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Promoting pharmaceutical management for underserved populations: Creating a pool of expertise at U.S. universities

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MANAGEMENT SCIENCES for HEALTH

RPM Plus | Rational Pharmaceutical Management Plus



Learning Objectives

- Describe the impetus and goals of an initiative to introduce pharmaceutical management for underserved populations into U.S. health care education.
- Contrast the site-specific strategies that the University of Iowa and the Johns Hopkins University have developed.
- Discuss how these two models, one from a college of pharmacy and the other from a school of public health can be adapted by other institutions.



The Problem

- There are increased efforts to ensure access to medicines – both internationally and domestically
- In many cases medicines have been made more readily available but the needed infrastructure to get them to patients is lacking – particularly in developing countries
- Developed countries have a responsibility to help build sustainable infrastructure and capacity
- There are few opportunities in traditional U.S. health care training programs to build the necessary skills and experience



The Proposed Solution

USAID, through the MSH RPM Plus Program, agreed to fund a pilot project that included:

- Development and implementation of a strategy for building skills and experience in pharmaceutical management in:
 - one school of public health (Johns Hopkins University)
 - one college of pharmacy (University of Iowa)
- Creation of awareness of career opportunities in pharmaceuticals management for underserved populations
- Sharing of experiences and materials developed with other schools to promote adaptation and adoption



Goal #1: Understanding the Problem

GOAL

Understanding
the problem
(sensitization or
attitude)

ILLUSTRATIVE ACTIVITIES

- Student seminars on relevant topics to increase awareness
- References to related issues in orientation and required/ elective classes
- Student groups encouraged to become active in issues relating to underserved populations

Goal #2: Acquiring Knowledge

GOAL

Acquiring
knowledge
(competence)

ILLUSTRATIVE ACTIVITIES

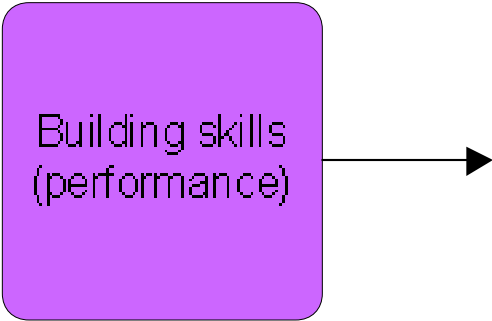
- Pertinent courses developed
- Case studies with underserved populations included as part of required and elective classes
- Study track developed that provides a multidisciplinary package of courses to build a range of competencies



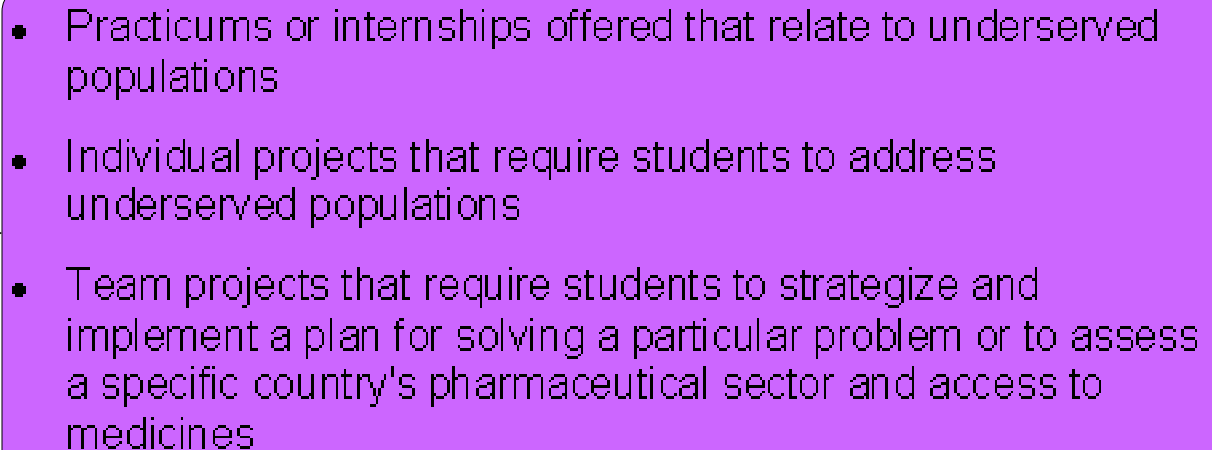
Goal #3: Building Skills

GOAL

Building skills
(performance)



