• No Haitian city has a public sewer system
• Nearly half of all deaths occur in the first 5 years of life
The Facts

In 2002, a *Water-Poverty Index* released by the British-based Centre for Ecology and Hydrology ranked Haiti dead last out of 147 countries surveyed.

Public water systems are rarely available throughout the year and close to 70 percent of the population lacks direct access to potable water at all times.
Per Capita Total Health Expenditures ($US) 
WHO 2006

<table>
<thead>
<tr>
<th>Country</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAITI</td>
<td>$42</td>
</tr>
<tr>
<td>USA</td>
<td>$6719</td>
</tr>
</tbody>
</table>
Life Expectancy at Birth (years)
WHO 2009

<table>
<thead>
<tr>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAITI</td>
<td>59</td>
</tr>
<tr>
<td>USA</td>
<td>76</td>
</tr>
</tbody>
</table>
Infant Mortality/1000
WHO 2007

Male

Female

HAITI

USA

Male: 79
Female: 73

Male: 7
Female: 6
Average Caloric Consumption
Calories/Person/Day

- USA: 3600
- Minimum Requirement: 2300
- Haiti: 1700

2nd lowest in world
kwashiorkor and marasmus remain significant pediatric health issues
Endemic Diseases

- Tuberculosis 180/100,000
- Malaria 35% seropositivity rate
- Typhoid Fever
- Diphtheria
- Dengue Fever 3%
- Parasitic Diseases: Ascariasis, Filariasis
- Malnutrition
Prevalence of HIV among adults >14 years per 100,000

- USA 452 (0.45%)
- Haiti 1823 (1.8%)

WHO 2009
Maternal Mortality

• 1 in 15 (6.7%) women die from complications due to childbirth
• For every 100,000 births, 670 maternal deaths occur (WHO 2009, USA 11); 74% of deliveries are unattended
• On average, women have 6-8 pregnancies in their lifetimes
The Obstacles

- Poverty/Misery/Unemployment
- Malnutrition
- Lack of Potable Water
- Lack of Basic Sanitation Services
- Violence
- Political Instability
- Endemic Diseases
- Environmental Degradation
- Lack of Health Resources and Capital
Konbit Sante
Cap-Haitien Health Partnership

• **Konbit:**
  Traditional Haitian method of working together to till your friends’ fields as well as your own

• **Sante:**
  Creole word for health
Our Mission

To support the development of a sustainable health care system to meet the needs of the Cap-Haïtien community with maximum local direction and support
Justinian Hospital, Cap-Haitien

- 250-bed teaching hospital in Cap-Haitien on the northern coast of Haiti
- Operated under the auspices of the Haitian Ministry of Health
- Largest health care provider in the northern part of the country
- Serves an estimated population greater than 800,000
Justinian Hospital, Cap-Haitien

- The hospital has an emergency room, 2 operating rooms, adult inpatient medical and surgical wards, an OB/GYN unit, and a pediatric ward
- There are residency programs in medicine, pediatrics, general surgery, OB/GYN, and family practice
Burden of Surgical Disease in Haiti

- No one in Haiti knows what the burden is
- No one outside of Haiti knows what the burden of surgical disease in Haiti is
What is the burden of surgical disease in Haiti?

- How is data collected?
- What are the surgical capabilities in a resource-challenged environment like Haiti in terms of equipment, facilities, personnel, training and infrastructure?
- Is there a way this can be assessed using detailed, comprehensive, and reproducible methodologies?
Assessment of Surgical Services at Hôpital Universitaire Justinien (HUJ) Cap Haitien Haiti
Assessment of Surgical Services at JUH

At the request of hospital administration and the surgeons of HUJ, we were asked to evaluate the Department of Surgery for its ability to provide comprehensive surgical services to the people of Cap Haitien and the Northern Departments of Haiti.
Why Local Buy-In is Important?

• The surgical assessment team interviewed all attending surgeons and resident surgical staff.
• We had complete and easy access to surgical log books, clinical space, OR personnel, and educational materials.
• We participated in daily teaching conferences and presentations.
• We scrubbed in surgery and observed first-hand the flow of patients on the wards.
• We were briefed and have an understanding of the educational process for Haitian physicians, including a learning environment challenged by lack of educational tools, computers, and reference manuals.
• “Things” get done when there is “local buy-in”
Assessment of Surgical Services at JUH

1. Staffing
2. Surgical ward
3. Operating Rooms
4. Clinical Case Mix, Quality System Performance, Finances
5. Surgical education and research
6. Surgical Supplies, Equipment and Maintenance
7. Surgical Support Services
Methodology

For each of the 7 categories:

- Detailed narrative description
- Modified SWOT Analysis with pictures
Modified SWOT Analysis

Strengths
Weaknesses
Opportunities
Barriers
Recommendations
Outstanding Issues
Surgical Ward Assessment

Strengths

- Dedicated physicians and nurses
- Consolidation of all surgical patients in one physical space
- Proximity of surgery ward to OR
- Surgical residents readily available
- Language and dialect easily understood by patients and staff
- Access by steps or ramp for wheelchairs or stretchers
- Water and electricity available but with specific limitations
- Charts organized and paper trail reproducible from patient to patient
- Surgical ward admit log contains pertinent demographics on each patient
- Family members play an active role in monitoring patient progress
Surgical Ward Assessment

