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Health Care in the Age of Mass Incarceration: A Selective Course for Medical Students in Their Preclinical Years

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Abstract

Introduction: While medical school curricula increasingly address health disparities, content regarding health care for persons impacted by incarceration is a persistent and notable gap. There is a high burden of disease among incarcerated populations, and health care challenges continue postincarceration. We developed a course to introduce medical students to the current landscape of mass incarceration in the US and implications for health and health care delivery to people impacted by this system. **Methods:** We developed a 3.5-hour elective course taken by 19 first-year medical students in its first year and 20 students in its second. The course utilized lecture, case-based discussion, and guest speaker modalities to introduce students to the history of mass incarceration, health care delivery within the carceral system, and challenges in accessing care during and following incarceration. **Results:** Students received two surveys after completing the course. In the first, 100% of respondents reported *outstanding*, *excellent*, or *good* levels of satisfaction with various elective components, including organization, learning activities, and student discussion. The second found significant increases in knowledge about mass incarceration and incarceration health issues, in addition to significant increases in interest in advocating or providing health care for incarcerated populations. **Discussion:** Given current mass incarceration practices, students will encounter patients impacted by this system. This elective course sought to better prepare students to effectively care for these patients. We were limited by time availability, and future directions include incorporating a standardized patient exercise, trauma-informed care principles, and providers working within the carceral system.

Keywords
Incarceration, Health Care, Disparity, Prison, Preclinical, Diversity, Inclusion, Health Disparities

Educational Objectives

By the end of this activity, learners will be able to:

1. Describe the current state and historical context of mass incarceration in the United States.
2. Describe health care disparities experienced by the incarcerated population.
3. Discuss how health care is typically delivered to incarcerated people.
4. Describe existing issues in health care provision for incarcerated people through case scenarios.
5. Explain how to be advocates for currently and formerly incarcerated persons, including exposure to local organizations that work with returning citizens.

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Introduction

Medical school curricula often highlight health care disparities, encouraging students to acknowledge bias in the clinical setting and understand that not all health care is delivered equally. The incarcerated population, however, is often missing from the conversation, despite being notoriously underserved by the health care system.

Over two million people are currently incarcerated in the United States.[1] This number has more than doubled over the past decade, rendering the US the country with the highest incarceration rates in the world.[2] The majority of those arrested are ethnoracial minorities who come from low-income communities.[3] This suggests that the people who are most frequently incarcerated enter prisons and jails with multiple

risk factors for limited health care access. In fact, for many incarcerated people, being in prison is their first experience with long-term health care. As a result, the burden of disease among the incarcerated population is very high. Compared to the general population, incarcerated people are at a significantly increased risk for infectious diseases including HIV and Hepatitis C, substance use disorders, serious mental illness, and chronic disease.[4] Clearly, there is a need for high quality care among this population.

In the 1976 case of Estelle v. Gamble, the Supreme Court ruled that the failure of a correctional facility to address the medical needs of an inmate constitutes "cruel and unusual punishment."[5] Though this ruling protects an inmates' right to care, the actual delivery and quality of health care available in prisons and jails across the nation is largely unknown. It has been shown, however, that the correctional environment often pressures providers to choose medical plans that adhere more to the desire of the facility than to that of the incarcerated person.[5] Furthermore, the relationship between physicians and patients in a correctional facility is severely hindered by the limited resources, limited number of health care professionals, and the ability of the prison administration to determine what constitutes a medical necessity.

It is important to also acknowledge that the health care disparities among this population do not stop once they are no longer behind bars. Reentering citizens often leave prison without any form of health insurance or plan for maintaining the care they might have been receiving while incarcerated.[3] They struggle to reintegrate into society and focus their energy on finding housing or employment rather than a doctor. As a result, their health care continues to suffer.

There is a gap in medical school curricula when it comes to incarceration care. It is important for students to understand the structure of health care in a restricted setting, and even more, the challenges of delivering high quality care within a correctional facility. Whether or not a student is planning on working with this community of patients, education on the topic can help overcome stigma and increase awareness of areas where the medical field can improve.

We built this course for medical students in their preclinical years. It was offered for 2 years as an optional selective in a Foundations of Public Health course. It was our hope that through this course, students would learn about the current state of mass incarceration in the US, its intersection with health care, and how to be advocates for this underserved population.

