



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

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 Abbadessa, Philip Chan, Max Cooper, Julia Penebianco, Bianca Grecu, Megan Barry, Aileen Butera, Henna Shah, Priscilla Sepe

Rugerero Projects	Akarambi Projects
Family Planning Prenatal Care Chicken Rearing Rabbit Rearing HIV/AIDS Groups **<u>Helminth Prevention</u>	Family Planning Prenatal Care HIV/AIDS Group Nutrition Water and Sanitation



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

Villages face unique environmental, participating in everyday life. are the country's history of d malnutrition (Government of the result, many residents face what fer to as occupational injuries, ly occupations, including family work.

Participation in food gardens increases an increased sense of rural African villagers, and ion. Evidence also demonstrates -based agricultural interventions are rity at the household level in sub- Drimie, 2011; Maunder & Meaker, mter, 2008).



Organization at Thomas Jefferson he National University of Rwanda emply these challenges. Students a client-centered approach to lopment of a nutrition education i garden project.

is to educate students and novative use of occupational entation of kitchen gardens in rural



With the Technical Nutrition Assistant learn recommended government nd the establishment of kitchen tional Strategy to Eliminate

Nutrition Education (cont.)



Interactive youth nutrition education was provided for approximately 40 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 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 nutrients.

Fresh fruits and vegetables purchased from the Gisenyi 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 form teams to implement gardens throughout the community.

Kitchen Garden Project



Based on the Ministry of Health's national vitamin deficiency statistics, TJU students distributed 11 varieties of fruit, vegetable, and nut seeds (spinach, carrots, eggplant, cabbage, peppers, tomatoes, watermelon, squash, onions, celery, peanuts, and a limited supply of herbs) to 120 families in Rugerero. Three households planted one nursery 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 as leaders to prevent any potential disturbance to the beds during playtime activities. Additionally, they were selected to share their knowledge regarding the positive health benefits of this project with their families and community members. According to bi-monthly NUR student follow-up reports, 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 advocacy 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
- "Village leaders are emphasizing kitchen gardens as tool for fighting malnutrition." (National University of Rwanda, 2011)



Occupational Justice

- "95% of families in Rugerero have kitchen gardens, and is used well, [of] the families I visited I saw that the consumption of vegetables by family members have increased and they are happy of that." (National University of Rwanda, 2011)
- "The meeting with villagers and health group for evaluation the impact of kitchen gardens conclude that next season every family is encouraged to...[participate in kitchen gardening]...This is one of the successful projects...all families were very thankful about the kitchen gardens." (National University of Rwanda, 2011)

Discussion

The development of cultural competent components that contributed to the s utilized a variety of resources to bett of the environment prior to and durin text, multi-media research, and new New concepts were emphasized whi values. Tiered communication system utilized, as much of village health ed mouth. Upon return, the author, who to Rwanda as a member of the inter outcomes of this project to students University. Presentations generated students to participate in this interna the upcoming year. In addition to pro student participants will focus on su the relationship between kitchen gas



Implications

Occupation-based programs, such a provide valuable opportunities throug Rwandan villages can develop the tc unique environmental, social, and cu in everyday life. Villagers who partici developed an increased level of com as parents/caregivers and student ei as health management. As with the programs, overcoming language bar local, geographic, social, and econo learning for both students and village of village life, the author was able to cultural competence to understand a traditions, and values exhibited in th and villagers.

1. Seiver, E., & Kern, S. (2011). Community-based agricultural interventions of rural Rwanda. *OTJ*, 21(1), 21-30.
 2. Government of the Republic of Rwanda. (2011). Official website of the Republic of the Rwanda.
 3. Maunder, R., & Meaker, J. (2008). The current and potential contribution of homegrown vegetables to the diets of rural African populations. *Journal of Human Nutrition and Food Science*, 1(1), 1-10.
 4. Seiver, E., & Kern, S. (2011). Occupational justice - integrating home and community-based care. *OTJ*, 21(1), 21-30.
 5. Seiver, E., & Kern, S. (2011). Addressing the role of culture in occupational justice. *OTJ*, 21(1), 21-30.
 6. National University of Rwanda. (2011). Jefferson Health Village concept project 2011.

+ Kitchen Garden – OT Poster

Erika Siever OTS, Stephen Kern PhD, OTRL

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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 - <http://www.rwanda-vcp.org/>