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Bridging the Expertise of Advocates and Academics to Identify Reproductive Justice Learning Outcomes

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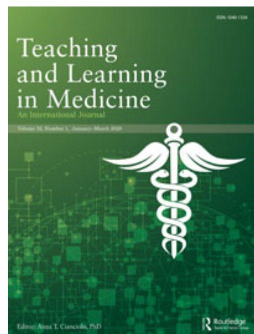

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GROUNDWORK

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Bridging the Expertise of Advocates and Academics to Identify Reproductive Justice Learning Outcomes

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ABSTRACT

Phenomenon: Reproductive justice (RJ) is defined by women of color advocates as the right to have children, not have children and parent children while maintaining reproductive autonomy. In the United States, physicians have been complicit in multiple historical reproductive *injustices*, involving coercive sterilization of thousands of people of color, low income, and disabilities. Currently, reproductive injustices continue to occur; however, physicians have no formal RJ medical education to address injustices. The objective of this study was to engage leading advocates within the movement using a Delphi method to identify critical components for such a curriculum. *Approach*: In 2016, we invited 65 RJ advocates and leaders to participate in an expert panel to design RJ medical education. A 3-round Delphi survey was distributed electronically to identify content for inclusion in an RJ curriculum. In the next 2 survey rounds, experts offered feedback and revisions and rated agreement with including content recommendations in the final curriculum. We calculated descriptive statistics to analyze quantitative data. A team with educational expertise wrote learning outcomes based on expert content recommendations. *Findings*: Of the 65 RJ advocates and leaders invited, 41 participated on the expert panel of the Delphi survey. In the first survey, the expert panel recommended 58 RJ content areas through open-ended response. Over the next 2 rounds, there was consensus among the panel to include 52 of 58 of these areas in the curriculum. Recommended content fell into 11 broad domains: access, disparities, and structural competency; advocacy; approaches to reproductive healthcare; contemporary law and policy; cultural safety; historical injustices; lesbian, gay, bisexual, transgender, queer/questioning, and intersex health; oppression, power, and bias training; patient care; reproductive health; and RJ definitions. The 97 learning outcomes created from this process represented both unique and existing educational elements. *Insights*: A collaborative methodology infused with RJ values can bridge experts in advocacy and academics. New learning outcomes identified through this process can enhance medical education; however, it is just as important to consider education in RJ *approaches* to care as it is knowledge about that care. We must explore the pedagogic process of RJ medical education while considering that expertise in this area may exist outside of the medical community and thus there is a need to partner with RJ advocates. Finally, we expect to use innovative teaching methods to transform medical education and achieve an RJ focus.

KEYWORDS
Reproductive justice; curriculum development; advocacy; health disparities

Introduction

Women of color introduced the concept of reproductive justice (RJ) in the 1990s when they sought to expand the reproductive rights discussion beyond abortion rights to address historical, social, and economic factors that affect reproductive health.[1] The term *reproductive justice* is defined by women of color advocates as "the human right to maintain bodily autonomy, have children, not have children, and parent the children we have in safe and sustainable communities."[2] An RJ framework highlights the need for all people—particularly people of color and

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lesbian, gay, bisexual, transgender, queer/questioning, and intersex (LGBTQI) people—to make reproductive choices free from discrimination, coercion, or undue governmental influence.[3] The RJ framework is distinct from the reproductive rights and reproductive health framework. The reproductive rights framework involves *protecting* a person's right to reproductive health services, whereas the reproductive health framework involves the *delivery* and expansion of reproductive healthcare. On a more fundamental level, RJ uses an organizing framework to *understand* and root out reproductive oppression to achieve human rights and social justice.[4]

One foundational component of the RJ framework is the understanding that historical reproductive injustices and current reproductive health disparities exist due to discrimination based on race, ethnicity, socioeconomic status, and gender and sexual identity. For instance, through the 1970s, physicians across the United States used coercive practices to sterilize more than 60,000 individuals who were low income, disabled, or persons of color.[1,5] A wide range of reproductive health disparities continue to exist in the United States, with higher rates of poor maternal health, preterm birth, and infertility, among other conditions being experienced by socially disadvantaged or marginalized populations.[6] More recently, there is increasing public awareness of how transgender communities are affected by bias in healthcare and new legal obstacles that threaten their basic primary healthcare needs.[7,8] Finally, structural barriers, such as differential access to food, clean water, housing, and transportation, compound the risk for poor health outcomes.[9–12] These past and current injustices underscore a need to incorporate RJ principles into healthcare, particularly because physicians have played a significant role in perpetrating these injustices.[13]

