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

Ellen Plumb, MD; James Plumb, MD, MPH; Francis Barchi MBE, PhD
Cameron Bass, MD; Kaitlan Elston, MD
and the Rwanda Squad (2005-2011)
Outline

- **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
Across the Years

**Rwanda Squad April 2009**
- 4<sup>th</sup> 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 Abbadessa, Philip Chan, Max Cooper, Julia Penebianco, Bianca Grecu, Megan Barry, Aileen Butera, Henna Shah, Priscilla Sepe

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<tr>
<th>Rugerero Projects</th>
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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**
Kitchen Gardens in Rural Rwanda: Enhancing Family Roles and Health Promotion

Erika Seiver, OTS & Stephen B. Kern, Ph.D., OTR/L, FAOTA
Thomas Jefferson University, Jefferson School of Health Professions, Philadelphia, PA

Nutrition Education (cont.)

Intensive youth nutrition education was provided for approximately 46 students, with nutrition educators teaching the importance of fruits and vegetables in a balanced diet. Illness associated with malnutrition, the specific health benefits of fruits and vegetables in the kitchen garden, proper washing of food, and consumption of the edible portions of the plant. Food preparation was also discussed in an effort to teach students ways to consume the most nutritious.

Fresh fruits and vegetables purchased from the Gashora market were used to show the variety that would be grown in the kitchen gardens. The majority of students tasted raw vegetables for the first time. Younger students were given the opportunity to design their gardens through art, while secondary school students were asked to be leaders of the project and farm teams to implement gardens throughout the community.

Kitchen Garden Project

Based on the Ministry of Health’s national vitamin deficiency statistics, 10 students distributed 11 varieties of fruit, vegetable, and nut seeds (peanuts, carrots, eggplant, sunflowers, peppers, tomatoes, watermelon, squash, onion, okra, peanuts, and a limited supply of wheat) to 110 families in Bugero. Three households planted one row per plot in early growing season. Once seedlings developed, they were divided and planted in individual family kitchen gardens throughout the village. Secondary students in Bugero acquired new roles of garden tenders and family educators to enhance the success of the kitchen garden project. These students were targeted as leaders to prevent any potential contamination of the plot during planting phases. Additionally, they were trained to share their knowledge regarding the positive health benefits of the plot with their family and community members. According to monthly NUR student follow-up reports, the kitchen garden project continues to be successful.

Outcomes

Enhanced Family Roles

- Parental and childcare 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 leadership roles in educating families about health, the importance of fruits and vegetables in nutrition, and maintenance of kitchen gardens.

Health Promotion

- Villagers increased their participation in health management activities 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.
- “Village leaders are emphasizing kitchen gardens as a tool for fighting malnutrition.” (National University of Rwanda, 2011)

Discussion

The development of cultural competent components that contributed to the utilization of resources to build the environment prior to and during the implementation. The components include values, food, and communication. The utilization of various cultural components utilized, such as community health education. The author, who was part of the project, as a member of the interagency collaboration, worked closely with students. The students were provided students to participate in this internship using the asynchronous tool. In addition, all students who participated were able to experience the relationship between kitchen gardens and overall health.

Implications

Occupational Therapy programs, such as occupational therapy assistant program, provide valuable opportunities for students to develop skills unique environmental, social, and cultural aspects. The utilization of various cultural components utilized, such as community health education. The author, who was part of the project, as a member of the interagency collaboration, worked closely with students. The students were provided opportunities to participate in this internship using the asynchronous tool. In addition, all students who participated were able to experience the relationship between kitchen gardens and overall health.

Kitchen Garden – OT Poster

Erika Seiver OTS, Stephen Kern PhD, OTR/L
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
  - 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
Rwanda Health and Healing Project
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
  - http://www.barefootartists.org/

- Rwanda Village Concept Project
  - http://www.rwanda-vcp.org/