

A blue-tinted background featuring a large, faint DNA double helix structure. At the top, there is a horizontal band with a repeating pattern of small DNA double helix segments.

TEACHING GUIDE

A large, dark blue circle with a subtle gradient and a slight shadow, centered on the page. It contains the main title text in white.

**TRANSFORMING MEDICAL
RESEARCH: ADVANCING
MODERN, ETHICAL
METHODS TO HELP
PEOPLE
AND ANIMALS**

Accompanying Video with Captions

PHOENIX
ZONES
INITIATIVE

OVERVIEW

In 1974, following unjust human research practices in the United States, the US Congress established the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, which released *The Belmont Report* five years later.

Public outrage over human research practices—including the 40-year-long US Public Health Service Syphilis Study at Tuskegee and the 14-year-long hepatitis studies at the Willowbrook State School in New York—prompted Congress to establish the Commission.

Using a broad framework of justice, the publication of *The Belmont Report* highlighted the importance of avoiding actual and potential harms—particularly in research involving individuals who cannot provide consent or those who could be targeted because of their vulnerabilities in society.

The Belmont Report transformed directives related to human research through its call for respect for autonomy and duties to justice, beneficence (the principle of “do good”), and nonmaleficence (the principle of “do no harm”).

The situation is different for (nonhuman) animals, which has significant implications for animals, for vulnerable human populations and patients, and for the public’s health.

Although multiple disciplines have evolved to better understand the minds and experiences of animals, and scientists have abandoned antiquated Cartesian views of animals, animals continue to be seriously harmed in research.

OVERVIEW

Over time, physicians and scientists have become more concerned with how the pain and distress animals experience in the laboratory may affect interpretations of data obtained through animal research, and there is widespread awareness that animal testing and research can be misleading in determining human therapeutic outcomes and serious life-threatening events.

Advocates for more modern and effective research methods often cite the fact that most drugs developed in animal trials fail in human trials. Amid this awareness is an existing and ever-expanding array of reliable research methods that produce human-specific data. As a result, policy directives have repeatedly called for greater reliance on human-centered, non-animal methods.

This teaching guide accompanies a captioned videorecording of the 2022 Transforming Medical Research panel discussion. The event was sponsored by Phoenix Zones Initiative and a range of academic cosponsors, and it included experts from medicine, public health, the sciences, and ethics.

The panelists discussed *The Belmont Report* and its principles and applications; the treatment of humans and animals within the context of research; and ways to transform medical research.

Dr. Jane Goodall, DBE, Founder of the Jane Goodall Institute, and UN Messenger of Peace, provided a special message at the event.



LEARNING OBJECTIVES

- 1) Discuss the strengths and limitations of *The Belmont Report*'s ethical principles and existing and potential applications.
- 2) Describe how the ethical principles described in *The Belmont Report* and technological advancements could be used to transform medical research.
- 3) Explore opportunities to advance ethical, evidence-based interventions to transform and improve medical research.

TARGET AUDIENCE

The target audience for this learning activity includes undergraduate and graduate learners from human and veterinary medicine; the social and biological sciences; public health; law, policy, and ethics; and advocacy.

LEARNING FORMAT

This learning activity involves a combination of Socratic and didactic learning methods, case studies, and discussion, with an accompanying captioned video.



SUGGESTED TEACHING STRATEGIES

The video is approximately 90 minutes long.

If you need to cover the material in a 50–75-minute class, here is a suggested strategy:

- 1) Ask students to watch the video outside of class time, and to read at least one of the two Recommended Readings (see below).
- 2) In class, break the students into small groups and assign each group specific items from the Discussion Questions. Additionally, instruct each group to create a new question of their own.
- 3) Come back together as a class, and have each small group lead the discussion on their assigned questions and pose the new question to the others. Encourage students to integrate what they learned from the assigned reading into the discussion.
- 4) Once the discussion has concluded, assign a reflective essay in which students imagine a future in which medical research has been transformed according to the ethical principles outlined in the video and readings.

If you need to cover the material over more than one teaching session, here are some suggested strategies:

- 1) Ask students to watch a portion of the video (or the entire video) during one session, and facilitate discussion in the next session(s), guided by the Discussion Questions and the Recommended Reading. Consider facilitating discussion using a mixture of small-group and class discussion.
- 2) Ask students to read the Recommended Reading in advance, and then, in class, ask them to watch selected portions of the video that correspond most with the Recommended Reading. Use the discussion questions that pertain most to ethical principles to guide class discussion. Consider facilitating discussion using a mixture of small-group and class discussion.

DISCUSSION QUESTIONS

- 1 What was the central purpose of the Transforming Medical Research panel discussion?
- 2 Throughout the discussion, the moderator and panelists referred to comparisons between human research standards and animal research standards. Why do you think they made these comparisons? Did these comparisons resonate with you? Why or why not?
- 3 The moderator and panelists referred to ethical principles. Describe these principles and what they mean to you in everyday life and during extreme circumstances, such as a personal health crisis or a global pandemic. In what ways could you implement these principles in your life?
- 4 Some of the panelists discussed how the ethical principles that guide human research could be applied to decisions about animals. What do you think of these potential applications?
- 5 How can transparency and accountability both uphold ethical principles and facilitate innovation?
- 6 Conversations about the historical and modern treatment of humans and nonhuman animals can be difficult and polarizing. Does starting from basic principles (such as respect for autonomy, beneficence, nonmaleficence, and justice) help overcome these difficulties and potential polarization? Why or why not?
- 7 Discuss the role of consent in medical research for humans and other animals—and then apply it to the larger context of our healthcare system. Why is consent so important to our individual and collective health and well-being?



DISCUSSION QUESTIONS

- 8 Think about a time that you were able to justify a behavior that caused harm to others. What allowed you to make that justification? How does the ability to justify causing harm in medical research hamper our ethical growth and our ability to innovate?
- 9 Some of the panelists discussed human exceptionalism. What is human exceptionalism, and how does it manifest in research and in other areas of society? How is it useful to consider whether concepts such as human exceptionalism influence decisions about others?
- 10 What reaction did you have to learning about some of the non-animal methods available in medical research today? Do you believe these methods will provide better healthcare to humans in the future? Why or why not?
- 11 Should the existence of new research technologies, such as organs on a chip, influence the moral permissibility of using animals in research? If so, how? Is there a moral imperative to develop these technologies? If so, how?
- 12 How did the panelists' experiences and areas of expertise shape their perspectives and how they delivered their comments?
- 13 What were your reactions to some of the stories that panelists shared? Discuss any aspects of the panel that surprised you. Have you changed your attitudes, opinions, or behaviors since watching and/or listening to the panel? If so, how?
- 14 How can you—as students—influence the trajectory of research ethics? What support can faculty offer? What systemic changes are needed?

RECOMMENDED READING & ADDITIONAL RESOURCES

RECOMMENDED READING

Ferdowsian, Hope, L. Syd M Johnson, Jane Johnson, Andrew Fenton, Adam Shriver, and John Gluck. “A Belmont Report for Animals?” *Cambridge Quarterly of Healthcare Ethics* 29, no. 1 (January 2020): 19-37.

Ferdowsian, Hope, Agustín Fuentes, L. Syd M Johnson, Barbara J. King, and Jessica Pierce. “Toward an Anti-Maleficent Research Agenda.” *Cambridge Quarterly of Healthcare Ethics* 31, no. 1 (January 2022): 54-58.

ADDITIONAL RESOURCES

Aguilera, Bernardo, and David Wendler. “Commentary: Should the Belmont Report Be Extended to Animal Research.” *Cambridge Quarterly of Healthcare Ethics* 29, no. 1 (January 2020): 58-66.

Bekoff, Marc, and Jessica Pierce. “Human Behavior Toward Animals Hasn’t Caught Up to the Science.” *The Cut*, April 2017.

Chandrasekera, Charu. “It’s Time to Think Outside the Cage.” YouTube video, 14:21.

Ferdowsian, Hope. “Ethics in Animal Research.” *Issues in Science and Technology* 38, no. 1 (Fall 2021).

ADDITIONAL RESOURCES

Ferdowsian, Hope, and John Gluck. “The Ethical Challenges of Animal Research: Honoring Henry Beecher’s Approach to Moral Problems.” *Cambridge Quarterly of Healthcare Ethics* 24, no. 4 (October 2015): 391-406.

Ferdowsian, Hope, and Agustín Fuentes. “Harms and Deprivation of Benefits for Nonhuman Primates in Research.” *Theoretical Medical Bioethics* 35, no. 2 (April 2014): 143-156.

Ferdowsian, Hope. “Stop Torturing Animals in the Name of Science.” *Scientific American*, September 16, 2021.

Fuentes, Agustín. “The Humanity of Animals and the Animality of Humans: A View from Biological Anthropology Inspired by J. M. Coetzee’s *Elizabeth Costello*.” *American Anthropologist* 108, no. 1 (2006): 124-132.

Fuentes, Agustín. “Politics of Species.” YouTube Video, 14:05, March 2, 2014.

Fuentes, Agustín. “Commentary: Other Animals as Kin and Persons Worthy of Increased Ethical Consideration.” *Cambridge Quarterly of Healthcare Ethics* 29, no. 1 (January 2020): 38-41.

Johnson, L. Syd M, and Andrew Fenton. “COVID-19 Animal Research Reveals Ethical Shortcomings.” *Impact Ethics*. September 25, 2020.

Johnson, L. Syd M. “Pigs as Spare (Human) Parts.” *Impact Ethics*. October 26, 2015.

Johnson, L. Syd M. “The Road Not Mapped: The Neuroethics Roadmap on Research with Nonhuman Primates.” *AJOB Neuroscience* 11, no. 3 (July 2020): 176-183.

ADDITIONAL RESOURCES

Jones-Engel, Lisa. “Commentary: Trust But Verify.” *Cambridge Quarterly of Healthcare Ethics* 29, no. 1 (January 2020): 42-45.

Kantin, Holly, and David Wendler. “Is There a Role for Assent or Dissent in Animal Research?” *Cambridge Quarterly of Healthcare Ethics* 24, no. 4. (October 2015): 459–472.

King, Barbara J. “Grief and Love in the Animal Kingdom.” Filmed April 2019 in Vancouver, Canada. TED Video, 14:33.

King, Barbara J. “My Cancer Scars Map the Pain of Animals Held in Research Labs.” *Psyche*, May 2021.

King, Barbara J. “A Spider Shows the Way Towards Greater Compassion for Animals.” *The Montréal Review*, July 2021.

Wendler, David. “Should Protections for Research with Humans Who Cannot Consent Apply to Research with Nonhuman Primates?” *Theoretical Medical Bioethics* 35, no. 2 (April 2014): 157-173.

Find out more about Phoenix Zones Initiative and our efforts to transform medical research.

Connect with us:

 [Facebook](#)

 [Twitter](#)

 [Instagram](#)

 [LinkedIn](#)