Currently, there is no formal focus in medical education on the principles of RJ or guidelines for how to apply them to care provision. Yet many medical associations recognize the need to diversify the physician workforce and works toward understanding how to care for diverse individuals.[14] An RJ curriculum could help build knowledge, develop skills, and change attitudes so that physicians understand how structural, economical, cultural, and political factors influence the patient experience and care delivery.[15] To that end, we wanted to develop a curriculum focused on RJ that could fill these gaps and be used within a variety of educational contexts.

One core concept of RJ is "nothing about us, without us"—meaning that any changes in services or policy should be made with direct involvement of members of the groups affected by the change.[16] Therefore, with the goal of incorporating RJ principles and framework into medical education, it was essential to engage RJ advocates and leaders as experts in identifying critical components of the curriculum. Here, we describe using the Delphi process to incorporate expert voices in defining RJ learning outcomes and specifying integrated cross-continuum curriculum delivery methods.

Methods

Before initiating this project, we formed an eight-member advisory board to oversee the project. The board was composed of RJ advocates and leaders, physicians, and medical educators. Board members were recruited based on expertise and experience, including leaders of prominent national RJ advocacy organizations (Appendix A) and with a goal of achieving racial, ethnic, socioeconomic, and professional diversity. The board met in a series of six phone calls, during which they discussed project goals, design, recruitment, and survey findings.

We asked each board member to review their broad interprofessional networks and recommend a list of RJ advocate peers to be invited to participate in curriculum development. We collated these lists, and the board reviewed all potential invitees, paying attention to factors such as geographic location; area of expertise; type of RJ work; and diversity of race, ethnicity, and gender, to select a final group of 65 individuals.

We surveyed RJ advocates and leaders using a Delphi method, a qualitative consensus-building method, to identify content necessary for an RJ curriculum for physicians. We used a Delphi method, as depicted in Figure A in Supplementary materials, to identify content for an RJ physician curriculum. The Delphi method is a consensus-building process that uses an anonymous iterative procedure to collect expert opinion, receive feedback, and collate and summarize findings.[17,18] This method aligned with RJ values in that it allowed a diverse group of experts to provide feedback and prevented one opinion from dominating. Medical education researchers have used the Delphi method to design new curricula in a range of areas, such as in geriatric medicine, intensive care, and clinical ultrasound education.[19–21] Typically, the first survey of the Delphi method anonymously collects opinions from an expert panel or a group with expertise in the topic area. Responses are combined and analyzed qualitatively. In the second survey, combined results are presented back to the same panel of

experts, who are asked to rate their agreement with each expert opinion using a rating scale. Qualitative feedback and additional opinions are also collected. Although there is no strict definition of consensus, many Delphi surveys define consensus as a 75% to 85% agreement rate among the expert panelists for any given topic. Results are collated and again presented back to the expert panel in a third round. In this final round, qualitative feedback is again collected, and items that did not previously meet consensus are rerated.[18] The University of Michigan Institutional Review Board determined that this study was exempt from human subject oversight.

To initiate the first Delphi round, we sent e-mail invitations to the sample of 65 RJ advocates and leaders selected by the board requesting their participation in a web-based survey about RJ curriculum development. The survey included a series of open-ended questions such as, "What should be included in a reproductive justice curriculum for physicians?" "What reproductive justice skills, processes, and practices (like identifying power and privilege or centering marginalized voices and experiences) ought to be included?" and "What does healthcare look like when provided through a reproductive justice lens?" Participants responded to these questions via open-ended responses to help identify content for the curriculum. Respondents were also invited to provide information about their age, geographic location, type of work, and length of engagement in RJ work. Other demographic data were requested, such as race, ethnicity, and sexual and gender identity via open-ended response so that participants were free to use their own words to provide this information. Survey participants were compensated for completing each survey with a gift card of their choosing, with a total compensation amount of $225 possible for completing the entire study. All those who completed the first survey were considered to be members of the "RJ expert panel," and it was this group that was invited to participate in subsequent surveys.