ILLUSTRATIVE ACTIVITIES

- 
- Practicums or internships offered that relate to underserved populations
 - Individual projects that require students to address underserved populations
 - Team projects that require students to strategize and implement a plan for solving a particular problem or to assess a specific country's pharmaceutical sector and access to medicines


Goal #4: Recognizing Career Opportunities

GOAL

Recognizing
career
opportunities

ILLUSTRATIVE ACTIVITIES


- One-on-one student mentoring and counseling
- Job openings posted on program websites
- Guest lectures by individuals involved in pharmaceutical management in resource-limited settings



Johns Hopkins University— Initiatives (1)

Goal #1: Sensitization


- Essential drugs concepts and courses discussed with incoming students, in large introductory classes (international health, managing health services organizations)
- General seminars and special speakers



Johns Hopkins University— Initiatives (2)

Goal #2: Competence


- Lab Exercises: Applying Quality Improvement tools to drugs logistics problems in developing countries
- Course: Pharmaceutical policy and management
- Open Courseware on Internet
- Synthesis case studies: Pricing for HIV drugs



Johns Hopkins University— Initiatives (3)

Goal #3: Performance

- Team projects to systematically assess pharmaceuticals sector in LMIC
- Design and conduct case studies on pharmaceutical issues (e.g., direct-to-consumer advertising; pharmaceutical sector response to avian flu epidemic)
- Critical issues analysis (e.g., counterfeit drugs; pooled procurement; TRIPS; drug access)



Johns Hopkins University— Initiatives (4)

Goal #4: Recognizing career opportunities

- Guest lecturers and advice by practitioners (from MSH, NGOs, etc.)
- Grant proposal writing on informal drug markets & access to medicines
- Career guidance

