The practice of pharmacy is one of the oldest professions; it has changed and evolved over time to meet the needs of the general public. In the last few decades there have been drastic advances in technology, which have been accompanied with sweeping changes to the practice of pharmacy. New discoveries are not the only factor driving the evolution of the pharmacy profession. A major promoter of change is the fact that peoples’ beliefs and knowledge change with each generation, and all professions need to adapt to these changes or perish. In the recent past, feminist movements have swept the nation winning women the right to choose, as well as changes occurring in certain areas of the country, such as physician assisted suicide in Oregon, which may soon (or may not) be adopted by other states. New discoveries such as the HPV vaccine have spurred many debates and controversies between different parties. All these factors and changes interconnect and together they influence the practice of pharmacy.

Religion and personal beliefs affect the choices that people make every day. In the practice of pharmacy many issues arise based on the pharmacist’s personal beliefs and moral values. I have chosen to do my paper on the ethical dilemmas concerning religious beliefs and the practice of pharmacy. I have decided to focus my paper particularly on the issues between religious beliefs and the human papillomavirus vaccine, refusal to dispense oral contraceptives and emergency contraception (Plan B) as well as the dispensing of medications for the purpose of assisted suicide. The HPV vaccine is intended for pre-adolescent girls before HPV infection is acquired; hence many groups believe that it might promote sexual promiscuity and risky sexual behaviors. Pro-life groups and pro-family groups are against oral contraceptives as well as the morning after pill (Plan B). This might cause a dilemma for some pharmacists who belong to one of those groups and share their views; should they be placed in a position where they are forced to dispense medications that violate their personal beliefs? Also, the medications that are used for physician assisted suicide need to be dispensed by a pharmacist. The pharmacist then faces the dilemma of either knowingly dispensing drugs that are intended to kill someone versus refusing to dispense a medication based on religious beliefs. Each of the above mentioned issues will be discussed separately in the following pages.
The HPV Vaccine

In the USA, there are several conservative religious groups that are strongly opposed to making the HPV vaccination a mandatory one for preadolescent females. These groups are fearsome of the fact that a vaccination preventing a sexually transmitted disease sends a message to teens that abstinence is no longer necessary, or rather a subtle message that promotes promiscuity.

Many of the known human papillomavirus (HPV) strains are known to be transmitted through sexual contact with an infected partner. HPV is “the primary cause of cervical cancer…and is the most prevalent sexually transmitted infection (STI) in the United States”\(^1\). Once a person becomes infected with the virus they may develop genital warts but most genital HPV infections are self-limited and asymptomatic. However, some strains of the HPV virus lead to infection, which “usually occurs years to decades before the appearance of cervical cancer”\(^1\). Until recently the general public was not aware that cervical cancer is caused by a virus, however the many advertisements and commercials on television of the HPV vaccines are increasing people’s awareness.

Worldwide, cervical cancer is one of the three leading cancers in women, breast and lung cancer being the other two. “Approximately 470,000 cases are diagnosed each year, resulting in approximately 233,000 deaths”\(^2\). Most scientific studies have found that HPV is responsible for more than 99.7% of cervical cancer cases\(^1\). The discovery that cervical cancer has a viral etiology is what spurred the development of the HPV vaccine.\(^3\)

The U.S. Food and Drug Administration has approved Gardasil® (Merck) the first HPV vaccine earlier this year\(^4\). Another vaccine is on its way, known as Cervarix® (GlaxoSmithKline) which will probably be available early next year\(^4\). Gardasil® and Cervarix® each include antigens against HPV types 16 and 18, which are implicated in approximately 70% of all cervical cancers worldwide\(^2,3\). Gardasil® also “incorporates HPV types 6 and 11, associated with approximately 90% of genital warts”\(^2\). The vaccines have shown 100% efficacy against pre-cancer development as well as genital warts that are caused by the HPV types contained in the vaccinations\(^1\). There are a few side effects, which may include injection site irritation, and the “protective effects of the vaccine are expected to last a minimum of 4.5 years after the initial vaccination.”

