LMC 3318: Biomedicine and Culture

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Note: Schedule may shift, depending on circumstances and final GTE calendar.

Core Area/Attributes: This is a Core IMPACTS course that is part of the Humanities area. Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas.

This course will help master course content, and support students' broad academic and career goals. This course should direct students toward a broad Orienting Question:

- How do I interpret the human experience through creative, linguistic, and philosophical works? Completion of this course should enable students to meet the following Learning Outcome:
- Students will effectively analyze and interpret the meaning, cultural significance, and ethical implications of literary/philosophical texts or of works in the visual/performing arts. Course content, activities and exercises in this course should help students develop the following Career-Ready Competencies:
- Ethical Reasoning
- Information Literacy
- Intercultural Competence

COURSE DESCRIPTION: In this course, you will learn to recognize, assess, consider, and articulate the ways that ethical principles are deeply informed by humanistic and philosophical inquiry, which in turn shapes our lived histories, politics, and cultural expressions across a range of disciplines and professions. This course discusses the history of medicine and medical technologies; literary and popular representations of health, disease, and the medical establishment; ethical issues related to medicine and public health; and cultural conditions affecting the development of medicine and medical technologies. Subjects include interpersonal conflicts between doctors and patients, the Tuskegee syphilis study and the establishment of bioethics, the race among researchers to discover the HIV virus causing AIDS, sustainability and public health, patients' rights, and genetic technology. *Prerequisites: ENGL 1101, ENGL 1102. Attributes: Humanities, Ethics*

LEARNING OUTCOMES:

- To increase awareness of the cultural factors affecting the development of biomedical knowledge and practice
- To increase awareness of and think critically about the role of biomedicine, including its technological means, in culture
- To explore nuance and ambiguity in ethical debates about research and practice in biomedicine
- To communicate in sophisticated ways about these issues of broad concern, orally and in writing

BOOKS THAT COULD BE PURCHASED; also available as pdf documents in class Canvas site: William Carlos Williams, *The Doctor Stories* New Directions, 1984. (\$11) [selected stories/poems in pdf] Margaret Edson, *W;t* [or *Wit*]. Faber and Faber, 1993, 1999. (\$10) [also in pdf]

READINGS available as pdf documents in class Canvas site:

Stanley Joel Reiser, "Examination of the patient in the seventeenth and eighteenth centuries" and "The stethoscope and the detection of pathology by sound," chapters 1 and 2 of *Medicine and the Reign of Technology* Cambridge University Press, 1978: 1-44.

Stanley Joel Reiser, "Governing the Empire of Machines," *Technological Medicine: The Changing World of Doctors and Patients* Cambridge University Press, 2009: 186-203.

Bettyann Holtzmann Kevles, "Looking through Women: The Development of Ultrasound and Mammography." Chapter 10 of *Naked to the Bone: Medical Imaging in the Twentieth Century*. Addison-Wesley, 1997: 228-260.

Susan Gubar, Memoir of a Debulked Woman: Enduring Ovarian Cancer, 2012. Selections.

Audre Lorde, "Power vs. Prosthesis," Cancer Journals 1980, 2020.

Dorothy Roberts, "Race and the New Reproduction," chap. 6 in Killing the Black Body 1998.

Anne Pollock, "Mass Incarceration: On the Suspended Sentences of the Scott Sisters" & "Reproductive Injustice: Serena Williams's Birth Story," chapters 3 & 6 in *Sickening* 2021.

James Jones, "A Moral Astigmatism" & "A Notoriously Bad Blood," Ch. 1 and 2 of *Bad Blood*, Free Press, 1993: 1-29.

Susan Reverby, "Bioethics, History, and the Study as Gospel" and "The Court of Imagination," chapters 10 and 11 of *Examining Tuskegee: The Infamous Syphilis Study and Its Legacy*. The University of North Carolina Press, 2009: 187-215.

