An Advance Pharmacy Practice Rotation in a Medical Group Practice: A Pharmacy Student's Perspective

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Abstract:
The changes that are occurring in our health care system are in a large part a result of the Medicare Modernization Act of 2003 and the Patient Protection and Affordable Care Act of 2010. Other factors playing significant parts in the changes are the increased monitoring of medical intervention outcomes by payers and their drive to adjust the provider reimbursement. These changes point to the need for enhancing the collaborative practice approach when providing patient care. They are also driving interest in the formation of Accountable Care Organizations (ACOs) which means changing the method of reimbursement while at the same time improving patient care. The ACO approach requires the development teams of healthcare professionals working together to provide improved care, while reducing health care cost. The development of teams of healthcare professionals to improve services will require collaboration among these healthcare professionals in the provision of care.

The Medical Director of a medical practice contacted a faculty member involved in the experiential education program of Western University of Health Sciences College of Pharmacy, because he developed an awareness of the need to have increased collaboration among all healthcare professionals in his practice. He wanted to discuss the possibility of developing an Advanced Pharmacy Practice Experience (APPE) rotation for pharmacy students in his medical group. The major goal for this rotation was to expose physicians, medical residents, nurses, and pharmacy students to an enhanced collaborative practice approach or “Shared Care” concept of patient care. An academic syllabus specific to this new type of rotation was developed by modifying an APPE standard syllabus to provide guidance for the implementation of this new clinical rotation for all parties involved. A third year pharmacy student agreed to participate as the first student to do a rotation in a medical practice working directly with primary care physicians, nurses employed by the practice, a consulting pharmacist working with the practice, and the Western University Faculty member.

The team of preceptors (Medical Director, consultant pharmacist, and faculty member) met initially with the student and explained the rotation and requested the student to keep a weekly diary of her daily experiences and observations. At the end of the rotation the team decided that we would share the student’s perspective to this new type of clinical rotation. The student’s perspective is important to the further development of this new approach in Western University of Health Sciences Inter-Professional Education curriculum and the expansion of this approach in the College of Pharmacy curriculum. The preceptor team and the college have learned a great deal from the student and her perspective is important to the further development of this new inter-professional education approach to Experiential Education for professional healthcare students.

Introduction:
The Medicare Modernization Act (MMA) of 2003 created the Medicare Part D benefit which required the implementation by the Prescription Drug Plan providers of Medication Therapy Management (MTM) services. Also, the Patient Protection and Affordable Care Act of 2010 Act (PPACA), emphasizes the importance of Inter-Professional collaborative healthcare practice. These major changes in healthcare laws encourage the development of a patient care team which provides health care in the form of a Patient Centered Medical Home or “Shared Care” approach. This approach to patient care takes advantage of the differing knowledge bases and skills of each of the healthcare professionals involved. It allows the team of professionals to create an Accountable Care Organization (ACO) to address one of the major recommendations/requirements stated in the PPACA. Thus, the integration of pharmacists into the medical practice allows the practice to implement an MTM program.

A recent New England Journal of Medicine Perspective speaks to “The Evolving Primary Care Physician”, which is happening as a result of the many changes in healthcare. The need for these changes is magnified by the increasing incidences of Adverse Drug Events (ADEs) being reported in the literature. ADEs account for 17 million emergency room visits and 8.7 million hospital admissions in the US each year. An additional factor that supports the inclusion of the pharmacist to the patient care team in a medical practice is the need for improved medication reconciliation during transitions of care (i.e., hospital admissions, hospital discharge). A relatively recent study regarding compilation of medication history in an emergency department demonstrated the benefit of pharmacist involvement.4 There are numerous other studies that have spoken to the common...
problem of ADEs in all areas/facilities where care is provided. The Centers for Medicare and Medicaid Services (CMS) announced that effective October 1, 2012 it would reduce payments for hospitals reporting an above average 30 day readmission rate. Thus, there is now additional incentive to ensure that patients do not suffer ADEs immediately after discharge. The approach of having a pharmacist involved in medication reconciliation when transitions of care occur is a critical part of preventing ADE-associated morbidity and mortality.

