Consortium for Advanced Research Training in Africa (CARTA): A model for training and retaining the next generation of African academics

Alex C. Ezeh, Executive Director, APHRC
• Brief overview of the issues
• Key elements of CARTA
• CARTA’s current membership
• Timeline
• Related Initiatives
• Retention – What you can do
• About APHRC
Rationale 1: Why a Consortium?

• Universities in Africa remain the key intellectual hub

• The future development of the region rests with universities

• Yet, they face enormous constraints including:
  – Unprecedented growth in undergraduate enrolment and expansion of training programs (337k in 1980 to 4m in 2004 – WB 2005)
  – Inadequate funding (Budgetary share of higher education ↓ from 19% (1980-84) to 15% (2000-05)
  – Reliance on PhD-by-thesis model
Rationale 2: Consequences

- Steady loss of university staff
- Low research output
- Doubts in the capacity of African universities to produce globally-competitive graduates
- African scholars remain marginal to research
- Weak preparation of the next generation of African scholars
Rationale 3: Current realities

- Current stock of African academics mostly trained overseas
  - Overseas training opportunities are much more limited
    - High and escalating costs
    - Low rates of return of overseas-trained PhDs
    - Those who return often drift away from teaching and research
Rationale 4: Implications

- African Technical Department Report (2002): ‘if nothing urgent is done now, African universities will be empty of brains in the next few decades’.

- African Partnership Forum (2007): Africa currently employs up to 150,000 expatriate professionals at a cost of US$4 billion a year to fill the human resource gap created by brain drain.

- The continent’s share of global scientific output fell from 0.5% in the mid-1980s to 0.3% in the mid-1990s.
Rationale 5: The Challenge ahead

- Majority of the next generation of academics in sub-Saharan Africa will be trained locally
- Urgent need for globally-competitive graduate programmes
- No individual university or country has the human resource capacity for such programs
- Hence……
- The CARTA Consortium
Goals of the Consortium

a) Facilitate creation of globally-competitive multi-disciplinary doctoral training program
b) Strengthen technical skills of doctoral students
c) Retain trained capacity within Africa
d) Create critical mass of multi-disciplinary research teams within universities
e) Strengthen research management, administration, & supervision skills
f) Increase research output & productivity
g) Create opportunities for multi-country Africa-led research partnerships
h) Strengthen linkages between research & policy
Key Elements of CARTA
Student training

• Strengthening doctoral training
  – Joint Advanced Seminar Series
  – Online support – STATA user group model
  – Participation in international conferences
  – Targeted sandwich/internship at a Northern or Southern university
  – Research grants for student-initiated projects
  – Library support to students
  – Post-doctoral components
  – Monthly stipend to facilitate fulltime studentship
**Student training**

- **JASS Model**
  - **Stage 1: Introduction to critical thinking/research**
    - Interdisciplinary research, conceptualizing research projects, research design, developing instruments, literature & data resources, research ethics, etc.
  - **Stage 2: Data analysis**
    - Mixed-methods approaches, identifying appropriate analytical models, model assumptions, common errors in data analysis, basic analysis to complex modelling, etc.
  - **Stage 3: Interpretation and writing up of results**
    - Communicating research to policy makers, presentation skills, scientific publications, identifying appropriate journals, etc.
  - **Stage 4: Beyond PhD**
    - Proposal writing, budgeting, managing research grants & partnerships, research ethics, developing course outlines & teaching materials, research & policy linkages, etc.
Selection

Pre-JAS Training
Testing and training in basic ICT skills, ‘Understanding Research and Critical appraisal’ and English for Academic Purposes via Warwick’s online programmes.

JAS 1
Introduction to Research and Critical Thinking
Month 6-7

JAS 2
Managing and Analyzing Data
Month 11-13

JAS 3
Presenting Data and Findings
Month 30-32

JAS 4
Professional Development
Month 40-41

Inter-JAS 1
•Development of dissertation proposal
•Completion of literature review
•Teach seminar at home institution

Inter-JAS 2
•Data Analysis
•Finalize dissertation proposal
•Development of analytic skills
•Teach seminar

Inter-JAS 3
•Submission of thesis 3-4 months before the final JAS
•Drafting of peer-reviewed journals for publication
•Explore possibilities for post-doc research experience
•Teach seminar

EXIT from CARTA
Students failing to deliver Inter-JAS assignments or repeatedly falling short of expected standards within the JAS will fail the course. Readmission into the program will be contingent on personal circumstances. Institutions with failing students will be given black marks and may eventually be cut from the CARTA program.

