Partnerships for Health - Jeff HEALTH and the Rwanda Village Concept Project – A Model of Health Professions Student Global Education

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Cameron Bass, MD; Kaitlan Elston, MD
and the Rwanda Squad (2005-2011)
Presentation Goals

- Learn a method to develop a collaborative international health professional student driven initiative
- Identify strategies for sustaining programs through cooperative agreements between students at a United States Academic Health Center and an East African Medical School
- Organize a student global education program based on student experiences and interest
- Identify strategies for developing a family medicine clinical training program for residents and medical students in a developing country

Outline

- Project Origins: Healing and Health
- Across the Years (2006-2011)
  - Public Health Programs
- Future Directions
Healing Project Origins

- **Community Partner: Barefoot Artists**
  - Lily Yeh, Village of Arts and Humanities, North Philadelphia
  - Mission: “bring the transformative power of art to the most impoverished communities in the world”
    - Kenya, China, Syria, Ecuador, D.R.C, Ghana, Rep. of Georgia, Ivory Coast
  - Goals: participatory and multifaceted projects
    - Community development
    - Improvement of Physical Environment
    - Promotion of Economic Development
    - Preserve and Promote Indigenous Art and Culture

- **The Rwanda Healing Project: 2 Components**
  - Expanding the boundaries of art as a vehicle for healing and transformation of individuals, families and community
    - Genocide Memorial Park: healing through remembrance
    - Transformation of Survivors Village (Rugerero, Gisenyi)
The Rwanda Healing Project

- Rugerero, Gisenyi, NE Rwanda
The Rwanda Healing Project
Health Project Origins

- **Identification of health needs by Barefoot Artists**
  - Village of Arts and Humanities and Jefferson Medical College
  - Importance of Health in Healing Process

- **Fall 2005-Spring 2006**
  - Jeff HEALTH (Helping East Africa Link to Health)
    - Developing Institutional Recognition and Support
  - Arnold P. Gold Foundation Presidential Grant: $5,000

- **Summer 2006: Exploring Options, Building Foundations**
  - Jeff HEALTH Members: Dr. James D. Plumb, Dr. Nancy Brisbon, InSung Min, Ellen Plumb, Emily Hall, Kelly Sheridan
  - Community-oriented primary care health needs assessment of the Survivors Village
  - Goal: **integrate** basic **public health** principles into Barefoot Artist’s holistic **philosophy of healing and community**
    - provide a basic public health training in hygiene and sanitation for the survivors village
    - to document the needs of community members through key informant interviews and focus groups
    - evaluate and document the health resources currently available through site visits and semi-structured interviewing of established organizations
    - to better understand health needs in context of the unique social and political history of Rwanda
Origins of Health Project

Drawings by the Village health team to instruct villagers of better hygiene practices
Building Local Partnerships

- **Rwanda Village Concept Project**
  - non-governmental, non-political, voluntary organization run by students at National University of Rwanda
  - international student cooperation for community development
    - HIV AIDS awareness, reproductive health and family planning program
    - Malaria prevention program
    - Hygiene, Water, and Sanitation Program
    - Income Generation Program
    - Gender Empowerment Program (Pyramid Project)
Across the Years

- **Rwanda Health and Healing Project: 2007**
  - Team: Komal Soin, Karen Connelly, Sam Grodofsky, Dana Johns, Jennifer Heckman, Jed Calata
  - Gold Foundation Summer Service Fellowship: Malnutrition
    - Assessing nutritional status, farming capacity, access to food
    - Malnutrition monitoring program
    - Train the trainer educational programming on micro-nutrition

- **New Partnership**
  - Engineers Without Borders Data Gathering
    - January 2008: EWB visits Rugerero for assessment
    - Ventilation Improvement Pit (VIT): improving village sanitation

- **Existing Partnerships**
  - Rwanda Village Concept Project
  - Barefoot Artists: healing through art project
Across the Years

**Rwanda Squad 2008**

- Team: Cameron Bass, Rachel Choron, Jennifer Nissly, Matthew Kerr, Ken Hemba, Breanne Ward, Janae Heath
- Projects
  - Education: HIV/AIDS, family planning/prenatal care, nutrition
  - Sanitation: EWB
  - *Geriatric Assessment*: documentation of health concerns, identification by local health center
  - Malnutrition Program: continuity
  - *Income generating project*: chicken-rearing
  - *RVCP-Jeff HEALTH partnership*: monthly visits
  - Other: children’s sports programs, eye-glass testing and distribution, toothbrush distribution, and de-worming