The Medical Director/owner of Telehealth medical practice contacted a college of pharmacy faculty member who is involved in the Office of the Experiential Education at Western University of Health Sciences College of Pharmacy to discuss the implementation of an Advance Pharmacy Practice Experience (APPE) rotation in his medical group. The Medical Director wanted to assure that full review of all medications was carried out for all patients on a regular basis as well as during transitions of care. The Medical Director, a consultant pharmacist, and the faculty member met and began the development of a plan for this new type of clinical rotation. A Syllabus was developed using a standard APPE Syllabus as a basis for the development of the Medical Group Practice rotation. After review and discussion the new Syllabus was implemented. Telehealth Medical Group utilizes an open platform electronic medical record that is Web-based so all parties can have on-site and remote access to patient medical records. The initial third year pharmacy student was selected from among a number of volunteers. The University requires the students from all of its colleges to take and pass Inter-professional Practice Experience curriculum which focuses on developing a collaborative approach to patient care. Therefore the selected student had been prepared to work in a collaborative practice environment.

The student met with the Medical Director, Consulting Pharmacist, and the Faculty member for her initial orientation to discuss the students’ input to the development of the new rotation option. The student was asked to keep a weekly diary for submission to the three organizers for review and discussion. The student became a valuable member of the rotation development team in the full development of this new clinical rotation option. With the growing recognition of the benefits that pharmacists can bring to the Patient Centered Medical Home team, it was agreed that providing APPE experience to pharmacy students was critical to the development of this new team member.

Student’s Perspective of the Rotation:

The following narrative of the student’s experience as a result of the team’s request briefly describes the student’s observations, experience, and perspective of this new APPE rotation and its value to the student.

My APPE clinical rotation at Telehealth was a unique opportunity in which I was able to work closely with physicians, nurses, and most important, directly with patients. As a 3rd year pharmacy student, I was able to collaborate directly with Dr. Henderson, a primary care physician, during the six weeks at his private practice in Orange, CA. During this rotation I was able to use the scientific and clinical knowledge I had learned in pharmacy school and apply it in a “real-world” setting. It deepened my understanding of clinical disease and pharmacotherapy as well as built my confidence as a pharmacy professional. My main goal was to provide Medication Therapy Management (MTM) services to patients; however, I also gained a lot of intangible knowledge and experience along the way, such as maturing professionally. This goes against the status quo because physicians and pharmacists usually work independently of each other. At this rotation, it was unique because of the fact that I mainly shadowed a physician rather than a pharmacist, thus, it allowed me to gain exposure to how physicians diagnose, treat, and interact with patients. I was responsible for asking all patients about their current medications, including prescription, over-the-counter, herbal supplements, and nutritional. I accomplished this by either calling patients on the phone before their appointments, or directly asking the patients at their physician visit. Thus, like the physician, I visited patients, but instead of diagnosing I was focused on determining whether any chief complaints could be related to the medications they were taking, and then recommending additions or changes to medication therapy. For example, if a patient came in to the physician’s office with a chief complaint of a persistent dry cough and they were recently prescribed Lisinopril or any other ACEI for blood pressure, this would likely be the cause of the cough, rather than a pathological reason. This direct contact between a pharmacist and physician in a medical office is yet to be seen, yet it is very much needed.

