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Learning to Sew: A Student Pharmacist's Service-Learning Experience

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Cover Page Footnote

The authors would like to acknowledge Sarah Ellen Mamlin. As a founder of the Sally Test Center, her dedication and tireless daily efforts have been instrumental in the success of the center and the children it serves.

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LEARNING TO SEW:

A Student Pharmacist’s Service-Learning Experience

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ABSTRACT

The collaboration between Purdue University College of Pharmacy and the USAID—AMPATH partnership gives student pharmacists the opportunity to complete an internal medicine experience in Eldoret, Kenya. Student pharmacists act as the pharmaceutical resource on multi-disciplinary teams at Moi Teaching and Referral Hospital (MTRH). Adding to the experience, the sewing initiative is one of numerous service-learning opportunities that have evolved in this resource-constrained setting. The initiative takes place at the Sally Test Pediatric Center, a place for children to learn and play while in the hospital. The program teaches sewing, an income-generating skill, to parents of hospitalized children. Students assist with sewing lessons, provide health care education for parents, and care for children while their parents learn a skill that can potentially provide a sustainable income. This program aids student pharmacists in balancing service and learning while working in a resource-constrained setting. This article describes the implementation of the sewing initiative, the goals of the project, the participants and students, and the initial impact.

INTRODUCTION

In 1989, a medical exchange program between Indiana University School of Medicine (IUSM), Moi University School of Medicine (MUSM), and Moi Teaching and Referral Hospital (MTRH) was established. Out of the existing exchange program, the United States Agency for International Development—Academic Model Providing Access to Healthcare (USAID—AMPATH) Partnership was developed in 2001. This unique partnership was built to address the HIV/AIDS epidemic and other chronic diseases for a catchment area of ~3.5 million people in western Kenya (Einterz et al., 2007; Inui et al., 2007). USAID—AMPATH has grown from providing care to a handful of patients in 2001, to providing care to more than 150,000 patients with HIV in western Kenya. The program is one of the largest comprehensive HIV programs in all of sub-Saharan Africa. USAID—AMPATH has expanded its community-based care program to include services for maternal-child health, cardiovascular diseases, diabetes, malignancy, mental health, and food insecurity.

Purdue University College of Pharmacy (PUCOP) joined the AMPATH Consortium, a group of universities from North America led by Indiana University, in 2003 to provide pharmaceutical care for AMPATH (Pastakia, Schellhase, & Jakait, 2009). PUCOP student pharmacists can elect to complete an eight-week advanced pharmacy practice experience at MTRH. The aim of this PUCOP experience is to expose students to global health, have students participate in establishing health



Figure 1. Craig Vargo (Purdue Class of 2012) at the Sally Test Pediatric Center.

care infrastructure, and provide excellent medical care to individuals and populations. Over 200 PUCOP student pharmacists have participated in this experience to date, alongside over 60 University of Nairobi pharmacy interns. These trainees serve as the primary pharmacy resource on the adult general medicine teams, each of which provide care for 25–30 patients daily. The academic medical teams at MTRH are made up of an attending physician, residents, and students from Kenya and North America, along with pharmacy students from PUCOP. Trainees are responsible for drug therapy management and monitoring and are an integral part of the multidisciplinary team.

While working with the medical team, students are encouraged to participate in service-learning activities in other areas of the hospital, including the Sally Test Pediatric Center (STPC). The purpose of participating in these activities is to balance the service and learning experiences (Furco, 1996). A systematic review found that medical educators believe that community-based care or service-learning projects provide better opportunities to learn about the social determinants of health and the cultural competence of students (Hunt, Bonham, & Jones, 2011). This experience allows students to understand that care extends beyond the traditional methods taught in the classroom, especially in a resource-constrained setting.

Sally Test Pediatric Center

The limited resources, coupled with the high prevalence of HIV/AIDS in this setting, are associated with an increased rate of orphaned children and single parents

(UNAIDS, 2006). When a child is admitted to MTRH, the hospital becomes a home to the entire family. Due to the high patient to nurse ratio, the family must remain with their hospitalized child to care for them around the clock. The STPC was created as a child life service (Child Life Council and Committee on Hospital Care, 2006). The purpose of the center is to reduce the stress of hospitalization for young children by presenting explanations in developmentally appropriate language to children and families before medical procedures, to provide techniques for children and family to deal with the process of hospitalization, and to have a safe place where children can engage in play without the fear of negative experiences. The STPC recognizes that children are not alone in needing care. Through participation in activities at the STPC, parents are able to learn new skills and develop a support system with other parents. The center has a staff of 22, which includes one nurse, three social workers, four teachers, and four outreach workers.

The STPC provides an environment for pediatric patients, which allows them the opportunity to participate in a variety of educational and recreational activities while they are hospitalized. MTRH has 72 pediatric beds with an average of 100 pediatric patients admitted at any given time. The STPC has an average of 25 pediatric patients utilizing the center on a daily basis. Many of them are abandoned children, children with HIV/AIDS, and/or children receiving chemotherapy.