Rebecca Skloot, *The Immortal Life of Henrietta Lacks*. Broadway, 2010, 2011. (\$8.24) [excerpts] Randy Shilts, *And the Band Played On.* 1987. pp. 11-33, 80-92, 234-242, 263-277, 450-456, 486-503 *A Timeline of HIV/AIDS* https://www.aids.gov/hiv-aids-basics/hiv-aids-101/aids-timeline/ *AIDS Retrospective Slideshow: A Pictorial Timeline of the HIV/AIDS Pandemic*http://www.webmd.com/hiv-aids/ss/slideshow-aids-retrospective

Luc Montagnier, Virus: The Co-Discoverer of HIV Tracks Its Rampage and Charts the Future, 1999. [Chapter 2]

Christopher Dyea and Shambhu Acharya, "How can the sustainable development goals improve global health? Call for papers." *Bulletin of the World Health Organization*. October 2017: 666-667. Assignment 4 articles, which are available in pdf on Canvas, are noted on the last page of the syllabus.

TIPS: Print the syllabus and download pdf files of course texts before leaving the US. We will reference texts during class discussions, so having access to print or electronic versions (on laptop, tablet, or phone) during class is helpful. Purchasing the William Carlos Williams book is recommended.

OFFICE OF DISABILITY SERVICES assists students self-identifying as having a disability to obtain reasonable accommodations. Documentation of disability is required to determine appropriate accommodations or modifications that may be helpful on campus. https://disabilityservices.gatech.edu/

INCLUSIVE EXCELLENCE: The Ivan Allen College of Liberal Arts supports the Georgia Institute of Technology's commitment to creating a campus free of discrimination on the basis of race, color, religion, sex, national origin, age, disability, sexual orientation, gender identity, or veteran status. We further affirm the importance of cultivating an intellectual climate that allows us to better understand the similarities and differences of those who constitute the Georgia Tech community, as well as the necessity of working against inequalities that may also manifest here as they do in the broader society.

ACADEMIC HONESTY: If you quote, paraphrase, or summarize information that you originally obtained from a written (print or Internet) or a verbal source in your written assignment, this source should be cited in your text. You should use MLA style in your papers for this course: references should be parenthetically made within your essay and linked to a Works Cited section. Questions about appropriate forms of citation can be asked of the course instructor. You should become familiar with the provisions of the Georgia Tech academic honor code and the policies governing violations of the honor code. See http://policylibrary.gatech.edu/student-affairs/academic-honor-code

WRITTEN ASSIGNMENTS AND PARTICIPATION: Due dates and topics for the writing assignments are listed in the syllabus and in each assignment. Your writing assignments will provide opportunities to extend classroom discussions and to meditate more thoughtfully on course topics. Class discussions depend on your analyses of the readings and your contributions to the conversations. Your

writing should build on your reading and class discussions. Please come to each class prepared to participate in discussions after having read all required texts assigned for that day, bringing your ideas and questions.

REPORTS: During each class a student will lead us through and share a short (5-6 minute) analysis of the text and topic, summarizing the reading's focus, evaluating its meaning and construction, and providing a question or two for class discussion. In preparing your presentation, consider what you learned from the reading, how it can apply to other readings, and which stylistic features of the text and aspects of its argument deserve consideration. You should consult the instructor if you have questions about your presentation. Remember that your contribution as a presenter should facilitate class conversations as you formulate appropriate questions that fit the course topics, provide a thoughtful way of approaching textual issues, and report on information gleaned from reading primary and critical material. Sign up for reports as soon as possible; "R:" indicates a report topic.

GRADING: All written assignments should be posted to the class Canvas site. Any postings should be in the body of the message (not sent as attachments). Late assignments will not be accepted unless you arrange with the instructor *in advance* of the due date.

Final grades will be calculated according to the following proportion and graded by the instructor/s named here:

Assignment 1 (short essay on relationship of doctor/nurse and patient): 15% of final grade [Senf]

Assignment 2 (short essay on ethics, culture, medical technology) 15% of final grade [Senf]

Assignment 3 (essay on public health, ethics) 15% of final grade [Colatrella]

Assignment 4 (team presentations on medical ethics article): 20% of final grade [Colatrella]

In-class oral report/leadership of one class discussion: 10% of final grade [Both]

General class participation/weeks 1-3: 5% of final grade [Senf]

Responses to Discussion Prompts: 20% of final grade [Colatrella]

GRADING SCALE: 90-100=A, 80-89=B, 70-79=C, 60-69=D, less than 60=F

ATTENDANCE IS REQUIRED IN THIS COURSE: Because class discussion and in-class assignments make up a significant percentage of the final grade, excessive absences (more than 2) could result in an unsatisfactory mark. Submit the appropriate documents to the instructor for medical, athletic, or other justified absences. Extended absences away from campus for family, medical, or legal reasons should be reported to Dr. Paul Voss at Georgia Tech Europe. The Georgia Tech Office of Student Life in Atlanta also has information: https://studentlife.gatech.edu/content/class-attendance