Another example of how I assessed patients and performed MTM services includes the following: a 75 year-old female patient brings in the following list of medications: Metformin 500 mg BID, Glimepiride 2 mg QD, Lovastatin 40 mg QD, Diovan 80 mg QD, Levothyroxine 25 mg QD, KlorCon 10 mEq QD, Keppra 1000 mg BID, Ranitidine 150 mg QD, ASA 81 mg QD. Her FBG and PPG were elevated and out of range, as well as her A1c (8.4%). Her TC, TG, LDL were all elevated as well. Based on the Framingham risk assessment model, the LDL reduction needed for the patient was 48%. I calculated the CrCl to be 70 mL/min; therefore there was no renal dysfunction. Her AST/ALT liver enzymes were mildly elevated, however. After these assessments and calculations, I determined that this patient’s main goals of therapy were to control FBG and PPG, control TC, TG, and LDL, improve drug therapy, reduce drug side effects, and reduce drug interactions. The
medication action plan that I made included increasing the Metformin dose to 1000 mg BID, discontinuing the Lovastatin and adding Lipitor 40 mg QD, continuing Glimperide at the present dose, adding chromium picocline 200 mg BID, continuing Divan, Levothyroxine, KlorCon, Keppra, and ASA. I noted that we should monitor labs for signs and symptoms of hypoglycemia and hyperkalemia.

This direct contact between a pharmacist and physician in a medical office is not done on a regular basis, yet I believe this approach is very much needed. Not only was I able to work with the physician and his medical residents, but also registered nurses. I collaborated with home health nurses in order to come up with detailed medication action plans for patients that were referred to Dr. Henderson. This involved direct contact with patients as well as tele-consults via web-based video. In these tele-consults, I was essentially the pseudo-pharmacist and not thought of as merely a pharmacy student. In my mind, I was in charge of independently developing the above mentioned medication action plans, building my confidence.

Although I was under the guidance of the pharmacist, Dr. Blackburn, my main preceptor was Dr. Henderson, as he was the person I interacted with most on a daily basis. As opposed to other rotations, I did not shadow the pharmacist. Instead, I was functioning as clinical pharmacist with immediate access to Dr. Blackburn if need be. Dr. Henderson wanted input from my clinical knowledge and expertise, and we discussed each situation after I did the research so we were able to optimize the treatment for the patient. I also had the privilege of interacting closely with my pharmacy professor, Professor Kotz. He was able to serve as a mentor during my rotation, as I was able to contact him via email or phone at any time. He was present with me during various meetings with Dr. Henderson and Dr. Blackburn. He also took time out of his schedule in order to drive to my rotation site and give me an introductory presentation on enteral nutrition. I am grateful for having Professor Kotz’ support during my rotation, for that is rare in most other rotations. Through this rotation, I was able to gain experience in working with a physician, which is a good opportunity as a pharmacist, let alone a pharmacy student. I was not only able to gain confidence in my own abilities and knowledge as a pharmacist, but also was able to become comfortable working directly with a physician. This experience is unique, and definitely a valuable asset to have as a pharmacist because, in order to use our clinical knowledge to help physicians better treat their patients, we must learn to better communicate and work together collaboratively with them. Working in a medical office allowed me to experience what it is like to be a primary care provider, since I was able to talk to patients one-on-one in an exam room. This gave patients a very different perspective on what a pharmacist knows and how they can add to their care. Patients are able to view the pharmacist as more of a clinician, rather than a medicine dispenser, when the pharmacist is part of the clinical team. The positive impact of my rotation experience proves that the image of the pharmacist is evolving and not only is it improving patient care, but it is also helping the profession in general. We are being increasingly recognized by other health professionals as clinical experts in our field and that can have a tremendous impact on the well-being of their patients.

The experience I had working with patients was very rewarding. This was my first exposure to direct patient care. The juxtaposition between community/retail pharmacy and clinical pharmacy was strikingly different in terms of how the patients responded to me. During my rotation, I answered drug information questions for patients waiting to see the physician. By the end of my rotation, I was receiving phone calls at the medical office from patients who had questions about their medications or who had questions regarding recommendations for over-the-counter remedies. This showed that patients both valued my opinion as well as trusted me as a healthcare professional. Like most pharmacy students, I work in addition to going to school. I work in a community/retail pharmacy setting where the atmosphere is quite chaotic and stressful for pharmacists and patients alike. Because of the high volume of prescriptions at most community/retail pharmacies, pharmacists often do not have the luxury of time in order to counsel all patients on their medications as we are taught in school. Lack of time as well as lack of designated areas for patient counseling provides barriers to patient care, potentially contributing to patient anxiety and embarrassment about asking pharmacists questions about their medications. In essence, providing direct patient care in a clinical setting such as in a physician’s office allows pharmacists to better help patients and allows for patients to have greater trust and feel more comfortable in talking to their pharmacist about their medications.

