



Ethics In Research

The word “ethics” is used to describe the rules for acceptable behaviors. Ethics is also a branch of philosophy dedicated to the study of right and wrong. Groups, such as doctors, veterinarians, and research scientists, as well as individuals in these groups are judged by society partly by how ethical they are believed to be. The more ethical that a profession is, the more they are respected and trusted by the public. With that respect comes favorable treatment including good salaries. On the other hand there are punishments for serious unethical actions. For biomedical professionals unethical actions include, not doing their job well, reporting false information, and causing unnecessary harm to people or animals that they treat or study. There are other unethical behaviors as you will read about in this brochure.

Why are Biomedical Researchers Needed and Respected?

Our lives are full of joys and sorrows. When we are healthy and feeling good we can enjoy our families, friends, neighbors, pets and others. We can also enjoy work, play, entertainment, hobbies, nature, and learning.

People differ in what they need to be happy. Some people need to be active, ambitious, and adventurous, while others are satisfied with their lives if they have friends, are comfortable and are not bored. To be happy, everyone must be free of serious pain and suffering. Pain and suffering can be caused by diseases, injuries, addictions, mental problems, loss of loved ones, and by seeing the suffering of others. To the rescue come heroes, including, doctors, nurses, veterinarians, pharmacists, and researchers that study diseases and find new treatments including medicines. All of these heroes depend on science and technology to do their jobs. They also depend on colleges and universities for training, companies that produce medicines, and professional organizations that hold meetings and publish journals (such as monthly magazines) that keep their members up-to-date on new developments. These professionals are also trained in ethics, including the treatment of their research animals.

So, it is easy to understand why biomedical professionals are so respected, and usually well-paid throughout the modern world. They work to prevent pain, suffering, and death in people and animals. Because of their efforts our lives have lengthened and several diseases can be prevented, cured, or treated. Many, if not most of us are now alive and feeling good due in-part to the hard work of biomedical professionals. But everyone expects biomedical professionals to follow the rules and do their jobs in ethical ways.

Knowing What is Right and What is Wrong

How do we know what is right and what is wrong?

It is not always easy to know. Sometimes deciding the right thing to do is not easy. Philosophers have studied this problem for thousands of years. We are taught that telling lies is wrong, but if a stranger asks a child if they are home alone, should they say “Yes, my parents are at work.”? This problem is an example of what is called an ethics “dilemma.” Dilemmas are cases for which all decisions can be criticized, which is one reason that philosophers study and discuss ethics. Dilemmas are also why research studies must be first approved and then monitored by ethics committees if the research involves using people or animals as study subjects. Such committees are required for research in colleges, universities, and drug development companies.

There are many ways of evaluating whether a specific action is ethical or unethical to do. Here are just some examples.

1. Is it the will of God or other divine authority?
2. Does it follow the golden rule, "Do unto others as you would have them do to you."?
3. Are the results more helpful than harmful?
4. Are the reasons, or motivations, of the action good?
5. Has there been an attempt to maximize the benefits and to minimize the harms of the action?
6. Does the act or decision follow the codes of conduct that are accepted?
7. Are people and animals treated with respect for their value and the fact that they can suffer?
8. Is the action needed to benefit society or to advance scientific knowledge?

Philosophers, and medical professionals must consider and weigh all of these factors in defining what is right and wrong in the situations that they face in performing their duties. Otherwise, they will not have the respect and the freedom to perform their jobs. In treating patients, doctors and nurses must do what is best for those that they treat. In studying diseases and treatments, biomedical researchers must make sure that the benefits of their studies outweigh any harms to their living research subjects, be they people or animals.

Researchers must also follow strict ethical principles in doing and publishing their studies. The research must be for the good of science, society, patients, or animals, not just for curiosity or money. Scientific publications cannot have false data or false conclusions. The work must be their own and not stolen from others. They must give credit to other scientists work and, clearly state the limitations of their own work. Also, their publications must be complete enough for other scientists to check and even reproduce the research study. In publications, researchers must explain why, and how their studies were done, as well as who paid for their studies.