We performed qualitative content analysis of the first round of survey responses, with the assistance of the web-based qualitative data management platform Dedoose, to identify curriculum recommendations.[22,23] Four research team members developed a codebook by inductively and iteratively identifying codes after close reading of all survey responses. All four members independently coded survey responses and resolved any discrepancies through discussion and consensus. For each code, we composed a summative statement that captured the content recommendation. We present an example of this analytic process next.

Survey question: What should be included in a reproductive justice curriculum for physicians?

Sample of answers:

"A clear simple definition of RJ and one that differentiates it from reproductive health and reproductive rights."

"A basic understanding of the reproductive health, rights and justice framework."

"Deeper knowledge of RJ that includes all three components of the RJ framework."

We coded these responses as "Reproductive justice definitions." After reviewing all responses with this code, the team then developed a summary of the recommended content area: "a definition of reproductive justice and the RJ framework, including the distinction between reproductive health, reproductive rights, and reproductive justice."

Following this content analysis, recommended content areas were organized into broader thematic categories or content domains. The board subsequently reviewed all recommended content areas and domains generated by the first survey and identified any gaps or missing areas. Open-ended questions were written and inserted into the second survey to collect additional qualitative data about these content gaps.

In the second Delphi round, all results from the first round were presented to the RJ expert panel. Panel members were asked to rate their agreement with including each content area in the curriculum using a rating scale (*strongly disagree* to *strongly agree*). The panel was invited to suggest revisions to each content area and was queried about content gaps through open-ended responses. We used descriptive statistics to analyze the content inclusion rating data. We defined consensus as occurring when 85% of experts indicated that they "strongly agree" or "agree" that content should be included in the curriculum. Open-ended responses were analyzed using qualitative content analysis as just described—generating both revisions to existing content and new content areas that addressed curriculum gaps. The advisory board again reviewed and discussed results.

In the third and final Delphi survey, we presented ratings results from the second survey to the RJ expert panel so that panelists would be aware of where they agreed or disagreed on content. Next, we presented both revised and new content areas and asked the panel to rate agreement with including these in the curriculum. We asked experts to make final curriculum suggestions via an open-ended response. After

Table 1. Demographics of members of a Delphi method expert panel who made recommendations for a reproductive justice physician curriculum, 2016.

Demographic Variable	No. (%)
Age (Years)[a]	
20–29	3 (7.3)
30–39	13 (31.7)
40–49	11 (26.8)
50–59	8 (19.5)
$\geq$ 60	6 (14.6)
Number of years in the field[a]	
<5	2 (4.9)
5–10	14 (34.1)
11–20	12 (29.3)
> 20	13 (31.7)
Race and Ethnicity[a,b]	
White	11 (26.8)
Black	10 (24.4)
Latina	7 (17.1)
Asian	2 (4.9)
Indigenous	6 (14.6)
Multiple	5 (12.2)
Gender[a,b]	
Female/Woman	23 (56.1)
Cis-Gender Female/Woman	13 (31.7)
Male	3 (7.3)
Queer	2 (4.9)
Sexual Identity[b,c]	
Heterosexual	22 (57.9)
Lesbian	2 (5.3)
Queer	5 (13.2)
Bisexual	3 (7.9)
Multiple	6 (15.7)
Location[a]	
Northeast	12 (29.3)
South	9 (21.9)
West	16 (39.0)
Midwest	4 (9.8)
Type of work[d]	
Academic	3 (7.6)
Advocacy	14 (35.9)
Research	6 (15.4)
Combination	4 (10.3)
Other	12 (30.8)

[a] $n = 41$.
[b] As self-reported by panel members using open-ended responses.
[c] $n = 38$.
[d] $n = 39$.

this final survey, the research team analyzed qualitative and quantitative data, which the board also reviewed.

Results

We invited 65 RJ advocates and leaders to participate in the Delphi process, as depicted in Figure A in Supplementary materials. Forty-one completed the first survey, for a response rate of 63%, and were considered to be the RJ expert panel moving forward. Table 1 shows demographic information provided by the expert panel. The RJ expert panel primarily identified as female or cisgender female (88%) and as Black (24%), Latina (17.1%), Asian (4.9%), or Indigenous (14.6%). Most had worked in RJ for more than 10 years (61%) in a variety of fields, including advocacy (36%), research (15.4%), academia (8%), and "other" (41%), such as private clinical practice or health policy.

In Round 1 of the Delphi survey, the RJ expert panel recommended 55 content areas for the RJ curriculum. These areas were organized into 11 broad content domains: historical injustices; RJ definitions; oppression, power, and bias training; contemporary law and policy; access, disparities, and structural competency; cultural safety; LGBTQI health; reproductive health; patient care; approaches to reproductive healthcare; and advocacy training.

Historical injustices

According to our expert panel, it is important for physicians to have a foundation in the history of reproductive injustices in the United States so that their understanding of the history of oppressed populations can inform and enhance healthcare provided today. Recommended content in "historical injustices" focuses on both knowledge of the history of reproductive injustices in the United States and reflection on how to mitigate current reproductive injustices. One expert stated,

> First and foremost, a historical account of reproductive abuses, experimentation and oppression in communities of color, namely: Native American, African American, Asian American, and Latino, including the US Territory of Puerto Rico, where human experiments took place to test the contraceptive pill, foam, surgical procedures as well as rampant sterilization in all communities mentioned

In addition, experts expressed that it was essential for physicians to understand the role of the medical community in perpetuating these injustices. One expert stated that physicians should understand "medical professionals' (problematic and otherwise) involvement in the control of people's reproduction (e.g., Sims[1], treatment of institutionalized populations)." Another noted that physicians need to "more broadly explore the history of reproductive oppression and eugenics and how this has impacted poor women-identified and communities of color." Experts stated that imparting this knowledge was important and that physicians should take additional

[1]Dr. J. Marion Sims is considered by some to be the "Father of Modern Gynecology" for his invention of the Sims speculum and development of surgical techniques to repair obstetric vesicovaginal fistulas in the 1800s. His work is considered by some to be unethical, and some critics have called for this title to be reassessed. His patients, primarily enslaved Black women, did not provide informed consent for medical experimentation and did not receive anesthesia for surgical procedures.

steps to explore how clinical practice can be guided with this knowledge. "Instead of just reviewing the history of how medicine and public health have violated human rights and/or produced and perpetuated racism and sexism, and the curriculum should have a framework for presenting this information on WHY it matters."

Reproductive justice definitions

Building on this historical context, expert panelists remarked that familiarity with "Reproductive justice definitions" is essential for an RJ physician curriculum. Multiple experts stated that physicians should know "the difference between reproductive health, reproductive rights, and reproductive justice." One expert stated, "they [physicians] need to have a deep understanding that the RJ movement places reproductive health and rights within a social justice framework." Experts recommended education in a human rights framework, stating that medical care for pregnancy or contraception is a human right.

Oppression, power and bias training

The Delphi survey revealed that content in "Oppression, power and bias training" should be included in the curriculum. An expert stated that physicians should be educated in "social theory on power and privilege in society, especially the power of professionals." Another noted that physicians need to "dismantle the power hierarchy … [coming] from a place of ultimately having charge and control over people's bodies, decisions and outcomes," highlighting the need for physician self-reflection on power. An ideal RJ curriculum would shift attitudes around implicit bias with physicians "becom[ing] deeply acquainted with their own social location and implicit biases and how that may impact the care they provide." This might include self-reflection and modification of attributes, with one expert stating that physicians should have training in "self-assessment of bias toward people of other nationalities and gender identities." Finally, experts stated that physicians should be skilled in shifting power differentials, one stating that "this would require leaders in medicine who are willing to shift, and basically give up, power."

Contemporary law and policy

Several content areas highlighted the need to acquire knowledge around contemporary law, justice, and rights—categorized as "Contemporary law and policy." One expert felt that "basic legal/ethical issues such as the conscience clause and Hyde amendment" should be covered in the curriculum. Another said to include "exposure to some advanced legal subjects like informed consent and the constitutional right to privacy and cases having to do with gay people, like Bowers v. Hardwick and Lawrence v. Texas." RJ education would include education in pregnancy criminalization, including "policing and prosecution of pregnant women for conduct during pregnancy (drug use, car accidents, falling down stairs, suicide, etc.); and privileging of fetal personhood over women's autonomy," according to another RJ expert. Multiple experts recommended training in advanced informed consent issues, stating that pregnancy or reproductive health are not exceptions to informed consent or patient–provider privilege.