In such a setting, pharmacists can essentially enhance the clinical care provided by a physician as well as drive down medication therapy costs. Examples of how pharmacists can do this include: changing brand medications to generics when appropriate, adjusting dosage administration, and discontinuing unnecessary medications. Pharmacists are better prepared to obtain the patient’s full medication history in a medical office setting than in a community/retail pharmacy because we have more time and can also determine if there is a correlation between the patient’s chief complaint and the medications that they are taking. This is especially true as more and more patients are resorting to the use of herbal medication and over-the-counter aids, which patients often do not consider as medications.

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when asked by nurses and physicians at their physician’s office. Over-the-counter (OTC) products and herbal medication use is on the rise. In 2000, OTC retail sales in the US were $14.7 billion, and in 2010, OTC retail sales were $17 billion according to the Nielsen Company. As for herbal medications, in 1999, US sales totaled $4.1 billion, and in 2009, US sales totaled $5 billion according to the Nutrition Business Journal. This information further shows the increased importance of pharmacists performing MTM and their involvement in direct patient care.

Conclusion:

Western University of Health Sciences requires all students from the nine colleges to be involved in the Inter-Professional Education (IPE) curriculum to graduate. While this approach does expose all health professional students to interaction with all of the other health professions, it is in an academic setting. This new approach to clinical training as part of the APPE rotations brings the student into a patient care environment in the real world working with other healthcare professionals and patients in the practical world of medical care. This approach drives home the value of inter-professional collaborative care and thus reinforces the students’ classroom training. The clinical rotation approach better prepares pharmacy students to be important members of a collaborative practice approach thus allowing the medical practice to fit into the Patient Centered Medical Home concept as well as potentially participate as an ACO. When pharmacists take over broadened responsibility for medication therapy they can increase the physician’s productivity and allow them to focus on patients and their needs. Medication reconciliation can become a major part of a medical group practice, thus ensuring that the patient’s medication therapy is consistent throughout the patient’s transitions of care. This new professional education approach can enhance the resources available to a medical practice and the effectiveness and safety of a patient’s medication therapy. A pharmacist involved in a medical practice can pre-screen all new therapies in relationship to the patient’s total therapy including prescription medications, over-the-counter products, and herbs to prevent drug interactions. This ultimately will reduce the amount of time that physicians have to deal with calls from the retail pharmacist.

From an educational standpoint, an additional benefit of the medical practice rotation is that it addresses a concern of the Accreditation Council for Pharmacy Education (ACPE) 2007 standards by expanding the pharmacy students’ exposure to direct patient care services. Fourth year pharmacy student experiences must include face-to-face interactions with patients according to these standards. The American College of Clinical Pharmacy (ACCP) found that many of its members are concerned that the training for some students during their APPE are essentially observational experiences rather than encounters, where students actively participate in direct patient care activities. The addition of a rotation in a medical practice for APPE students will help the student to understand and be more comfortable interacting with physicians no matter what area of practice they ultimately enter. A second student has now completed the medical practice APPE rotation and we are scheduling a student for a rotation in a second medical practice office. Also, two Western University of Health Sciences Pharmacy faculty members have been running an anticoagulation clinic in a community pharmacy and the University’s Patient Care Center, which provides direct patient care experience for pharmacy students outside of a medical office. This type of direct patient care experience is critical in the development of future pharmacy practitioners.

References: