

# Global Collaboration to Ensure Patient Safety

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## INTRODUCTION

Patient safety is an important issue that touches every corner of the globe (World Health Organization [WHO], 2009). Distance technology and healthcare are working hand in hand to meet today's health demands around the world. The WHO's agenda focuses on specific health objectives, strategic needs, and operational approaches (WHO, 2012d). Collaboration with various non-governmental organizations and institutions of higher education are key aspects of ensuring patient safety on a global scale. The University of Miami and the WHO have partnered to promote health for all people

through global health research and educational activities by addressing disparities in low-income regions in the Americas and the Caribbean. Through the use of Moodle, an open source learning management system, free online nursing and patient safety education courses are available globally to nursing students and professionals (University of Miami, 2012a).

## WORLD HEALTH ORGANIZATION

The WHO is the authorized institution that leads and organizes global health matters for the United Nations (UN) (WHO, 2012a). The WHO is a nongovernmental



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organization that is responsible for research, setting standards and policies, providing technical assistance, and observing and evaluating health trends in countries that are a part of the UN system. The organization is currently reforming to become better prepared with solutions to respond to issues faced in the 21st century through shared responsibilities and accessibility to essential healthcare needs in any environment. The WHO creates global guidelines which impact health policies or clinical interventions while addressing its six core functions of providing healthcare leadership, contributing to and expanding healthcare knowledge and research, implementing and monitoring standards, advocating healthcare ethics, assisting with technical issues, and building the capacity of health systems based on assessments of current health trends (WHO, 2012c).

#### **WHO COLLABORATING CENTRE FOR HUMAN RESOURCES DEVELOPMENT AND PATIENT SAFETY**

The WHO achieves its strategic goals by partnering with various private and non-governmental organizations and institutions of higher education around the world. The WHO designates specific institutions as WHO Collaborating Centres, creating partnerships that allows these institutions to implement initiatives in underprivileged regions that support the WHO's vision of health for all. Of the WHO's six core functions, three of these are encapsulated in the WHO Collaborating Centre for Human Resources Development and Patient Safety. These include promoting socioeconomic progress through meeting the basic healthcare needs of remote and underprivileged populations, improving healthcare systems by building the technical capacity of nursing professionals through distance education courses, and strategically collaborating with international partners within specific countries or regions.

#### **HISTORY OF THE WHO COLLABORATING CENTRE AT THE UNIVERSITY OF MIAMI**

In 2003, Nilda Peragallo Montano became the Dean of the School of Nursing and Health Studies at the University of Miami. Her vision for the School of Nursing and Health Studies included taking a leadership role in the ongoing transformation of international healthcare that is resulting from globalization in order to ensure that healthcare knowledge regarding nursing workforce development and patient safety is disseminated to remote and underprivileged populations in the Pan American region. Peragallo Montano applied for the designation of WHO Collaborating Centre for Human Resources Development and Patient Safety, and in 2008, this designation was awarded to the University of Miami School of Nursing and Health Studies (University of Miami, 2012c). Over the course of the next 4 years, the Centre successfully executed several productive international initiatives. This led to a renewal of the WHO Collaborating Centre designation in 2012 for another 4-year period.

The University of Miami's geographic location in South Florida provides a unique opportunity to connect the Americas and the Caribbean and make an impact by assisting countries in this region that have limited healthcare resources to tap into medical expertise from leading medical institutions, researchers, and practitioners. The WHO Collaborating Centre's program goal for its 2012-2016 period is to strengthen collaboration with the Pan American Health Organization (PAHO), which is a global public health agency that serves as the main hub of the Americas for the WHO (PAHO, 2012). The center WILL focus on strengthening nursing education, disseminating critical information regarding patient safety to increase nursing expertise, and developing research centers

in remote and underprivileged regions in the Americas and the Caribbean.

### **NURSING WORKFORCE DEVELOPMENT INITIATIVES**

The WHO recognizes that nursing professionals play a critical role in increasing the quality of healthcare that is delivered to patients (WHO, 2012b). It strives to link nursing professionals through worldwide virtual communities of practice to promote quality healthcare to their patient populations. The WHO builds collaborative practices among nursing professionals, harnessing their experiences and expertise to develop professional competencies to support global health initiatives. The WHO Collaborating Centre at the University of Miami initiated several collaborative projects to build the capacity of nursing professionals, increasing the skills and knowledge of the nursing workforce throughout the Pan American region. These initiatives have included developing specific nursing education courses and programs, proposing long-term health improvement projects, and hosting an international colloquium that addressed current global research challenges in the field of nursing.

One nursing education course designed by the School of Nursing and Health Studies is entitled "Strategies for Clinical Nursing Education Using Simulation." The course targets healthcare faculty and clinicians, which includes faculty who visit the University of Miami from Latin America and also University of Miami healthcare faculty who regularly travel to and teach in various Latin American institutions of higher education. The focus of the course is to educate faculty and clinicians about best practices for incorporating simulation techniques into existing patient safety curricula in nursing programs at other institutions.