The ethical dilemma spurs from the fact that HPV is transmitted sexually and many pro-family groups believe that abstinence is the best way to prevent HPV. For pharmacists with personal beliefs there is a dilemma whether or not to dispense the vaccination. Since the vaccination is supposed to be given to adolescents before they are exposed to the HPV vaccination the target population group is females between the ages of 11-12\(^1\). The fact that these girls are underage requires parental consent and many parents are unwilling to let
their children get a vaccination against a sexually transmitted disease because they may not be ready to discuss the topic of sex with their children at that age. Before making any decisions one must make sure to evaluate all the facts so that their decision is an informed one rather than one that is based on misconceptions presented by the media or different groups.

The benefits associated with vaccinating females seem relatively clear. One would expect the rates of HPV infections to decrease, which would mean a decrease in cervical cancers, decrease in genital warts (if the vaccination includes antigens against type 6 and 11), as well as “possibly a reduced frequency for recommended cervical cytological testing”\(^1\). The potential risks of the vaccination are irritation of injection site or adverse reactions; other risks seem hypothetical and include but are not limited to:

“…concerns about reductions in safer sex practices and screening for cervical cancer, and potential misconception that HPV vaccine would protect against other STIs. Although HPV vaccine has a low level of local reactions, widespread use might uncover a rare adverse reaction not previously seen. Due to perceived protection from vaccination, the potential exists for increased sexual activity among partners, increased numbers of partners, and decreased use of barrier protection methods. The possible results of such actions include increased unplanned pregnancies, increased abortions, increased rates of other types of HPV, and increased rates of other STIs including HIV”\(^1\).

Many of these risks could be addressed by proper education of the adolescent as well as the parent. This would include educating the parent(s) that although the HPV vaccination protects them from some types of HPV strains, there are other strains that can cause infections. Also the HPV vaccination does not protect them from other STIs, nor are other screening methods no longer needed.

By applying the theory of utilitarianism to the dilemma of the HPV vaccination one might be able to come to a decision. The theory of utilitarianism is an ethical framework, which states that all of ones actions should be directed so that the greatest number of people will benefit. This is a theory based on evaluating the consequences of your actions. In the case of the HPV vaccine I believe that the greater good would be to attempt to eradicate cervical cancers due to the HPV virus. Pro-family groups, and religious groups might argue that the consequences of this vaccination would increase sexual promiscuity and risky sexual behaviors however I believe with proper education this would not be the case. The public would have to become educated that the HPV vaccine is not intended to replace other barrier methods and that it doesn’t protect the individual from all types of HPV or other STIs. To address the hype about the HPV vaccine’s potential role in increasing promiscuity one must evaluate the multiple factors adolescents face when deciding to initiate “sexual activity; fear of sexually transmitted infections is not a major reason for abstinence, and condom
availability programs have not been associated with behavioral disinhibition. In my opinion I think that adolescents will engage in sexual behavior whether they have this vaccine or not and by giving them this vaccination we will protect them from a very devastating disease. Pro family and religious groups may believe that STI’s are a punishment from God for promiscuity however one must take into consideration “that even women who remain virgins until marriage can catch HPV if their husbands are not” also one must consider HPV infections from rape cases or sexual molestation. Among Christian groups, the HPV vaccine raises similar issues as abortion however “unlike abortion, HPV vaccine cannot be considered morally wrong per se: its long term goal is cancer prevention, an undisputable benefit”. Another factor that should be taken into consideration is the cost associated in the long run of decreasing the incidence of cervical Cancer. The cost-benefit factor is also a consequence that can be considered and the economic burden of HPV infection and its sequelae in the U.S. amount to more than $5 billion per year. The issues surrounding the HPV vaccines need to be evaluated and a decision must be based on what is best for young girls, mothers and grandmothers, because HPV affects all women and the emotional and psychological burden of HPV and cervical cancer can become preventable.