In addition to child life activities for the patients, STPC has worked to ensure that parents have activities to fill their days in the hospital. Educational services ranging from preventative health services to financial planning are offered to parents, with over 10 parents attending each session. Medical and pharmacy students have provided informative talks about basic signs and symptoms of common pediatric illnesses, childhood developmental milestones, and nutrition.

IMPORTANCE OF RESPITE CARE

The definition of respite care has yet to be standardized and varies greatly depending on the setting and the population needing relief. Respite care for the parent can range from brief child care to more thorough long-term or overnight care. Literature has shown that parents who care for children with disabilities and cancer can experience “caregiver burden,” resulting in emotional, psychological, and financial stress (Ling, 2012). In addition, parents often experience negative health outcomes due to lack of attention to their own health and wellness needs (James et al., 2002). It has also been shown that



Figure 2. Justine, the STPC seamstress, prepares to teach parents how to sew.

parents of vulnerable toddlers need stress lowering interventions such as respite care (Loretta et al., 2007). Users of respite care were shown to have decreased levels of stress compared to non-users. Parents utilizing respite care reported less anxiety, less tendency to become depressed, and increased optimism in caring for the child at home (Robertson et al., 2010). Very little data is available regarding the access to respite care in resource-constrained settings. According to literature reviewed by Hunt et al. (2011), in medically related service-learning activities, it is important that we provide a service that is not only educational to students, but also meaningful to the community we support (Hunt et al., 2011). In this project, the goal was to combine respite care with the provision of a skill-building activity, which could have a more long-term effect on the family.

The Community and its Need: The Sewing Initiative

In a developing country, the need and desire to learn an income-generating skill is abundant. With approximately 45% of the population living below the national poverty level (World Bank Group, 2013), sewing provides an opportunity for parents to learn an income-generating skill, which can be used in the future to provide a service to their families and community. Parents are also able to make clothes for their family through participation in the program. These educational and sewing sessions at STPC provide parents with respite care during the time of their children's treatment while in the hospital. Because nurses often find themselves having to care for many acutely ill patients, parents are expected to be

caregivers for their children throughout their hospital stay. STPC provides needed respite care for the parents through these numerous educational programs and through the sewing initiative.

The Students and Faculty

The sewing initiative gives students and faculty the opportunity to participate in a program with a broader definition of health, and allows them to develop rapport with their patients in a non-health care setting. There are three major objectives for students and faculty of this program: (1) improving cultural competencies, (2) understanding the socioeconomic challenges in a developing country, and (3) engaging engage students and faculty in a project that allows them to utilize their patient care skills in a non-health care environment. While sewing and pharmacy are not directly related, each objective is designed to help learners become better pharmacy practitioners by continuing to develop the skills needed to relate with all people, no matter their walk of life.

METHODS

PUCOP students applied for grant funding through the Office of Engagement at Purdue University for a Community Service/Service Learning Student Grant to support the initial cost of the program. We used the awarded grant money to purchase a sewing machine and supplies for the STPC. After the supplies were secured, a local seamstress was employed to teach the parents basic sewing skills. These skills include taking measurements,

pattern drawing, running the machine, dressmaking, stiches, and making button holes. In addition to helping secure materials, the PUCOP student pharmacists and STPC staff provide care for children while the parents are taking their sewing lessons. We also serve as resources for the parents being trained by answering health- and medication-related questions. During times when student pharmacists are not on hand, they have developed educational materials for the STPC parents, including brochures about basic health safety, appropriate medication administration, household poisons, childhood disease prevention, immunizations, and other identified areas of need. These resources have helped improve the educational infrastructure provided to parents at the STPC.

The impact of this project has been assessed through interviews with the seamstress and current and past participants of the sewing program. We asked parents about their experiences and successes after they learned basic sewing through the program. Each participant was asked the same series of questions: length of sewing experience, overall thoughts about the sewing program, how the program has affected them, and if they have been able to make goods either to sell or for their family. Due to the decreased means of communication and travel in this setting, there is a high percentage of parents who cannot be reached for additional follow-up. This decreases the ability to assess the impact of the sewing program. The goal of this article is to assess the impact our project has made on the community and to learn methods of implementing a formalized student assessment process.

RESULTS

Over a three-year period, more than 400 parents completed the entire sewing training program. However, there were incomplete records for the total number of parents who learned basic sewing skills through this program but did not complete all the courses due to the shorter hospital stay of their child. At least five parents have left the hospital and purchased their own sewing machine to create a sustainable source of income for their families. PUCOP has had more than 50 student pharmacists involved in the program since its inception.