The WHO Collaborating Centre designed and executed research studies in

some of the poorest regions of the poorest countries within the Western Hemisphere (University of Miami, 2012b). These areas have been identified by the WHO as regions of critical need. In Haiti, the center conducted a 1-year research study to provide healthcare knowledge and education. The research study, "Increasing Capacity at Hospital Justinien in Response to Haiti Earthquake," focused on expanding the mental health capacity of healthcare workers in Cap-Haïtien, Haiti, to diagnose and treat trauma patients in the aftermath of an earthquake that devastated the island nation in January 2010. In 2011, 113 Haitian healthcare professionals completed this educational program over a period of six months. While analyses of the research study's impact are ongoing, preliminary reports have determined that local healthcare professionals, including the trainees themselves and local health leaders, are highly satisfied with the program (M. Padron, personal communication, November, 13, 2012). Currently, the center is working on expanding the program into other areas within Haiti, providing educational materials in multiple languages, including Haitian Kreole, French, and English.

In 2011, the WHO Collaborating Centre conducted another 1-year research study in Nicaragua. This study, "Exploring the Health of Adolescent Young Adult Creole Women in Bluefields, Nicaragua," researched high risk behaviors such as substance abuse and unsafe sexual practices among females in that targeted population. Currently, the study continues to explore the health and psychological assessment of this population, while engaging the local institution of higher education to build its research capacity. The overall goal of this research study is to establish a baseline for a continued collaboration on community-based health initiatives between the University of Miami School of Nursing and Health Studies and the Bluefields, Nicaragua Indian and Caribbean University School of Nursing.

As a result of the WHO Collaborating Centre's impact on increasing international healthcare knowledge and knowledge dissemination to date, in September 2012, the Centre was selected to host the XIII Pan American Nursing Research Colloquium in Miami Beach, Florida. This was the first time that this prestigious global conference was hosted in the United States. The colloquium brought together over 1,000 nursing leaders, scholars, researchers, and students from 40 countries around the world to discuss nursing research challenges in the 21st century.

Most recently, the WHO Collaborating Centre, in conjunction with Haiti's Ministry of Health and its École Nationale des Infirmières in Les Cayes, Haiti, submitted a proposal in October 2012 to secure private funding for a 5-year project to improve maternal-child health in the southwestern part of the country. The center's faculty conducted an extensive needs assessment evaluation on the equipment, infrastructure, workforce, and services that are currently offered to mothers and children in Les Cayes, Haiti, as well as these patients' needs based on interactions with Haitian women, healthcare professionals, and local community leaders. As a result of the needs assessment, the center proposed a 5-year plan to expand the healthcare workforce and the family planning capacity of healthcare professionals at the École Nationale des Infirmières in Les Cayes (M. Padron, personal communication, November, 13, 2012).

### **PATIENT SAFETY**

Research has shown that unintended clinical outcomes that negatively impact patients' lives occur because of the complexity of health care, where "the successful treatment and outcomes for each patient depend on a range of factors" (WHO, n.d.). The WHO recognizes that patient safety is a worldwide challenge in the field of healthcare, which encompasses

every aspect of patient care. At a microscopic scale, patient safety examines how individual healthcare professionals interact with their patients and their families, and at a macroscopic scale, patient safety evaluates how a healthcare organization's own protocols affect patients' lives.

The goal of patient safety is to eliminate preventable harm and adverse medical events (Emanuel et al., 2008). Some of the vital areas of patient safety include (a) systems thinking, where health care delivery is integrated into a system that operates under complex conditions; (b) transparency and learning, where sharing information about medical errors that occur results in lessons learned and increases trust between patients and the healthcare organization; (c) accountability, for healthcare professionals to continuously learn and for healthcare organizations to institute safety protocols; and (d) emphasizing teamwork, which promotes functional relationships among interdisciplinary healthcare teams.

### **DISTANCE EDUCATION**

There are a variety of continued challenges revolving around patient safety that impact global health care. In remote and underprivileged regions around the world, patients have limited access to health resources, and healthcare professionals have limited access to medical knowledge and expertise from leading medical institutions, researchers, and practitioners. This situation is increasing health disparities around the world, as the need for educated healthcare professionals is greater than the capacity of the existing healthcare workforce (WHO, 2012e). In short, not only are more healthcare professionals needed around the world, but those who are currently practicing in these regions of critical need lack the skills, competencies, and experience to meet the healthcare needs of their patients.

Distance education is a means of bridging this gap by making medical expertise

and knowledge readily available to health-care workers regardless of geographic or economic barriers. It is a cost effective method for delivering education to health-care professionals worldwide, as they are able to learn without incurring the expenses of traveling to locations to fulfill their educational requirements. By building their capacity, these healthcare professionals are able to deliver higher quality and safer patient care that is aligned to address 21st century healthcare needs, and patients have improved access to high quality care at a local level. As healthcare professionals apply the concepts learned via distance education, they become more efficient and effective in their delivery of care, and ultimately, they are able to contribute to better health outcomes for their patient populations.