Weaknesses

- Deficiencies of basic surgical ward supplies (BP cuffs, dressings, intracath needles, NGs, tape, suture, drains, emergency medicines)
- No dedicated emergency supplies (Ambu-Bag, face mask for ventilation, oxygen, suction)
- Lack of adequate and sanitary toilet facilities
- No functioning hand washing sinks on patient wards
- No Purell dispensers in main ward areas for patient use
- Not enough locked storage space for basic surgical supplies
- No functioning ward autoclave or refrigeration
- Lack of privacy between patient beds
- Marginal infection control measures
- No separation of pediatric beds from adult beds
- Insufficient space for additional patients
Surgical Ward Assessment

Opportunities

• Computerized surgical ward admission demographics or discharge summaries could allow for better tracking and recall of patients

• Surgical Outcomes studies

• Infection Control Initiatives

• Partner with Ethicon, Inc. to support suture needs of ward

• Photographs of surgical ward are compelling and could be integrated into Konbit Sante PowerPoint presentations for specific fundraising opportunities

• Expansion of the physical space (Dr. Barella has a plan)
Surgical Ward Assessment

Barriers

- Lack of hospital dietary service
- No on-site fixed X-rays
- Clinical decisions often made on basis of extremely limited financial resources of patients
- Patients without accompanying family members are challenged with how to purchase food outside the hospital and have it delivered to their bed
- Space limitations of existing building prevent increasing bed capacity
- OR limitations create backlog of patients awaiting surgery
- No blood bank
Surgical Ward Assessment

Recommendations

- Develop master plan for improving water supply and enlarging surgical ward space. Could central courtroom be covered and converted into additional space?
- Develop a plan for conversion of pit latrines to water-based toilet facilities
- Place Purell dispensers and instruction posters in Kreol in each patient ward area
- Improve supply side of basic surgical ward equipment (suction, sterile suction tubing, disposable suction tips and 14Fr suction catheters, Betadine, antibiotic ointment, ½” Iodoform wound packing, Xeroform gauze, BP cuffs, penrose drains, sutures and sterile suture kits, hemostats, bandage scissors, sterile and non-sterile gloves, sterile gauze dressings, IV tubing and intracaths, oxygen and nasal prongs, masks and eye protection for staff, sterile gowns, Davol and Jackson-Pratt suction drains, ostomy supplies)
- Obtain a lock and/ or security guard for front gate to allow staff to work and not function as “gatekeepers”. They are too valuable a resource to assume this job.
- Improve medical record archiving and access so that patients who are readmitted or seen in an outpatient setting will have their charts more easily accessed.
- Obtain foldable bed screens or curtains for improved patient privacy
- Obtain additional portable lights for patient use
- Bedside tables for all patient beds
- Obtain workable autoclave for ward
- Clearly defined Red “Sharps” plastic Boxes for safe needle disposal
- Increase storage capacity for basic surgical supplies on ward and construct a second locked cabinet on the female ward (similar to the one on the mens ward)
- Encourage Dr. Dube’s plan for Bio-Hazard waste collection and disposal
- Obtain scale for weighing patients
Surgical Ward Assessment

Outstanding Issues

- Ongoing problems with adequate water and electrical supplies
- Bio-Hazard Waste disposal
- Medical Record access problems
- Lack of hospital-wide dietary service
- How do patients without accompanying family members or financial resources obtain or pay for their meals?
- No on-site fixed X-rays
- The capabilities and resources of the emergency ward to support emergency surgical care were not assessed. This might be done in conjunction with the emergency medicine team.
Final Report

Assessment of Surgical Services at Hôpital Universitaire Justinien (HUJ), Cap Haitien, Haiti

Prepared February 22, 2008 by:

Samuel B. Broaddus, MD
Department of Surgery, Division of Urology
Brad Cushing, MD
Chief, Department of Surgery
Maine Medical Center
and
Konbit Sante
P.O. Box 11281
Portland, ME 04104

Portland, Maine, USA
Who we shared our report with

- Haitian Ministry of Health
- HUJ Haitian Hospital Administrator
- All surgeons and surgery residents at HUJ
- Partners in Health
- Other physicians within Konbit Sante as a template for assessing other medical services at HUJ
What we accomplished

• Evaluated all aspects of surgical services at a large regional hospital in Haiti that serves a population base exceeding 800,000

• Developed a tool that allows a better way to understand a complex problem like surgical services by breaking it down into smaller categories that can be systematically evaluated in a standardized format
Our recommendations for quality and systems improvement in surgical services at JUH were based on:

- a comprehensive and thorough understanding of the limited resources at hand,
- an awareness and sensitivity to Haitian culture,
- complete buy-in by Haitian surgeons and Haitian hospital administrators
Konbit Sante

We believe this tool could be of value to other humanitarian groups or NGOs looking to improve surgical services in other health challenged environments like Haiti.
“A rock that is in the water cannot fully know the pain of the rock that is in the sun”