Access, disparities, and structural competency

RJ experts recommended education categorized as "Access, disparities, and structural competency" for the curriculum. An expert stated that physicians should learn "how to investigate the social determinants of health that can contribute to and exacerbate health disparities." Several experts identified that learning about social determinants of health was an essential component of an RJ curriculum. Experts felt that it was important to link content in reproductive health disparities to content in healthcare access. One respondent stated that physicians should learn about the "impact of race, gender, class, ability on peoples' access to healthcare." In addition, panelists identified that it would be important for learners to understand structural competency, or how structures such as transportation, food, and access to healthcare facilities contribute to health disparities. One expert stated, "the other social disparities (e.g., education, housing, drug treatment, immigration) provide social context in which reproductive decisions are made."

Cultural safety

Panel members suggested content in "Cultural safety," which focuses on respecting and accepting differences in cultural identity, to provide RJ-informed care.[24] One expert stated that it was important to teach cultural safety instead of cultural competency because

> cultural competency movement, while well intentioned to acknowledge differences, has been extremely detrimental in promoting stereotypes, in reducing what

> people see as patients' 'health related behaviors' as individual choices based on stereotypical cultural beliefs and values, rather than recognizing structural forces.

One expert explained that cultural safety content was particularly important in indigenous healthcare, stating,

> This understanding should span all the way from cultural understanding (e.g. allowing indigenous patients and their families to practice traditional ceremonial ways and burn sage, etc.) to the history of the relationship between Western medicine and indigenous communities.

Although knowledge about cultural safety is a key content area, respondents identified that physicians need to acquire skills and attributes to aid in providing culturally safe reproductive healthcare, remarking that it is essential to "work with the patient rather than disregarding people's practices."

Patient care

Experts felt not only that content in cultural safety was important but also that its application in the content domain of "Patient care" could improve clinical interactions with patients. Experts recommended basic skills that are typically included in medical education, such as communicating "balanced information: including info about both harm and benefit" and instruction on "bias-free and non-judgmental listening and communication styles." One expert highlighted the importance of learning about "principles and practices of nonviolent communication." Some experts noted that developing good communication skills could help with care of marginalized populations, with one stating,

> I think if physicians can talk with native folks about their sexuality and sexual health in ways that don't contribute to shame or judgment, it would greatly increase native folks' willingness to ask questions and maybe to seek service sooner than later.

Reproductive health and LGBTQI health

The RJ expert panel stated that all physicians should receive education in core areas of "Reproductive health" and "LGBTQI health." Experts stated that physicians "would need to understand the difference between sex and gender" and should be "inclusive of LGBTQ and gender non-conforming people." Transgender healthcare was highlighted as an important part of general medical education. Experts stated that medical education should include content in general sexual health and adolescent health.

Approaches to reproductive healthcare

Respondents reflected that certain approaches to reproductive healthcare could be informed by RJ values, categorized as "Approaches to reproductive healthcare." One stated that physicians should "operate under the trauma informed care model concept at every opportunity to understand how trauma increases their patient's risk for reproductive injustices." Another emphasized the importance of teaching "the midwifery model and benefits of collaborative maternity care." Many experts stated that content intersectionality was needed so that physicians "can understand the implications of racial, economic, and gender injustice as central to well-being." RJ-informed reproductive healthcare was described as "patient-centered" and requiring "allyship."

Advocacy training

Finally, experts recommended curricular content in advocacy, categorized as "Advocacy training." Several experts felt that this training could involve collaboration with their own advocacy work, building on content knowledge to gain advocacy skills. One stated, "Physicians can contribute to our advocacy work by understanding RJ and how they may contribute to these injustices within their medical practices. This ensures a level of individual advocacy on behalf of the movement that will be invaluable."

Another expert identified attributes to be addressed in physician advocacy education, writing, "Physicians must respect, embrace, connect, and collaborate with community workers and members of the community when implementing practices for women and women's, rights." Finally, experts indicated that physicians could leverage leadership skills and positions of influence to enhance the understanding of RJ and benefit the RJ movement.

We next prepared for the second round of the survey and shared qualitative analysis results and categorization of content domains to the board for review. The board identified the following content gaps: transgender care, fertility care, menopausal care, environmental justice, and ethics—which were all incorporated into the second survey. The second survey was completed by 35 members of the 41-member RJ expert panel (85% response rate), who rated their agreement with including 55 content areas in the curriculum, suggested revisions, and responded to open-ended questions. Of the 55 recommended content areas, experts reached consensus to include 48 in the RJ curriculum (second results column, Table 2 in supplementary material). Following qualitative analysis of

open-ended responses, the team revised the seven areas that did not meet consensus and added three new content domains: prenatal care, environmental health, and fertility services.