SCHEDULE:

Carol Senf

Relationship of doctor and patient, diagnosis, therapy, ethics of research

W 5/14 Introduction to course; choose oral report topics (R:); discuss poems by W. C. Williams: "Médecin malgré lui," "The Poor," "To Close," "The Dead Baby," "A Cold Front" (pp.129,131,132)

F 5/16 Williams, *The Doctor Stories*, pp. 56-60 & pp. 92-98; Reiser, "Examination of the patient," *Medicine and the Reign of Technology*, pp. 1-22 (pdf), Williams, *The Doctor Stories*, pp. 42-55.

R: Williams, "The Use of Force," *The Doctor Stories*, pp. 56-60

R: Williams, "The Paid Nurse," pp. 92-98

R: Williams, "The Girl with a Pimply Face," pp. 42-55

Development of evidence-based medicine, biomedical technologies

M 5/19 Reiser, "The stethoscope and the detection of pathology by sound," *Medicine and the Reign of Technology*, pp. 23-44 (pdf)

- R: Reiser on development of stethoscope: technical and cultural factors
- R: Reiser on cultural and technical issues related to examining the patient and diagnosing illness

W 5/21 Stanley Joel Reiser, "Governing the Empire of Machines," *Technological Medicine*, 186-203 (pdf); Bettyann Kevles, "Ultrasound and Mammography," *Naked to the Bone*, Ch. 10: pp. 228-260 (pdf)

- R: Ethical use of technologies in medicine
- R: The example of ultrasound
- R: Development of ultrasound: technical factors
- R: Development of ultrasound: cultural factors

Assignment 1 (due F 5/23) two-page (250-300-word) essay on doctor/nurse-patient relationship as represented in readings by Williams and Reiser.

M 5/26 Kevles, "Ultrasound and Mammography," Naked to the Bone, Chapter 10 228-260 (pdf)

- R: Development of mammography: technical factors
- R: Development of mammagraphy: cultural factors

Discussion comparing representations of culture and medical technologies in Bernard, Reiser, Kevles

Conflicts between medical therapy and research

W 5/28 Susan Gubar, Memoir of a Debulked Woman: Enduring Ovarian Cancer. Selections in pdf.

- R: Gubar's personal tone
- R: Gubar's incorporation of technical information
- R: Gubar's literary references

Assignment 2 (due M 6/2) two-page (250-300-word) essay on tensions/ethical conflicts related to use of technologies in medical practice in two course texts: Reiser, Kevles, Gubar.

Carol Colatrella [NOTE: Choose report topics for weeks 4-11 if these have not already been selected]

Conflicts between medical therapy and research

M 6/2 Edson, Wit (play)

- R: Vivian Bearing's character
- R: Doctors in the play
- R: Nurse in the play
- R: Ethics in the play

Related, but not required: view film adaptation of Wit--see links on Canvas Pages 6/6 Edson, Wit

Social inequalities (race, class, gender) and medicine:, Tuskegee syphilis "experiment," the development of bioethics, cancer, pregnancy

W 6/4 James Jones, Bad Blood, chapter 1: pp. 1-15 (pdf) & chapter 2: pp.16-29 (pdf)

- R: Bad Blood, chapter 1: Public Health Service "experiment" on syphilis
- R: Bad Blood, chapter 1: Nazi experiments and the Tuskegee syphilis study
- R: Bad Blood, chapter 2:cultural perceptions of race and sexuality and diagnosis of syphilis
- R: Bad Blood, chapter 2:cultural perceptions of race and sexuality and treatment of syphilis

Prompt 1 due 6/4 noon: Why is it important that we read about the Tuskegee Syphilis Study?

On own: Listen to Remembering Anarcha podcast

 $\frac{https://www.npr.org/2017/02/07/513764158/remembering-anarcha-lucy-and-betsey-the-mothers-of-modern-gynecology}{}$

W 6/11 Susan Reverby, "Bioethics, History, and the Study as Gospel," ch. 10 and "The Court of Imagination," ch. 11, *Examining Tuskegee*, 187-215

- R: Public imaginary of race and Tuskegee syphilis study
- R: Tuskegee study and bioethics
- R: Representing an historical case in popular film
- R: Ethical concerns in film, according to Reverby

Prompt 2 due 6/11 noon: For you, what is the most effective presentation of the ethical issues related to the Tuskegee Syphilis Study?: non-fictional history? Drama? Film? Commentary on these?

Medical research studies and patients' rights; journalistic ethics; public health

M 6/16 Audre Lorde, "Power vs. Prosthesis," in Cancer Journals, pdf especially pp. 1-11 and 16-19

- R: Claiming one's own body
- R: Attitudes towards one's body after surgery
- R: Including personal elements in social criticism of medicine

W 6/18 Dorothy Roberts, "Race and the New Reproduction," chap. 6 in Killing the Black Body

- R: How Race Shapes Reproduction
- R: Ethical Discussions

M 6/23 Anne Pollock, "Mass Incarceration: On the Suspended Sentences of the Scott Sisters" & "Reproductive Injustice: Serena Williams's Birth Story," chapters 3 & 6 in *Sickening*

- R: Scott Sisters
- R: Serena Williams

Prompt 3 due 6/23 noon: In what ways does gender bias and/or race discrimination affect research and medical treatment?

AIDS: Public Policy & Research

W 6/25 and M 6/30 Screen and discuss *And the Band Played On* (Dir. Roger Spottiswood; 2 hrs. 21 mins.)

Questions for class discussion: why is it important to know the history of HIV/AIDS as a disease? why is it important to consider politics and policy related to AIDS/HIV research and therapies? What lessons did scientists, agencies, and the public learn from their experiences with AIDS/HIV.

Required reading/viewing--Randy Shilts, And the Band Played On, pp. 11-33, 80-92, 234-242, 263-277, 450-456, 486-503

Luc Montagnier, ch. 2: "The Red Notebook," *Virus* (autobiography of HIV researcher), pp. 42-82 *A Timeline of HIV/AIDS* https://www.aids.gov/hiv-aids-basics/hiv-aids-101/aids-timeline/ and *AIDS Retrospective Slideshow: A Pictorial Timeline of the HIV/AIDS Pandemic* http://www.webmd.com/hiv-aids/ss/slideshow-aids-retrospective

Prompt 4 due Thursday 6/26 5pm: In what ways did the disagreement between Gallo and Montagnier about credit affect the development of science?

W 7/2 Rebecca Skloot, *The Immortal Life of Henrietta Lacks*, pp. 13-17, 62-66, 105-109, 127-143, 152-169, 180-187, 315-328

- R: Diagnosis of Henrietta Lacks
- R: Treatment of Henrietta Lacks
- R: Skloot's interest in history of HeLa and Henrietta Lacks
- R: Journalistic ethics and Skloot's example

[In class: Trailer for HBO The Immortal Life of Henrietta Lacks & Hopkins Lacks websites]

Assignment 3 due Thursday 7/4 by 5pm: two-page (250-300-word) essay referencing representations of ethical conflicts in medical practice and research (syphilis, cancer, AIDS) in two of these course texts: Edson, Jones, Reverby, Lorde, Roberts, Pollock, Skloot, Shilts.

Ethics, Sustainability, and Public Health

M 7/7 Review United Nations Sustainable Development Goals (SDG)

http://www.un.org/sustainabledevelopment/sustainable-development-goals/

Read Christopher Dyea and Shambhu Acharya, "How can the sustainable development goals improve global health? Call for Papers" (2017)

Prompt 5 due in Canvas and bring to class for discussion: On your own or with a partner and in response to the Dyea and Acharya CFP, construct a list of SDG related to ethics and public health to share in class Discuss Assignment 4 article with group; see Canvas Resources "medical ethics articles" folder.