Another way to evaluate this ethical dilemma is to apply the ethical theory of principalism. The Principle of Autonomy (self – determination) applies to this scenario because the adolescents receiving these vaccinations are individuals with the right to make their own decisions however in this case, parents or guardians may be making decisions for them. The principle of Beneficence (actively doing good or preventing harm) clearly applies in this situation because by giving the HPV vaccination we would be doing a lot of good. Rates of cervical cancer would decrease, genital warts would also decrease and a lot of physical and emotional anguish would be eliminated from people’s lives. I think that by not doing anything, by not giving adolescents this vaccination we are doing harm, especially if we consider the fact that 28% of adolescents are sexually active by grade 9. The principle of Justice also applies to the HPV vaccination because according to this principle all people should be treated equally. This vaccine is probably going to be associated with a high cost, and many insurance companies will be unwilling to cover the cost especially since HPV is preventable through abstinence. Hence the people, who will most likely need it most, people from a low socioeconomic class, will still not receive the vaccination. The principal of nonmaleficence may also apply to this case, because we are not supposed to do harm. The HPV vaccine may have adverse reactions associated with it for certain patients, and also there is the hypothetical risks of increased promiscuity and risky sexual behaviors which is also a potential harm associated with the vaccination. One can see that the theory of principalism has mixed outcomes; clearly beneficence and autonomy are in favor of the vaccination whereas nonmaleficence and justice oppose it.
Birth Control and Emergency contraception

Since 1991, there have been many reports of pharmacists who refuse to dispense emergency contraception based on personal moral grounds. These actions have raised many debates worldwide over the “competing rights of pharmacists to refuse to participate in something they consider repugnant and a woman’s right to get medications her doctor has prescribed”. As we all know, pharmacists are the gatekeepers of our medications. They receive countless hours of training and education before they become our friendly neighborhood pharmacists. They earn the public’s trust and respect by dispensing drug therapy that is intended to improve the quality of their lives. One of the main goals of a pharmacist is to make certain that none of the medications they dispense will harm their patients; hence there are times when a pharmacist will not fill a prescription that a physician wrote, but where do we draw the line?

Certain religious groups, for example the Roman Catholic Church, do not permit their followers to use any forms of birth control, and views emergency contraception equivalent to abortion, which clearly is also not allowed. As a result many medical professionals have opted out of performing abortions because in their eyes it is equivalent to murder. In the practice of pharmacy, this has lead to pharmacists refusing to dispense objectionable medications and stand up for their beliefs, for example:

“In Texas, a pharmacist, citing personal moral grounds, rejected a rape survivor’s prescription for emergency contraception. A pharmacist in rural Missouri also refused to sell such a drug, and in Ohio, Kmart fired a pharmacist for obstructing access to emergency and other birth control. This fall, a New Hampshire pharmacist refused to fill a prescription for emergency contraception or to direct the patron elsewhere for help. Instead, he berated the 21-year-old single mother, who then, in her words, “pulled the car over in the parking lot and just cried”.

The above quote shows that this issue is widespread throughout the country, and it raises many questions about public health versus the rights of the individual. The Federal government currently has not passed any laws concerning the right of a pharmacist to fill a prescription. “The lack of federal legislation is not unusual, given that the practice of pharmacy is generally an issue of state law. Thus, pharmacies and pharmacists are primarily regulated by state boards of pharmacy. There are many compelling arguments for both sides of the arguments, but the question remains should pharmacists have a right to refuse to dispense birth control and emergency contraceptives? The arguments for and against a pharmacists right to dispense will be described below.