**Exchange Program!**

- December 2007-January 2008
- Family and Community Medicine, Pediatrics Rotation or Rwandan Students
Rwanda: 2007-2008
Across the Years

- **Rwanda Squad April 2009**
  - 4th year elective: Elizabeth Krebs, Julia Switzer
  - **Akarambi**: Expanding to a Second Village
    - Community Health Needs Assessment
    - Needs Identified: malaria, diarrheal disease, cough, worms, HIV, malnutrition

- **Rwanda Squad Summer 2009**
  - Team: Rob Brody, Allison Abbadesa, Philip Chan, Max Cooper, Julia Penebianco, Bianca Grecu, Megan Barry, Aileen Butera, Henna Shah, Priscilla Sepe

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Across the Years

**Rwanda Squad: 2010**

- **Team**: Pier Hart, Lealea Hane, Christine Chew, Emma Somers, Tavor Sondheimer, Danielle Pickford, Eva Cantor, Minji Kang
- **Continuing Projects**: HIV/AIDS Education and Groups, Malnutrition, Water, Income Generation, Family Planning and Prenatal Care, Health Surveys
- **New Projects**: MPH Prevention of Soil-Transmitted Helminthic Infections

**Rwanda Squad: 2011**

- **Team**: Morgan Greenfield, Elizabeth Collins, David Caspar, Erika Seiver, Breanne Ward, Supritha Nagaraj, Ashlyn Sakona, Sabrina Chen, Ryan Cobb, Kasia (Katarzyna) Kania
- **Continuing Projects**: HIV/AIDS Education and Groups, Malnutrition, Water, Income Generation, Family Planning and Prenatal Care, Health Surveys
- **New Projects**: **Kitchen Gardens**
**Nutrition Education (cont.)**

- Interactive youth nutrition education was provided for approximately 45 students in primary and secondary school in Rugerero. The educational program included the four nationally recognized food groups, the importance of fruits and vegetables in a balanced diet, illnesses associated with malnutrition, the specific health benefits of fruits and vegetables in the kitchen garden, proper handling of food, and consumption of the edible portions of the plant. Food preparation was also discussed in an effort to teach students ways to ensure the most nutritious meal. Fresh fruits and vegetables purchased from the Kigali market were used to show the variety that could be grown in the kitchen garden. The majority of students received raw vegetables for the first time. Younger students were given the opportunity to plant their gardens through art, while secondary school students were asked to be leaders of the project and form teams to implement gardens throughout the community.

**Kitchen Garden Project**

- Based on the Ministry of Health’s national vitamin deficiency statistics, 1,871 students distributed 11 varieties of fruit, vegetable, and nut seeds (beans, carrots, cabbage, eggplant, squash, peppers, tomatoes, watermelon, squash, onions, and peanuts), and a limited supply of jetw in 120 families in Rugerero. Three families planted one row in order to begin growing seedlings. Once seedlings developed, they were divided and planted in individual family kitchen gardens throughout the village. Secondary students in Rugerero acquired new roles of garden tenders and family educators to enhance the success of the kitchen garden project. These students were targeted at all levels to prevent any potential resistance to the idea during planning stages. Additionally, they were taught to plant variety knowledge regarding the positive health benefits of this project with their families and community members. According to a monthly NUR student follow-up report, the kitchen garden project continues to be successful.

**Outcomes**

- Enhanced Family Roles
  - Parental and childrearing roles were enhanced through access to healthy, nutritious food sources for their children.
  - “We will be able to feed our families good, nutritious food.” (National University of Rwanda, 2011)
- Secondary school students and younger children took on advancing roles by educating families about health, the importance of fruits and vegetables in nutrition, and maintenance of kitchen gardens.

**Health Promotion**

- Villagers increased participation in health management occupations such as eating fruits and vegetables as a part of their diet.
- Families and children enhanced their participation in nutrition education by passing their knowledge of the positive health benefits of fruits and vegetables on to neighbors and community members.
- “This serves as the foundation on which all the other outcomes of this project are built.” (National University of Rwanda, 2011)

**Discussion**

The development of cultural competency components that contributed to the utilization of resources to best suit the environment prior to and during the project, multi-media materials, and role models are vital. Nutrition-related elements were utilized, as well as village health services. Moving forward, the author aims to disseminate the information to a greater number of individuals.