Codes of Conduct (Codes of Ethics)

Codes of conduct (or ethics) are established for all biomedical professionals by laws and by professional organizations. Failure of a researcher or other professional to follow their code of conduct is a serious thing. They can lose their jobs, pay fines, and lose their professional titles. And in serious cases, such as violating laws, they may face large fines and even jail sentences. Following an accepted code of conduct is required; it is not optional. Here is a sample code of conduct for biomedical researchers.

CODE OF CONDUCT

1. Performing biomedical research is a duty to society because it can prevent and treat disease and suffering.
2. Researchers must have the proper training and experience to perform their duties.
3. Researchers must faithfully serve their employers, individuals, animals, and sometimes the environment, as all are valuable.
4. Honesty is a requirement in all of one's professional actions.
5. Respect for privacy, and even secrecy is required, except in cases where secrecy will clearly risk either the life or health of others.
6. The dignity and value of the profession must be protected by not engaging in disrespectful or dishonest behaviors toward others, and by not allowing others in the profession to do so.
7. Professionals must limit their professional actions to what they are trained to do. They must not act as authorities on matters beyond their qualifications.

This is a sample code of ethics, or code of conduct for researchers. Other professions, such as doctors, nurses, veterinarians, counselors, teachers, advisors, and administrators have their own codes of conduct to follow.

Future Ethics Challenges

The world of ethics is always changing along with advances in science, medicine, and technology. Acceptable ethical behavior also depends on the circumstances, the time, and the place. For example, in wartime the ethics of military behavior will be quite different than that of doctors, nurses, and researchers.

Past scandals in medicine and science have also changed the rules and the questions we ask about ethics. Scandals often lead to new laws that can restrict physicians and scientist in what they do or how they do it. Some of the emerging medical advances have generated new ethics challenges. Fertility is one example. Nowadays, parents can select the sex of their children. Some want a boy and others want a girl. The way that sex can be selected in a laboratory involves complicated actions. Tiny eggs from a woman's body can be harvested, frozen and then treated chemically before they are implanted in the body of a potential mother. Such treatments can go wrong, and when that happens they might place the children at risk of having birth defects. This presents an ethics problem. The children had no say in how they were conceived, but they might suffer as a result of their parents wishes. An ethicist might say that the child was denied its right to make the decision to accept that form of being created. This is an ethical dilemma. There are advances in medicine that can extend life beyond what the patient would want. Some will want to live as long as possible, even if they are in pain and the cost to their families could cause a financial hardship. Others might not wish to live on life support when there is no hope of recovery to a meaningful life. These situations are serious, and if possible, the patient's wishes must be followed. If the patient has not previously let their wishes known and they are not capable of communicating their wishes, then doctors, family members, or others acting on the patient's behalf must make decisions about continuing the treatments.

Similar ethics problems arise as genetic engineering advances are made, and as medical practice moves into the computer and artificial intelligence realms. For example, electronic medical records and research data can be hacked, which can lead to disclosing private information. Clearly, the future will involve new and difficult ethical problems.

Staying Out of Ethics Trouble

There are ways to stay out of ethics trouble in one's career, whether one delivering medical care or performing research. Most important is following existing ethics and conduct codes for one's profession. It is important to keep up with new advances in medicine, technology, and science. Also, keeping accurate records of one's activities and being prepared to make the records public is important. When accused of unethical behavior, such records, along with documents of one's ethics and professional training will be needed. It will help to discuss your research or treatment plans with a group that includes a variety of people that can warn you of any problems.

One can appreciate that ethics is an important part of being a professional, including being a biomedical scientist. If the professional is properly trained in their specialty, and follows the rules of ethics, they can expect to have a successful career, and to fulfill their duty to contribute to a better future for both people and animals.