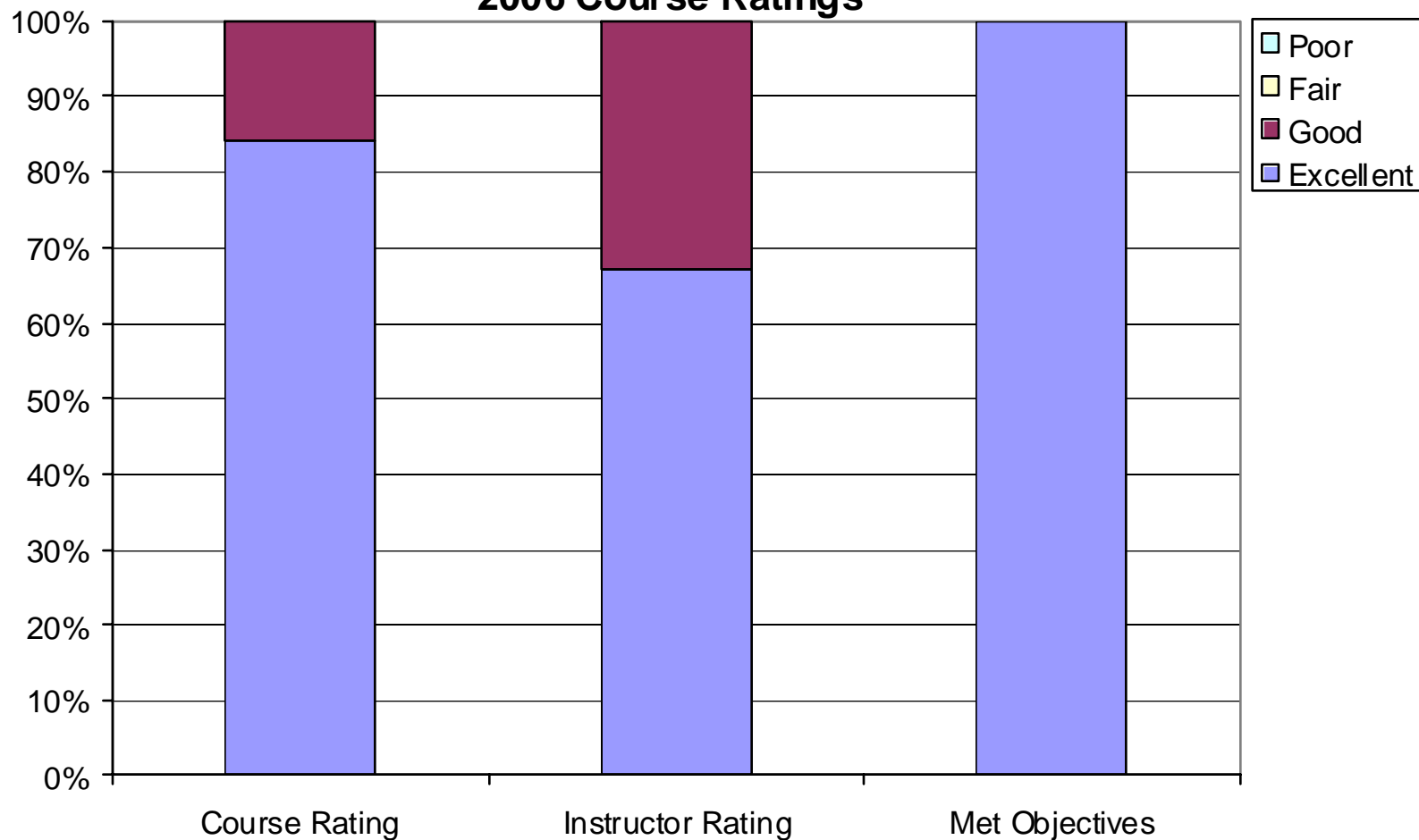


Johns Hopkins University— Results (1)

- High levels of awareness of issues in pharmaceuticals in underserved populations
- Good demonstration of advanced skills (e.g., sectoral analyses, case studies projects, pharmaceuticals issues analyses)
- International masters & doctoral students and small group work promoted learning
- High interest and expectation for continued work in pharmaceuticals policy & management in developing countries
- High course ratings

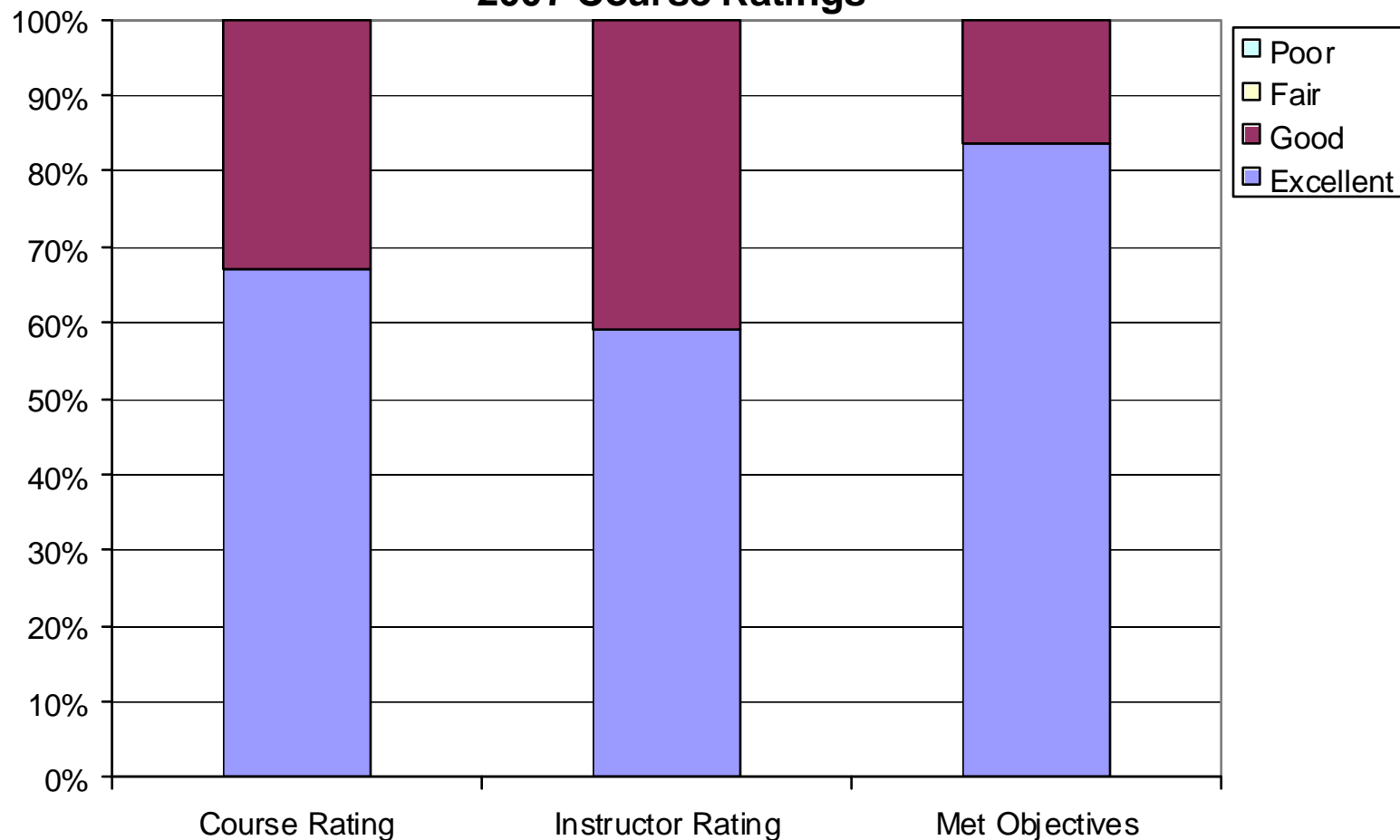
Johns Hopkins University— Results (2)

