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ASSISTED REPRODUCTION TECHNOLOGIES

Self-reported barriers to accessing infertility care: patient perspectives from urban gynecology clinics

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Abstract

Purpose (1) To test the hypothesis that under-represented minority women, including Hispanic/Latina and African American or Black women, will be more likely to report greater socioeconomic and cultural barriers to infertility care compared with white women. (2) To identify gaps in knowledge that can guide future educational interventions.

Methods A cross-sectional survey was completed by 242 women, ages 18–44, at five gynecology clinics in the greater Boston, Massachusetts area from February 27, 2018, to February 25, 2019.

Results Of the respondents, 61.4% identified as Hispanic/Latina, 24.5% as white, and 6.6% as Black or African American. Cost was the most commonly reported barrier to care (62.8%) regardless of race/ethnicity or insurance status. Only 8.9% of participants were aware of personal insurance coverage for infertility treatment. Compared with white patients, Hispanic/Latina patients were less likely to know if their own insurance covered infertility treatment: 14.3% vs 6.8%; aRR 0.36 (95% CI 0.17–0.74), after adjusting for a personal history of infertility.

Conclusion Cost was the most commonly reported barrier to care. Most women were unaware of their insurance coverage despite the state insurance mandate to cover infertility treatment in Massachusetts. Education and outreach will be instrumental in helping address disparities in access to care.

Keywords Access to care · Disparities · Infertility

Introduction

Improving access to infertility care has emerged as a central pillar of the American Society for Reproductive Medicine (ASRM) [1]. Disparities in access to infertility care have been well described, with several studies highlighting the under-representation of Hispanic woman and non-Hispanic Black or African American women in an infertility population, in addition to a longer delay in presenting for care compared with white women [2–8]. Jain et al. described that, even in a state with an insurance mandate to cover infertility treatment, the large majority of patients presenting for care were white and of upper socioeconomic status [2]. Although the use of assisted reproductive technologies increases in states with an insurance mandate, and in other countries with generous coverage policies, in the USA, racial disparities continue to exist [9, 10].

Furthermore, racial and ethnic disparities in outcomes following assisted reproduction are cause for concern [6, 11]. A

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recent large single-site study demonstrated that, compared with white women, African American women have statistically significantly lower clinical pregnancy and live birth rates and higher miscarriage rates following infertility treatment [12]. A large systematic review of 24 studies confirmed these findings and concluded that lower clinical pregnancy rates and live birth rates are observed in Black, Hispanic, and Asian women compared with white women [13]. The most recent data from the Society of Assisted Reproductive Technology (SART) demonstrated persistently lower live birth rates and increased miscarriage rates for non-Hispanic Black women compared with non-Hispanic white women, with race demonstrating an effect even after controlling for age, body mass index (BMI), prior pregnancies, and infertility diagnosis [8, 11]. Delays in accessing care and starting treatment, and concerns over cost, are just a few potential explanations for why these disparities persist.

Though the financial burden of infertility treatment is a significant factor for self-pay patients, barriers beyond cost, including cultural values, language differences, social stigma, and fear are likely to contribute to the racial and ethnic disparities in access to care [4, 5, 14–17] . Infertility may profoundly impact the mental health of patients, leading to anxiety and depression [18, 19] . Provider insensitivity to racial and ethnic disparities and lack of awareness of their own subconscious biases may inhibit patients from seeking care as well [14].

Many prior studies recruited participants from an infertility clinic setting and thus cannot adequately capture barriers to care for those patients who have not yet successfully accessed an infertility clinic. In an effort to identify potential barriers to care among women outside of an infertility clinic setting, a survey study was conducted across five gynecology clinics in the Boston, Massachusetts, area. The primary aim of this study was to test the hypothesis that under-represented minority women, including Black or African American women and Hispanic women, would be more likely to report greater socioeconomic and cultural barriers to infertility care compared with their white counterparts. The secondary aim was to identify gaps in knowledge that can guide future educational interventions. The overarching purpose of this study was to gain a greater appreciation for potential obstacles in accessing care, thereby helping inform providers on how to more effectively address the needs of patients from diverse backgrounds.

