

**Global Leadership:
Building Academic Nursing
Scholarship, Education, and Service**



New York University

College of Nursing

STTI Meeting, Indianapolis


17 Nov. 2013, Session C15

2:45-4:00 pm

Panel Outline

Objectives:

- Challenges & opportunities of nursing global health work
- Eileen Sullivan-Marx: Integrating Global Nursing at NYU
- Ann Kurth: NYU College of Nursing Global
- Gail Melkus: Ghana Diabetes EHR
- Deb Chyun: Capacity building Rwanda & Georgia
- Q & A



**The Global Network University:
Integrating global nursing education,
research & practice at NYU**



Eileen Sullivan-Marx

with Ann Kurth, Gail Melkus, Deb Chyun, Madeline Naegle

<http://nursing.nyu.edu/global>

NYU – a Global Network University

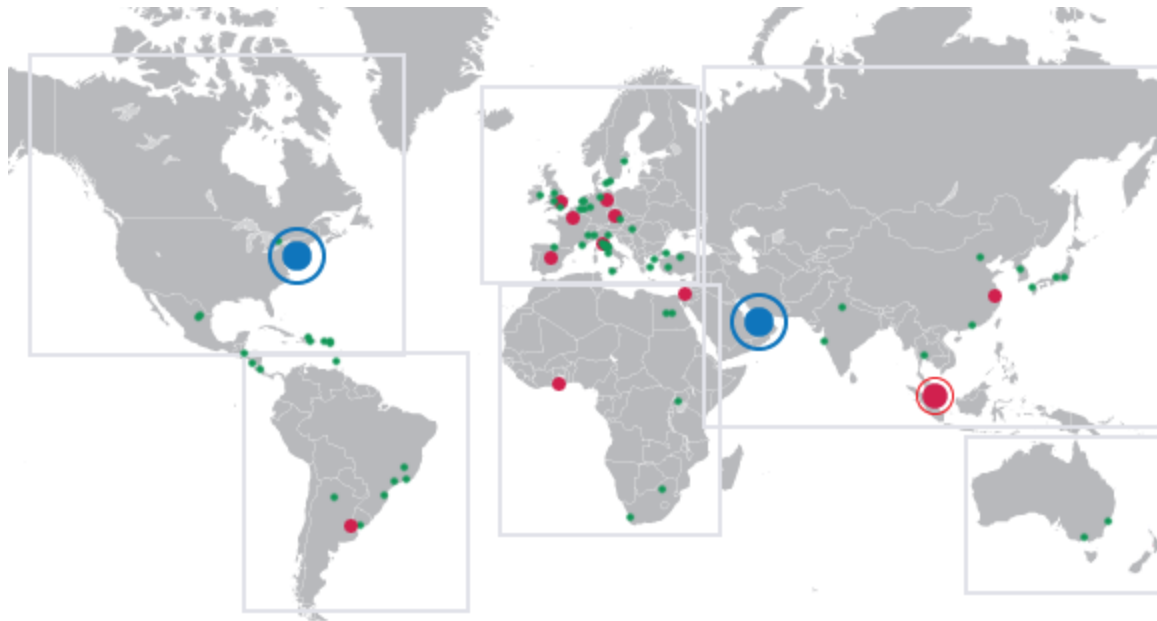
NYU-NYC Schools and Colleges

- College of Nursing
- School of Medicine
- College of Dentistry
- Wagner School of Public Svs
- Polytechnic Institute (Engineering)
- Stern School of Business
- School of Law
- Silver School of Social Work
- Steinhardt (allied health)

NYU Global Network

- Portal campuses
 - Shanghai
 - Abu Dhabi
 - NYC
- Research Centers:
 - Accra, Berlin, Buenos Aires, Florence, London, Madrid, Paris, Prague, Tel Aviv, Sydney, Washington DC

NYU World's first global network university (GNU)



- Two portal colleges in Abu Dhabi and Shanghai
- Research sites in Accra, Buenos Aires, Tel Aviv, Prague, Madrid, Paris, London, Florence, DC

