

Outcome & Evaluation: A 2014 prevalence study found 33.1% of people in Chimbo had blood pressures indicative of hypertension. Of this cohort, 70.1% had no prior knowledge of this fact. In addition, 9.6% of the adult population had been diagnosed with diabetes and the mean BMI was 29.3 kg/m². A longitudinal study initiated in June 2015 enrolled 223 participants who will be educated and monitored indefinitely. Residents of Chimbo perceive the value of health monitoring and express eagerness for the continuation of the project.

Going Forward: The project has institutional support of the local clinic, the FNDLA, and Loyola's ISI program. Difficulties will include recruitment of future student volunteers, loss to follow-up in the longitudinal study, and education of local health advocates promoting local sustainability. Feedback from future cohorts and local participants will direct future actions.

Funding: Institutional.

Abstract #: 1.024_NEP

Making imaging around the world better: global survey of radiologists in 10 Countries

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Purpose: There are substantial unmet imaging needs for vulnerable and crisis affected populations. Our aim was to survey radiologists across developing countries in Asia, Europe, and South America to assess their imaging needs and find out what, in their opinion, are the most effective ways to improve imaging in their respective countries.

Methods and Materials: A standardized questionnaire containing 11 questions was sent to radiologists in 18 developing countries across the world. Radiologists from 10 countries responded (response rate=55%). These included Sri Lanka, Thailand, Costa Rica, Belarus, Serbia, Macedonia, Singapore, the Czech Republic, Lithuania and Slovenia. Some questions addressed the overall status of radiology in their countries and focused on potential shortages of radiologists, residency positions and medical physicists, while others focused on effective solutions to problems they face everyday.

Results: Survey results indicated that most of the countries (90%), need to establish more radiology residency training positions. For improving knowledge in radiology, every participant (100%), thought online-teaching modules would be the most effective, while only thirty-percent believed onsite-teaching workshops would help. Sixty-percent of radiologists (95% CI being 47.6 to 72.4%) believed that humanitarian "second opinion" teleradiology would be valuable in more than 50% of their cases, while forty-percent (95% CI being 27.6 to 52.4%) believed that a second opinion would be needed in less than 50% of their cases. Every radiologist surveyed (100%), believed that the subspecialty in which they feel most deficient is neuroradiology, with musculoskeletal imaging and pediatric imaging being the second and third most highly ranked choices, respectively.

Only 60% (95% CI being 47.6 to 72.4%) had access to a medical physicist and most believed that they need education in radiation safety and dose reduction. Other practical questions focused on image transfer, organizational development and informatics.

Conclusion: This survey helps radiologists around the world communicate the imaging needs in their respective countries and how they can be met. This survey can help radiologists who want to reach out in their humanitarian efforts to improve imaging around the world.

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RISE (Radiology International Student Education): creation and utilization of virtual online classroom for global radiology education

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Program Project/Purpose: One of the major challenges facing international radiology is a lack of available subspecialty fellowship training in the developing world. For example, the entire continent of Africa has no neuroradiology fellowship training available within the region. International travel to complete subspecialty training presents financial challenges for trainees and is in practice unsustainable as a routine method of training. We created an innovative solution by designing a virtual classroom which allow trainees from around the world to tune in live during radiology lectures at UCSF.

Structure, Method & Design: A virtual classroom was created at UCSF Medical Center to enable international radiology residents to tune in live to the radiology lectures given at UCSF. The pilot project was launched with Kenyatta National Hospital, University of Nairobi, Kenya. Kenyatta National Hospital has 45 radiology residents. Specifically, the live lectures involve two-way audio and video communication with interactive technologic solutions to annotate shared slides. The limitations in internet access, equipment availability, and cross platform technologies were solved with support of local IT staff and the Center of Digital Health and Innovation at UCSF.

Outcome & Evaluation: The impact of the virtual classroom was studied with close monitoring using pre and post lecture online exams. Advanced result analytics to assess the longitudinal performance of each radiology resident at University of Nairobi is being performed to assess the improvement in knowledge gap in multiple subspecialties in radiology. For asynchronous teaching, the RISE platform provides continuous online access to the recorded lecture database for access across different time zones.

Going Forward: In the future, the aim is to expand the RISE platform to include other countries around the world for live virtual education. We also plan to make this technology available to different medicine specialties in academic institutions across the United States so that it can be utilized for virtual education worldwide to benefit those who do not have access to specialized medical education.

Funding: The project was funded by the Radiological Society of North America.

Abstract #: 1.026_NEP

Hypertension prevalence in Zanskar, India: a study to guide future health interventions in rural health clinics

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Background: Zanskar, India is a high-altitude, remote region located near the Himalayan mountain range in Ladakh, in northern India. Due to its isolation, much of the population, especially in the farming villages, lack access to regular medical care. The aim of the study was to assess the prevalence of hypertension and to consider risk factors specific to this population.

Methods: Data was collected from 318 patients aged 20 to 90 years who presented at temporary medical camps in the villages of Sani and Raru in July 2015. Patients had their blood pressure measured twice and the mean systolic and diastolic pressures were calculated. Through a translator, patients completed a questionnaire about their knowledge of their medical conditions and lifestyle risk factors. The population was stratified by age and gender and then categorized by their blood pressure status.

Findings: Of the 318 patients we surveyed, 33% were pre-hypertensive and 25% were hypertensive, with 60% of that group unaware of their hypertension status. 90% of patients who were aware of their hypertension were not taking medications at the time of presentation to the clinic. The prevalence of hypertension increased with age while the prevalence of prehypertension remained relatively stable at all surveyed age groups. At 36%, the prevalence of hypertension for men was higher than that for women (21%). Men also had a higher prevalence of prehypertension (40%) than that of women (30%).

Interpretation: The prevalence of hypertension is relatively high in the two villages in Zanskar, India, indicating that hypertension is not limited to urban Westernized populations and can also affect isolated, rural populations. More thorough epidemiological studies should be conducted to identify specific risk factors in other parts of Ladakh. We believe that cultural, socioeconomic, and geographical factors likely greatly influence hypertension risks in Zanskar. Our findings suggest that future interventions in similar populations should prioritize hypertension as a serious public health issue.

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Analysis of refugee mental health screening and referral processes at the Newcomers Health Program, San Francisco General Hospital's Refugee Medical Clinic: a quality improvement study

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Program/Project Purpose: The *Newcomers Health Program (NHP)* is a clinic-based and community-based health program that serves refugees, asylees, and immigrants. NHP is working in collaboration with the *UCSF Trauma Recovery Center/Survivors International* to improve mental health screening and referral processes as a part of the Refugee Health Assessment Program (RHAP). Survivors International is a non-profit organization providing psychological, social, and medical services for survivors of torture. At the NHP, refugees/asylees are generally seen for two clinic visits: a screening visit, and a screening follow-up visit. The State of California recently designed a new comprehensive screening form to be used at all the California county refugee health assessment programs, and it has been in use at the NHP since October 2013. In particular, it includes a much more comprehensive mental health screening – including questions about post-traumatic stress disorder, depression, generalized anxiety disorder, trauma, and persecution.

Structure/Method/Design: The aim of the quality improvement study was to evaluate the efficacy of the new mental health screening tool in comparison to a previous screening tool used at NHP. We first analyzed a subset of patient records during a time period when the previous screening tool was used (September – October 2013), and key indicators were documented: positive mental health screen, referral made, and outcome of referral. Specifically for survivors of torture, we analyzed to see if torture was identified, and whether a referral to *UCSF Trauma Recovery Center/Survivor's International* was made. Next, we analyzed a subset of patient records during a time period when the new screening tool was used (January – February 2014) with similar indicators as above.

Outcome & Evaluation: The new mental health screening tool increased the number of patients who screened positive during screening visits, and who would therefore be eligible for referral services. Currently, a RHA outreach pilot project is being conducted between initial screening and follow-up visits to serve as an additional measure in identifying potential torture/persecution survivors and to facilitate referrals.

Going Forward: Next steps for enhancing mental health services include improving the clinical workflow, training for providers, improving referral coordination, and sharing best practices with other counties.

Abstract #: 1.028_NEP

Stigma and knowledge of Hepatitis B virus in an urban Vietnamese population compared to that of a Vietnamese immigrant community in Chicago

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Background: Hepatitis B virus (HBV) infection is particularly common in Asia and among Asian immigrants in the United States. We conducted this study to evaluate HBV stigma and knowledge in a large group of persons in Vietnam and to compare their views and understanding of HBV to those of Vietnamese immigrants in the United States.