Methods

A survey with 27 questions was developed in both English and Spanish at an approximately sixth-grade reading level, with review and approval by all authors. The survey was distributed to five gynecology clinics, including two hospital-based clinics in Boston, Massachusetts, as well as satellite clinics in Revere, Chelsea, and Jamaica Plain, Massachusetts, all nearby suburbs of Boston. Participants were recruited from these specific clinic sites due to the population they serve, with a high percentage of under-represented minority women, including Hispanic/Latina women and African American/Black women. By targeting these clinics, we hoped to survey women at particularly high risk of facing barriers to care.

A total of 242 surveys were completed from February 27, 2018, to February 25, 2019. When checking in to their appointment at the front desk of the clinic, women between the ages of 18 and 44 interested in having a child were asked if they would like to participate. An informational flyer advertising the survey was also posted at the front desk in view of the women checking in for appointments. The survey was anonymous and collected no identifying information. Women that completed the survey returned it to the front desk staff and received a $5 gift card for participating.

The survey was collected on paper and included 27 multiple-choice items. All completed paper surveys were returned for analysis. Respondents were asked to report age, gravidity, parity, race/ethnicity (Hispanic or Latina, non-Hispanic white, non-Hispanic African American or Black, Asian, Native Hawaiian or Other Pacific Islander, American Indian or Alaska Native, Middle Eastern or North African, Other, Multiracial), sexual orientation, education status, insurance status and knowledge of insurance coverage, primary language spoken at home, mode of transportation, personal history of infertility or family history of infertility, knowledge of infertility treatments, and infertility clinic locations. Participants were also asked to indicate if they believed that access to infertility treatment is a right.

The primary outcome of interest was self-reported barriers to care, focusing on socioeconomic in addition to cultural explanations for difficulty accessing care. Within the item focusing on barriers to care, respondents were able to select more than one multiple choice option and given the opportunity to write in an additional response of their own.

Secondary outcomes included knowledge of both personal insurance coverage for infertility treatment, and the Massachusetts state insurance mandate, which requires private insurers to cover the cost of some or all infertility treatment. Coverage is specific to each insurer and each plan, though several large insurance companies typically cover the entire cost of care for patients with proven infertility. Public insurance in the state ("Mass Health") does not cover the cost of any infertility treatment but does pay for an infertility evaluation, including blood work, uterine and fallopian tube evaluation, and semen analysis.

Using log binomial regression, relative risks and 95% confidence intervals were calculated for the outcomes of interest, with results stratified by race/ethnicity, education level, and insurance status. Crude and adjusted analyses were performed, controlling for a personal history of infertility.

The Partners Human Research Committee, the Institutional Review Board of Partners HealthCare, approved this protocol.

Results

A total of 242 women completed the survey at the following sites: Brigham and Women's Hospital in Boston, Massachusetts: 18.2%, Brookside Community Health Center in Jamaica Plain, Massachusetts: 41.3%, MGH Chelsea Healthcare Center in Chelsea, Massachusetts: 15.7%, Massachusetts General Hospital in Boston, Massachusetts: 12.4%, and MGH Revere Healthcare Center in Revere, Massachusetts: 12.4%.

The demographic characteristics of all respondents are outlined in Table 1. Of the surveyed women, 61.4% identified as Hispanic/Latina, 24.5% identified as non-Hispanic white, 6.6% identified as non-Hispanic Black or African American, and only 1.2% identified as Asian. No respondents identified as Native Hawaiian or Other Pacific Islander, or Middle Eastern or North African. The small number of women who identified as Asian (3), American Indian or Alaska Native (1), Other (1), and those who selected more than one answer (13) were collapsed into a single "Other" category for Tables 2, 3 and 4. Of the respondents, 71% completed the survey in English and 29% completed it in Spanish.

Of the respondents, 47.3% attended some college or were college graduates, and 24.6% reported graduating high school as their highest level of education. Of the participants, 9.5% had less than a high school education and 14.0% had a graduate or professional degree. The largest proportion of respondents, 46.2%, had public insurance ("Mass Health"). Of the respondents. 41.5% had non-profit insurance, and only 10.3% had commercial insurance.