We interviewed eight program participants, as well as the lead seamstress, to qualitatively assess their views of the program and its impact. There were consistent themes identified from these interviews. The first theme was the enthusiasm the parents expressed about the opportunity the sewing program offered them regard-

ing income generation and the ability to clothe their own families. Each of the eight parents we interviewed planned to continue sewing to make clothes for their family, with two of them working toward income opportunities. Another identified theme was that the sewing program provided respite care for the parents. The head seamstress told us, "Sewing gives parents a time away from the hospital and distracts them from their children's sicknesses." All parents interviewed indicated a decreased level of stress while involved in the sewing initiative. Overall, the sewing lessons allowed time for the parents to learn a sustainable and income-generating skill while knowing that their children were safe and cared for in the STPC. The head seamstress summarized the program results best by saying, "Sewing allows parents to learn a skill that, when they leave the hospital, they can use to earn money."

Student pharmacists also had positive outcomes. The program offered us a unique experience to interact with families and parents of children admitted to MTRH. This allowed us to engage in service-learning in a different environment than the traditional hospital setting. It also yielded the opportunity for us to be fully immersed in the Kenyan culture by better understanding the Kenyan family dynamic. All of these activities yield a perfect setting to reflect—an important aspect of service-learning (Eyler & Giles, 1999).

DISCUSSION AND REFLECTION

Sustainability and Long-Term Assessment

The sustainability of the sewing initiative is based on yearly grant funding and donations. With the sewing machines already purchased, the yearly expenses include fabric, salary, and maintenance. The sewing initiative has continued for more than three years with overall success. It allows parents to provide clothing for their families and the opportunity to learn a potential income-generating skill. The program is expanding to include teaching parents beading and crochet techniques, allowing for additional income-generating skills training. Providing these programs and services helps strengthen the relationships, reputation, and support for the pharmacy program and the services students provide. Participation allowed students to enrich their experience while completing a rotation in Kenya. It also demonstrates a commitment in caring for patients and their families.

Though it has had overall success, the program has encountered some limitations. Sewing lessons are only offered to individuals who have children admitted to the

hospital, so many parents do not complete the training program. A way of addressing this limitation is to hire another seamstress to train parents whose children are no longer hospitalized. Another limitation is the cost of a sewing machine, which is about 7,000 KSH (~\$80 US). Many parents are able to complete the training program but cannot afford to purchase their own sewing machine. This challenge is difficult to overcome since many people live in remote areas, making sharing machines difficult. We lose track of many parents who participate in the sewing program, and thus need to improve communication with families after they leave the hospital. This would help us better understand the long-term impact of the experience.

Future Plans

In addition to addressing these limitations, we plan to implement a participant exit survey to assess the overall impact of the sewing program, and to begin keeping records of all participants. There are also plans to formally implement methods of measuring student outcomes. Students currently complete an open-format reflection. By implementing a guided reflection process for the service-learning sewing initiative, the faculty can better measure student learning outcomes. According to the Community-Campus Partnerships for Health, reflection on service-learning activities benefits students in that it allows for them to critically evaluate their experiences, discuss their accomplishments, and connect to faculty and peers (Krauel & Krauel, 2003). Although Community-Campus Partnerships for Health believe that reflection is the “most effective forum” for evaluating a service-learning opportunity, other options include implementing an exit survey (Krauel & Krauel, 2003). The systematic review conducted by Hunt et al. (2011) stated that 19 articles about service-learning in medical education described cultural competence as a desired outcome, with no comments on how it was assessed. However, various survey tools exist and have been used in health care service-learning opportunities to measure cultural competence (Amerson, 2010). The Inventory for Assessing the Process of Cultural Competence Among Healthcare Professionals—Revised is a survey tool that has been used in a variety of health care professions, including pharmacy (Transcultural C.A.R.E. Associates, n.d.). The tool measures cultural competence in the following construct areas: desire, awareness, knowledge, skill, and encounters (Haack & Phillips, 2012). Because this involves measurement of both didactic and experiential learning opportunities, this may best suit our program’s vast array of service-learning opportunities. By incorporating the combination of a reflection and

an exit survey, the program will be able to attain more measureable, timely data on student achievement of outcomes and success, and areas of improvement of the program specifically.

CONCLUSION

The value of service-learning in professional health care education programs is well documented, but its use in resource-constrained settings is limited and focuses on the outcomes of short-term service-learning experiences. The sewing initiative provides insight into the implementation, sustainability, and value of a long-term service-learning initiative in a resource-constrained setting.

We learned that service-learning does not have to directly relate to our educational degree in order for us to learn. More importantly, the service provided should be based on community needs. In our case, we added value by providing education on an income-generating skill to parents while their children were hospitalized. We learned lessons on cultural competency, consumerism, the broader definition of health, and the barriers in providing service—all valuable, applicable lessons that we can relate and apply to pharmacy and patient care.

Hundreds of parents of children who are hospitalized and students from PUCOP have benefited from the STPC sewing initiative. The program continues to expand, and future plans will allow for better assessments of the initiative’s impact. The STPC sewing initiative is a positive example of service-learning, one that could be replicated in other disciplines and settings.

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The authors would like to acknowledge Sarah Ellen Mamlin. As a founder of the Sally Test Center, her dedication and tireless daily efforts have been instrumental in the success of the center and the children it serves.

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