

Patients and Public Systems. Each module consists of a set of 3-7 minute core videos featuring a guided conversation between course faculty and guest experts. Videos are augmented by readings, assessment and survey questions, discussion forums and additional interactive activities, such as live question and answer sessions, with the aim of eliciting student-generated information and feedback. Registration for the course is open and there are no prerequisites to participate.

**Outcomes & Evaluation:** As of October 2014, 15,695 students had enrolled in the course from 141 countries. A plurality (44%) of students were between the ages of 21 and 30 and the majority were female (55%). One third of the students had a master's degree. Nearly eight in ten students reported working in the healthcare field and nearly four in ten were healthcare providers. While students provide feedback through discussion forums in real-time, structured feedback will be captured in a post-course survey and follow up interviews with a randomized sample of participants. Additional metrics of success include: weekly engagement (a composite indicator developed by edX), completion of survey questions (which provide data on perceptions of quality and local context) and total number of students receiving course certificates (which requires a grade of over 60%).

**Going Forward:** The course seeks to continuously improve both engagement and content. This is being done through four primary strategies: First, diversifying presentation of content to improve accessibility in low-bandwidth settings, such as through audio and printed mat

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### Identifying disparity to improve outcomes: Diabetes-related knowledge assessment among primary health care providers in Armenia

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**Background:** Context: No national guidelines exist for treatment of some disease states in Armenia. Officials in Armenia have established diabetes as a priority target. Due to projected increases in diabetes morbidity by the International Diabetes Federation (0.9% annually), it is estimated that by 2030 one out of ten Armenians will have diabetes and diabetes will become the 7th leading cause of death in Armenia. Why the study was done: Provider diabetes-related knowledge in Armenia is currently unknown. Baseline knowledge must be assessed in order to develop effective training protocols and improve education for providers. Aim: To determine diabetes-related knowledge in five categories based on IDF guidelines: diagnosis, pathophysiology, treatment, pharmacology, and complications. Assessment of these key indicators will determine target areas for development and improvement of diabetes outcomes.

**Methods:** Study design: A cross-sectional descriptive study of primary health care providers from two urban and three rural settings in Armenia. The study questionnaire was composed of 20 questions covering the five major areas suggested by the IDF. Participants: The study included 131 participants from urban (41%) and rural (59%) settings. Participants were family physicians (39.7%), nurses (26.7%), pediatricians (6.1%), endocrinologists (3.8%), and other specialists (23.7%). Participants were recruited using convenience sampling

from clinics recommended by the Ministry of Health of Armenia. Analysis: The primary outcome was correct answers. Chi-squared and Fisher's exact tests were used to identify any relationships between demographics and each question or aggregate score. P-values reported indicate a relationship between specific demographics and performance. Consent was obtained by return of completed questionnaire after verbal and written explanation of consent. The study was approved by the University of Utah IRB (IRB\_00072919) and Yerevan State Medical University Ethics Committee (N\_8/14-15). 3

**Findings:** The mean comprehensive knowledge score was 6.85 out of 20 (SD 3.18). 45.80% of subjects were unable to answer any diagnosis question correctly. Only 6.87% were able to correctly identify three out of four treatment approaches, while 37.40% knew at least three pharmacology answers. 35.88% were aware of at least three pathophysiology signs, yet only 2.29% identified all four complications listed. There were statistically significant differences between rural and urban providers regarding diagnosis ( $p = 0.003$ ) and pathophysiology ( $p = 0.003$ ), and also amongst specialties regarding pharmacology ( $p < 0.0005$ ), treatment ( $p = 0.044$ ), pathophysiology ( $p = 0.039$ ), complications ( $p < 0.0005$ ), and overall knowledge ( $p < 0.0005$ ).

**Interpretation:** Armenian primary health care providers lack diabetes knowledge. There are also differences based on location of practice and provider types. These results suggest the need for provider educational programs based on International Diabetes Federation guidelines to improve diabetes-related clinical outcomes in Armenia.

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### The partnership between Mount Kenya University and the University of Cincinnati: A case of interdependent academic innovation

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**Program/Project Purpose:** To increase the positive impact of higher education in a replicable paradigm of collaboration between Mount Kenya University [MKU] and the University of Cincinnati [UC]. Context UC is an Ohio public university, educating over 40,000 students per year. The US News and World Report ranked UC in Tier One of Best Colleges rankings and number 3 of "Up-and-Coming" National Universities. Its College of Medicine accounts for most of UC's \$500,000,000 external funding. MKU is the 2nd largest of Kenya's 52 public and private universities, with 12 campuses, 10 schools, including medicine, and over 40,000 students. Program/Project Period 2007 - present Why the program/project is in place, in one or two sentences To globalize UC in teaching, research, service, clinical care, community development, and corporate social responsibility. To ensure MKU meets internationally accepted academic standards. Aim To enhance education in their own institutions [MKU & UC] and the wider world.

**Structure/Method/Design:** Desired Outcomes Improved institutional Impact through Capacity Building, Research Collaboration, Corporate Social Responsibility, and Ensuring Sustainability. Participants and Stakeholders: How were they selected, recruited? Commitment to providing human, technical, material resources. Competence in teaching, research, clinical care, and community corporate responsibility. Capacity to handle the load and complexities of implementation. Positive relationship with community. Geographic convenience. \* Capacity Building / Sustainability: What is the plan, structure in place to encourage viability? \* A formal liaison (0.5 FTE) begins Nov 1st.