W 7/9 Discuss Assignment 4 article with group; see Canvas Resources "medical ethics articles" folder. In-class team meetings preparing group presentations (read and discuss article for Assignment 4)

W 7/16 Group presentations (Assignment 4) reflecting on ethical dilemmas in medical research and practice, referencing medical ethics articles on reserve and on Canvas presentations

M 7/21 Group presentations (Assignment 4) reflecting on ethical dilemmas in medical research and practice, referencing medical ethics articles on reserve and on Canvas General discussion about course readings, discussions, and assignments

READING PERIOD & FINAL EXAMS

LMC 3318 ASSIGNMENTS 2024

In-class Individual Presentation (10 points):

During each class students will take turns leading us through a text; each student will share a short (5-minute) analysis of a text or a topic, summarizing the reading's focus, evaluating its meaning and construction, and providing a question or two for class discussion. Because most people learn better when they both see something and hear something, each student presenter should develop one power point slide with name, topic, and 3-5 main points of the presentation. The slide should be projected during the class presentation and uploaded into the class Canvas site.

In preparing your presentation, consider what you learned from the reading, how it can apply to other readings and which stylistic features and argumentative aspects of the text deserve consideration. You should consult the instructor if you have questions about your presentation. Remember that your contribution as a presenter should facilitate class conversations as you formulate appropriate questions for the course and your writing assignments, provide a thoughtful way of approaching textual issues related to style and argument, and report on information gleaned from reading primary and critical material. Sign up for an opportunity to present as soon as possible; "R:" indicates an oral leadership report topic.

Pay particular attention to organization. Begin your discussion with an overview or introduction that prepares your audience for what you will cover in the presentation. And conclude your presentation with a wrap-up or summary that lets the audience know what they should remember about your presentation and the discussion that results from your presentation. Avoid the temptation to say, "That's all I have to say."

Treat your audience with respect. Speak clearly and directly and look at the rest of the class instead of reading from the slides or notes. You may stand and walk around the classroom, but it's also fine to sit in front of the class.

Sign up for a report as soon as possible; "R:" indicates report topic.

LMC 3318: Biomedicine and Culture Summer 2024 Assignments

Short Essay 1 (due F 5/24): Write a 250-300-word essay considering the representation of the doctor/nurse-patient relationship or the physician's treatment of a patient in readings by Williams and Reiser. Pick one text by one of these authors and discuss the characteristics that are associated in the text with the caregiver's treatment of the patient and the patient's (or the patient's family's) perceptions of the doctor. What can the text teach us about the ideals and the realities of medical practice and/or research?

Short Essay 2 (due M 6/3): Write a 250-300-word essay analyzing how cultural values, perceptions, attitudes, and the development and/or use of medical technologies influence each other. Your essay should reference one or two texts by Reiser, Kevles, Edson, or Gubar. What does the text argue regarding how technology supports and/or hinders the quality of medical practice? What ethical concerns does the text raise about the development or the use of technologies in medical practice?

Short Essay 3 (Tu 7/9): Write a 250-300-word essay outlining the ethical conflict/s troubling medical practice or medical research as these are explained or suggested in two of the texts by Lorde, Roberts, Pollock, Jones, Reverby, Skloot. What do these representations argue or suggest should be the responsibilities and ethical practices of medical caregivers (doctors, nurses) and researchers? What responsibilities might the patient/s have?

Keep in mind:

Your thesis statement and argument should respond to the question/s noted or develop your own focused question/s related to the readings. Consult the thesis statement handout posted in Resources on the class Canvas site.

Each 2-page essay should be written along the lines of a standard 5-paragraph essay with a short introduction, including a thesis statement presenting your argument in a sentence or two. In the following paragraphs, provide evidence supporting your argument followed by a short conclusion.

It's ok to have fewer or more paragraphs, but each essay should make an argumentative claim that you support with examples from the text/s you are writing about. Resist the temptation to summarize the text or to quote extensively (more than a phrase or two) from it.

Use 11- or 12-point font and double-space the essay, which should be about 500-words. Please submit the essay to the class Canvas site by the date/time indicated.

Ask questions during class about assignments 1 and 2 of Dr. Senf (carol.senf@lmc.gatech.edu) and about assignments 3 and 4 (team oral presentation) of Dr. Colatrella (carol.colatrella@lmc.gatech.edu). Or let us know via email if you have any questions or concerns.

LMC 3318, Assignment 4:

The group presentation should define the ethical concerns, dilemmas, conflicts, or problems in medicine or public health noted in the article. Often thinking about the interests of different individuals or groups can help define an ethical conflict or a possible conflict. If relevant, you can link your discussion to SDGs, sustainability, or issues from other course readings. Consider what could be and should be done to solve the problem or eliminate the conflict. What social/cultural or technical innovations could be developed and applied to this problem? Describe possible resistance to the solution or technology. What initiatives could overcome resistance?

