**Lecture 5 Dr. Haider Raheem**

**Ethical Problems in**

**the Pharmacist's Clinical Practice**

**Abortion**

Perhaps the most controversial and intractable issue in health care ethics is abortion. The underlying issue is what moral status and moral claims should be attributed to embryos and fetuses after conception has taken place and prior to birth. Do the normal moral principles, such as beneficence and avoiding killing, apply and, if not, why not?

 One of the most commonly offered reasons for abortion is that the fetus has some genetic or other medical abnormality that justifies the abortion. This can happen on two different grounds. First, in some extreme cases the fetus might not be medically capable of surviving. A fetus prenatally diagnosed with anencephaly (absence of all or major portions of the brain) is one example. More often, the fetus unarguably has the capacity to survive, at least for some time, but still has enough of a medical problem that some might consider abortion justifiable. What is striking here is that the parents may, in general, be eager for a child. If they abort, they will be deciding that this child is so compromised that the medical problem warrants the abortion.

 Another major reason offered for abortion is that the pregnant woman was raped and, therefore, did not consent to the risk of getting pregnant. In such a case, however, as contrasted to the previous one, the fetus presumably is perfectly normal or at least not at significant medical risk. If the fetus is aborted, it is in order to serve the psychological well-being of the pregnant woman.

*Abortion for Socioeconomic Reasons*

The most controversial abortion cases are also the most frequent. They are abortions desired by women who simply do not want to be pregnant at least at the present time and under the current circumstances. Either the woman is not ready to have children or cannot afford to care for them.

**Sterilization**

Another intervention that has traditionally raised moral controversy in biomedical ethics is sterilization. Designed to permanently prohibit fertility, it has run afoul of Catholics and others who apply natural law reasoning to matters of medical morality. They hold that there are certain “natural ends” of human beings that are associated with certain bodily organs and tissues. One of these natural ends of the human is said to be procreation and that any directly intended interference with this function violates the moral law.

 Others, who may not share this natural law reasoning, also encounter moral problems related to sterilization. Other women have reported finding it extremely difficult to convince physicians to sterilize them, especially if they are not considered too old for childbearing or had not already given birth to a number of children.

**Contraception**

The third area of moral concern related to fertility and birth is contraception. Until the 1930s most of the major religious traditions had moral objections to efforts to control fertility through contraception. The techniques that were available were not very reliable, and such efforts were seen as infringing on the traditional “duties of marriage” as well as furthering promiscuity in sexual relations.

 By the 1960s, some Catholics were beginning to consider such strong prohibitions as unnecessary and were becoming more open to the use of the new oral contraceptives. The majority of a Papal Commission considered such an opening acceptable, but with the issuance of the papal encyclical *Humane Vitae* in 1968, a condemnation of all except so-called natural methods was reaffirmed. Similar disputes arose within the Jewish tradition, with its commitment to the duty to procreate seen as being in conflict with the more liberal stance of recognizing self-determination regarding fertility.

**Genetics**

Increasingly pharmacy professionals working in hospitals will be involved in communicating with patients who are being counseled about the statistical risk of conceiving a child with a genetic anomaly. This could involve a condition already present in a child, a parent, or some other member of the family. Or it could involve concern about a new genetic problem, such as the risk of an older woman conceiving a child with trisomy 21 (Down syndrome).

*Genetic Screening*

Sometimes genetic counseling arises in the context of community-based genetic screening programs. These differ from the previous cases in that the pharmacist would be involved in decisions about a mass or group screening rather than one-on-one counseling. Sometimes these programs have racial or ethnic implications that further complicate the counseling. For example, proposals to screen for sickle-cell anemia, a blood disease affecting primarily persons of African origin, raises issues of whether the purpose is to discourage fertility among this group.

 One major effort has been directed toward Tay-Sachs within the Jewish community. Tay-Sachs is a devastating disease that leads quickly to complete loss of bodily functions and death within a few months, but it is an autosomal recessive disorder so that carriers of the disease lead perfectly normal lives. The primary purposes of the screening are to discourage fertility when two people who each have the recessive gene marry or to identify and abort fetuses with the actual disease. Both discouraging fertility and facilitating abortion are morally controversial within the Jewish community.

**In Vitro Fertilization**

Some of the most exotic and controversial developments in biomedical ethics involve our newfound capacity to manipulate the human egg and sperm cells in the laboratory in ways that permit the actual creation of human life in the test tube. These technologies were originally designed to help couples overcome certain kinds of female infertility, such as blockage of the oviduct, to bypass the cause of infertility. They involve removal of one or more egg cells from the ovary followed by fertilization mechanically in the clinic.

 Some of these ethical problems have actually been around for a long time, as newer technologies replicate what has long been accomplished through artificial insemination. They all raise the issues of whether it is unethical to mechanically mimic the reproductive process. Some, especially within the Roman Catholic tradition, consider such manipulations “artificial,” which is taken to mean “immoral.” Others see the moral issues not so much in the physical manipulation of the gametes per se, but in the risks of injury that are involved. Still others are concerned primarily about the more exotic uses of these technologies, which would permit conception of a child in ways that involve more than a married couple: first through artificial insemination by a donor and more recently through surrogate motherhood and schemes whereby a woman who wants to bear a child that was genetically hers could engage another woman to carry the fetus through the pregnancy.

**Surrogate Motherhood**

Once the egg is removed, it could be implanted into a woman who was not the source of the egg, either to have her function as a surrogate, carrying the fetus to term for the purpose of returning it to the woman who supplied the egg, or to gestate a child she will not only give birth to but maintain after birth as well. In the latter case, the woman receiving the fertilized egg, the host mother, might be sterile due to damaged ovaries but capable of maintaining a pregnancy. The egg could be fertilized by the host mother’s husband’s semen, or she might be the recipient of extra fertilized eggs produced by another couple.

**Genetic Engineering**

The future of innovative genetic technologies lies in interventions intentionally undertaken to change the genetic code. Some of these changes will occur in human gene therapy. If a gene is missing, for example a gene that is responsible for producing a necessary enzyme, incorporating that gene can, at least in theory, correct the deficiency. One such disease is adenosine deaminase (ADA) deficiency, the disease that causes severe combined immunodeficiency, such as that of children who have to grow up in “bubbles” in order to be protected from infection. Other efforts are attempts to use gene therapy to switch off the gene for Huntington’s disease and to treat the blood disorder thalassaemia as well as cystic fibrosis, sickle-cell disease, HIV, and some cancers.

 Several technologies are potentially available to transmit genetic material. The use of viruses to pick up and transmit genetic material into cells is one such technology.

 The direct risks are not the only concerns raised by these technologies. Some changes that at first appear to be beneficial may later in life produce indirect effects that are unattractive. Some are concerned that the remaking of the human genetic code will change the underlying fabric of the culture. While it used to be assumed that the nature of the human being was permanently fixed, increasingly it has been seen as temporary and subject to human manipulation. We are remanufacturing ourselves.

 The same technologies that permit adding a critical missing enzyme might permit adding genes that would produce additional substances. In a competitive world, genetic engineering may eventually permit improvement on the normal average functioning of humans such that users of the technologies get “unnatural” advantages. If everyone else begins to use the technologies to gain an advantage, nonusers will be at a disadvantage, much like an athlete competing against opponents on steroids.

 Similar technologies permit modifying animal or plant species, in some cases making possible the production of new drugs and biological products.




