Enhancing of Quality Medical Education and Curriculum Change at the University of Zimbabwe

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Introduction

• University of Zimbabwe College of Health Sciences
  – Only Medical School until 2012
    • Attempts at establishing other medical schools over the years were not successful or failed to sustain these institutions
  – Second Medical School was finally established in 2012
    • National University of Science and Technology in Bulawayo Medical School
NECTAR, CHRIS, IMHERZ

- **NECTAR**
  - Novel Education Clinical Trainees And Researchers

- **CHRIS**
  - Cerebrovascular Heart Failure, RHD Interventions Strategy

- **IMHERZ**
  - Improving Mental Health Education & Research in Zimbabwe

- **ZiRIM & BRAD-G11**
  - Zimbabwe initiative on Research Innovation Management
Economic Crisis 1999-2009

Breaking the Cycle of Declining Medical Education and Research Capacity in Zimbabwe

1. Had to decrease Med Student Enrollment by 49%
2. Only 19% of IM "residency" spots filled
3. In 2010, 39% of faculty positions were filled (n=122/314)
4. Only 33% of govt. doctor posts filled
   - # docs↓ 45%
   - Emigration of existing qualified general practitioners and specialists
NECTAR and its two linked award programs -- CHRIS and IMHERZ -- will support medical education and research capacity development in Zimbabwe. The programs will coordinate to increase the quantity, quality, and retention of graduates with specific skills to address the healthcare needs of the population of Zimbabwe.
NECTAR Objectives

- Enhance the existing **curriculum** for ALL medical students in the PEPFAR Priority areas
- Implement the **NECTAR Mentored Clinical Scholars Program** to provide highly motivated students with the knowledge and skills necessary to become effective academic medical practitioners
- Engage UZCHS undergraduate and postgraduate trainees and junior faculty in **multidisciplinary mentored research projects and scholarly activities** related to PEPFAR health priorities
- Create an **academic environment** at UZCHS that will enhance the ability of UZCHS faculty to serve as medical educators, investigators and mentors.
- **Monitor** the impact of NECTAR on medical education, research, and practice at UZCHS and in Zimbabwe.
Background-HPE

- How were faculty members capacitated in Health Education at the UZ before 2010?
  - University Teaching & Learning Centre-UZ
  - Institute of Continuing Medical Education-UZCHS

- Educational workshops
  - Annual 3 day introductory course for new lecturers
    - General and did not take into consideration health education theory or practice
  - College ran 1-2 day courses in aspects of health education
    - Especially “setting examinations”
    - No emphasis on theory and practice of assessment

- No Health (Medical) Professions Education Unit
Health Professions Education-Gap

• On the whole health professions education was not a priority

• Hence no emphasis on:
  – Learning theory & practice
  – Assessment theory & practice
  – Course design and curriculum development
  – Models of learning
    • eLearning, PBL, TBL, etc
  – Education research & scholarship
Strategies to Address the Gap

• Faculty Development
  – Workshops
• Health Education Advanced Leadership in Zimbabwe (HEALZ)
  – FAIMER
  – Others
• Mentored Clinical Scholars Program (MCSP)
• Community Based Medical Education
• Curriculum review
  – Teaching innovations-TBL, Simulated patients
  – Course review
  – Curriculum reform
Quality Health Professions Education in Zimbabwe

Health Professions Education Department

Faculty Develop

Library Resources

HEALZ
FAIMER

ICT

Research Support Centre

Med Education Research & Scholarship

MCSP

CBE

CBME

Curriculum Change

Curriculum Change
PARTNERSHIPS

UZCHS - University of Zimbabwe College of Health Sciences
UCD - University of Colorado, Denver
SU - Stanford University
UCL - University College London; IoP - Institute of Psychiatry
UCT - University of Cape Town
Local Partnerships

Relationship with Ministries
- MOHTE
- MOHCW
- UZCHS

Partnership with Universities
- NUST
- AU
- UZCHS
Interdisciplinary Implementation of Faculty Development Efforts

Medicine  Dentistry  Pharmacy  Nursing  Rehab  Lab Sciences
NECTAR: 2010-2013
Faculty Development Workshops

- 3 FDW per year
- Topics
  - Principles of adult learning
  - Teacher-learner contact
  - Assessing clinical skills
  - Continuous assessment
  - Developing effective learning tools
  - Developing and using case studies
  - MCQs
  - Teaching professionalism & ethical behaviour
  - TBL
- Topics-continued
  - Clinical reasoning
  - Giving feedback
  - Teaching cognitive skills in clinical settings
  - Teaching procedural skills
  - Writing goals and objectives
  - Large group teaching
  - PowerPoint presentation skills
  - Curriculum Development
Faculty Professional Development

