FOCUS: RESEARCH AND CLINICAL ETHICS

Introduction

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Simply defined, research ethics are moral principles that guide judgment and decision making in research. In the United States, the approval and conduct of research involving human subjects is governed by three fundamental ethical principles: respect for persons, beneficence, and justice [1]. The establishment of these principles by the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research in 1979 was spurred in part by the steep realization of the existence of injustice and abuse of human subjects in research, which was brought to the fore following public outcry against a number of highly publicized studies. One example is the Tuskegee Syphilis Study, in which a group of disadvantaged rural men enrolled in a research study on syphilis were denied access to treatment against the disease even when treatment was available [2].

While those three widely accepted core principles provide a broad framework for the prevention and resolution of ethical problems in research, unique and complex ethical questions often arise that cannot be easily answered. Continuing discussions on the interpretation and application of ethical principles in research are, therefore, imperative to ensure that the highest standards of ethics are maintained. In this issue of the *Yale Journal of Biology and Medicine (YJBM)*, the contributing authors examine and provide insightful discussions on a variety of important ethical issues, including the role of parental permission and child assent in clinical research, the enrollment of subjects with intellectual disability (ID) in clinical trials, clinical trials in international settings, placebo experimentation, organ donation in the emergency room, management of missing data in clinical trials, and direct-to-consumer (DTC) genetic testing.

The principle of respect for persons necessitates that informed consent be obtained from prospective research subjects before they can take part in scientific research. The process of informed consent entails ensuring that adequate information about the research is made available to the participant, including full disclosure of the potential risks and direct benefits (or lack thereof) to the participant. Prospective research subjects...
must adequately comprehend such information before they can voluntarily consent to participating in scientific research [1]. Special considerations in the process of obtaining informed consent arise when prospective research participants lack the capacity to fully comprehend details of the research and, therefore, lack the ability to express a truly informed consent. Such is the case in research involving children or individuals with ID. Roth-Cline and Nelson discuss the complexities involved in the application of the principle of respect for persons and obtaining informed consent in pediatric research. They provide an in-depth examination of the concepts of parental permission, child assent, and conditions for waiving either or both prerequisites. Carlson explores the intricacies of research involving subjects with ID, addressing the dangers of inclusion or exclusion of ID subjects in research and weighing the risks and benefits, as well as deliberating on competence and authority of ID subjects.

Another important consideration in the application of the principle of respect for persons is the concept of autonomy, or the right to self-determination. This directly impacts research in international settings where certain cultural norms dictate that in decision-making, input from community leaders or family members supersedes individual autonomy. Alfano discusses the application of the principle of respect for persons in research in international settings by highlighting the need for a contextual adaptation of the informed consent process to accommodate local cultural conventions. Alfano also discusses the principles of beneficence and justice in research conducted in international settings, advocating for a fairer distribution of the benefits and risks as well as greater involvement of local authorities and community members.

In “Deceit and Transparency in Placebo Research,” Justman examines the application of ethical principles in studies investigating the isolated effects of placebos in contrast to placebo-controlled studies in which placebos function to account for confounding factors that may impact the outcome of a clinical trial. Additionally, Justman explores the issues of deceit and transparency in the informed consent process, as well as the role of verbal and non-verbal cues from physicians to their patients in affecting the outcome of placebo effect trials.

Robey and Marcolini examine the ethical dilemma that emergency physicians often encounter when patients die in the Emergency Department (ED) and decisions need to be made about organ donation. Robey and Marcolini address such questions as “How should organ donation be addressed in the ED, and by whom?” and “Should temporary organ preservation be initiated when the patient’s wishes are unknown?” The authors advocate a need for increased communication and cooperation between organ procurement agencies and emergency physicians regarding decisions about organ donation in the ER.

One common problem that researchers frequently face in clinical trials is that of missing data. Trial participants may miss study visits, skip treatments, or drop out of the study. All of these aspects invariably impact the analyses and interpretation of data obtained from such trials. Dziura et al. provide an in-depth evaluation of the problem of missing data in clinical trials and provide a detailed analysis of strategies that may be applied to deal with this issue at various stages of a clinical trial.

The advancement of technology in recent years has brought significant progress to the biomedical field in terms of improved diagnosis, drug development, and patient outcomes. With these advancements, complex ethical considerations also arise. For example, the availability of cheaper DNA sequencing technologies has led to a sharp drop in the cost of genetic testing, which offers a direct examination of DNA for the diagnosis or prediction of genetic disorders or identification of biological markers. Individuals can now afford to pay private companies to sequence their DNA and obtain the results without consulting or obtaining approval from physicians. This has raised ethical concerns with regards to the risks, limitations, interpretation, and regulation of such DTC genetic tests. Su presents a com-
prehensive overview of DTC genetic testing, examining why people choose to do DTC genetic testing and exploring the benefits, concerns, regulatory considerations, and the future of DTC genetic testing.

We hope that the reader will find this collection of engaging discussions on the topic of research and clinical ethics both interesting and informative.

REFERENCES
1. The Belmont Report. U.S. Department of Health and Human Services [Internet]. [cited 2013 Aug 22]. Available from http://www.hhs.gov/ohrp/humansubjects/guidance/belmont.html.
2. Office for Human Research Protections: Belmont Report. U.S. Department of Health and Human Services [Internet]. [cited 2013 Aug 22]. Available from http://www.hhs.gov/ohrp/archive/belmontArchive.html.