There are currently very few publications in *MedEdPORTAL* which solely focused on incarceration and health care. From our search, we did find one course that centered around the issue of female incarceration.[6] It highlighted a particular case study and used group discussion to call attention to the themes of incarceration and barriers to health care, but only among the female incarcerated population.[6] We also came across a small number of courses which involved rotating through prisons/jails as part of more advanced clinical training, though the submissions did not only focus on incarceration.[7,8] Outside of these particular courses, *MedEdPORTAL* contained many submissions which focused on the social determinants of health.[9-12] These included various barriers to care including sex and sexual orientation, race and ethnicity, socioeconomic status, and language, to name a few. While many of these courses addressed current or past incarceration status as a potential barrier to care, it was often a minor theme or one of a list of factors that may affect a person's health status. Our course is a unique addition as it centers on incarceration exclusively. Furthermore, our course integrates critical historical background of the issue of mass incarceration in general, as well as health care behind bars and after reentry. We address these essential themes not just through lectures, but through sharing the opinions of health care providers and statements from incarcerated persons themselves. In this way, we offer a multidimensional experience which allowed students to really engage with the material and themes of incarceration in an interactive environment. The ultimate aim of the course is to build more well-rounded and well-informed physicians who are more sensitive to this often-overlooked population.

Methods

The Health Care in the Age of Mass Incarceration course was offered to first-year medical students at Johns Hopkins University School of Medicine as an elective component of their Foundations of Public Health Class. The course was designed and taught by a group of eight second- and third-year medical students under the supervision of Drs. Carolyn Sufrin and Eric Bass (professor of medicine at the Johns Hopkins University School of Medicine and director of the Foundations of Public Health course). As medical students, we recognized that we did not have the expert perspectives of people who have experienced incarceration, provided health care to incarcerated people, or formally studied the intersection of incarceration and health. For this reason, we collaborated with faculty who provided extremely valuable knowledge on the topics of incarceration and health as well as curriculum design. Furthermore, we included and received feedback from an individual who has experienced incarceration. Our course would not have been

successful without their support. However, we believe that student instructors, with the guidance of experts in the field, are able to build a strong, effective course and most importantly, create a class environment in which participants feel comfortable openly discussing the issues of incarceration and health and voicing their opinions on these difficult topics.

Approximately 6 months were dedicated to designing the curriculum and preparing the course materials. Nineteen first-year medical students were enrolled in the course the first year it was offered and 20 in the second year it was offered. No prerequisite knowledge or coursework was required. For both years that it was offered, the course met for two 1-hour sessions and one 1.5-hour session over a 3-week period. A projector and a whiteboard were the only supplies that were needed to carry out instruction of this course.

Course Content

Session 1—introduction to mass incarceration and correctional health care: The first session of the course provided an overview of the historical context of mass incarceration and of the provision of medical care within the United States prison system. The content was presented in a lecture format with embedded discussion questions (Appendix A). Key historical issues covered in the lecture included the impact of the War on Drugs on the US prison population, the ethnoracial disparities rooted within the carceral system, and a timeline of incarceration in Baltimore, Maryland. The portion of the lecture that discussed health care within prisons and jails emphasized the systems different states use to deliver care to their incarcerated populations (e.g., contracting with private vendors, contracting with university systems, and hiring health care workers internally), and discussed how the profit incentives of private health care vendors can negatively affect the quality of care they provide. We also included a video which highlighted one example of health care insufficiency in prison as told by a formerly incarcerated person (Appendix B). During the second year the course was offered, additional information providing state and local context surrounding issues of police brutality, police privatization, operations of the local justice system, and the 2015 Baltimore uprising after the death of Freddie Gray was added. As an assignment, students were tasked with finding a newspaper article related to incarceration and health care to bring in for discussion in the next session.

Session 2—the quality of medical care within the United States prison system: The first several minutes of this session were spent reviewing the articles that students brought into class and answering any questions from the previous session. Examples of articles that students brought for discussion included a piece on the 2018 US prison strike[13] and an article on recent legislation mandating women's correctional facilities in Maryland provide adequate menstrual products.[14] Students then divided into small groups to participate in an interactive activity discussing case scenarios of medical care in the prison system. Each group was given a set of letters written by incarcerated individuals that detailed those individuals' experiences with health care in the prison system (Appendix C). The depersonalized letters were provided to us with permission by the Maryland Prisoner's Rights Coalition. Several of the letters highlighted the bureaucratic and opaque systems individuals had to navigate in order to request medical appointments while in prison. Others provided testimonials from people with complex medical conditions who were unable to access specialists for adequate management of their disease or who were denied access to care altogether. The groups were tasked with reading each of their assigned letters and discussing how the patient's incarceration affected the care they received. Each group then reported back to the class as a whole with some of the main themes they encountered in the letters and the major take-aways from their group's discussion (Appendix D). As an assignment for the next week, students were asked to read the first two chapters of *The New Jim Crow* by Michelle Alexander.[15]