**Pharmaceuticals Management for Under-Served Populations
2006 Course Ratings**



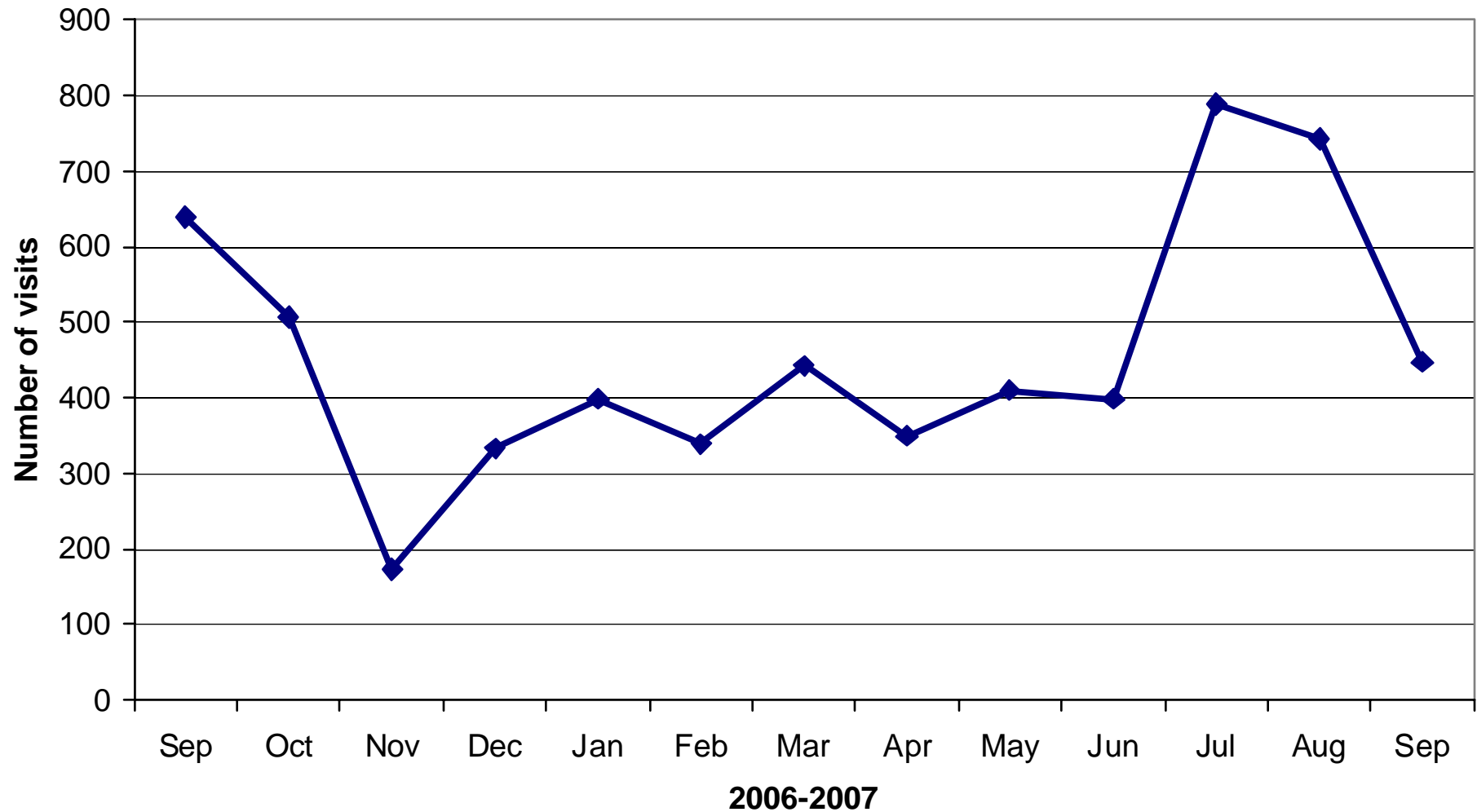
Johns Hopkins University— Results (3)