Thirty-five respondents (14.5%) reported a personal history of infertility, and 31 (12.8%) reported they had a discussion with a physician about infertility. Forty-four respondents (18.2%) reported a family history of infertility.

As demonstrated in Table 2, the majority of all groups, regardless of stratification by race/ethnicity, education level, or insurance status, would present to care before 12 months if struggling with infertility. Hispanic/Latina women were less likely than white women to present before 12 months if having difficulty conceiving: 64.7% vs 78.2% (aRR 0.84, 95% CI 0.69–1.01), though this difference did not reach statistical significance, and the majority of Hispanic respondents would still seek care before 1 year. Fewer respondents identifying as Black or African American would present to care before 12 months compared with white respondents, but similarly no statically significant difference was identified (46.7% versus 78.2%; aRR 0.59, 95% CI 0.34–1.04).

Table 1 Demographic characteristics of survey respondents

	N = 242 Mean ± SD N (%)
Age	32.0 ± 6.9
Gravidity	1.78 ± 1.7
Parity	1.2 ± 1.3
Race/ethnicity	
White	59 (24.5%)
Hispanic/Latina	148 (61.4%)
African American or Black	16 (6.6%)
Asian	3 (1.2%)
American Indian or Alaska Native	1 (0.4%)
Other	1 (0.4%)
Selected >1 category	13 (5.4%)
Did not answer	1 (NA)
Insurance	
Non-profit insurers*	97 (41.5%)
Commercial insurers‡	24 (10.3%)
Mass Health	108 (46.2%)
Could not recall	5 (2.1%)
Did not answer	8 (NA)
Primary language	
English	136 (57.3%)
Spanish	94 (39.7%)
Haitian-Creole	3 (1.3%)
Other	4 (1.7%)
Did not answer	5 (NA)
Sexual orientation	
Straight	216 (91.9%)
Lesbian	1 (0.4%)
Bisexual	10 (4.3%)
Unsure	4 (1.7%)
Other	2 (0.9%)
Did not answer	9 (NA)
Highest level of education	
Elementary school	6 (2.5%)
Middle school	4 (1.7%)
Some high school	13 (5.4%)
High school graduate	59 (24.6%)
Some college	78 (32.5%)
4 College graduate	46 (19.2%)
Graduate degree	22 (9.2%)
Professional degree	12 (5.0%)
Did not answer	2 (NA)

*Non-profit insurers include Blue Cross Blue Shield, Tufts Health Plan, Harvard Pilgrim Health Plan, Neighborhood Health Plan, etc.

‡ Commercial insurers include Aetna, Cigna, United Healthcare, etc.

Table 2 Relative risk of reporting less than 12 months waiting time before seeing a physician for infertility associated with race/ethnicity, education level, and type of insurance*

	≤ 12 months	>12 months (Ref)	RR (95% CI) aRR (95% CI)**
Race/ethnicity			
White	43 (78.2%)	12 (21.8%)	Ref
N = 58			
African American or Black	7 (46.7%)	8 (53.3%)	0.60 (0.34–1.04)
N = 16			0.59 (0.34–1.04)
Hispanic/Latina	90 (64.7%)	49 (35.3%)	0.83 (0.69–1.00)
N = 143			0.84 (0.69–1.01)
Other	12 (70.6%)	5 (29.4%)	0.90 (0.64–1.26)
N = 9			0.90 (0.64–1.26)
Education			
Less than high school	13 (59.1%)	9 (40.9%)	0.81 (0.55–1.20)
N = 22			0.85 (0.56–1.27)
Graduated high school	36 (65.5%)	19 (34.5%)	0.90 (0.69–1.17)
N = 55			0.91 (0.69–1.20)
Some college	49 (69.0%)	22 (31.0%)	0.95 (0.75–1.20)
N = 71			0.97 (0.75–1.24)
College graduate	32 (72.7%)	12 (27.3%)	Ref
N = 44			
Graduate or professional degree	20 (60.6%)	13 (39.4%)	0.83 (0.60–1.16)
N = 33			0.87 (0.61–1.24)
Insurance			
Non-profit	62 (69.7%)	27 (30.3%)	Ref
N = 89			
Private	17 (70.8%)	7 (29.2%)	1.02 (0.76–1.36)
N = 24			1.05 (0.78–1.42)
Public	66 (64.1%)	37 (35.9%)	0.92 (0.75–1.12)
N = 103			0.92 (0.75–1.12)

*Of the respondents that answered the question

**Adjusted for personal history of infertility

Socioeconomic barriers

When comparing between categories of education level and insurance type, no significant differences were found in the likelihood to report socioeconomic barriers in access to care.