Arguments that are in favor of a pharmacists right to object include the fact “pharmacist can and should exercise independent judgment”. Pharmacists spend many years on their education and are expected to use critical reasoning
skills in everyday practice to decide what is best for their patients. Pharmacists are not supposed to be robots that just fill what a physician orders. If that were the case, there would be no need for a pharmacist. A pharmacist's job is to ensure that patients receive the proper medications and are expected to make judgment calls about appropriate therapy for a patient, hence it seems irrational to question the pharmacists' judgment in the case of birth control and oral contraceptives on one hand and then ask them to make judgment calls on other therapies. The second argument is that "professionals should not forsake their morals as a condition of employment". Every person is responsible for his or her own actions and they have to live with the things that they choose to do or not do. Doctors and nurses can object to performing an abortion based on moral grounds and the law is on their side but this is not the case for pharmacist and their refusal to dispense emergency contraceptives. Also there are doctors who openly refuse to prescribe oral contraceptives or emergency contraception based on their values and beliefs hence it seems rational for a pharmacist to have the right to refuse to dispense such items. Opponents to pharmacists rights to refuse to dispense emergency contraception state that "there is a whole lot of medical yardage between an abortion and birth control...contraceptives are nothing like surgical abortion". But this argument is irrelevant because whether one action is an active abortion and the other one is a passive one, both have the same outcome and that is to end what they believe to be a human life. The third argument in support of pharmacists' right to refuse to dispense is that "conscientious objection is integral to democracy". Since we live in a democratic society we are bestowed with certain rights, and that includes the right to not do things that clash with our moral and religious beliefs, so it is hypocritical to expect a pharmacist to do something that he/she is morally in opposition to whereas others in similar situations have the right to say no. The opponents of pharmacists' rights are fighting to protect women's rights, and their right to choose, so in the end it seems ironic that they want to take personal choice away from pharmacists, when they themselves are fighting for the protection of personal choice for women.

If we try to apply the theory of utilitarianism to this matter we have to think about the consequences of a pharmacist refusing to fill a prescription for emergency contraception. In the worst case scenario, the female that is refused her prescription would miss the therapeutic window of emergency contraception, which is within 72 hours of sexual intercourse, and this would in turn result in an unwanted pregnancy. This could hypothetically result in an increased number of unwanted pregnancies and in turn in an increased number of abortions. Hence the pharmacist would not have prevented the female from doing what is in their eyes morally wrong; also surgical abortion would result in a higher economic burden for the country as well as a more dangerous situation for the female. However by taking this right from pharmacist we are violating the rights of pharmacists to choose, and here we would start another dilemma. Should pharmacists become automatons who simply fill whatever the physician orders without question? Should all professions be void of personal beliefs and moral
values? This type of scenario seems to cause even more problems and questions than before. Filling a prescription for the morning after pill is not a life or death situation, and patients always have other options. They can choose to go to another pharmacy, they can choose to call their doctor and ask for a sample, they can choose to have a supply of emergency contraception ready from a pharmacy that does dispense the medication so in summary there are other options for the patients, although less convenient, that do not violate the pharmacists’ rights.

One might also apply the ethical theory of principalism to this ethical dilemma. Application of beneficence, that is doing good, seems hard in this case because it depends on whose side of the story you look at. To the pharmacist doing good things may mean to avoid things that are evil or are punishable by the God that they believe in; but to the patient doing good would mean to avoid a late-term abortion or a pregnancy in the first place. If we look at the principal of nonmaleficence, we once again face a dilemma from whose point of view we look at. To the pharmacist dispensing emergency contraception is equivalent to the act of killing an unborn child, which implies the act of doing harm. The female however, would see not getting the prescription filled in time as the harm being done. If the female ended up pregnant she might choose to have an abortion, and this would mean she would still end the life of an unborn child. Also she runs the risk of complications from surgery, which is also doing harm to the patient. The principle of autonomy applies in this case because persons should make their own choices and decisions. Hence for a pharmacist to not be allowed to fill a prescription would equal the violation of the principle of autonomy. It is clear that in this situation principalism does not help in solving the ethical dilemma because it is almost impossible to clarify the facts and ensure that all parties involved are using the same terminology and working with the same definitions.

Medications intended for physician-assisted suicide

Oregon Ballot measure 16 in 1994, established the Oregon Death with Dignity act, which came into effect in 1997 and allows physicians to assist their patients in committing suicide. Physician assisted suicide (PAS) is much more controversial than simply withdrawing or withholding life-sustaining treatments, such as mechanical ventilation. Such an act would be considered passive whereas PAS involves patients receiving help from the health care team in performing active suicide. In the past, codes of ethics of medical professions have “long prohibited physician involvement in assisting a patient’s suicide. However…calls for liberalization of this ban have grown in recent years.” In the recent past, the life span of the average human being has increased drastically with advances of technology and medicine however the downfall to this is that there has been a surfacing of age-related diseases that previously have been overlooked. This has spurred fear in the general public of a prolonged and painful
death, and hence the calls for physician assisted suicide and euthanasia in recent years.