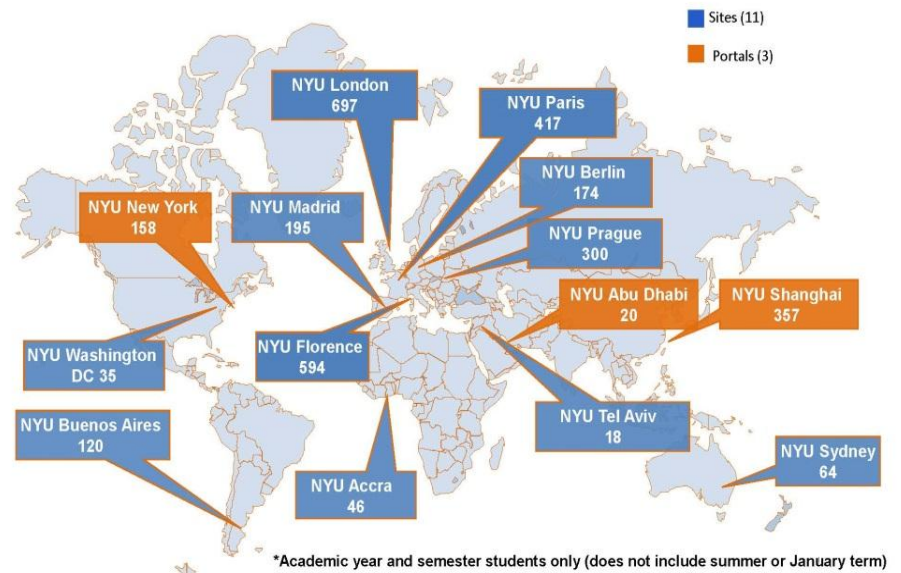
<http://www.nyu.edu/global/the-global-network-university.html>

Senator Paul Simon
Award for
Comprehensive
Internationalization,
Association of
International
Educators 2011



NYU Global Sites

- **NYU: A Global Network University**
 - “In and of the City”
 - “In and of the World”
- 40% of students study abroad; 53% of nursing students do
- Engaged global citizens



NYU New York City

GNU structure

Core value on global learning promotes structure

- travel support
- faculty appointments
- research opportunities without barriers



NYU Buenos Aires

- Global Associate Deans or Directors in each school with link to Global Provostial Team
- Faculty Committees on Global Strategies
- Portals – Degrees
- Sites – Study Abroad



NYU Florence

- Research for Nursing Globally
- Core Pillar in Strategic Plan
- Enables cross disciplinary research
- HIV/AIDS, Workforce, NCD, Aging, Mental Health





**NYU College of Nursing Global:
Developing an academic unit to advance
health solutions**



**Ann Kurth, with
Deb Chyun, Gail Melkus, Mattia Gilmartin,
Allison Squires, Marie Claire Roberts, Madeline Naegle**

<http://nursing.nyu.edu/global>

NYUCN Global Mission

To conduct research and implement programs that address health disparities, inform clinical practice, and advance science to improve health and well being of individuals, families and communities in America and throughout the world.



***“...in our interconnected world,
global health is local health ”***

NYUCN Global Strategic Planning

- Strategic planning was undertaken and development, operations, and methods cores were established within the Division
- Goals
 - Synergize CN programs/efforts
 - Expand partnerships with agencies (WHO, IOM, NIH, PEPFAR, HRSA, CDC, GHWA, Gates Foundation) & local LMIC universities, association, NGOs in key countries
 - Engage CN faculty expertise; support/retain junior and senior faculty through research; attract new faculty
 - Disseminate knowledge and translational research

NYUCN Global Approach

- Strategic partners to conduct dissemination and implementation science in health system strengthening & HRH, HIV/ID, MCH, reproductive health, NCDs
- Collaboration ethics: Joint production of scientific articles, evidence-based research and practice tools
- Diversify research and programmatic funding from NIH, HRSA, ARHQ, USAID, World Bank and other federal and multi-lateral donors

Progress Since NYUCN Global Launch

	2010	2012
STAFF	3	12
GRANTS	7	12 Additional Grants
FUNDING	\$11.2M*	\$6.2M* Additional Funding
CORE CAPABILITIES	HIV	HIV, HRH, HSS, NCD, Gender
DONORS	NIH, Gates Foundation	NIH, USAID ¹ , US State Dept ² , UNAIDS ³ , Banco Santander

*Aggregate funding, not annualized
1,2,3 First funding at NYU

HRH - Human Resources for Health
HSS – Health Systems Strengthening
NCD – Non Communicable Diseases

Progress Since NYUCN Global Launch

2010

□ Countries

- Kenya, Uganda
- PAHO region (WHO CC)