In the third and final survey, 34 of 41 members of the RJ expert panel completed the survey (83% response rate). The panel agreed that two of the seven revised and two new recommended content areas should be included in the curriculum (third results column, Table 2 in supplementary material). At the conclusion of the third Delphi survey, the RJ expert panel agreed to include 52 of the 58 recommended content areas in the curriculum.

Throughout the process, panel members expressed steadfast support for the development of an RJ curriculum as they entered recommendations in the first round of the survey and indicated a desire to collaborate further when asked for additional comments about the curriculum in the third round of the survey. Respondents described the Delphi research process itself as "comprehensive," "very thorough," and "amazing." They overwhelmingly agreed that RJ training is important for physician education. One stated, "I think it can encourage physicians to make new connections with organizers, direct providers, and other health experts to create a comprehensive and holistic form of care." In addition, many panel members offered reading materials or media that could be used as curricular material, including texts on historical injustices like Dorothy Roberts's *Killing the Black Body* and Harriet A. Washington's *Medical Apartheid* and video content such as the films *No Más Bebés* and *Vessel*. However, some experts wondered about the approach to education, with one suggestion "to focus less on the comprehensiveness of the topics covered and more on the principles that should guide what commitment to repro[ductive] justice looks like in practice."

Finally, two medical educators reviewed all 58 content areas and, through an iterative process, created 97 learning outcomes for the RJ physician curriculum (Table 3 in supplementary material). The team indicated whether each learning outcome would teach knowledge, skills, or attributes. In addition, learning outcomes were labeled to reflect whether they represented existing or new medical education, with 36 of 97 learning outcomes (38%) representing new education.

Discussion

Our study revealed that it is possible to bridge those working in advocacy and academic silos to work together in designing a RJ curriculum. We were able to achieve this because our project adhered to RJ values by including a diverse group of experts, leveling power differentials through an anonymous process, and considering all opinions. In addition, all participants were deeply committed to RJ education, given the role of physicians in historical and ongoing injustices in reproductive healthcare and the opportunities for physicians to contribute to culture change. The intended learning outcomes created by this research are comprehensive, insofar as they include some broad learning outcomes commonly taught in medical education, as well as new outcomes specific to an RJ curriculum that can add to or enhance existing curricula in undergraduate medical education (UME), graduate medical education (GME), and professional medical education. The learning outcomes and the collaborative relationships resulting from this research are important building blocks for developing an innovative curriculum grounded in RJ values.

We have an exciting opportunity to develop new curricular elements that can truly enhance medical education, even beyond reproductive healthcare (Table 3 in supplementary material, shaded learning outcome.) New curricular content developed for learning outcomes can provide knowledge and skills to learners in the domains "Historical injustices," "Reproductive justice definitions," "Contemporary law and policy," and "Access, disparities, and structural competency." Understanding the past and current RJ issues and learning to apply a RJ framework can inform improvements to reproductive healthcare and identify goals for reproductive health research.[13,25,26] In addition, structural competency has been recognized as an important component of reproductive health educations because of the prominence of racism and bias in reproductive healthcare.[12,27] Thus, it is important for learners to understand and explore how race, socioeconomic status, sexual identity, and culture affect health and healthcare, and how structural factors, such as housing, food sources, and transportation, may influence health. Moreover, educational materials can aid learners in achieving core competencies within an interprofessional sexual and reproductive health curriculum by applying an RJ framework to reproductive health.[28] Content in these areas will provide the groundwork that will allow us to focus on building skills and adjusting attitudes to recognize and combat reproductive injustices in all types of clinical care.

Our study highlights the importance of teaching *approaches* to patient care—rather than rote

knowledge—that are consistent with RJ values and will transform reproductive healthcare. Training in RJ informed care requires the learner to synthesize knowledge, skills, and attributes learned through different models of care, such as patient-centered care, the midwifery model of care, and harm reduction. Teaching these types of care will likely require a combination of apprenticeship, clinical skills teaching, didactics, and simulation. Regarding education in "Oppression, power, and bias training," the RJ expert panel emphasized a need for learners to self-reflect on their own biases, power, privilege, and training process to change attitudes around *how* reproductive healthcare is provided. Although implicit bias training is a growing area for undergraduate learners to self-reflect and learn to mitigate bias within patient encounters, RJ advocates can inform curricular design using their extensive experience with this training as it applies to reproductive health and advocacy.[29–31] Our respondents also indicated that self-reflection should explore how traditional medical training desensitizes physicians to their own human rights and how that may impact the physician–patient relationship. Finally, it is important to consider how an RJ curriculum may teach about human rights—particularly that healthcare is a human right. Adjusting learner attributes will likely require innovative teaching techniques to consider personal experiences, probe assumptions, and identify personal strengths and weaknesses through self-reflection.