• UZCHS faculty attending NECTAR FD workshops
  – July 2011 = 69
  – November 2011 = 31
  – March 2012 = 82
  – August 2012 = 55
  – December 2012 = 65

• Total # of faculty attending one or more workshops = 121 (79% based on a total count of faculty of 153) (Source: Evaluation survey 2013)
Health Education Capacity Building

• FAIMER (Foundation for the Advancement of Medical Education and Research)
  – 4 fellows completed program (2012, 2013)

• HEALZ (Health Education And Leadership in Zimbabwe)
  – 14 fellow-2012-13
  – 17 fellow-2013-14
  – 14-16 fellows-2014-15

• Other
HEALZ GOALS

1. Train more doctors
   - Develop curriculum
   - Conduct faculty development

2. Keep doctors in Zimbabwe
   - Train medical educators
   - Support medical educators

Monitoring and evaluation
HEALZ Objectives

Provide participants with the knowledge, attitudes and skills necessary to successfully:

• Implement best practices in educational pedagogy
• Develop, implement and evaluate curriculum
• Develop and implement reliable learner assessment tools
• Develop and implement a rigorous program evaluation
• Turn educational work into scholarly activity
Curriculum

• One year program
  – 3 intensive week long in person sessions
  – Mentored project work
Curriculum Weeks 1-3

- Week 1
  - Educational theory
  - Introduction to core principles of curriculum development & program evaluation
  - Needs assessment/surveys/interviews/focus groups

- Week 2
  - Curriculum development
    - Program evaluation including basics of quantitative and qualitative analysis
    - Learner assessment

- Week 3
  - Educational leadership
  - Curriculum/program implementation
  - Turning educational work into scholarship
Mentored Independent Work

• Complete a needs assessment for curricular idea
• Develop a curriculum or program
• Develop a curriculum or program evaluation
• Online platform (wiki) for communication/articles/resources
Satisfaction of HEALZ Scholars

Number of Scholar Responses

- Extremely satisfied: 13
- Satisfied: 8
- Neutral: 4
- Not satisfied: 2
- Not at all satisfied: 2

Legend:
- Green: Module 3
- Red: Module 2
- Blue: Module 1
Knowledge Before/After Module 1
Average Self-Rating

Conducting quality interviews
Prepared quality surveys
Developing an evaluation plan
Conducting a medical education review of literature
Conducting a needs assessment for curriculum
Principles of learning theory

Five point scale “no knowledge” to “expert”
NECTAR: 2010-2013
Mentored Clinical Scholars Program

- Academic development program for MMeds & Registrars in all departments
  - Improve MMed teaching skills
  - Prepare MMed for academic positions at UZ
  - Enhance MMed personal development

- Topics
  - Learning preferences/styles
  - Life skills/stress management
  - Giving feedback & teaching opportunities
  - Team management
  - Formal procedures/EBM/EOL issues/communication skills
  - Critical Thinking
  - End of life care & breaking bad news
  - Physician/surgeon self-care
Field Attachment Program (CBE)

- Established in 1987
- Initially 1 monthly rotation for medical students Yrs 1-5
- Now 2-4 week rotations for Yr2, Yr3, Yr5
- 37 available district attachment sites
- UZCHS & local district hospital supervisors
- NECTAR enhancement-curriculum, FD training, ICT, infrastructure, academic resources access
Field Attachment-CBE
Roadmap to Curriculum Development

Faculty Development

FAIMER/HEALZ

MCSP

CBE

Curriculum Development

Curriculum Reform

Health Professions Department
Health Professions Department

- Established in March 2013
  - Faculty Development
  - HEALZ
  - MCSP
  - Modernize teaching
  - Oversee implementation of teaching technologies
  - Graduate tracking
  - Etc...
UZ VC Prof Nyagura Meets NECTAR Leadership
HPE Department Offices
Competency Domain: the roles and responsibilities of practice

- Competency Domain: Patient Centered Care
  - Medical Expert
  - Communicator/Relationship Builder
  - Scholar/Researcher
  - Manager and Leader
  - Community Health Advocate
  - Educator

Competent Physician
Challenges

• Student numbers
  – Models of teaching that reach a wider student audience
• Staff shortage
  – eLearning, etc
  – Health Professions Department
• Internet bandwidth
  – Sustainability
• Field attachment sites & infrastructure
• Change management
  • Health Professions Department
• Initiative & drive
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