**Pharmaceuticals Management for Under-Served Populations
2007 Course Ratings**

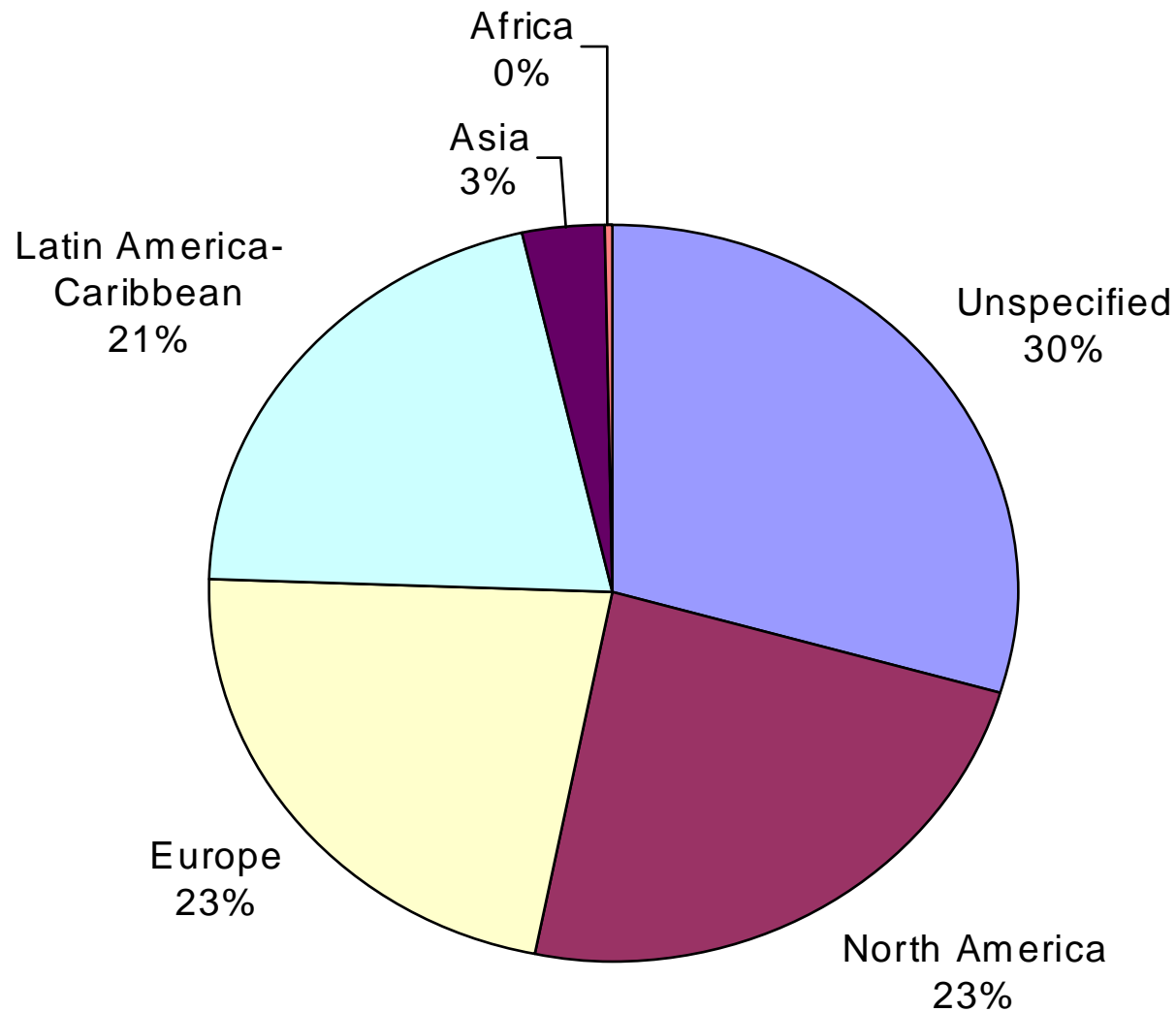




Visits to Johns Hopkins Open Courseware Course on Pharmaceuticals Management in Under-Served Populations