Team oral presentation (20 minutes) on medical ethics with each presentation referencing one of these articles (all are on Canvas) and with all team members participating:

Rachel Aviv, "What Does It Mean to Die," *The New Yorker*, February 5, 2018: 24 pages. When Jahi McMath was declared brain-dead by the hospital, her family disagreed. Her case challenges the very nature of existence. https://www.newyorker.com/magazine/2018/02/05/what-does-it-mean-to-die (Links to an external site.)

David C. Bellinger "Lead Contamination in Flint — An Abject Failure to Protect Public Health," *The New England Journal of Medicine*, 2016. http://www.nejm.org/doi/full/10.1056/NEJMp1601013 (Links to an external site.)

Atul Gawande, "Overkill" *The New Yorker*. May 11, 2015 *An avalanche of unnecessary medical care is harming patients physically and financially. What can we do about it?* http://www.newyorker.com/magazine/2015/05/11/overkill-atul-gawande (Links to an external site.)

Atul Gawande, "The Heroism of Incremental Care (Tell Me Where It Hurts)." *The New Yorker* January 23, 2017. *Our medical system rewards heroic intervention. When will we grasp the power of incremental care?* http://www.newyorker.com/magazine/2017/01/23/the-heroism-of-incremental-care (Links to an external site.)

Atul Gawande, "Letting Go: What Should Medicine Do When It Can't Save Your Life." The New Yorker August 2, 2020. https://www.newyorker.com/magazine/2010/08/02/letting-go-2?

Patrick Keefe, "The Family That Built an Empire of Pain." *The New Yorker* October 30, 2017: 34-49. *The Sackler family's ruthless promotion of opioids generated billions of dollars—and millions of addicts.* https://www.newyorker.com/magazine/2017/10/30/the-family-that-built-an-empire-of-pain (Links to an external site.)

Olga Khazan, "Being Black in American Can Be Hazardous to Your Health." *The Atlantic* July/August 2018. Download Khazan Being+Black+in+America+Can+Be+Hazardous+to+Your+Health+-+The+Atlantic.pdf

Elizabeth Kolbert, "How Iceland Beat the Coronavirus." *The New Yorker* June 8&15, 2020 https://www.newyorker.com/magazine/2020/06/08/how-iceland-beat-the-coronavirus

Larissa MacFarquhar, "The Comforting Fictions of Dementia Care." *The New Yorker*. October 8, 2018. 30 pages. *Many facilities are using nostalgic environments as a means of soothing the misery, panic, and rage their residents experience*. https://www.newyorker.com/magazine/2018/10/08/the-comforting-fictions-of-dementia-care (Links to an external site.)

Siddhartha Mukherjee, "AI versus MD," *The New Yorker*, April 3, 2017: 18 pages. *What happens when diagnosis is automated?* https://www.newyorker.com/magazine/2017/04/03/ai-versus-md (Links to an external site.)

Siddhartha Mukherjee, "What the Coronavirus Crisis Reveals About American Medicine." *The New Yorker* May 4, 2020 *Medicine is a system for delivering care and support; it's also a system of information, quality control, and lab science. All need fixing.*

https://www.newyorker.com/magazine/2020/05/04/what-the-coronavirus-crisis-reveals-about-american-medicine

Amanda Schaffer, "The Moral Dilemmas of Doctors During Disaster." *The New Yorker* September 12, 2013. http://www.newyorker.com/tech/elements/the-moral-dilemmas-of-doctors-during-disaster (Links to an external site.)

John Seabrook, "The Promise and the Peril of Virtual Health Care." *The New Yorker* June 29, 2020. *During the coronavirus pandemic, telemedicine looks like the future of health care. Is it a future that we want?* https://www.newyorker.com/search/q/seabrook%20promises%20virtual%20care

Jerome Amir Singh, "How Bioethics is Complementing Human Rights in Realizing Health Access for Clinical Trial Participants: The Case of Formative PrEP Access in South Africa," *Health and Human Rights* 17, 1 (June 2015), pp. 58-62. to an external site.)