Session 3—the challenges of reentry: The final session of the course was a discussion led by Dr. Stanley Andrisse, a formerly incarcerated individual who is now a PhD scientist and faculty at Johns Hopkins. Dr. Andrisse spoke about his life story and experiences in prison and the obstacles he has faced pursuing higher education and a career in academia after his release (Appendix E). He also discussed his advocacy work to support returning citizens and the importance of education as a tool to empower formerly incarcerated individuals and reduce recidivism. Two formerly incarcerated people who worked with Dr. Andrisse's organization, From Prison Cells to PhD, were also present at the session to speak about their experiences with reentry. Of note, we compiled a facilitator's guide for the course which also included a list of how to organize a comparable in-person speaker experience in any state (Appendix F). As the final course assignment, members of the class were asked to write a reflection essay on what they took away from the course and how their views of incarceration and health care had changed. Detailed instructions for all weekly course assignments were included in the student handout (Appendix G).

Postcourse Evaluations

Members of the class were asked to complete two postcourse evaluations. The first evaluation was a general survey designed

by the Foundations of Public Health faculty to assess the different elective courses offered to first-year medical students (Appendix H). The second evaluation was specific to the Health Care in the Age of Mass Incarceration elective and assessed the impact of the course on students' knowledge and career goals in a retrospective pre/post format (Appendix I). The statistical analysis of the survey results was a paired *t* tests performed with Microsoft Excel. These surveys had the approval of the Johns Hopkins Medicine Institutional Review Board.

Results

In the inaugural year of our public health selective, 19 students enrolled in the course, and 20 students enrolled the following year. As shown in Table 1, respondents to general postcourse surveys administered by the Foundations of Public Health faculty ($n = 12$; response rate of 31%) reported either *outstanding*, *excellent*, or *good* levels of satisfaction with various components of the selective, including organization, learning activities, and student discussion. No students rated the course components as *fair* or *poor*.

A more specific retrospective pre/postevaluation for the course with 24 respondents over 2 years (response rate of 62%) asked learner to rate four items on a 10-point scale (1 = *very little*, 10 = *a lot*). Responses indicated significant increases ($p < .001$) in self-assessment of knowledge about mass incarceration in the United States ($M_{before} = 4.1$, $M_{after} = 7.2$) and incarceration health issues ($M_{before} = 3.8$, $M_{after} = 7.0$; Table 2). We also found that students reported a significant increase in interest in volunteering/advocacy work and providing health care for incarcerated and formerly incarcerated populations ($p < .001$).

The retrospective pre/postevaluation survey specific to the course also included several questions to obtain student feedback on reasons for choosing the selective, lessons learned, and future directions. Common reasons for enrolling in the selective included prior exposure to the topic, an interest in the social determinants of health, and insufficient knowledge about the topic after an introductory incarceration health lecture in the health care disparities course:

- "My father previously worked as a psychotherapist in a prison in Texas and talked a lot about the mental health issues that exist in this population and I wanted to learn more about how these issues were or weren't addressed."
- "I worked with the homeless and low-income housing population in LA. Was interested in the intersection between health, incarceration, and homelessness."
- "The lecture during our [health care disparities] course was very eye-opening for me and I really wanted to learn more about health care for the incarcerated population."

Students indicated heightened understanding of the historical and racial factors that contribute to mass incarceration, the inadequate health care provided to incarcerated people, and the need to address systemic issues in incarceration health. Several students explained their personal interest in engaging with incarcerated and formerly incarcerated populations in their future careers:

- "Mass incarceration disproportionately affects African-American males and is, in many ways, a propagation of the racism that has existed in the US since its conception. Because of this inhumane treatment, minority populations are suffering shockingly poor health outcomes."
- " ...Mass incarceration affects the health of entire communities, not just those immediately incarcerated."
- "[This selective] has definitely encouraged me to play a role in the health care within prisons because the people who are incarcerated are an especially vulnerable population that is abused by the system. Because the system is so broken, I have become aware of many ways that I can intervene from being the provider of care, to mentoring to advocacy and more."

While some respondents felt the selective provided more incarceration health content in the curriculum than they expected,

Table 1. Student Evaluation[a] of Foundations of Public Health Selective Experience: Health Care in the Age of Mass Incarceration[b]

Question	Outstanding (%)	Excellent (%)	Good (%)	Fair or Poor (%)
How do you rate student involvement in discussion during the sessions?	33	33	33	0
How do you rate the organization of sessions?	42	33	25	0
How do you rate the use of learning activities other than lectures?	67	25	8	0
What is your overall assessment of this selective?	42	42	17	0
How do you rate the appropriateness and value of the required assignment in the selective?	58	25	8	8
How do you rate the clarity of the learning objectives?	50	25	33	0
How do you rate the reading materials?	58	33	8	0

[a]Rated on a 5-point scale (1 = *poor*, 5 = *outstanding*)
[b]$n = 12$

Table 2. Student Retrospective Before/After Course Self-Assessment[a,b]

Question	Before Course *M* (*SD*)	After Course *M* (*SD*)	*P*
Level of knowledge about mass incarceration in the United States.	4.1 (±2.1)	7.2 (±1.6)	<.001
Level of knowledge about health issues affecting incarcerated and formerly incarcerated persons.	3.8 (±1.7)	7.0 (±1.6)	<.001
Interest in doing volunteer/advocacy work on behalf of incarcerated and formerly incarcerated persons.	5.4 (±2.2)	7.4 (±2.1)	<.001
Interest in providing care in a prison or jail in your future career.	3.8 (±2.2)	5.4 (±2.5)	<.001

[a]Rated on a 10-point scale (1 = *very little*, 10 = *a lot*)
[b]*n* = *24*

others suggested this topic should be covered in more depth and taught to all medical students in the class:

- "I think it does an ok job of it because it does bring it up which is better than most schools."
- "I have not heard anything about this topic, which is shocking considering we are in Baltimore. I would like to see some [more] guest speakers and presentations."
- "It is such a prevalent issue that I think everyone should be more exposed to, not just who chose this selective."

Lastly, both surveys included opportunities for students to provide recommendations for course improvement. Most responses for the course were favorable, though some students suggested allocating more time for student discussion and guest lectures:

- "Thank you for running this incredibly thought-provoking, and thoughtful, selective. From the review of the stories of people in the detention centers to the discussion with Dr. Stanley Andrisse, I left each class in awe at the strength of humans despite the adversity they face. This has been a highlight of the ethics course!"
- "Having more open discussion would be great. I learned a lot in the sessions but these were more passive (more lecture style than open discussion)."
- "I think the last session could have been timed better. I really wanted to hear the stories of the two men who were incarcerated, but their time was consistently cut short."

Discussion

In the country with the highest incarceration rate in the world,[16] it is inevitable that physicians will have patients who have either been directly involved with or otherwise affected by the carceral system. These patients face unique challenges to managing their health.[17,18] By providing an introduction to mass incarceration in the United States and its intersection with health, our curriculum left students feeling more knowledgeable about the impact that incarceration has on patients and more interested in engaging with the issue through volunteer work and patient care. This increased awareness serves as an essential foundation for students to become effective caregivers and advocates for this sizeable, but underserved population.

To orient students to the current landscape of health care issues for incarcerated people, our curriculum combined lecture-style introductions with assignments to review recent outside material on the topic. Students were exposed to a brief history of incarceration in the United States, the health care disparities that affect the incarcerated population, and the range of methods used to deliver health care to incarcerated people across the country (e.g., contracted private vendors, state-employed providers).[19] Students also learned about ethnoracial disparities in the carceral system, as well as the local context of incarceration where our hospital is located in Baltimore, Maryland. While these topics only scratched the surface of the intersection between incarceration and health, we carefully selected content that would contextualize the patients that medical students will be seeing as they train here in Baltimore, whether they were currently incarcerated, formerly incarcerated, or have a loved one who has been incarcerated.

Importantly, our curriculum also placed an emphasis on the perspectives of people who have experienced incarceration. The testimonials that students read and discussed, as well as the talks given by formerly incarcerated people provided case illustrations of what health care issues can look like behind bars or during the process of reentry, in line with our fourth learning objective. When solicited for open-ended comments about the course, multiple students commented positively about these firsthand experiences. Furthermore, previous research suggests that positive interactions with incarcerated people can decrease a medical trainee's preconceived negative biases toward the population.[20-22] Likewise, the pieces of our curriculum that highlighted the voices of directly affected people likely contributed to the students' increased interest in volunteering, advocacy work, or providing health care for incarcerated and formerly incarcerated populations, as reported in the evaluations. Given recent evidence for discrimination against patients with a history of incarceration in the health care provider community,[23]

efforts that remove stigma against these patients are especially important.