Distribution of Location of Visitors to Open Courseware Course





University of Iowa—Initiatives (1)

Goal #1: Sensitization

- Dean's Forum presentation: "International Health/Global Health"
- College-wide seminar: "Sources and threats of fake drugs"
- Orientation speaker: "Global Health"
- PharmD elective courses with sensitizing content:
 - International Perspectives: Xicotepec, Mexico
 - Health Disparities & Cultural Competence
- Global Health Advisory Council created for college initiatives



University of Iowa—Initiatives (2)

Goal #2: Competence

- Course Materials Developed
 - Global health and health disparities cases and activities for Pharmacy Practice Laboratory:
 - Preparing for a trip to Nigeria (vaccinations & medications)
 - Treating hypertensive and diabetic patient in Nigeria
 - Access disparity issues added to *IowaTeach™ Case Database*
- Degree Offerings
 - Promotion of dual degree: PharmD-MPH
 - Brochures, presentations, lunch team-building
 - Development of PharmD Global Health Studies Certificate track
- New Course Developed
 - Pharmaceutical Management for Underserved Populations (3 semester hours)

University of Iowa— Initiatives (3)

Goal #3: Performance



- New elective: Advanced Practice Experiences (APE)
 - Medication Management in Xicotepec, Mexico
 - MSH Center for Pharmaceutical Management (CPM)
- Student papers for medication management in underserved populations course
 - Access to Pharmaceuticals in Developing Latin American Countries
 - Effects of Privatized and Centralized Health Services on the Medically Underserved
 - Negotiating Medicare Part D Drug Prices
 - Counterfeit Antimalarials in Southeast Asia
 - Antiretroviral Drugs in Low and Middle Income Countries
 - Team Paper: Assessment of Nigeria's Pharmaceutical System with Analysis and Recommendations



University of Iowa—Initiatives (4)

Goal #4: Recognizing career opportunities

- Global Health Advisors Program for PharmD students established
- College of Pharmacy Global Health web site:
<http://www.pharmacy.uiowa.edu/globalhealth/globalopp.htm>
- Guest lecturers modeling career opportunities, including representatives from:
 - Management Sciences for Health (MSH)
 - CARTHA (an organization that provides professional development programs)
 - Community Health Free Clinic
 - Supply Chain Management System
 - Iowa/Nebraska Primary Care Association



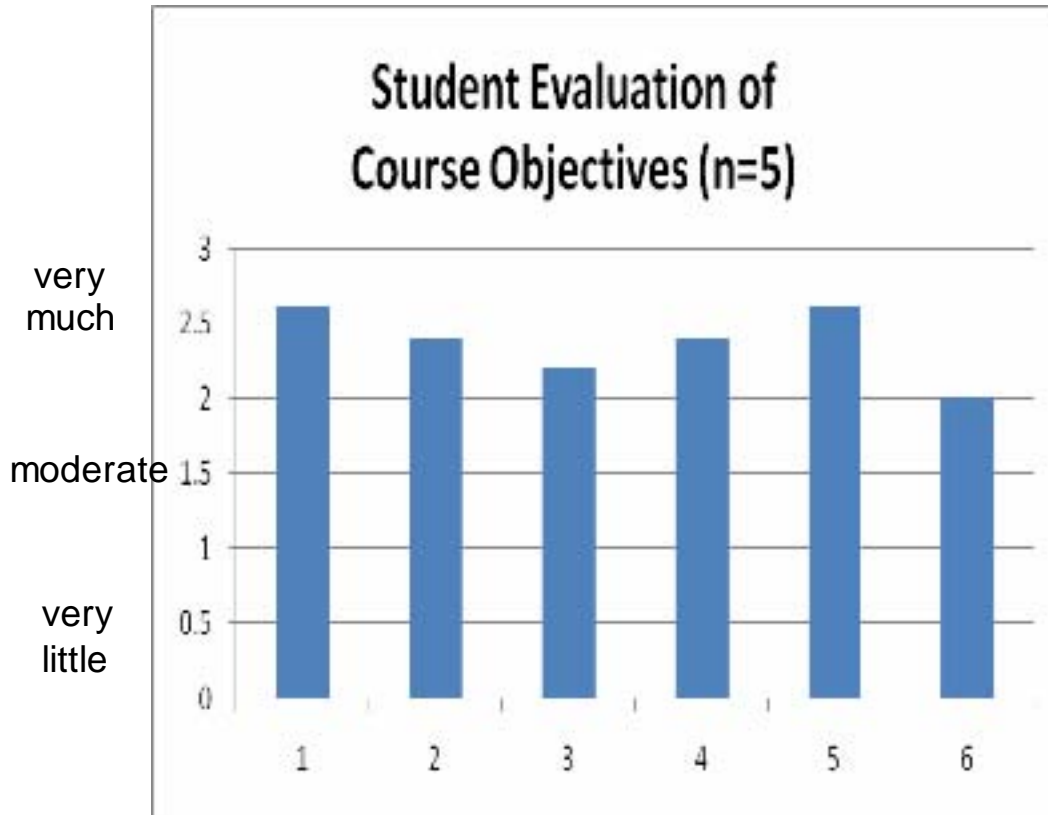
University of Iowa—Results (1)