The Death with Dignity act has specific conditions, which must be met in order for assisted suicide to take place. These conditions include that “patients must make one written request to die (signed in front of two witnesses and two oral requests to die separated by 15 days, and two doctors must independently judge that the patient has six months or less to live and determine whether the patient is capable”\(^{14}\). Also, the physician is allowed to write a prescription for the lethal drugs, but the drugs have to be administered by the patient, who has to be over the age of 18, an Oregon resident and have a terminal disease\(^{14}\). It is hence quite clear that PAS is a decision made by a competent patient; it involves his/her physician as well as the pharmacist who dispenses such medications. This law poses an ethical dilemma for the practice of pharmacy because a “pharmacist is involved in the provision of the means to bring about death”\(^{15}\).

There are different viewpoints by different religious groups about physician-assisted suicide. Amy Burdette et al, in her research found that “religious differences in attitudes toward physician-assisted suicide and terminal palliative care may be explained in part by variations in two forms of religious involvement, church attendance and strength of affiliation”\(^ {16}\). What this means is that people who attend church more often and who define themselves by their religious affiliation will most likely have stronger opinions based on what their church teaches. For example, the catholic church has made various statements and has made it quite clear that they are opposed to physician-assisted suicide because “God alone is the Lord of life from its beginning until its end: no one can under any circumstances claim from himself the right directly to destroy an innocent human being”\(^{16}\). Hence people who are strongly affiliated with their religion and believe what their religion preaches may have strong opposition to be involved in any manner in physician-assisted suicide.

Does the pharmacist have a right to refuse to fill a prescription to which he/she morally objects? One might think that the pharmacist is just filling an order for a doctor and that they really aren’t an active participant in the process of the assisted suicide, however by filling the prescription with full knowledge of its intended use, pharmacists are involved albeit passively in this process. One might also look back at legal cases where pharmacists were blamed for adverse reactions to medications that were incorrectly filled, which proves that pharmacists are held accountable for the effects of the medications they dispense. Since this is an ethical decision we must again address the normative principles of pharmacy practice.

The principle of seems to have a clear role in this dilemma. This principle involves avoidance of inflicting harm. In the case of PAS, it is clear that dispensing of lethal medications will lead to the murder of a patient, or rather the assisted suicide of a patient, whatever terminology one chooses to work with, the
fact is undeniable that the act results in death. The principle of beneficence may apply if you look at the situation from the point of view of the patient. Doing good might mean to dispense this medication and end the patients’ pain and suffering and it might also help the family of the patient with the financial burden of end of life care. The principle of autonomy indicates that people have the right to choose, and each patient is an individual. This principle can apply to both the patient as well as the pharmacist. To the patient this might mean that they have the right to decide whether they want to end their life or not, however it seems that the pharmacist also has a right to decide, whether to dispense this medication or not.

It is clear that the ethical dilemmas have no easy solution however pharmacists cannot choose to ignore the situation if they want to be respected as key members of the health care team. It is clear that pharmacists are individuals and that measures must be taken by states, or by boards of pharmacies of each state to protect pharmacists who choose to stand up for their beliefs and not be prosecuted or punished for them. There are solutions to these problems that would benefit both pharmacists as well as patients; however those solutions must be developed to make the process of obtaining these controversial prescriptions as seamless as possible. Possible solutions might include making the public more aware of the fact that some pharmacists may refuse to dispense certain products. Even more beneficial to the patients would be if physicians informed their patients directly at the time of prescribing such substances that some pharmacists might refuse to fill them and instruct them to phone pharmacies in advance. In rural areas physicians might take the responsibility to stock some of these medications themselves. Solutions to these problems do exist that wouldn’t involve making people compromise their morals and beliefs. This is important because we expect our pharmacists to have high moral values; in fact there are codes of ethics that pharmacists have to follow. We wouldn’t want our pharmacists to have no morals and become automatons who simply fill whatever scripts they get now would we?
References


7. The changing face of pharmaceutical ethics retrieved from: http://www.theinterim.com/oct98/10changing_ethics.html