□ Partners

- Univ of Nairobi, Moi Univ, Bomu Hospital

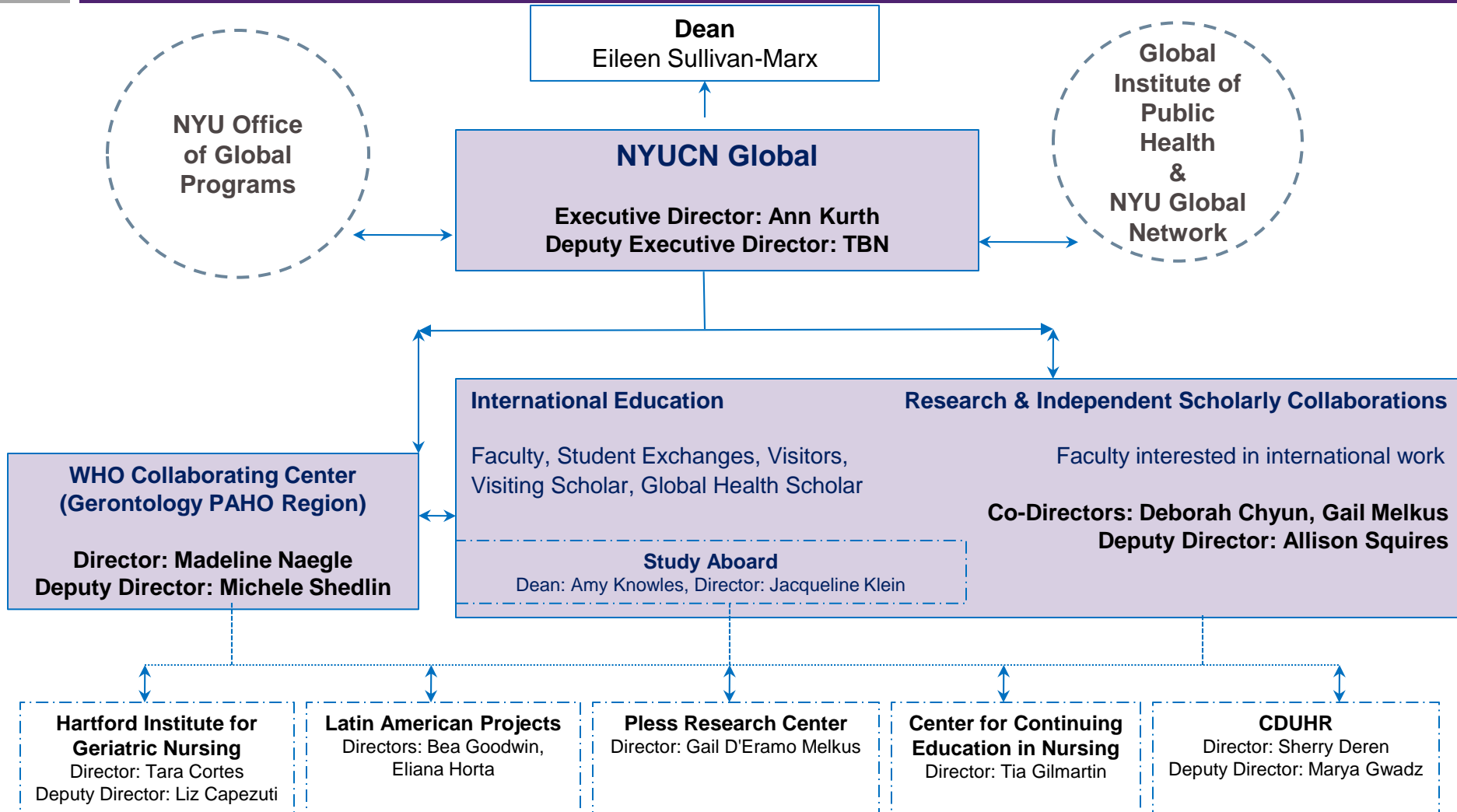
2013

□ Countries

- Brazil, Kenya, Uganda, Rwanda, Ghana, Georgia, Global Review (multicountry), Tanzania

□ Additional Partners

- UoGhana, Rwanda MoH, Kenya MoH, TSU, TSMU, PRAH, UoGeorgia, Touch Foundation, PSI, Zambia FHS, Tanzania NMC, Touch



Key Faculty Experts & Staff



Ann Kurth
Executive Director,
NYUCN-Global



Deborah Chyun
Deputy Director,
NYUCN-Global



Gail D'Eramo Melkus
Director, Pless
Research Center



Madeline Naegle
Director, WHO
Collab. Center



**Julia Lange
Kessler**
Director, Midwifery
Program



**Marilyn
DeLuca**
HRH



Gbenga Ogedegbe
NCD and Health
Disparities research



Marc M. Triola
Associate Dean,
Educational
Informatics



Christine Kovner
Professor
Nursing
Workforce,
Turnover



Maja Djukic
Interprofessional
Education & Health
System/Workforce
Development



Allison Squires
Health human
resources
development
Latin Am,
Caribbean



Mei Qiu
Assistant Professor,
Collaborative nursing
research – China and
South Korea



