Design, implementation, and evaluation of the first year of an anti-racism curriculum for a family medicine residency program in Atlanta, GA

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Abstract

Background: Racism in medicine is a recognized problem that contributes to health care disparities.

Objectives: This curriculum was designed to educate primary care residents by providing the historical perspective to understand racism in medicine while also giving them the tools to work towards deconstructing and reconstructing the systems that propagate racism.

Methods: To evaluate the curriculum, from 2021-2023, a mixed-methods approach was used consisting of (1) pre- and post-curriculum surveys for learners, (2) focus groups discussions (FGDs), and (3) examination of change in change in hemoglobin A1c (HbA1c) values among patients of color.

Results: Four FGDs (24 residents/faculty) indicated that although residents felt an anti-racism curriculum would be useful, some were doubtful about how effective it would be. Most requested that any teaching be evidence-based and action-oriented. Twenty-five of 27 (93%) of residents and students rotating with the program at that time responded to the pre-curriculum survey, and 18 of 25 (72%) participated in the late-curriculum survey. Aftercompleting the curriculum, residents had greater awareness of the problem. Most felt more prepared to deal with racism in their practice. With respect to patient-oriented outcomes, HbA1c did not change among black vs non-black patients but did decrease for Hispanic vs non-Hispanic patients.

Conclusions: Based on this preliminary evaluation, implementation of an anti-racism curriculum for primary care residents was perceived to be effective by the residents at teaching anti-racism concepts and may have led to small improvements in the health of patients in the residency clinic.

Discussion: Ongoing quality improvement and sustainability efforts are needed.

Background

Family physicians across the United States (U.S.) comprise the frontline of medical care for large portions of the population including many underserved and underinsured patients (Bazemore et al., 2019). Providing family medicine physicians with the tools they need to combat racism can play an important role in decreasing disparities (*Enhance Racial Disparities Training, Say Primary Care Residents*, n.d., *White Docs Can – and Should – Address Racism in Health Care*, n.d.). The skills of primary care educators to effectively teach about anti-racism have also been called into question (Vass & Adams, 2020). Both the American Academy of Family Physicians (AAFP) and the Society for General Internal Medicine (SGIM) have developed tools to help educators design curricula to accomplish this (*AAFP Promotes Health Equity Curricular Toolkit*, n.d., *SGIM Forum - SGIM Forum Newsletter*, n.d.). Despite these calls to action, only a small number of graduate medical education programs report implementing curricula to help learners improve awareness about racial and ethnic disparities (Hasnain et al., 2014).

Strategies for teaching residents to combat racism include knowledge improvement techniques, competency-based curricula, and increasing underrepresented minorities in medicine (Stowers et al., 2020). Studies show that residents believe that the implementation of such a curriculum would be useful for their development as effective physicians (Taylor et al., 2019). This study aimed to design, implement, and evaluate an anti-racism curriculum for a community-based family medicine residency program in the Southeastern United States.

Evidence base

Components of the curricula described in the literature include lectures, direct patient experiences, longitudinal experiences, and increased diversity of the residents and faculty (Eddy & Labuguen, 2002; SCL Health, n.d.; Zweifler & Gonzalez, 1998). Some of these curricula also include descriptions of curricular evaluations (Guh et al., 2019). These studies rarely assess patient-oriented outcomes. Implementation of knowledge- and competency-based anti-racism curricula in family medicine residency programs increases knowledge and confidence in addressing the problem of systemic racism in medicine and racial disparities in health. Wolff et al. (2007) demonstrated that a competency-based curriculum improved resident capabilities (Wolff et al.2007); while Dennis et al (2019) showed that lecture curriculums and workshops changed knowledge and attitudes, increased awareness and understanding of racism in medicine (Dennis et al., 2019)

A randomized trial evaluating virtual skills-based courses to improve cultural competence showed improved scores on the Cultural Competence Assessment Tool. Implicit bias training for faculty and residents led to a feeling of empowerment among participants to address racism and racial disparities in health. Future family medicine residency anti-racism curricula should include this as part of their measured outcomes.

