A valuable talent that a pharmacist may possess is knowing how to compound a wide variety of medications. Compounding is an art that may allow a pharmacist to explore many different areas pertaining to the pharmacy profession. For example, it allows a pharmacist the opportunity to customize a medication to a particular patient’s needs. According to PCCA, compounding is defined as “the art and science of preparing personalized medications for patients.” For many years, most medications were compounded by a pharmacist. However, that changed with the increase in manufacturing of medications around 1950 and also led to the decline in the teaching of compounding in pharmacy schools. Also, many states do not even require additional exams in compounding to become a licensed pharmacist.

Compounding in the pharmacy profession has become a specialization rather than what it once was as a required part of the curriculum. Many pharmacy institutions may still teach compounding but it is most often a small part of the entire curriculum. I believe that in order to become a well-rounded pharmacist who can provide the highest quality of patient care possible it is necessary for adequate
training in the compounding arena. After graduation from pharmacy school, most pharmacists will encounter compounding medications to some extent in their career. Whether it is only a minimal amount of compounding in the community pharmacy or extensive compounding working for an independent pharmacy, it is important that pharmacists maintain their skills necessary to ensure the patient receives the correct medication.

The importance of compounding in the pharmacy profession was evidenced in a study conducted by a team of faculty at the St. Louis College of Pharmacy. The study was titled “Independent Community Pharmacists’ Perspectives on Compounding in Contemporary Pharmacy Education” and it surveyed independent compounding pharmacy practitioners concerning their education exposure and their views on compounding in PharmD curriculum. Surprisingly I believe, only 69% of the respondents accepted compounding as a component of pharmaceutical care. However, 84% of the respondents stated that they believe the PharmD curricula should include compounding.

One of the main reasons that compounding, including a laboratory component with hands-on experience, should be a required component in the PharmD curriculum is that there are a constant number of drug shortages and recalls. This means that a patient may be on a medication and unable to obtain the medication from a commercially available product. Therefore, they may have to resort to having a medication compounded to meet their needs. When this happens the pharmacist will be required to have the requisite knowledge about compounding in order to fulfill the patient’s needs. As discussed in this article, even the concept of simple mixing requires that the pharmacist has the knowledge concerning the compatibility of the active and inactive ingredients. The article also brings up a good point that a graduate should at a minimum be able to compound preparations such as ointments, creams, gels, solutions, and suspensions. Even if the pharmacist is not working in a
pharmacy setting which specializes in compounding they may called upon to prepare a “simple”
compound for a patient.

Another reason that it is important that compounding is a required course in pharmacy school is
because of the tight regulations associated with preparing compounds. This may be the only time that a
pharmacist may be exposed to the regulations and laws associated with compounding. For example, in
our compounding course in pharmacy school this is where we learned the USP 795 and USP 797
regulations as well as other regulations relating to compounding. If compounding is not taught in
pharmacy school, then many students would be at a disadvantage when they begin doing their rotations
as well as after they graduate depending on their practice sites.

One other area in which compounding is advantageous to being taught in pharmacy school is
that it exposes the future pharmacist to many areas in pharmacy that they may have limited exposure
to, most likely, upon graduation. One example is the wide variety of routes of administration that
compounding may consist of. For example, various routes of administration may be utilized in
compounding to increase the absorption and bioavailability of a medication. This may be the only
exposure that the future pharmacist will have to different formulations of medications such as troches,
suppositories, various creams, and gels. Also, compounding is done to customize a medication for a
patient, such as an animal, a child, or patients who are unable to swallow oral medications. The
compounding courses in pharmacy school help to build a foundation for the requisite knowledge
required for the ability to think outside the box to achieve these tasks. It also teaches the basic skills
necessary for compounding such as formulating a medication and performing calculations to ensure
accuracy of the compounded medication. Compounding courses in pharmacy school may be the only
exposure that the future pharmacist has to an area such as veterinarian medications. This is a big area in
compounding in which a medication has to be customized for a patient for different reasons, such as
flavoring a medication or adjusting the dosage from the commercially available medication.

Another reason why it is important that compounding is a required course in pharmacy school is
because it is important that the pharmacist knows the active and inactive ingredients of a medication.
Even if they are just dispensing a commercially available medication, knowing the active and inactive
ingredients is important because a patient may be allergic or unable to tolerate one of the ingredients.
As a pharmacist, a patient may come to you and ask if a medication contains a particular ingredient. This
is where having the background of knowing where to find this information is valuable.

In conclusion, I believe that compounding should be a required course in pharmacy school. It
should include at a minimum the coverage of the most commonly compounded medications such as
creams, ointments, capsules, suppositories, suspensions, and solutions. It should include covering all of
the laws and regulations relating to compounding medications. In addition elective courses in
compounding should be offered for students who have an interest in specializing in compounding.

Citations

2.) Martin, Kathleen S., Timothy B. McPherson, and Patrick E. Fontane. "Independent Community
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