

outreach efforts in the global cancer care community is dispersed in the databases of the individual groups pursuing the projects, and thus, it is not easily accessible to the cancer care community at large. In order to address the need for a centralized, updated, and easily accessed repository of information about existing cancer-related projects worldwide, we developed the Global Cancer Projects Map (GCPM). The GCPM is a user friendly, comprehensive, online display of cancer research projects and outreach programs on an interactive world map. The platform was developed as collaboration between the Global Oncology, Inc. (GO), and the National Cancer Institute's Center for Global Health (CGH).

Structure/Method/Design: The GCPM is designed for the ease of use by public health professionals, researchers, medical personnel, and trainees. The users can search for collaborators and projects by cancer types and countries, visualize information pertinent to each project on an interactive world map, and initiate contact with on-site project managers. Details of a project include investigator and on-site collaborators' institutional and governmental affiliations, cancer type studied, and the institution funding the project. The users can also overlay heatmaps of epidemiological measures that provide a representation of burden of cancer by country and cancer type. These disease- and country-specific measures include disability adjusted life years, mortality, incidence and prevalence rates, and Human Development Index.

Outcomes & Evaluation: The map is being tested to improve usability, which includes navigation, intuitiveness, and accessibility. The website will be available to the public in March of 2015. Feedback from the public, usage data such as number of hits and amount of time spent on the website will be collected and analyzed. Analysis of this data will help identify additional issues that need to be addressed and generate ideas for future improvement.

Going Forward: The next version of the GCPM aims to include databases from key partner organizations that GO and the CGH have identified. The partner organizations are projected to include the Union for International Cancer Control and the American Society of Clinical Oncology. It is GCPM's goal to allow all collaborators around the world to submit their cancer-related projects to catalyze comprehensive and equitable sharing of cancer resources.

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Innovations in improving access to contraceptives

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Program/Project Purpose: In 2010, Senegal's contraceptive prevalence rate (CPR) was just 12.3%, and unmet need for family planning (FP) was 29% among married women. With nearly 80% of public service delivery points (SDPs) experiencing regular contraceptive product stockouts, the supply chain was identified as a major barrier to the Senegalese government's goal of achieving a 27% CPR by 2015. To improve FP access and use, IntraHealth International piloted the Informed Push Model (IPM) in the regions of Dakar, Thiès, and Kaolack. After six months of implementation, the IPM pilot successfully reduced FP stockouts to less than 2%. IntraHealth now is expanding IPM nationally.

Structure/Method/Design: IPM's goal is to boost contraceptive consumption and, therefore, CPR by reducing product stockouts and increasing FP access. Currently, IPM is implemented in nine out of 14 regions covering 55 districts and 958 SDPs. Expansion into the 5 remaining regions (21 districts and 319 SDPs) will be completed by

the end of project year two. The project collaborates with Senegal's Ministry of Health and Social Action (MSAS) and National Pharmacy (PNA) as well as the United Nations Population Fund, US Agency for International Development, and other international and local organizations. The PNA is assisting operations in all regions and is leading IPM implementation in the St. Louis region to identify performance gaps and build local sustainability. Project stakeholders, identified through coordination mechanisms such as the ministry's contraceptive security committee, continually analyze the model's capacity for financial sustainability and assess local capacity for ongoing distribution and political buy-in. Moreover, IPM is now integrated into Senegal's National FP Action Plan and the PNA's annual strategic plan. The model will fully transition to the PNA in 2016. The ministry has secured funding to continue IPM post-2016, committing a portion of the proceeds from IPM's cost-recovery system to pay for ongoing implementation.

Outcomes & Evaluation: Since 2013, IPM has reduced stockouts globally to 10% or less for a full range of contraceptive products. In comparison, pre-project stockout levels of Depo-Provera were 43% in Pikine district and 26% in Kaolack district. Over the four-month period between April and July 2014, overall demand for Depo-Provera and oral contraceptives increased by 11% and 14%, respectively. Likewise, when observing facility level stockouts related to specific IPM interventions such as FP product quantification, transportation, and financial flows these stockouts were reduced to less than 0.5%. Moreover, IPM has made significant inroads to improve the availability of FP consumption data. Under IPM, for the first time, consumption data is now fully available.

Going Forward: IPM is investigating how to integrate other pharmaceutical products into SDP-level FP distribution systems to increase the model's sustainability.

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Adapting global health professional virtual communities to the domestic landscape: Reflections and lessons learned

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Program/Project Purpose: Since 2007, GHDonline.org hosts a platform of professional virtual communities (PVCs) for thousands of health care implementers around the world to connect, share, and discuss delivery challenges, focusing primarily on low-resource settings. In 2013, we expanded the platform for US-based health care professionals working with underserved populations. We aim to reach a geographically diverse group of 10,000 US health care professionals and increase their understanding and use of evidence-based resources. We hope to develop a greater understanding of their needs and challenges as well.

Structure/Method/Design: These new communities feature population health, quality and safety, costs of care, and delivery innovations. GHDonline will also host regular virtual Expert Panels (week-long, asynchronous online conferences). Expert moderators will lead and organize the activities. They will identify contributors through networking, research, and targeted outreach. As a grassroots effort, the GHDonline communities grow through word-of-mouth, as members and moderators invite colleagues to contribute to community discussions. While core funding comes from grants and foundations, we rely on an array of active volunteer contributors to nurture the communities and help them become self-sustaining.

Outcomes & Evaluation: Our efforts to evaluate the impact of these PVCs and Expert Panels are ongoing. We have established four PVCs and are currently reaching over 6,000 US-based health care professionals. Preliminary survey findings and member interviews show increased knowledge and ability to implement certain evidence-based tools. In order for USCI to reach sustainability, we have identified a number of areas where we must adapt both our approach and platform functionality to better engage our new, US-based audience. Challenges include: members' access to an already overwhelming amount of information and updates from existing connections on established social networks such as Twitter and Facebook; less need for new virtual connections to colleagues; a desire for short-term engagements, such as videos and webinars, over text-based discussions; and an expectation of more personalized notifications and a specialized mobile application.

Going Forward: GHDonline is currently experimenting with video Expert Panels and Twitter chats to provide alternative engagement opportunities for this US-based audience. We are also implementing a responsive web design to improve PVC usability on mobile devices, and we are improving the underlying information architecture that powers navigation on GHDonline to more clearly tailor content to the needs of community members and highlight the benefits of joining our PVCs.

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A simplified, stature-based method for dosing antiepileptic therapy in children presenting with status epilepticus

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Background: Seizure disorders in children are a frequent presentation in under-resourced healthcare settings. Appropriate dosing of medication can be challenging, as dosing is based on weight, which can be difficult to obtain in emergent situations. The Seizure Tape is a flexible tape measure that provides the clinician with appropriate clinical decision guidance for seizure management including standard dosing of antiepileptic therapy for children. By measuring height only, the tape provides an immediate recommendation of dosing for common antiepileptic medications based on expected weights of the child using WHO standard growth curves, avoiding the need to weigh a child or estimate a weight in the emergent setting. Previous work in Kisoro District, Uganda, has demonstrated a high prevalence of underweight children, as measured by weight-for-age, in this district. This project evaluated the accuracy of the seizure tape in providing an appropriate recommended dose of antiepileptic medications for a cohort of Ugandan children in Kisoro, Uganda.

Methods: After appropriate IRB and local approval, height (cm), weight (kg), and age (mo) were collected on 167 children age th percentile of weight-for-age. Dosing recommendations within 30% of the standard weight-based ranges were considered acceptable.

Findings: The stature-based dosing method accurately recommended dosing of lorazepam in 87.8%, diazepam in 91.5%, midazolam in 92.0%, phenytoin in 90.9%, and phenobarbital in 93.9% of children. Doses 30% of ideal were suggested in 11.6%, 7.3%, 7.4%, 7.9% and

5.5% respectively. Child underweight status strongly predicted dosing by >30% above the maximum ideal range for all medications ($p < 0.001$ for each), with nearly all height-based suggestions leading to doses >30% above ideal occurring in children with low weight-for-age.

Interpretation: The seizure tape provides a quick clinical reference for managing pediatric status epilepticus in resource-limited settings. Using a stature-based simplified dosing guide accurately dosed anti-epileptic therapy in 87.8%–93.9% of children. For significantly underweight children with low weight-for-age as determined by clinical exam at presentation, the clinician may wish to decrease the suggested dose to compensate for smaller body mass.

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Novel use of a medical database smart phone application improves clinical learning experience during a global health rotation in Tena, Ecuador

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Background: Two seemingly conflicting trends are emerging among medical students: they are high-tech learners [1] and they consistently seek out global health electives in low resource areas [2, 3]. PEMSof Portable is an evidence-based electronic resource that can function on the native memory of a smart phone or tablet. We hypothesized that using PEMSof Portable would improve the perceived clinical learning experience of medical students on a global health rotation in Tena, Ecuador.

Methods: Sixteen medical students participated in running 8 rural clinics over a 2 week period in the area surrounding Tena, Ecuador, where they helped provide primary care services to over 1100 patients of all ages. Internet access was not available during clinics. Students served as their own controls by performing clinical work without access to PEMSof Portable for the first 4 days of clinic and then using PEMSof Portable for the last 4 days of clinic. Pre-rotation, daily, mid-rotation, and post surveys were conducted to understand student perceptions regarding the utility of the application for learning and providing care. Data from the surveys was compiled into an Excel document and analyzed for trends.

Findings: Compiled data from the daily shift surveys revealed that 92% of the time the medical students thought PEMSof Portable improved their clinical understanding of the Patient/Condition on a day-to-day basis. The data from the post surveys showed that 87.5% of the subjects said they would definitely recommend PEMSof Portable to a friend planning a global health elective. Finally, 100% of the medical students believed that PEMSof Portable improved their overall clinical learning experience.

Interpretation: It is clear from the data that the medical students believed that using PEMSof Portable improved their clinical learning experience. These results suggest this may be a way to improve the clinical learning experience of students while rotating in areas where internet access is limited. While this study had a small sample size, it still demonstrates that students find a portable point of care referencing tool enhances their learning in clinical settings. Further studies should be done to examine if there are different results for different levels of medical school training, length or location of global health experience, or types of health care delivered while working abroad.

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