

2009 RAD-AID Conference



RAD-AID Conference on International Radiology for Developing Countries, November 2009, hosted by Johns Hopkins Hospital, Baltimore, MD.

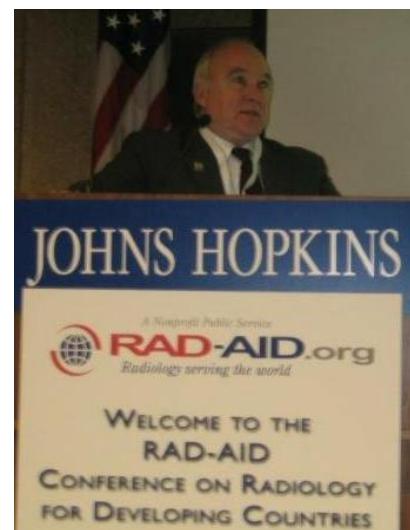


The RAD-AID conference occurred on November 2, 2009 and was a great success in bringing together a multidisciplinary forum of nongovernmental organizations (NGOs), government agencies, health care relief organizations, radiologists and other health care providers, businesses, technology engineers, and public health experts. The conference was attended by approximately 60 participants and 11 institutions with 20 speakers. The aim of the conference was to discuss and develop solutions for ongoing shortages of radiology and medical imaging in developing countries.

The conference began with a warm welcome from Dr. Jonathan Lewin, Chairman of Radiology at Johns Hopkins (shown left), stating the unique opportunity the conference represents to share new ideas and learn from tested models in bringing radiology services to underserved areas of the world. Radiology interfaces with every medical and surgical service, ranging from trauma care to breast cancer screening and the diagnosis of infectious disease, raising the need and importance of imaging in the clinical care systems of developing countries. RAD-AID's partners gathered for this conference to realize that dialog and exchange ideas. Introductory comments were made by Dan Mollura and Atif Zaheer detailing the day's agenda, and articulating the interdisciplinary and interactive format of the conference.



The **first panel** of the conference (photo at left), **Finance, Entrepreneurship & Leadership for Developing Countries' Health Care Systems**, composed of Anna Starikovsky (RAD-AID), Aduke Thelwell (MIT



Legatum Center for Development and Social Entrepreneurship), Sarah Iosifescu (Grameen Foundation), and Cary Kimble (Project HOPE), shown left to right. The panel explored ways in which sustainable radiology services in developing countries could be accomplished through microfinance and leadership training for emerging radiology enterprises. Legatum's presentation focused on methods of selecting and training entrepreneurs for growth enterprises that deliver positive social impact. Grameen Foundation's presentation summarized the microfinance system and how microfinance institutions (MFIs) can receive support from organizations such as Grameen to increase capital access in developing nations for new enterprises. Project HOPE (Cary Kimble shown at right) illustrated HOPE's Village Health Bank (VHB) program operating in 10 countries since 1994 to strengthen local entrepreneurship with health services.



The **second panel** at the conference, **Clinical Imaging Models and Strategies for International Radiology**, showed a range of approaches for delivering medical imaging to scarce-resource regions. Photo of the panel (at left) shows (left to right) Brian Garra, Kristen DeStigter, Ivy Walker, Ann Polin, Cary Kimble, and Barry Goldberg. Dr. Goldberg (photo at right) of Jefferson University Research and



Education Institute (JUREI) presented world-wide programs of ultrasound instruction, such as "Teaching the Teachers" and "E-Learning," which provide ultrasound leaders in other countries the opportunity to learn ultrasound and teach others in their home countries, while maintaining skills through internet-based modules.

Brian Garra (shown below) and Kristen DeStigter of Imaging the World (ITW) presented a model for bringing ultrasound to peripheral rural regions of developing countries via established protocols based on external body landmarks to obtain ultrasound sweeps recorded as videos and transmitted electronically to central locations for expert interpretation. Ann Polin presented her experience in providing sonography education in West Africa, with numerous lessons learned from direct mission experience.



