



The Tuskegee Experiment: An Introduction in Ethics for Pre-Healthcare Professional Students †

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Over the past years, professional students have had extensive exposure to clinical cases during basic science classes. With this in mind, we have taken this clinical case exposure moment to be an opportune time to introduce the ethics of working with patients during biomedical research. Our goal is to present a straightforward assignment that allows for active student research into the facts of the Tuskegee Experiment of the 1900s. The assignment provides the necessary background to allow for a student-centered discussion on the ethical issues of the events and ramifications of what happened. Thus, in educating a class on the event's happenings, one concomitantly creates a platform for meaningful discussion on the principles and ethics of patient care. We have found that an ethics-infused event such as the Tuskegee Experiment is an excellent way to introduce students to these topics.

INTRODUCTION

Students in courses such as microbiology for pre-nursing and pre-pharmacy students often struggle to find connections between their career path and the basic science they are learning. Over the past years, professional students have had extensive exposure to clinical cases during basic science classes (2). With this in mind, it is never too early to introduce students to a diversity of clinical cases linked to a student's basic science curriculum. Additionally, we have found this diverse case exposure to be an effective and opportune time to introduce the ethics of working with patients, especially in connection with medical research. In particular, an event as eye-opening as the Tuskegee Syphilis Experiment of the 1900s is an excellent way to introduce students to these topics.

We have chosen to introduce the roles of healthcare professionals in the ethical treatment of patients by using the striking example of the Tuskegee Syphilis Experiment. While many individuals in the U.S. know of this dark chapter in medical science, many younger students are not well-informed or knowledgeable on the topic. Clarification of the events is the main goal in this assignment, which

concomitantly creates a platform for meaningful discussion on the ethics of patient care.

Our goal is to present a straightforward assignment that allows for active student research into the facts of the Tuskegee Syphilis Experiment. This assignment then provides the necessary background to allow for a student-centered discussion on the ethical issues of the events and the ramifications of what happened during these events.

PROCEDURE

Assignment setup

This assignment has often been coupled with an introduction to Koch's postulates, as the combination enables the class to begin discerning problems that could arise in medical research. Often presented as a first "clinical correlate" to parallel topics covered in lecture, this assignment allows us to touch upon ethical issues concerning patients throughout the class. As students may encounter extreme information while researching the subject matter, it is important that the instructor facilitate an honest, unbiased, and facts-driven discussion of the topics.

To introduce the assignment and connect it to the underlying microbiology, students are provided with a take-home essay prompt, which also includes general background on syphilis. Within the instructions, students are asked to research and analyze available information regarding historic, procedural, and/or anecdotal details, surrounding the Tuskegee Experiment. It is important to note that for some students, this may be a first exposure to subject matter research. Along with the written instructions, it is

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instrumental to discuss how to conduct a search and what sources can be deemed “good” references. Providing brief examples of keywords and search engines is also useful. As an introduction to distinguishing quality references, for example, one can describe how general sources like *Wikipedia* may offer a broad account on a subject. Students are encouraged to examine the bibliographies, reference lists, and citations of such reviews to determine a site’s credibility; these lists can also be used as starting points for further investigation and analysis. Students are prompted to collect consistent facts found in their research and consolidate the information to create a summarized, fact-driven story.

Specifically, to guide the student conceptually, the objectives (listed in Appendix I) of the assignment are listed at the beginning of the prompt—namely, to:

- Learn about the cause of syphilis
- Understand the symptoms of the different stages of syphilis
- Demonstrate background knowledge and describe the ramifications of the Tuskegee Syphilis Experiment
- Know how ethics are involved with all scientific experiments
- Be able to apply the principles of informed consent and protection of patients in a medical setting

After acquiring a substantial, well-rounded, consistent set of information, the student will summarize the historic event by writing a one-page essay about the Tuskegee Syphilis Experiment.

Outside class time preparation

Class time is used to provide general instructions. Time outside of class is used to conduct research/literature searches on the topic and write the essay after students have completed their own research and analysis. Several examples of potential essay prompts are listed in Appendix I. The assignment is to be turned-in on the day of discussion. We normally allow one week to prepare the appropriate one-page essay.

Discussion

This topic affords the class the chance to discuss the ethical treatment of patients in biomedical testing and experimentation. Due to the abundance of commentaries on the Tuskegee Syphilis Experiment, it is critical that the instructor facilitate discussion with students. We present topics for both large and small groups, but, depending on class time restraints, they could easily be mixed or even combined with responder polling to enhance class participation. During these discussions, it is important to bring up which sources students considered valid to reference for information on such an important and often controversial topic.

Whole-class discussion. A consistent result of the assignment is an unsolicited discussion on the truths, concepts, or misconceptions regarding the Tuskegee Syphilis Experiment. Students will often begin commenting on what new information was learned, and more poignantly, what details were clarified and newly understood. To best facilitate whole-class discussion the instructor should lead questions and answers, being sure to engage students and also lead them toward the correct and factual answers.

Small-group discussion. In groups of four or five, students share what previous thoughts they had of the event, and what was learned. Facilitated dialogue lends for a guided discussion on ethics, and personal insights gathered from questions addressing scientific research, the goals of clinical trials, and the ethical treatment of patients/subjects/candidates are shared and explored. We have found that issues of ethics are often easier to discuss in small groups with facilitated discussion and input from all participants.

Assessment

Essays are reviewed for content and to see whether the general historic facts are addressed. To assess understanding of the subject matter, student participation and discussion demonstrates the extent of understanding of the event and ethical principles. Often, students will provide their own personal views and sentiments on the event and the ethics displayed. To assess application of ethics to biomedical testing, case scenarios beyond the Tuskegee Syphilis Experiment can be used in examinations.

CONCLUSION

While the Tuskegee Syphilis Experiment is a very critical part of the development of ethics and practices of modern biomedical research and care, it is not common knowledge. A study published found that graduate students at Tulane University often do not have much background on the Tuskegee Experiment or its ethical ramifications (1). Consequently, it is important to introduce and allow students to explore these topics early in their path toward careers in the health professions.

In our experience with this assignment, we have found that students are often struck by the currently unimaginable circumstances of the entire Tuskegee Syphilis Experiment. Responses are varied and often demonstrate passionate concern. This assignment was presented at Los Angeles City College, which has a very diverse student population. Consequently, questions of how race and socioeconomic standing affected the study participants are also common. The facilitator should be prepared to explain how current Institutional Review Boards focus on support of patients and their rights. Also, questions of how to report abuses of patient rights are brought up

and we have often had to explain whistle blower laws and the importance of reporting to superiors, which is necessary in any healthcare setting. Overall, this assignment has generated a significant level of discussion and engagement of students and shows the importance of thinking of the rights of patients in all biomedical experimentation and testing.

ACKNOWLEDGMENTS

The authors would like to thank the students of Los Angeles City College who worked with us to develop this and other programs to enhance teaching of microbiology for pre-health professional students. The authors declare that there are no conflicts of interest.

SUPPLEMENTAL MATERIALS

Appendix I: List of learning objectives and sample essay prompts

REFERENCES

1. **Coughlin, S. S., G. D. Etheredge, C. Metayer, and S. A. Martin, Jr.** 1996. Remember Tuskegee: public health student knowledge of the ethical significance of the Tuskegee Syphilis Study. *Am. J. Prev. Med.* **12(4)**:242–246.
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