Problem statement and objectives

Although process outcomes have been examined and documented for multiple anti-racism curricula, the question remains: Do patient-oriented outcomes demonstrate that these curricula benefit the populations served and for whom they aim to ultimately improve health?

The main objectives of this project were to design, implement, and evaluate an anti-racism curriculum for family medicine residents. The hypothesis was that implementation of the curriculum would decrease disparities among clinic patients and provide a learning experience for residents.

Methods

Curriculum design and implementation

Timeline

From June 2021 to July 2022, the first year of programs anti-racism curriculum was implemented. Evaluation of the program also began during this period with pre-curriculum surveys being conducted in July of 2021 and late curriculum surveys in February of 2022. Focus groups were also conducted mid-way through the curriculum in winter of 2021–2022. De-identified data for patient-oriented outcome were extracted from the medical record from the three months prior to curriculum implementation (April through June of 2021) and the three months after the first year of the curriculum was completed (July through September of 2022). These data were made available to the authors and analyzed in the summer of 2023.

Target populations

Two target populations exist for this curriculum, including (1) the medical residents in the program, and (2) the patients they serve in the clinic and at the hospital.

The medical residents in the program consist of six residents per year, mostly between the ages of 24 and 34. They have diverse racial and ethnic backgrounds and most attended medical schools in the continental U.S., Caribbean, or Canada. The community served by the residency outpatient clinic is the county where the outpatient clinic is located and where residents and faculty care for patients. According to census data from 2019, the population was approximately 300,000 people with a population density of approximately 2,000 people per square mile. The median age is 34, and 63% of the population are 18–64, 10% are over 65, and 27% are under 18. Fifty-three percent are female. For race and ethnicity, 9% are white, 69% black, 5% Asian, 13% Hispanic, and 4% identify as two or more ethnicities. The per capita income and median household income are approximately $21,000, and $51,000 respectively (below the US as a whole). About fifteen percent of the population lives below the poverty line, with about 23% of children under 18 and about 11% of those above 65 living under the poverty line. Only 6% have a postgraduate degree, but 83.7% have a high school diploma or higher (slightly lower than the national rate, which is 88.6%), and about 19% have a bachelor's degree or higher (lower than the rate of 33.1% for the U.S.) (US Census Bureau, 2022).

Stakeholders and resources

Stakeholders for this curriculum included patients, medical students, residents, faculty, and staff at the outpatient clinic, and the healthcare institution as a whole. Resources for this project included the time needed from the faculty champions to design and implement the curriculum, and the time of the residents and medical students who participated in the curriculum. A small grant was also obtained to help support $1000 honoraria each for the outside speakers - experts on critical race theory. Given the common practice of expecting and asking Blacks lead the fight against racism without compensation, we felt this was important.

Curriculum Structure

The curriculum consisted of the following activities: (1) One grand rounds lecture every two months with an anti-racism theme, conducted by an expert in racism in medicine. (2) One Balint session every 6–9 months focused on anti-racism. Balint groups focused on discussing patient-related race issues once every other month; discussions were meant for resident reflection and were not recorded or analyzed. (3) One-hour sessions at the start, middle, and end of each year where residents discussed how the curriculum was going and how it could be improved. (4) Assigned readings for selected sessions and a resource list for residents to pursue further reading on their own if desired (See Appendix A - Curriculum).

Learning objectives

Learning objectives were as follows: (1) Understand the United States' racist roots. (2) evaluate how racism and our current medical system have shaped our narrative about disparities. (3) Identify racism in healthcare and health services research, and (4) Create tools for healthcare professionals to counteract existing racism and dismantle structures that perpetuate racism. The learning priority was ensuring that residents have the tools to confront racism, teach those tools to others, and be motivated to continue learning and teaching even after they finished the curriculum.

Lecture topics

Lecture and reading topics included: the history of racism and racism in medicine, implicit bias, micro-aggressions, allyship, bystander training, social determinants of health, race in medicine, the intersectionality of race and gender and how they affect medicine, racial disparities in the COVID-19 Pandemic, and racial disparities in selected disease outcomes (e.g. weathering).

Curriculum Evaluation

Focus groups

Focus groups were conducted partway through the curriculum's first year in 2021. The focus groups were separated by self-identified race to allow for open discussion. A semi-structured guide was used to facilitate discussion. Qualitative analysis was done to determine common themes and sub-themes. Open coding was used to identify recurring themes and was done by hand in Microsoft word.

Survey

We used surveys before (in summer of 2021) and during (early 2022) curriculum implementation to assess the residents' perception of curriculum effectiveness. These surveys were de-identified and no personal information was collected. Data from surveys were analyzed descriptively.

Patient-oriented outcomes

Three patient-oriented outcome measures were planned. The specific outcomes were chosen as previous data suggested racial disparities within the community existed. First, the change in colon cancer screening rates among Black patients in the resident clinic: the percentage of eligible patients who were up to date on their colon cancer screening before the curriculum started was compared to the percentage of eligible patients who were up to date on their colon cancer screening after the curriculum ended. The change in percentage among Black patients compared to the change in other groups (e.g. White, Hispanic, and Asian) was also a planned measure.

The second was the change in hemoglobin A1C (HbA1C) levels among Black patients with diabetes from before to after curriculum implementation. The average change in HbA1C in Black patients was compared to the average change for White, Hispanic, and Asian patients.

The last was referrals to nephrology among Black patients with CKD from before to after the implementation of the curriculum. The referral rate among Black patients compared to that for White, Hispanic, and Asian patients was also a planned measure.

Ethics

Approval for curriculum evaluation using surveys, focus groups, and patient oriented outcomes evaluation was sought and obtained from the Wellstar IRB.

Results

Major challenges

Of the planned data collection, only partial data could be collected due to staffing shortages within the healthcare system and staff turnover during the COVID pandemic. End of year surveys and focus groups as well as two out of the three patient-oriented outcome measures were never completed.

Qualitative results of focus groups

One hundred percent of residents and faculty voluntarily participated in four focus groups groups of 6 (24 total). The first focus group identified a number of themes: (1) The majority of residents were in favor of having an anti-racism curriculum. (2) Most residents had some in experience with anti-racism teaching but thought that more would be useful. (3) Most residents felt that racism affected them and their patients. (4) Residents were concerned that anti-racism instruction might take away from learning in other medical topics. (5) Residents hoped the curriculum would better prepare them to discuss racism with patients and colleagues. (6) Residents preferred interactive sessions over straight lectures and in general hands-on experience or case studies. (7) Residents reported that they wanted to learn fact-based knowledge such as history and the evidence base for how racism affects health in disparate ways.

Quantitative results of surveys

For the surveys, 25 of 27 (93%) of residents and students rotating with the program at that time responded to the pre-curriculum survey, and 18 of 25 (72%) participated in the late-curriculum survey. Quantitative analyses showed no difference from pre-curriculum to mid-curriculum in resident responses to questions about demographics; however, there was a shift to greater percentages of residents believing that racism plays a role in medical outcomes and has an effect on them and their patients, and a belief that they are better prepared to combat racism in medicine (Table 1).

Table 1
Participant demographics, reported patient racial/ethnic mix, perspective on racism's role in practice — pre- and late-curriculum

	Pre-curriculum	Late-curriculum
	n = 25	n = 18
	n (%)	n (%)
How do you classify your own race/ethnicity? (Check all that apply)		
Black	10 (40)	9 (50)
White	7 (28)	4 (22)
Asian	7 (28)	4 (22)
Hispanic	1 (4)	1 (6)
	Average %	Average %
What percentage of your patients are*:		
Black	68	69
Hispanic	7	9
Asian	6	4
Pacific Islanders	1	1
Native American	0	1
White	19	15
Other	1	2
	n (%)	n (%)
How old are you?		
25–45	22 (88)	15 (83)
46–65	3 (12)	3 (17)
What is your preferred gender?		
Male	13 (52)	9 (53)
Female	12 (48)	8 (47)
How prepared do you feel to combat racism in your medical practice?		
Very	5 (21)	4 (22)
Somewhat	16 (67)	14 (78)
Unsure	3 (12)	0
Not much	0	0
Not at all	0	0
Do you think racism exists in our society?		
Very much so	21 (84)	17 (94)
Somewhat	4 (16)	1 (6)
Unsure	0	0
Not really	0	0
Not at all	0	0
Do you feel that racism exists in medicine?		
Very much so	16 (64)	17 (94)
Somewhat	6 (24)	1 (6)
Unsure	3 (12)	0
Not really	0	0
Not at all	0	0