Ivy Walker (shown right) of World Health Imaging Telemedicine and Informatics Alliance (WHITIA) presented models for delivering radiographic imaging such as Chest X-ray technology, with examples of evidence from Guatemala, and ongoing efforts to improve imaging and digital transmission. Project HOPE presented examples of how radiology could improve HOPE's delivery of medical care around the world in its



affiliated health facilities.



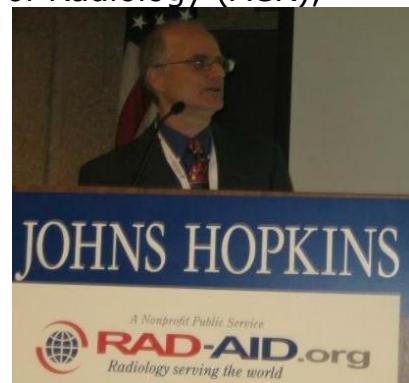
The **third panel** of the day, **Education and Residency for Serving Developing Countries**, focused on the roles of residents and medical students in overseas projects delivering radiology services. Kristen DeStigter (shown left) delivered an essential overview of radiology residency requirements and how future efforts should include an international radiology curriculum that meets American College of Graduate Medical Education (ACGME) core competency requirements.

RAD-AID resident leaders, Matt Lungren and Ezana Azene, presented roles for residents including clinical and policy research, PACS/information technology education, and clinical radiology roles from which residents could both enhance their own training and deliver important services to developing countries. Matt Lungren described the evolving development of the Duke/Rad-Aid chapter (shown right).



Ezana Azene illustrated the research experience of RAD-AID's Country Report program (providing analyses of developing countries' radiology resources and health care systems) as well as RAD-AID's "Radiology-Readiness" research program which assesses how radiology can be best implemented into limited resource regions by accounting for the clinical/engineering/infrastructural counterparts that make radiology effective.

Brad Short (photo at right) of the American College of Radiology (ACR), described the ongoing efforts of ACR to support residents interested in training and serving in developing countries. For example, the ACR initiated the Barry Goldberg/Maurice Reeder International Travel Grant Program in December 2008 which has enabled four radiology residents to do service work of one-month durations. Overall, the panel established a clear mandate to improve and develop programs available to radiology residents wishing to work overseas on international radiology while achieving clear research and clinical objectives integral to residency structure.



The **fourth panel, Information Technology for Developing World Radiology**, aimed at discussing the technology challenges and opportunities available for improving radiologic service in limited resource regions. Som Javadi (shown left) and Brian Garra presented advances in cloud architecture, digital transmission, and PACS design for meeting these needs. Advances made at Johns Hopkins University Applied Physics Laboratory in remote telemedicine, mobile-van based mammography, and ship-to-shore satellite based radiography was presented by Dave White. Dan

Mollura described the potential role of teleradiology, which is making progress through better connectivity, but is still limited by (i)lack of training for technically producing high quality imaging, and (ii)the need for more education in how local care-providers can use the interpretations of teleradiologists. Ben Johnson and Christian Welch of the University of California-San Diego (shown right) presented clips from their documentary on the role of telemedicine and teleradiology based on interviews with leading administrators of clinical and imaging departments. Overall, the shared dialog of this panel identified several key challenges to overcome in future information technology development, including (i) optimizing bandwidth for connectivity, (ii) improving PACS for long term storage, and (iii) maximizing communication systems for both educational and clinical consults integral to teleradiologic services.

The conference concluded with an **Open session for Future Planning**. Key themes identified for future efforts include:

- (1) Outcomes-based research to test different imaging models and measure clinical outcomes.
- (2) Ongoing forums and webinars to continue dialog and sharing of ideas via RAD-AID.ORG and partner organizations' web sites.
- (3) Curriculum planning for increasing training opportunities for radiology residents meeting ACGME core competencies.
- (4) Continuing plans and strategies to expand RAD-AID's Country Reports and Radiology-Readiness research programs.
- (5) Increase role of radiology technologists and sonographers in project development.