Mary Brennan
Clinical Education,
Pediatric Nursing,
Ghana



**Yvonne
Wesley**
Nurse
Leadership



Michele Shedlin
HIV Research,
Latin Am and
Caribbean

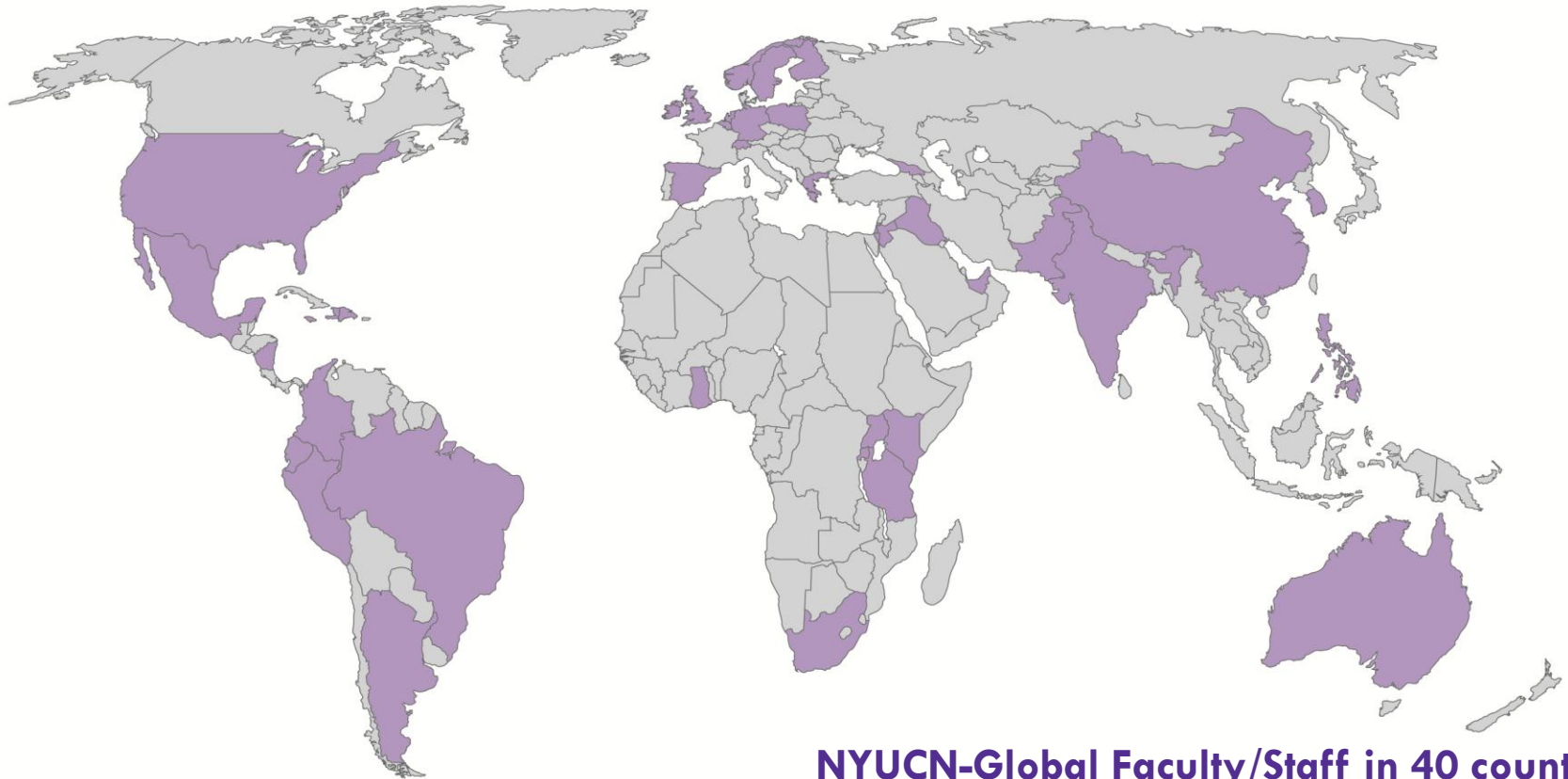


Tia Gilmartin
Leadership/
Cange Mgmt

US STAFF: Kerry Stalonas,
Adam Sirois, Nkiru Azikiwe,
Jasmine Buttolph, Nok
Chhun, John Lizcano



NYUCN-Global Programs



NYUCN-Global Faculty/Staff in 40 countries

Argentina, Australia, Belgium, Brazil, China, Colombia, Dominican Republic, Ecuador, Finland, Georgia, Germany, Ghana, Greece, Haiti, India, Iraq, Ireland, Israel, Jamaica, Jordan, Kenya, Mexico, Netherlands, Nicaragua, Norway, Pakistan, Peru, Philippines, Poland, Rwanda, South Africa, South Korea, Spain, Sweden, Switzerland, Tanzania, Uganda, United Arab Emirates, United Kingdom, and the United States.

Core Capabilities



**Maternal and
Child Health**



**HIV/AIDS and
Infectious
Diseases**



**Non-
Communicable
Diseases**



**Healthy Aging
and Elder Care**

Health System Strengthening / Health Workforce

Core Capabilities

- Human Resources for Health (HRH)
 - Interprofessional training, pre & post-licensure education, retention, task shifting, telemedicine, simulation
 - Global Scholar & Leadership programs
- Non-Communicable Diseases
 - Diabetes, CVD, mental health, dental
- HIV & Infectious Diseases
 - NIH: multiple R Grants (Gwadz HIV R01, Anastasi complementary therapy, Kurth 6 RC/01s, P30 CDUHR)
 - Gates: Grand Challenge Explorations award, Kenya

Core Capabilities

- Maternal-Child Health
 - Midwifery program
 - HRSA Grant
 - Pediatric/Neonatal program
- Healthy Aging and Eldercare
 - WHO Collaborating Center
 - Hartford Institute
 - NICHE Program
- eHealth
 - Computerized counseling tools
 - Clinical education & training
 - Mobile platforms

NYUCN is ranked #1 in the United States for gerontology nurse practitioner education.

