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)
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
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

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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., OTRL, FAOTA
Thomas Jefferson University, Jefferson School of Health Professions, Philadelphia, PA

Nutrition Education (cont.)

Interactive youth nutrition education was provided for approximately 46 students in primary and secondary school in Rugarero. The educational program included the four nationally recognized food groups, the importance of fruits and vegetables in a balanced diet, information 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 ensure the most nutritious.

Fresh fruits and vegetables purchased from the Gasiyo market were used to show the variety that could be grown in the kitchen gardens. The majority of students selected 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 in implementing gardens throughout the community.

Kitchen Garden Project

Based on the Ministry of Health’s national vitamin deficiency statistics, 75% of students distributed 11 varieties of fruit, vegetable, and nut seeds (green beans, carrots, eggplant, sunflowers, peppers, tomatoes, watermelon, squash, onions, okra, and peanuts), and a limited supply of water to 120 families in Rugarero. Three families who planted one row to begin growing seedlings. Once seedlings developed, they were divided and planted in individual family kitchen gardens throughout the village. Secondary students in Rugarero 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 disturbances to the fruits during planting and cultivation. Additionally, they were selected to share their knowledge regarding the positive health benefits of this project with their families and community members. As the monthly nutritional analysis of families who followed-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 additional roles by educating family 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 cooking 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
- “Villagers are emphasizing kitchen gardens as tool for fighting malnutrition.” (National University of Rwanda, 2011)

Discussion
The development of kitchen gardens contributed to the utilization of various resources to foster the environment prior to and during the implementation of the program. Several factors enhanced the development of this program. First, the authors aimed to increase the understanding of kitchen gardens in the community. Second, the villagers were encouraged to participate in the development of kitchen gardens through various activities, such as sharing their knowledge and experiences with others. Finally, the authors emphasized the importance of maintaining kitchen gardens as a tool for fighting malnutrition.

Implications
Occupational therapy programs, such as the one described in this article, provide valuable opportunities for clients to work in unique environmental, social, and cultural settings. Villagers who participate in these programs gain insights into their own culture and traditions, which can be beneficial in understanding and maintaining kitchen gardens. The authors encourage other therapists to consider incorporating kitchen gardens into their therapy programs, as it can provide an opportunity for clients to learn and develop skills that are essential for maintaining healthy lifestyles.
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
  - The 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
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- Rwanda Village Concept Project
  - http://www.rwanda-vcp.org/