	Pre-curriculum n = 25	Late-curriculum n = 18
Do you feel that racism contributes to inequalities in outcomes among your patients?		
Very much so	15 (60)	13 (72)
Somewhat	5 (20)	4 (22)
Unsure	3 (12)	1 (6)
Not really	2 (8)	0
Not at all	0	0
How likely are you to consider racism in your day-to-day practice while seeing patients?		
Very	11 (44)	9 (50)
Somewhat	8 (32)	7 (39)
Unsure	2 (8)	2 (11)
Not much	3 (12)	0
Not at all	1 (4)	0
Do you feel like you know how to access anti-racism resources to use in your day-to-day practice?		
Very much so	0	2 (11)
Somewhat	12 (48)	10 (56)
Unsure	4 (16)	6 (33)
Not really	8 (32)	0
Not at all	1 (4)	0
How much of an effect do you feel racism has on your patients?		
A lot	11 (44)	11 (61)
Some	10 (40)	6 (33)
Unsure	2 (8)	1 (6)
Not much	2 (8)	0
None at all	0	0
How much of an effect do you feel racism has on you?		
A lot	5 (20)	4 (22)
Some	13 (52)	10 (56)
Unsure	4 (16)	3 (17)
Not much	3 (12)	1 (5)
None at all	0	0
How prepared do you feel to discuss racism with your patients?		
Very	5 (20)	6 (33)
Somewhat	13 (52)	9 (50)
Unsure	4 (16)	2 (11)
Not much	3 (12)	1 (6)
Not at all	0	0
How prepared do you feel to discuss racism with your colleagues?		
Very	5 (20)	6 (33)
Somewhat	20 (80)	8 (44)
Unsure	0	3 (17)
Not much	0	1 (6)
Not at all	0	0

	Pre-curriculum n = 25	Late-curriculum n = 18
How prepared do you feel to teach anti-racism to your colleagues or students with whom you might work in the future?		
Very	4 (16)	4 (22)
Somewhat	12 (48)	6 (33)
Unsure	3 (12)	7 (39)
Not much	4 (16)	1 (6)
Not at all	2 (8)	0

*Categories were not mutually exclusive

While many residents learned about the influence of racism on healthcare and learned about themselves, fewer residents changed the way they interacted with patients (Table 2). Many residents were interested in continued discussions or lectures.

Table 2
Participant perspective on curriculum effectiveness - late-curriculum

	n (%)
The lectures have helped me learn about how racism influences healthcare:	
not true	2 (11)
slightly true	3 (17)
moderately true	7 (39)
mostly true	2 (11)
very true	4 (22)
The way I interact with patients has changed as a result of things I have learned through the anti-racism curriculum:	
not true	4 (22)
slightly true	4 (22)
moderately true	8 (44)
mostly true	0 (0)
very true	2 (11)
I have learned about myself as a result of the lectures, discussions, and other components of the curriculum:	
not true	2 (11)
slightly true	3 (17)
moderately true	10 (55)
mostly true	1 (6)
very true	2 (11)
Going forward, I would like to have more:	
lectures	3 (17)
discussions	8 (44)
readings	1 (6)
none of the above	4 (22)
Other	2 (11)

Quantitative results of patient-oriented outcomes

The clinic overall had a higher percentage of black patients than white or Hispanic patients (Table 3). Overall, prior to the curriculum, there was no difference at the clinic among black and non-black patients in the average HbA1c value. However, Hispanic patients did have a higher HbA1c prior to the curriculum than non-Hispanic patients. On average, there was an improvement in HbA1c from before compared to after the curriculum was implemented. The improvement was only seen among Hispanic patients (Table 4).