#### **PATIENT SAFETY INITIATIVES**

The WHO Collaborating Centre at the University of Miami School of Nursing and Health Studies has implemented distance education programs to transfer patient safety knowledge to nursing students and practicing professionals in these regions of critical need throughout the Americas and the Caribbean. The center capitalizes on recent improvements in communications and information technologies, enabling it to enhance nursing education and competencies in a cost effective way and efficiently meet the critical challenges of nursing workforce development.

The center's free undergraduate online certificate program covers three critical topics in patient care safety: awareness and prevention of HIV, medical errors, and domestic violence. The program's web-based courses are available in English, Spanish, and Portuguese, and they are targeted toward nursing students and professionals in remote regions of the Americas that have been identified by the WHO as having low or limited access to health educational resources.

Working with PAHO and the International Network for Nursing and Patient Safety, the WHO Collaborating Centre also developed a free online course entitled "Nursing and Patient Safety" (University of Miami, 2012a). This web-based course was written specifically for a nursing audience, and it covers essential skills related to providing safe patient care, including hand hygiene, patient identification, medication safety, fall prevention, psychological wellbeing, and patient rights (University of Miami, 2011). The course was designed according to current, evidence-based practice guidelines and aligns with priorities determined by the WHO and the Joint Commission, an independent, non-profit organization which accredits and certifies health care programs and organizations in the United States (The Joint Commission, 2012). During its 1-year pilot phase, the "Nursing and Patient Safety" course was deployed in English and Spanish. While evaluations of the pilot phase are still ongoing, it has been deemed a success so far (M. Padron, personal communication, November, 13, 2012). The course has received highly positive feedback from over 2300 participants who have completed the course since September 2011, and it is now in the process of being translated into Portuguese for the next stage of deployment.

#### **INFRASTRUCTURE**

The WHO Collaborating Centre has established a technological infrastructure to support the virtual learning environment for its distance education programs. Working with the WHO, the center identified specific developmental needs that could be addressed using distance education programs. Courses were designed and developed using the expertise of faculty and instructional designers at the University of Miami School of Nursing and Health Studies. The center piloted its courses using the Collaborative Institu-

tional Training Initiative program, a partnership between the University of Miami and the Fred Hutchinson Cancer Research Center that provides web-based training to more than 1,100 institutions and facilities around the world (Collaborative Institutional Training Initiative, n.d.). However, at the end of the pilot phase, it was determined that the Collaborative Institutional Training Initiative program did not meet all of the center's needs in managing and delivering these distance education courses. As a result of feedback from both learners and center administrators, the center decided to look for alternative solutions in delivering its distance education courses. For the next phase of this program, the center sought a solution that would meet the needs of both learners and administrators. For instance, the solution needed to be easily accessible and easy for learners to use, while being able to assess learning, track learner progress, and provide accurate reporting.

The center's current solution includes a hosted web server, a learning management system, and the online modules themselves (M. Padron, personal communication, November, 13, 2012). While the content of the courses have not changed, the learners' user interface experience has been enhanced, and the courses are more accessible to learners via the School of Nursing and Health Studies' website. The Linux-based web server is run by a third party, HostGator, which provides unlimited web hosting, disk space, and bandwidth. HostGator provides around the clock technical support and automated data backups, but content on the server is managed remotely by information technology staff at the center via CPanel. This flexibility allows the university to quickly install and remove specific software packages as well as manage other server settings as needed. The center has installed Moodle 2.3.1, a well-known open source learning management system that is used ubiquitously among educators due to its

ability to deploy and manage learning content easily to both small and large learning communities. In order for Moodle to function properly, the center has also installed PHP5 and MySQL, and the transfer of course content files is enabled with the server running an FTP.

The Moodle learning management system is customized to reflect the look and feel of the University of Miami, using the University's color scheme and the logo for the School of Nursing and Health Studies. The "Nursing and Patient Safety" distance education courses consist of 11 online modules, an evaluation of the course curriculum, a certificate of completion, a glossary of terminology, and online additional resources for each topical area. Through these distance education courses, the center is helping to increase healthcare knowledge across diverse geographical regions, facilitate a collaborative learning experience, and build the capacity of the global nursing workforce.

## CONCLUSION

The WHO Collaborating Centre at the University of Miami School of Nursing and Health Studies focuses on addressing both new opportunities and challenges facing the nursing profession today. Through distance education, learning is flexible and can be extended to areas with limited resources. Nurses from remote geographical regions to educational resources are now connected to leading medical institutions, researchers, and practitioners. Through its partnership with the WHO and the PAHO, the center promotes the basic healthcare needs of remote and underprivileged populations and improves healthcare systems in regions of critical need within the Americas and the Caribbean by building the capacity of nursing professionals. The continued collaboration between the center and these international organizations will strengthen and develop nursing education and

research, improve patient safety, and work toward eliminating health disparities on a global scale.

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