Global Faculty Capacity-Building

- WHO Collaborating Center '04 (healthy aging)
- Capacity-building
 - Nurse faculty: PAHO (Naegle), Mexico, Tanzania (Squires), Ghana (Gilmartin, Wesley)
 - Interdisciplinary faculty: Georgia (Chyun)
 - Entire country: Rwanda (Chyun)



NYU CN WHO Collaborating Center in Geriatric Nursing Education

□ Leadership

- Madeline A. Naegle, PhD, CNS-PMH,BC, FAAN, Director
- Michele Shedlin, PhD Assistant Director

□ Network Member:

- Pan American Nursing and Midwifery Collaborating Centers Network [PANMCC] (est. 1993)
- Global Network of Nursing and Midwifery WHO Collaborating Centers (GNNMCC)

WHO Collaborating Center: Geriatric Nursing Education

(2004-present)

Building capacity

- -Focused WHO work plan
 - -Collaborative projects with int'l and network partners
 - -Expand reach, build partnerships for knowledge generation and dissemination
 - ----12 + Nursing and medical agencies, organizations
 - 50+ Schools and universities: over 50 in Chile, Argentina, Colombia, Peru, Brazil, Mexico, West Indies
 - PAHO/NYUCN joint projects
- Partnership Data base of over 200

Expanding Influence through Networks

Global Network of Nursing and Midwifery Collaborating Centers.

43 world wide

Provide technical Expertise in
Research, training, education

Health and health care delivery:
infectious disease, maternal child health, healthy aging, primary care, non-communicable disease

Continuing education and nursing workforce leadership development

Research training and research network development

Building Capacity for Nursing Care: Healthy Aging, Geriatric Care

PAHO/NYUCN Joint Project

- Online access to evidence-based, learning resources: NICHE (Nurses Improving Caring for Health System Elders), HIGN (Hartford Institute for Geriatric Nursing Education)
- Consultation and outreach in support of culturally relevant, system appropriate use of materials, translation of best clinical practices, population relevant training
- Translation for regional adaptation

Outcomes

- Online Resource Guide for Competencies in Care of Older Adults:
 1. Partner validation (LAC)
 2. English/Spanish
 3. Consultation and training for use, adaptation
- Focused presentations, publications and trainings
- Agency and institutional collaboration to enhance adaptation

Targeted Outcomes: Dynamic Response to Aging Populations in the Americas

- Expand access and innovative strategies for inter-professional and nursing education
- Seek funded projects with sponsoring regional agencies
- Partner in research and educational evaluation
- Continue and expand relationships with regional nursing/medical/public health organizations
- Fully use NYU GN resources in Latin America and the Caribbean for expanded reach and resource development

Ghana Wins! Ghana Nurse Scholars

- ❑ 3 cohorts of 10 female nurses
- ❑ 30 evidence-based practice projects
 - ❑ Leadership summits, Accra & NYC
 - Mentoring/local faculty coaches for projects
 - Project implementation/evaluation
 - Presentation in Accra to next cohort

Partners = Banco Santander
Univ of Ghana SoN, Mujeres Por
Africa, Ghana Health Service



Ghana Nurses Program Goal/Objectives

- Improve participants' ability to be effective leaders within the Ghanaian health sector
 - By the end of the program participants will be able to:
 - Identify personal strengths and weaknesses as a leader
 - Create a personal action plan to improve leadership effectiveness
 - Effectively manage teams
 - Provide effective performance feedback to promote clinical practice excellence
 - Apply principles, practices, and models of organizational change
 - Use quality and safety principles and methods to improve clinical care
 - Apply the chronic care model to clinical practice setting
 - Evaluate the outcomes of a clinical change project

Ghana Nurses Program Design and Teaching Approach

Four year program that seeks to train 30 mid-level nurse managers working in each administrative district of the Ghana Health Service.

Each cohort enrolls into the program for 12-14 months for a two week residential teaching program that includes a 10 month action-learning change project

Case-based teaching and discussions build new frameworks, integrate evidence into decision making, and learning activities build skills.

One week of the program delivered in Accra, Ghana in collaboration with faculty from the University of Ghana School of Nursing.