Graduation
Institutional capacity building

- Training sessions for faculty & staff
  - Supervision of doctoral students
  - Grant writing
  - Research management and administration
  - Management of partnerships
  - Leadership skills

- Infrastructural support
  - Internet connectivity, library, computers, etc

- Support in developing multi-disciplinary research programs

** Development of institutional capacity to support research and training
## Current Membership

<table>
<thead>
<tr>
<th>African Universities</th>
<th>African Research Centers</th>
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<tbody>
<tr>
<td>Makerere Univ., Uganda</td>
<td>APHRC (Kenya)</td>
</tr>
<tr>
<td>Moi University, Kenya</td>
<td>Ifakara Health Institute, TZ</td>
</tr>
<tr>
<td>National Univ. of Rwanda</td>
<td>KEMRI/WT Res. Program, KE</td>
</tr>
<tr>
<td>Univ. of Dar es Salaam, TZ</td>
<td>Agincourt PHU/Wits, SA</td>
</tr>
<tr>
<td>University of Ghana</td>
<td><strong>Northern Partners</strong></td>
</tr>
<tr>
<td>Univ. of Ibadan, Nigeria</td>
<td>WHO/TDR</td>
</tr>
<tr>
<td>University of Malawi</td>
<td>Swiss Tropical Institute</td>
</tr>
<tr>
<td>Univ. of Nairobi, Kenya</td>
<td>University of Colorado, USA</td>
</tr>
<tr>
<td>WITS, South Africa</td>
<td>University of Warwick, UK</td>
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</tbody>
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**On-going discussions many others**
Current Membership

Established Research Sites
- Agincourt
- Ifakara
- Kilifi

Lead Institutions
- APHRC
- Wits

Promising African Universities
- Malawi
- Moi
- Rwanda

Northern Partners
- Colorado
- Swiss Tropical Inst.
- TDR
- Warwick

Established African Universities
- Dar es Salaam
- Ghana
- Ibadan
- Makerere
- Nairobi
- Wits

** On-going discussions many others
# Timelines

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>May 2006</td>
<td>Roundtable on doctoral training in Africa</td>
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<tr>
<td>June 2006 – June 2007</td>
<td>Consultations</td>
</tr>
<tr>
<td>Jan. 2008</td>
<td>1st Meeting of partners – in Dar es Salaam</td>
</tr>
<tr>
<td>Feb. 2008</td>
<td>Submission of EoI to Wellcome Trust</td>
</tr>
<tr>
<td>May 2008</td>
<td>Invitation to submit a full proposal</td>
</tr>
<tr>
<td>Sept 2008</td>
<td>Full proposal submitted</td>
</tr>
<tr>
<td>Ongoing</td>
<td>Raise additional funds to increase number of students from 14 to 25 per cohort</td>
</tr>
<tr>
<td>Jan. 2009</td>
<td>Rollout of the Program</td>
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Other Capacity Building Initiatives

- CARTA-Med
  - Research training for medical doctors during specialization
  - Training of mid-level health workers
- African Doctoral Dissertation Research Fellowship (ADDRF)
- Technical workshops
- Internships
- Research traineeship programs
- Sabbatical fellowships
Retention: What we can do

• Flexible appointments
  – Existing expertise outside the university
  – Research appointments

• Redefine parameters for salary negotiations

• Recognize and reward research productivity
  – Buy out time
  – Promotions – defined by output rather than years of experience

• If accounts/bursary is a problem, outsource!

• Apply limited research funds to productive faculty
The African Population and Health Research Centre
Background

• Pan-African Research Institute set up in 1995 as a fellowship program of the Population Council with funding from the Rockefeller Foundation

• Became autonomous non-profit international organization in 2001

• Current Status
  – 501(c) 3 status in the US
  – Headquarters agreement with Govt. of Kenya
Vision and Mission

• **Vision**
  “To be a global centre of excellence, consistently delivering sound scientific evidence for policy and action”

• **Mission**
  “Promoting the wellbeing of Africans through policy-relevant research on population and health”
Institutional Objectives

- Provide an enabling environment for African scholars
- Strengthen professional and institutional research capacity
- Promote the dissemination and utilization of research findings for policy and program improvement
Who we are

• About 40 Research Staff
  – Multi-country (from 12 African countries)
  – Multi-disciplinary team
    • Demography, Biostatistics, Health Economics, Development Economics, Sociology, Anthropology, Socio-linguistics, Public Health, Epidemiology, Education Policy/Planning
    – 20 PhDs and 19 MA/MSc/MPH degree holders

• 17 Administration and Support Staff

• 75+ Field and Data Entry Staff

• About 150 field staff on short term contracts
Core Areas

Research

Generation and Synthesis of Scientific Knowledge

- Urbanization & Wellbeing
- Population & RH
- Health Challenges & Systems
- Education

Policy Engagement
- Publications
- Meetings, briefings & workshops
- Media engagement
- Network creation & collaboration

Strengthening Research Capacity
- Fellowships
- Training workshops
- Support to universities
If we consistently apply the same strategies that have failed us over the years, we can’t expect a different outcome tomorrow!
Thank You!