

use and usefulness predict attitudes, behavioral intentions, and subsequently actual use of the technology.

**Structure/Method/Design:** Learning Management System (LMS) logon data and online surveys administered to first-year medical (MD1) students were analyzed. Mann-Whitney U tests and separate linear regression analyses were conducted to test the effect of TAM main elements.

**Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract):** 72% (n = 116) of the MD1 students responded to the online survey (73.3% males). Mann-Whitney U and linear regression analyses indicated that perceived usefulness and attitude had a significant effect on intention to use ( $P < 0.05$ ). Female gender and older age (>25 years) were factors that significantly lowered intention to use and perceived usefulness of LMS. To ascertain actual use of the system, trend data on LMS logons for 6 consecutive months were assessed. The average registered number of logons was 5,268, with minimum and maximum of 1,058 and 11,127 respectively over this period. Similar trends were witnessed in the previous two periods.

**Summary/Conclusion:** Deployment of eLearning in institutions of higher learning does not guarantee the acceptability and sustainability. As institutions in sub-Saharan Africa embrace eLearning, careful evaluation of technology fit and actual use has potential to assess implementation effectiveness and impact sustainability. Our study reveals that age and gender are significant factors that may negatively affect technology acceptance.

### Training emergency care practitioners and creating access to acute care services in Uganda: The pilot phase

S.W. Nelson<sup>1</sup>, U. Stolz<sup>2</sup>, B.A. Dreifuss<sup>3</sup>, S. Chamberlain<sup>4</sup>, H.S. Hammerstedt<sup>5</sup>, B. Alfonsi<sup>6</sup>, M. Bisanzo<sup>7</sup>; <sup>1</sup>Maine Medical Center, Department of Emergency Medicine, Portland, ME/US, <sup>2</sup>University of Arizona, College of Medicine, Tucson, AZ/US, <sup>3</sup>University of Arizona, College of Medicine, Emergency Medicine, Tucson, AZ/US, <sup>4</sup>University of Illinois at Chicago, Emergency Medicine, Chicago, IL/US, <sup>5</sup>Idaho Emergency Physicians, Boise, ID/US, <sup>6</sup>Karoli Lwanga Hospital, Emergency Department, Rukungiri, RUKUNGIRI/UG, <sup>7</sup>University of Massachusetts, Department of Emergency Medicine, Worcester, MA/US

**Background:** Acutely ill or injured patients require urgent treatment to avoid morbidity and mortality. Given current physician density in Sub-Saharan Africa (SSA), very few patients are seen by a physician promptly on presentation to a health unit. A novel task-shifting program training non-physician clinicians was initiated in rural Uganda to create access to high-quality emergency care. The Emergency Care Practitioner (ECP) program is a 2-year program incorporating semi-weekly didactics using a symptom-based approach, simulation/procedure labs, and graded clinical responsibility (40 hours of clinical time per week). The initial data on patients cared for by the student ECPs at Karoli Lwanga Hospital are described here.

**Structure/Method/Design:** For the inaugural year, emergency physicians supervised and taught the ECPs. Curriculum content was based on a needs assessment and international consensus documents. Core competencies were adopted from Ugandan and US medical education. Data on all patients seen in the ED were entered into a quality assurance database prospectively. Attempts were made to contact each patient beginning 72 hours after ED discharge to determine vital status. Data are presented as proportions.

**Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract):** A total of 2636 patients were seen from November 2009 to March 2010, with 1778 having follow up (67.5%). Most

common diagnoses were malaria (33.0%), trauma (10.4%) and pneumonia (7.2%). Overall mortality for patients presenting to the ED was 4.1% and 2.5% for children under 5 years of age. Case fatality rates (CFRs) for children under 5 with malaria and pneumonia were 2.3% and 2.6%, respectively. CFR for all trauma patients was 2.9%.

**Summary/Conclusion:** Data from this initial pilot suggest that emergency care provided by these non-physician clinicians improves patient outcomes. Reported CFRs are considerably lower than other published CFRs for SSA. Outcomes need to be monitored as ECPs assume more fully independent practice to ensure continued quality care.

### In-service training of midlevel providers in emergency care in Ghana: Challenges, successes, and lessons learned

A. Niyogi<sup>1</sup>, N. Adom-Boakye<sup>2</sup>; <sup>1</sup>Tulane University, New Orleans, LA/US, <sup>2</sup>KAB Consultants, Accra/GH

**Background:** Provision of emergency medical care is an increasingly important aspect of health care delivery in resource-limited settings. To meet the greater demand for skilled personnel in emergency medicine in Ghana, we developed an in-service course in basic emergency care for midlevel providers (physician assistants and nurse practitioners) working in district hospitals. Midlevels were specifically targeted as this group cares for the majority of the rural population in Ghana.

**Structure/Method/Design:** We held an initial "training of trainers" course for 22 physician assistants from district and subdistrict hospitals within three regions of the country. From this initial cadre of participants, 10 were selected as senior trainers who then received a refresher training course and continue to train colleagues within their respective regions. The course is organized in three parts: didactic lectures, structured case discussions with simulations, and skills stations. Evaluation methods include knowledge-based pre- and post-tests, direct observation, case review, and simulation stations.

**Results (Scientific Abstract)/Collaborative Partners (Programmatic Abstract):** Stephan Brenner, MD, MPH; Barbra Villona, MD, MPH & TM, DTM & H; SueLin Hilbert, MD, MPH; Beth Rubenstein, MPH, MBA; Rachel Moresky, MD, MPH

**Summary/Conclusion:** All groups showed improvement in knowledge with average pre-test scores of 56% (SD 14.5%) and post-tests scores of 84% (SD 9.5%). Simulation cases indicate that the majority of the trained midlevel providers learned information sequentially, inconsistently used physical examinations for diagnosis, and rarely reassessed following interventions. Practical skills such as splinting and suturing were more easily acquired than skills in clinical decision making. Most participants felt that case discussions and simulations were the most helpful learning tools and identified symptom-based algorithms as useful reference tools for daily practice and teaching colleagues.

The greatest successes of this program are increased awareness, knowledge and advocacy of emergency medicine, more confidence in basic lifesaving skills, and the development of a focused introductory curriculum targeted to midlevel providers. For continued successful implementation of this program, facilitators must take ownership of teaching materials, knowledge gaps within the senior trainer group must be bridged, and appropriate long-term evaluation methods must be developed.

### Organization and optimization of global health resources for US medical trainees: The Global Health Hub Resource Page Project

E. Park<sup>1</sup>, K. Pettersen<sup>2</sup>, M.S. Lipnick<sup>3</sup>; <sup>1</sup>Boston University School of Medicine, Las Vegas, NV/US, <sup>2</sup>University of California, San Francisco,