Time was a major limitation for this course; in two 1-hour sessions and one 1.5-hour session, it was impossible to fully examine the wide-ranging impacts of mass incarceration on health and health care provision. With more time, the curriculum could have included discussions about health care fields that are particularly influenced by incarceration, including reproductive health, mental health, and adolescent health. Students could have further explored how incarceration affects the health of loved ones, perhaps including direct testimonials from affected family members. Given that nearly half of Black women in the United States have a family member who is incarcerated,[24] students are likely to encounter these patients during their medical career. Due to time constraints, students also did not receive instruction from providers who had experience caring for people affected by incarceration. Although we chose to prioritize the perspectives of patients for this introductory course, providers could have shared insights and instruction to prepare students for clinical encounters with affected individuals. For example, developing the ability to discuss a patient's incarceration history appropriately could be crucial for managing their care.[25] While our introductory PowerPoint (Appendix A) included a slide on health disparities with facilitator notes for a discussion about taking an incarceration history, this topic would have been better addressed with a combination of provider instruction and standardized patient simulations.

Additional challenges encountered included a lack of publicly available data regarding the health of incarcerated and formerly incarcerated people. National- and state-level data describing the types of services provided behind bars, the mechanism of delivery, and associated health outcomes are typically unavailable.[26] Health care provision also varies from state to state and institution to institution, meaning it was important to avoid generalizations while simultaneously giving students a truthful sense of the breadth of existing patient experiences. For this reason, we felt that it was important to provide many direct anecdotes from patients as well as some local context, since students will be taking care of their first patients here in Baltimore.

Lastly, our chosen method of evaluation had limitations. Although students reported feeling more knowledgeable about mass incarceration and health issues affecting incarcerated individuals, an objective assessment of student knowledge would have allowed us to better evaluate student responses to our first three learning objectives, which all addressed knowledge of historical and current aspects of mass incarceration and health. Regarding our fifth learning objective—discussing how to be effective advocates—our student self-assessment showed increased interest among students but did not ask how students would choose to engage. For example, did students feel equipped to reach out to local organizations after the course? Additionally, it was important to recognize that this course was an elective, and that our sample size was small. Although all medical students who train in East Baltimore will likely encounter patients who have been affected by incarceration, only those who chose to take the course were exposed to our curriculum, potentially biasing our results. Furthermore, because the survey was administered solely as a retrospective pre/posttest, recall bias may have led students to underreport their precourse knowledge or interest, particularly if they enjoyed the course. By administering both a pre- and postcourse assessment, we could have circumvented this issue and potentially increased our response rate to the self-assessment. Optimally, we also would have sought formal evaluation of our curriculum by stakeholders who are affected by incarceration. While we received extensive feedback from a formerly incarcerated individual who was well versed in medical education, as well as a physician who previously practiced in a jail, it was difficult to assess whether we appropriately covered the range of experiences that fall at the intersection of incarceration and health.

Going forward, we envision that our curriculum could be used in combination with content addressing incarceration integrated longitudinally into medical training. For example, this year at Johns Hopkins, all first-year medical students attended a lecture about incarceration and health as part of their required health disparities course. Other possibilities include standardized patient experiences that involve incarceration, cases integrated into relevant units (e.g., psychiatry, infectious disease, reproductive health), and elective clinical experiences in jails and prisons, which are already available at some institutions. We would also encourage those who teach this course to incorporate material on current events relevant to incarceration and health into their curricula. For instance, future iterations of this course could explore the impact of COVID-19 on the health of incarcerated individuals and discuss policy changes that prisons and jails adopted in response to the pandemic.[27]

As mass incarceration continues to rise as a topic of national conversation, it will be increasingly important for physicians to understand the disparities affecting this population and the ways in which they can address these disparities, both in the clinical and advocacy arenas. Our curriculum is one effective way to

provide a necessary starting point for the next generation of providers.

Appendices

A. Introduction.pptx

B. Incarceration Hygiene Policy Video.mp4

C. Letters from Behind Bars.pdf

D. Questions from Session Two.docx

E. Reentry Discussion.pptx

F. Facilitator's Guide, Ideas for Speakers.docx

G. Student Assignment Handout.docx

H. General Course Evaluation.docx

I. Specific Course Evaluation.docx

All appendices are peer reviewed as integral parts of the Original Publication.

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Ethical Approval

The postsession surveys had the approval of the Johns Hopkins Medicine Institutional Review Board.

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