Table 3
Patient demographics

	pre-curriculum n (%)	post-curriculum n (%)	Total (n = 1989)
Black	339 (24)	1059 (71)	**1398 (70)**
White	73 (15)	215 (14)	**288 (14)**
Other	58 (12)	110 (7)	**168 (8)**
Asian	27 (5)	104 (7)	**131 (7)**
AIAN	4 (1)	0 (0)	**4 (0)**
Total	**501 (25)**	**1488 (75)**	**1989 (100)**
	pre-curriculum n (%)	**post curriculum n (%)**	**Total (n-1989)**
Hispanic	82 (6)	30 (6)	**112 (6)**
Non-Hispanic	1406 (95)	468 (93)	**1874 (94)**
Didn't answer	0 (0)	3 (1)	**3 (0)**
Total	**501 (25)**	**1488 (75)**	**1989 (100)**

Table 4
Hemoglobin A1c: Pre- and post-curriculum

Difference Pre- vs Post-Curriculum			
	Mean	**95%CI**	**p-value**
Black	7.8	7.6 to 7.8	p = 0.67
Non-Black	7.8	7.6 to 8	
Hispanic	8.3	7.8 to 8.8	*p = 0.01*
Non-Hispanic	7.7	7.6 to 7.8	
Pre-curriculum	7.9	7.7 to 8.2	*p = 0.02*
Post-curriculum	7.7	7.5 to 7.8	
Pre vs Post in Black and Non-Black Patients			
	Mean	**95%CI**	**p-value**
Pre-curriculum Black	7.8	7.6 to 8.2.	p = 0.38
Pre-curriculum Not-Black	8.1	7.7 to 8.5	
Post-curriculum Black	7.7	7.5 to 7.8	p = 0.86
Post-curriculum Not-Black	7.6	7.4 to 7.9	
Pre vs Post in Hispanic and Non-Hispanic Patients			
	Mean	**95%CI**	**p-value**
Pre-curriculum Hispanic	9.5	8.4 to 10.6.	*p = < 0.001*
Pre-curriculum Not- Hispanic	7.8	7.6 to 8.1	
Post-curriculum Hispanic	7.9	7.4 to 8.4	p = 0.38
Post-curriculum Not- Hispanic	7.6	7.5 to 7.8	

Conclusions

While the available data indicated that residents found the curriculum helpful, many data were unavailable to assess the impact on patient-oriented outcomes or more in-depth dive into how the residents felt and what could be improved.

Next steps include obtaining data for patient-oriented outcomes and developing a plan for sustainability and continuous quality improvement for the curriculum.

Discussion

Implementation barriers, facilitators, and plans for future years

Implementation challenges were common but also represented opportunities for future years. One major facilitator was the political climate at the time of curriculum initiation. Curriculum planning occurred as the Black Lives Matter movement was gaining momentum and a national realization that the COVID-19 Pandemic exposed long-existing inequities in our country and medical system. This enabled us to gain support at the individual resident and faculty levels, as well as the institutional and systems levels. The AAFP and other medical groups were (and still are) in the process of updating recommendations for medical education curricula to include racism, diversity, equity, and inclusion. Despite this, several challenges to implementation were encountered including difficulty obtaining funding, lack of protected faculty time for curriculum development, finding qualified and willing speakers, and scheduling curriculum activities.

Plans for future years involve strategies developed from the faculty champions and resident feedback. These strategies include: (1) securing a permanent funding source, (2) identifying permanent speakers, (3) continuous quality improvement including continued solicitation of feedback from residents and faculty, (4) and continued efforts to measure important patient-oriented outcomes.

Declarations

Ethics approval and consent to participate

IRB approval was obtained from the University of South Florida and Wellstar. All participants provided informed consent.

Consent for publication

Not applicable.

Availability of data and materials

The datasets generated and/or analysed during the current study are not publicly available due concern for keeping identity of participants anonymous but may be provided in part from the corresponding author on reasonable request.

Competing interests

All authors declare they have no competing interests

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Authors' contributions

AMG conceived, designed, and carried out this work, and wrote the paper. JB, CV, CE, AT, MS, and DT, helped with design, interpretation of results, and reviewing and editing of the manuscript.

Prior or related publications, and prior abstract or poster presentation: None

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Disclaimer

This work does not necessarily represent the employers of any of the authors, only the viewpoints of the authors themselves.

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Appendix A

Appendix A is not available with this version.