James Somers, "The Engineers Taking on the Ventilator Shortage." *The New Yorker* May 11, 2020. *The newest designs are smart, streamlined, and inexpensive. Will they be enough?* https://www.newyorker.com/magazine/2020/05/18/the-engineers-taking-on-the-ventilator-shortage

Michael Specter, "Rewriting the Code of Life." *The New Yorker* January 2, 2017. *Through DNA editing, researchers hope to alter the genetic destiny of species and eliminate diseases.* http://www.newyorker.com/magazine/2017/01/02/rewriting-the-code-of-life

Margaret Talbot, "The Rogue Experimenters." *The New Yorker* May 18, 2020 *Community labs want to make everything from insulin to prostheses. Will traditional scientists accept their efforts?* https://www.newyorker.com/magazine/2020/05/25/the-rogue-experimenters

Christine Van Dusen, "A Georgia sperm bank, a troubled donor, and the secretive business of babymaking." *Atlanta Magazine*, March 2018: 18 pages.

 $\underline{https://www.atlantamagazine.com/great-reads/georgia-sperm-bank-troubled-donor-secretive-business-\underline{babymaking}}$

Linda Villarosa, "Why America's Black Mothers and Babies Are in a Life or Death Crisis." *The New York Times Magazine*, April 11, 2018: 26 pages. *The answer to the disparity in death rates has everything to do with the lived experience of being a black woman in*

America. https://www.nytimes.com/2018/04/11/magazine/black-mothers-babies-death-maternal-mortality.html

Additional possible articles:

Carolyn Kohrman, "Through the Looking Glass," *The New Yorker*. December 21 & 28, 2015. http://www.newyorker.com/magazine/2015/12/21/through-the-looking-glass-annals-of-science-carolyn-kormann [Producing a low cost microscope for use in non-industrial countries] Suzanne Koven, "The Doctor's New Dilemma," *The New England Journal of Medicine*. 374, 7 (February 18, 2016) [Managing efficient, economic, and effective physician/patient visits] http://www.nejm.org/doi/full/10.1056/NEJMp1513708

Sandra Soo-Jin Lee, "American DNA: The Politics of Potentiality in a Genomic Age," *Current Anthropology* 54,S7, *Potentiality and Humanness: Revisiting the Anthropological Object in Contemporary Biomedicine* (October 2013), pp. S77-S86 https://www.journals.uchicago.edu/doi/full/10.1086/670970

Emmanuel Kabengele Mpinga, Tshimungu Kandolo, Henk Verloo, Ngoyi K. Zacharie Bukonda, Ngianga-Bakwin Kandala and Philippe Chastonay, "Traditional/alternative medicines and the right to health: Key elements for a convention on global health." *Health and Human Rights* 15, 1 (June 2013), pp. 44-57. https://cdn2.sph.harvard.edu/wp-content/uploads/sites/13/2013/06/Mpinga-FINAL.pdf

Jerome Amir Singh, "How Bioethics is Complementing Human Rights in Realizing Health Access for Clinical Trial Participants: The Case of Formative PrEP Access in South Africa," *Health and Human Rights* 17, 1 (June 2015), pp. 58-62. http://www.hhrjournal.org/2015/06/how-bioethics-is-complementing-human-rights-in-realizing-health-access-for-clinical-trial-participants-the-case-of-formative-prep-access-in-south-africa/">http://www.hhrjournal.org/2015/06/how-bioethics-is-complementing-human-rights-in-realizing-health-access-for-clinical-trial-participants-the-case-of-formative-prep-access-in-south-africa/">http://www.hhrjournal.org/2015/06/how-bioethics-is-complementing-human-rights-in-realizing-health-access-for-clinical-trial-participants-the-case-of-formative-prep-access-in-south-africa/

Adriana Petryna, "Right of Recovery." *Current Anthropology*, Vol. 54, No. S7, Potentiality and Humanness: Revisiting the Anthropological Object in Contemporary Biomedicine (October 2013), pp. S67-S76

Rebecca Solnit, "Medical Mountaineers," *The New Yorker*. December 21 & 28, 2015. http://www.newyorker.com/magazine/2015/12/21/medical-mountaineers [Providing medical care in remote places such as the Himalayas]

Darren B. Taichman and Christine Laine, "Reducing Firearm-Related Harms: Time for Us to Study and Speak Out," *Annals of Internal Medicine* 2015, 62: 520-521. http://annals.org/aim/fullarticle/2173244/reducing-firearm-related-harms-time-us-study-speak-out