Fortunately, many core components of medical education will serve as resources for learning outcomes in several domains identified by the expert panel and will not require novel curricular development. (Table 3 in supplementary material, no shading). In 2014, the American Association of Medical Colleges published a core set of behaviors—the Entrustable Professional Activities (EPAs), or tasks that medical students are expected to perform independently to proceed to residency and beyond.[32] The first core EPA for entering residency, "Gather a history and perform a physical examination," includes using patient-centered interview skills, respecting autonomy, and demonstrating cultural awareness. In addition, it notes that the physical exam should be conducted to respect privacy. Similarly, our expert panel stated that physicians should "build verbal and nonverbal communication skills," "provide comprehensive counseling," "maintain confidentiality," and "create a safe space" when communicating with patients. They also recommended coordinating with "interpreter services," "social work," and "referral to community resources" as important skills for physicians, which are consistent with the EPAs regarding transition of care and collaborating on an interprofessional team. Likely influenced by reproductive injustices that lacked proper informed consent, the expert panel stated that physicians should be familiar with the informed consent process, which is consistent with EPA 11—"obtain informed consent for tests and/or procedures." Although each medical school designs its curricula based on the needs of its learners, the vision of the school, and the strengths of the faculty, each institution must teach knowledge, skills, and attributes to achieve these core EPAs. We therefore suggest that content in the domain "Patient care" may not need to be newly developed, or just require enhancement for the purposes of developing an RJ physician curriculum.

Beyond patient care, there is additional UME that exists or is being developed and can be adapted for the curriculum.[29,33,34] For example, our experts suggested a number of learning outcomes within "Reproductive health" related to adolescent health, fertility care, and abortion care because of reproductive injustices that occur in these areas. They also recommended learning outcomes related to "LGBTQI health." Most of this content already exists in UME, and definitions of sexual and gender identities and the basics of transgender healthcare that are taught can be expanded to achieve RJ learning outcomes. In addition, most UME includes specific content about healthcare access, health disparities, and social determinants of health.[35] Although most education in social determinants of health includes information about how class, education, and employment impact health, the World Health Organization also emphasizes including privilege as a social determinant to work toward health equity.[36] Other educators have used privilege training through a social determinants framework to successfully alter learner attributes, which can be adapted and incorporated into an RJ curriculum.[37] The education community has an opportunity to build upon existing curricula to purposefully align with a cultural safety model, as recommended by our experts. Ultimately, we anticipate being able to use or modify existing educational tools to provide learners with the knowledge, skills, and attributes that will enable them to provide comprehensive reproductive healthcare to marginalized groups.

An RJ curriculum can also teach each of the core competencies at the GME level. In Table 2, we show how RJ domains identified in our study are aligned

Table 2. Alignment of reproductive justice physician curriculum content domains, as identified using a Delphi method in 2016, with educational core competencies.

Reproductive Justice Curriculum Categories	Patient Care	Medical Knowledge	Systems-Based Practice	Interpersonal and Communication Skills	Professionalism	Practice-Based Learning and Improvement
Historical Injustices		●				
Reproductive Justice Definitions		●				
Oppression, Power, and Bias Training		●		●	●	
Contemporary Law and Policy		●	●		●	
Access, Disparities, and Structural Competency		●	●		●	
Cultural Safety	●			●	●	●
Patient Care	●	●		●	●	●
Reproductive Health	●	●				
LGBTQI Health	●	●	●	●	●	
Approaches to Reproductive Healthcare	●			●	●	●
Advocacy Training			●	●		●

Note: LGBTQI = lesbian, gay, bisexual, transgender, queer, and intersex.