- Case-based global health medication management **course materials** developed and successfully presented in Pharmacy Practice Laboratory.
- Global health **speakers** presented in four venues, Orientation, Dean's Forum, College Seminar, Med Mgt Course, generating student interest for increased programming
- Three students have **graduated with a dual degree** (PharmD-MPH) this academic year and three more have enrolled
- New Pharmacy Management for Underserved Populations **course** attracted not only pharmacy students but students from the public health, business, and liberal arts and sciences colleges.
- New Medication Management in Xicotepec, Mexico, **experiential course** successfully delivered de-worming treatment to ~2000 school children.
- An active cohort of seasoned global health **advisors** have been identified and made available to students, thus nurturing future activities.

University of Iowa—Results (2)

Rank the extent to which you believe this course focused on of the course objectives

- 1 – Understanding of pharmaceuticals management.*
- 2 – Understanding the concept of underserved populations*
- 3 – Illustrating different types of health commodities and their regulations*
- 4 – Explaining key factors in the Drug Management Cycle*
- 5 – Identify obstacles and synthesize solutions to the problem of access*
- 6 – Understanding factors influencing selection and rational use of medicines*



046:127 Medication Management for Underserved Populations



Lessons Learned and Conclusions (1)

- In general, lectures, seminars, and courses are well appreciated and effective learning
- Involving practitioners in class work and follow up improves the translation from classroom to practice, and is highly value
- Advanced Practice Experiences in low and middle income countries are powerful determinants for students' commitment to serving those with limited access to medications
- Need to better incorporate teaching into research work, e.g., health systems work on poverty and access to care, financing innovations and pharmaceuticals, etc.



Lessons Learned and Conclusions (2)

- Coupling local and global health care providers to jointly present provides a successful linkage between local and global issues; however, course management is more complicated
- Course written assignments are a deterrent to Pharmacy student enrollment; support from specialized librarian, writing center, and instructor improves all aspects of written assignments
- A consistent, multiple-faceted approach with both local and global aspects that presents pharmaceutical care to underserved patients is most successful for achieving knowledge, skills, and attitude goals.

Next Steps

Johns Hopkins

- Continue pharmaceuticals course and develop modular courses
- Build research program on pharmaceuticals markets in LMICs: Linkages to poverty and access to care
- Recruit faculty with pharmaceutical policy and analysis expertise



University of Iowa

- Continue current course offerings
- New Advanced Practice Experience in Nicaragua
- UI Global Health Studies Program Conference: “Health and Health Care: Rights and Responsibilities from a Global Perspective.”
- *Internationalizing the Curriculum* book chapter
- MOU with Muhimbili University, Tanzania





Sharing of Experiences and Materials

- Johns Hopkins

<http://ocw.jhsph.edu/courses/pharmaceuticalsmanagementforunder-servedpopulations/>

- University of Iowa

<http://myweb.uiowa.edu/hseaba/curriculummaterialsunderserved/index.html>