**Implications**

- Occupation-based programs such as this provide valuable opportunities for families in the study, who develop unique and individual roles as caregivers and students in health management. As with other programs, increasing communication skills and awareness of cultural competency is essential.
- The way villagers engaged in positive health behaviors of fruits and vegetables is important for future research.
- “We are very thankful for the kitchen gardens.” (National University of Rwanda, 2011)
Rwanda 2009-2011
Medical Exchange Program

Timeline

- 2006: First meeting with members of RVCP
- April 2007: Dr. James Plumb meets with RVCP Leaders in Rwanda
- Fall 2007: Rwanda Squad works on setting up Exchange Program
- December 2007-February 2008: First Exchange Students
- 2007-2011: 12 Rwandan Students at Jefferson
RVCP-Jeff HEALTH MOU

**Jeff HEALTH/Jefferson**
- Learn approach to Pediatric care, education and research in a developed country
- Learn approach to Family and Community Medicine care, education and research in a developed country
- Learn methods of integrating primary care and public health
- Understand how to offer a range of clinical services to meet community needs
- Promote health education through clinical encounters
- Understand management of chronic disease
- Learn methods to promote community linkages with medical institutions

**RVCP**
- Learn approaches of medical care, medical education and research in a developing country (Rwanda)
- Understand the management of major infectious diseases in a developing country (HIV/AIDS, Malaria, Tuberculosis, etc.)
- Promote health education through clinical encounters
- Understand some approaches, principles and practices of global health
Impact of Program

- **Total number of participants:** 47
  - *Sustainability, continuity*

- **Interdisciplinary:** Medicine, Nursing, MPH, Physical Therapy, Occupation Therapy, Undergraduate

- **Specialties:** Family Medicine, Emergency Medicine, Internal Medicine, General Surgery, Obstetrics/Gynecology, Anesthesia, Urology, Dermatology

- **Rwandan Students:** Johns Hopkins, Albert Einstein College of Medicine, Masters in Science of Clinical Research; Brandeis

- **Career Paths:**
  - Elizabeth Krebs: Founder of PURE-Physician’s Ultrasound in Rwanda Education Initiative
  - Emily Hall: Partners in Health (Rwanda, Haiti)
Future Directions

- Expansion and Evaluation
- Clinical Elective
  - **GOAL:** sustainable inter-disciplinary clinical experience for advanced health professionals focusing on reciprocal education and the integration of public health and medicine
    - Health System: 3 Levels
      - Local Community Health Centers, District Hospitals, Referral Hospitals
  - Kaitlan Elston, Cameron Bass (Spring 2011)
  - Family Medicine in Rwanda: National University of Rwanda
  - Rubavo Clinic, Sante Murara District (includes village of Rugerero)
  - Continuity with Jeff HEALTH public health and education programs

- Program Evaluation
  - Impact of experience on participants
  - Process Evaluation
  - Survey of Projects
Future Directions

- **College Within the College (CWiC Program)**
  - Inter-professional Primary Care Dual Degree program (IPCDDP)
  - 2 Tracks of CWiC: Population Health and Clinical Translational Research
  - 4 Rwanda Squad 2011 Members Participated as part of CWiC Program
  - A scientific basis for Public Health rests on the study of risks to the health of populations and on the systems designed to deliver required services
  - *problem-solving paradigm* in Public Health practice
    - Problem Definition
    - Problem Magnitude
    - A Conceptual Framework (e.g. – Ecological Framework) for Key Determinants of Health
    - Intervention Strategy
    - Policy Development
    - Implementation and Evaluation

- **Jefferson Medical College Clinical Skills Center**
  - Dr. Joseph Majdan
THANK YOU!

- Villages of Rugerero and Akarambi
- Rwanda Squad (2005-2011)
- Rwanda Village Concept Project
- Jefferson Medical College
- Arnold P. Gold Foundation
- Foerderer Travel Scholarship (Thomas Jefferson University)
- Thomas Jefferson Department of Radiologic Sciences
- Lily Yeh, Barefoot Artists
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- Barefoot Artists
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- Rwanda Village Concept Project
  - http://www.rwanda-vcp.org/