The second week of the program delivered in New York City at the NYU campus

Ghana Nurses Change Projects

- Participants design and implement an organizational change project that provides an opportunity to develop skills in:
 - identifying *content* for change (what to change)
 - leading *process* of change (the how of change) within their organizations
- During the action learning period, participants will engage in coaching and feedback sessions with faculty coaches from
 - The University of Ghana, School of Nursing
 - Faculty mentors from the NYU College of Nursing
 - Participants present their **Change Project** to the following cohort at end of the 12 month action-learning period

Ghana Nurses 2013 Cohort Change Projects

- Improving hand washing rates, Bolgatanga Regional Hospital
- Nurse-led diabetes self-management education program, Military 37 Hospital
- Nursing process documentation improvement projects, Komfo Anokye Teaching Hospital, Korle Bu Teaching Hospital, Ridge Regional Hospital
- Integrating physical assessment skills into clinical teaching routines, University of Ghana and University for Development Studies, Schools of Nursing
- Assisted delivery improvement project using Queen Mothers, Ashanti Health District

Global Health Scholar: MoH Nurses

3-month scientific sabbatical

- Training, coursework in evidence-based practice & research
- Rotations at clinical sites, sim lab
- Conferences, networking
- Faculty mentorship
 - Including when back in home country
- Grant writing for interventions that address health priority issues



First Global Health Scholar Gustav Moyo with Ann Kurth, 2010.
Gustav is CEO of the Nurses and Midwives Council, Tanzania

Global HRH Summit, Investing in Workforce – NYC 2011

NYU **Nursing** COLLEGE OF

GLOBAL

Invitational Summit

Strengthening 21st Century Global Health Systems: Investing Strategically in the Health Care Workforce

Summit Co-Chairs: Ann E. Kurth, PhD, CNM, FAAN and Marilyn A. DeLuca, PhD, RN

Thursday, October 13, 2011



Without extra skilled hands, available everywhere, in the form of health workers, the supply of vaccines, delivery of medicines and access to critical services... will not be possible. We know what policy solutions are effective. It is time to back this knowledge with the right level and the right type of investment.

Dr. Mubashar Sheikh, 2011, Executive Director, Global Health Workforce Alliance

NEW YORK UNIVERSITY

COLLEGE OF
Nursing

Overview

Global health depends on access to an educated, skilled and motivated health care workforce. Global health philanthropy has historically supported disease-specific initiatives with minimal investment in the health care workforce as essential infrastructure. Reluctance among funders springs from complex issues related to human resources for health including how we can most effectively attract, deploy and retain health care professionals.

The Summit will convene on Thursday, October 13, 2011 in conversations to identify workable strategies to strengthen human resources for health and to spark investment and action by interested funders, governments and institutions.

Objectives

Articulate a range of strategic investments that have the potential to efficiently strengthen the global health care workforce

Present, discuss and learn from evidence-based strategies for health workforce development

Strengthen partnerships and scale-up collaborations and commitments among funders, governments and institutions that can effectuate health workforce strengthening

Participants

Summit Co-Chairs, Academic Presidents, Board Members, Leaders of Public and Private Organizations

When: October 13, 2011, 11:30 am - 6:00 pm
Cocktail Reception, 6:00 pm - 7:00 pm

Where: McKinsey & Company
55 East 52nd Street, 21st Floor (between Park and Madison Avenues)

KEYNOTE BY:



Julio Frenk, MD, MPH, PhD
Chair, Lancet Commission Placem 21
Dean, Harvard University
School of Public Health



Professor David K. Mphande
Minister of Health Malawi



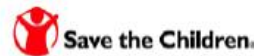
The
ATLANTIC
Philanthropies



GENEVA GLOBAL
FORUM ON HEALTH POLICY AND LAW



Johnson & Johnson



TouchFoundation



<http://www.nyu.edu/about/news-publications/news/2011/11/11/nyu-nursing-global-conference-tackles-need-for-global-investment-in-human-resources-for-health-october-13-2011.html>

Global HRH Book (2013)



- ***Transforming the Global Health Workforce.*** Marilyn A. DeLuca, PhD, RN & Agnes Soucat, MD, MPH, PhD, Editors. September 2013, New York: New York University, College of Nursing ISBN 978-1-939029-08-9
- Online purchase www.bookstores.nyu.edu “Search” ISBN “9781939029089”
- PDF available NYU Faculty Digital Archive www.archive.nyu.edu/handle/2451/31736
- Searchable through Google, soon Amazon
- www.ondemandbooks.com Espresso Book Service

Global HRH Summit, Associate Clinicians – Brazil 2013

- Leveraging north-south lessons learned and regional networks to enhance use of Associate Clinicians (non-physician providers such as NPs, PAs, Clinical Officers, etc.)



Achieving Universal Health Coverage? Not Without Associate Clinicians.

Time to leverage North - South Partnerships.

From Nurse Practitioners and Physician Assistants in the United States and Physician Associates in Europe, to Clinical Officers, Tecnicos and Medical Licentiates in Malawi, Mozambique, Zambia, and many other African countries, the use of these Associate Clinicians is not unique to developing countries.