with GME core competencies.[38] Learning outcomes in the domains "Reproductive justice definitions" and "Historical injustices" likely represent new knowledge areas that are not covered by traditional GME curricula. However, the remaining content domains can provide essential education needed for core competencies. For example, content developed for the learning outcome "Integrate advocacy into clinical practice at the community, health system, state, or federal levels" could provide knowledge and skills to achieve competency in Systems-Based Practice and Interpersonal and Communication skills. In addition, education related to the RJ domain "Cultural safety," which would emphasize responsiveness to diversity and incorporating cultural beliefs into shared decision-making, could teach attributes and skills within Interpersonal and Communication Skills and Professionalism. Thus, incorporating RJ knowledge, skills, and attributes into GME can help learners achieve necessary competencies without significant change to existing curricula. In addition, the content is applicable across many GME programs well beyond obstetrics and gynecology, family medicine, and pediatrics.

Strengths of this study include its success in establishing a multidisciplinary and inclusive team to identify curricular components centered on learning outcomes for an RJ curriculum within medical education. The Delphi process enabled us to draw on the wisdom and experience of more than 40 experts who have defined and built the RJ movement over the past 30 years. In addition, this methodology allowed us to collect multiple opinions and maximize input from a diverse panel that included community-based advocates, as well as professionals and academics, to obtain consensus. The methodology of this project was aligned throughout with RJ values that maximized inclusion and built relationships for future collaboration.

There are, however, limitations of our Delphi survey process. Panel members lacked expertise in medical education, including how this education could be integrated into existing structures. Despite this limitation, many of the RJ experts had experience with education in their work as advocates or worked as professional educators themselves. Members of the advisory board with medical education expertise were therefore able to adapt recommended content into a medical education framework. In addition, we chose to focus this research on physician education rather than health professional education in general. We recognize, however, that it is important for all healthcare professionals to have a basic understanding of RJ, because they too will care for patients who may be subject to reproductive injustices. We anticipate that the learning outcomes we developed in this research can inform curricular development in any health professional education. In addition, there are opportunities to design interprofessional education for several learning outcomes, and we look forward to future collaborations to build educational content together.

Moving forward, we plan to collaboratively design and build functional curricular elements around the identified RJ learning outcomes with a team of medical educators and RJ experts and leaders. Additional work will map existing curricular materials to RJ learning outcomes so that we can focus on designing and implementing new curricular elements. Education leads could blueprint their own curricula by comparing it to the recommended RJ curricula, and where gaps in curricular experiences exist, engage content experts to help create additional educational opportunities.

It is essential that we adhere to the core principles of the RJ movement and center the curriculum around marginalized populations, combat

reproductive control, shift power hierarchies, and use a human rights framework.[39] To build on the enthusiasm expressed during this Delphi process, we plan to hold an in-person expert meeting to discuss the pedagogic process of RJ training, particularly because this survey focused mainly on the content for the curriculum. We anticipate discussing the challenges of shifting power dynamics in academic institutions, incorporating patient stories into RJ education, allyship, and deciding *who* will teach this content—because RJ expertise lies largely outside of the medical education community. We anticipate continuing to build collaborative relationships so that RJ experts can oversee curriculum design and be included in the delivery of content—through video-based curriculum, webinars, or potentially even massive open online courses. Ultimately, our aim is to join a movement in transformational education that grows leaders who collaborate, break down hierarchies, and are accountable to the local and global communities.[40]

Disclosures

None

Ethical approval

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Disclaimer

None

Previous presentations

Fellowship in Family Planning Annual Meeting, June 2017, San Diego, CA

AAMC Learn Serve Lead, November 2017, Boston, MA

Sistersong Let's Talk about Sex, August 2017, New Orleans, LA.

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Appendix

Advisory board members involved in identifying components for a reproductive justice physician curriculum.

Name	Title	Organization
Lisa H. Harris, M.D., Ph.D.	Associate Professor	University of Michigan Medical School
Laura Jimenez	Executive Director	California Latinas for Reproductive Justice
Charisse Loder, M.D., M.Sc.	Clinical Lecturer	University of Michigan Medical School
Zakiya Luna, M.S.W., Ph.D.	Assistant Professor	University of California, Santa Barbara
Nancy Rosenbloom, J.D.	Director of Legal Advocacy	National Advocates for Pregnant Women
Loretta Ross	Co-founder Visiting Professor	SisterSong Women of Color Reproductive Justice Collective Hampshire College
Caren Stalburg, M.D., M.A.	Associate Professor	University of Michigan Medical School