For decades, developed countries have trained and deployed clinical 'non-physician' cadres who have worked effectively to expand care. And yet, there has been limited sharing of experiences and leveraging of potential partnerships between developing and developed countries.

The purpose of this workshop is to bridge these divides – within and across regions and continents – to identify best practices, map out partnerships and increase the professionalization and voice of Associate Clinicians regionally and globally.



Please join the conversation on:

Sunday 10th November: 9—10.30AM
Room 1, Atlante Plaza Hotel
Av. Boa Viagem, 5426
Recife

This session will bring together health policymakers, providers, funding partners, and others to discuss the following issues facing Associate Clinicians globally:

- Regulatory and policy issues (*case studies*)
- Training models and metrics (*International Academy of Physician Associate Educators*)
- Implementation issues (*case studies from Ghana, Zambia and the US*)
- Professional Associations (*Zambia Medical Licentiate Practitioners Association*)
- Importance of regional networks (*Africa Network for Associate Clinicians*)

Session sponsored by:

- *Africa Network for Associate Clinicians*
- *New York University*
- *Columbia University*

Health Workforce:

Ghana 2023 (Kurth, Ogedegbe, Binka)

- Associate clinician (AC) program at new university
 - Over 10 years, train 300 ACs, place in 150 clinics
- Workforce Support Center
 - Interprofessional curriculum
 - Clinical simulation, ICT for pre-svs & continuing education



PROGRAM KEY RESULTS

25 TO 45 THOUSAND

patients per clinic

Nursing Workforce Examples, Middle-Income Country Partner (Squires)

- Purpose: pilot test then validate the Mexican Spanish version of 'Practice Environment Scale of the Nursing Work Index-Revised' and test an online data collection method
- Funding: Internal small grant funding
- 455 surveys collected from 6 sites around the country over a 2 year period (2011-2012)
- Five in-country collaborators to concordantly build research capacity
- Status: Finalizing data analysis
- PI: Allison Squires, PhD, RN

Pilot Study Analyzing the Nursing Work Environment in Mexico

Nursing Workforce Examples, Middle-Income Country Partner (Squires)

- Partnership with the Mexican Institute for Aging, and the NICHE program and WHO-PAHO Collaborating Center on Aging at NYUCN, to develop and study implementation and patient outcomes impact of nurse-focused capacity building interventions around care of hospitalized older adults in Mexico in both public and private hospitals

**Improving
Hospitalized
Elder Care in
Mexico**

University Role in Global HRH

- Consortium of Universities in Global Health (CUGH) HRH Fellowship (Karen Roush, 2013)
White Paper

- Methods
 - Systematic scoping review of the literature
 - Structured interviews with key informants
 - Focused case study (Rwanda HRH)

CUGH Global HRH Paper

- Preliminary Findings
 - 17 articles, all but 1 published in last 5 yrs, only 1 a research article
 - Efforts vary widely in scope and goals
 - Evaluation/outcome data primarily process-oriented/short-term
 - Challenges include funding; differences between MoH-MoE; ‘parachute’ models; not enough sharing of best practices/working in isolation or parallel

CUGH Paper: To Improve University HRH

- Coordinate efforts / information sharing across programs and regions
- Commit to long-term support (sustained funding, leadership, mentorship)
- Build trust, respect, transparency, mutual benefits, well-delineated expectations
- Partnership has agreed upon purpose with defined goals and outcomes
- Leverage technology, including e-learning, mHealth, and simulation
- Include governmental agencies responsible for health, education, economics
- Do detailed pre-assessment of local context (available resources, epidemiology, and sociocultural, political/economic factors that impact HRH)
- Conduct systematic evaluation to determine effectiveness of strategies
- Carry out rigorous research on factors influencing success of programs to address HRH, innovative teaching, and recruitment/retention strategies
- Provide leadership training at all levels of the health system, including management, large program administration, and health systems leadership

Tools for HRH Training: Clinical Simulation

- NYU College of Nursing Simulation Center
 - 6,300-square-foot simulation training facility
- New York Simulation Center for Health Sciences
 - 25,000-square-foot simulation facility in Bellevue Hospital
- These State-of-the-Art Simulation Centers support:
 - Inter-professional team training
 - OSCE (Objective Structured Clinical Examination)
 - Telemedicine
- NYU School of Medicine Div. of Educational Informatics
 - Cutting edge course ware and applications
 - **VP 21** - innovative Virtual Patient web-based application that allows students to manage virtual patients and collaborate in virtual teams

Using 'ICT for IPE'

NYU3T:Teaching, Technology, Teamwork

- NYU Nursing and NYU School of Medicine collaborating on **interprofessional education** project funded by Josiah Macy, Jr. Foundation that provides NYU medical and nursing students with systematic interdisciplinary education in competencies of team-based care using **novel technologies**
- <http://dei.med.nyu.edu/research/nyu3t>

Academic Nursing & Global Research Challenges

- Research differs from svcs/education/study abroad mission
- Takes investment & infrastructure
 - Time (balancing home university with partner entity needs)
 - Resources / \$
 - Grants mgmt – subcontracts, less IDC, capacity-building re finance/tracking systems, cash mgmt, monitoring, closeout
 - Staff hires, QA, support when distant
 - Facility with int' travel/security/visas etc.
- Not the traditional tenure track route
 - Early career faculty
 - Funding

Global Research Principles

- **Must be mutually beneficial**

- How to best actualize that?

- **Study of Ethical Issues in Int'l Nursing Research** ('03 Olson):

(1) respect for persons; (2) beneficence; (3) justice; (4) respect for community; (5) contextual caring; collaborative model of researcher-participant relationship; community input & benefit from study

- **Key traits needed** (adapted from Kim et al '06): Open-minded, flexibility, adaptability/Cultural humility/Optimism, energy, resiliency, resourcefulness/Honesty & integrity/Stable personal life/ Technical & business skills & political savvy/Conviction the work is meaningful, passion for the cause/Understanding structural contributors & commitment to social justice (Crigger '08; Crawford '09)

Global Research Principles

- Multiple PI model
- Interprofessional team optimal – multiple disciplines, histories of hierarch, communication
- Share resources (time, funding, IRBs, protocol development & adherence, financial compliance, auditing)
 - Longterm relationship building
 - Takes investment on both sides, not always covered by grants
- Cultural/linguistic/vulnerability differences between researcher & participants
- Authorship
- Mentoring/capacity building of scientific & staff team



**Development and implementation of a
diabetes electronic health record in Ghana**



NYU

**Gail Melkus, with
Albert Amoah, Ann Kurth, Gbenga Ogedegbe, Kelly Newlin**

Global Burden of Diabetes

- ~285 million people with diabetes worldwide or 1 in every 10 adults
- 438 million within next 20 years
- US \$376 billion cost to the world

Emerging Countries Diabetes Projections (persons 20-79 years)

	2010	2030	
	millions	millions	% increase
AFRICA	12.1	23.9	98
Middle East & North Africa	26.6	51.7	94
Southeast Asia	58.7	101.0	72

Diabetes In Ghana



- Population ~ 25 million 2012
~ 14 million 1990
- ↑ Life expectancy 66 yrs. 2012
58 yrs. 1990
- 6.4% adults with diabetes,
17.0% with pre-diabetes
- ~ 4% of national budget for diabetes costs



Contributors to Diabetes & Pre-diabetes

- Population Growth
- Increased Life Expectancy
- Urbanization
- Dietary Imports
- Obesity rates 25%; 45% in Accra



National Diabetes Services

- 1995 Ministry of Health established National Diabetes Management & Research Centre at Korle Bu Teaching Hospital, Accra
- Partnered with Diabetes Research & Chronic Diseases Reference Lab
- Diabetes Care Team: 7 physicians, 6 nurses, 2 eye nurses, dietitian, 3 nursing assistants, 3 medical records staff



Challenges

- No national diabetes morbidity & mortality data
- Health records handwritten and stored in folders
- Limits data use for diabetes quality improvement: providers, system, and patient outcomes

Project Purpose

- Develop a contextual open-source electronic health record (EHR) system for the National Diabetes Center caring for diabetes patients
- Goal: EHR extensible to all Ghana clinics for diabetes management and health services research to improve diabetes prevention and care outcomes
- Leverage to create a national diabetes registry

Methods

- Collaboratively identified problem; objective, goal
- Conducted needs assessment
- Visited clinic, medical records area, lab data repository
- Reviewed current clinical data-gathering forms
- Current IT use and network

Needs Assessment Findings

- 3,886 of 5,000 diabetes clinic patients data in Lab repository
 - Demographic data, including tribal affiliation and family contacts
 - Physiologic data from laboratory tests
 - Anthropometric measurements
- Medical records shelved, many written with fountain pen
- Hospital does not have full intra or internet connectivity
- IT team connected hospital and National Diabetes Center lab auto-analyzers to main data warehouse, supported by main server with extensive back-up system

Diabetes EHR Development

- 100% patient data entered into Lab Repository database
- Team meetings by Skype and teleconference for EHR platform and software development
- Local collaborator, computer scientist and software developer
- Mutual agreement for EHR similar in concept to Open Medical Record System (OpenMRS®) web-based, multiple platform use: laptop, PC, tablet
- No license for Diabetes EHR for use by other sites in Ghana; other African countries
- On site support for user training and implementation, and system refinements

Diabetes EHR Content

- Based on National Diabetes Center patient data forms
- Cross-walked consensus with WHO and American Diabetes Association recommended standards of diabetes care
- Software development currently underway

NEXT STEPS.....

- Team will logic check, beta test, pilot application
- Train health care team users in Diabetes EHR
- Begin implementation with patient visits using EHR