However, cost was reported as a barrier to care for the majority of all respondents, 62.8% overall, regardless of race/ethnicity or insurance status, as depicted in Table 3. Those with commercial insurance were statistically more likely to report cost as a barrier compared with those with non-profit insurance: 90% vs 72.3% (RR 1.24, 95% CI 1.01–1.54). However, this finding no longer reached statistical significance when adjusted for women with a personal history of infertility (aRR 1.26, 95% CI 0.99–1.61). Women with public insurance were less likely to report cost as a barrier to care (aRR 0.74, 95% CI 0.58–0.95).

When asked if time off work was a potential barrier to care, Hispanic/Latina respondents were less likely to answer yes than white respondents: 12.0% vs 25.6% (aRR 0.47, 95% CI 0.23–0.96)). Those with public insurance were less likely than those with non-profit insurance to report time off work as a barrier to care as well: 7.4% vs 26.2% (aRR 0.28, 95% CI 0.12–0.64).

Of the entire survey population, only 3.7% reported transportation as problematic.

Cultural barriers

A minority of the survey respondents, 14.4%, reported “lack of information” as an obstacle, including 15.4% of white respondents and 16.0% of Hispanic/Latina respondents.

Reported levels of shame or fear as barriers to care were similarly low among all respondents regardless of race/ethnicity, education, or insurance status, averaging 10.1% of the entire respondent population.

Only 3.7% of the respondents reported language difficulties, all of whom identified as Hispanic/Latina. 2.7% reported

Table 3 Relative risk of reporting self-identified socioeconomic barriers (cost and time off work) associated with race/ethnicity and type of insurance*

	Cost	RR (95% CI) aRR (95% CI)**	Time off Work	RR (95% CI) aRR (95% CI)**
Race/ethnicity				
White	27 (69.2%)	Ref	10 (25.6%)	Ref
N = 41				
African American or Black	7 (70.0%)	1.01 (0.64–1.60)	1 (10.0%)	0.39 (0.06–2.70)
N = 10		1.08 (0.68–1.73)		0.37 (0.05–2.53)
Hispanic/Latina	75 (60.0%)	0.87 (0.67–1.12)	15 (12.0%)	0.47 (0.23–0.96)
N = 128		0.89 (0.69–1.16)		0.47 (0.23–0.96)
Other	9 (69.2%)	1.00 (0.66–1.52)	2 (15.4%)	0.60 (0.15–2.39)
N = 8		1.07 (0.70–1.65)		0.58 (0.15–2.28)
Insurance				
Non-profit	47 (72.3%)	Ref	17 (26.2%)	Ref
N = 65				
Public	50 (52.6%)	0.73 (0.57–0.93)	7 (7.4%)	0.28 (0.12–0.64)
N = 95		0.74 (0.58–0.95)		0.28 (0.12–0.64)
Private	18 (90.0%)	1.24 (1.01–1.54)	4 (20.0%)	0.76 (0.29–2.01)
N = 20		1.26 (0.99–1.61)		0.72 (0.27–1.89)

*Of the respondents that answered the question

**Adjusted for personal history of infertility

mistrust, 2.1% reported lack of support, 0.4% reported cultural differences, and 0 respondents reported religion as barriers to care.

Compared to white patients, African American patients were more likely to report belief in fate as a barrier to care: 5.1% vs 40% (aRR 7.21, 95% CI 1.55–33.59).

Knowledge of insurance coverage

Though only 14.4% of respondents reported a lack of information regarding infertility care, 80.7% of respondents were not aware of the Massachusetts insurance mandate requiring coverage for infertility treatment. 30.8% were unaware of their personal insurance coverage for infertility care, and 60.3% were unsure of their insurance coverage.

As seen in Table 4, African American or Black patients were more likely to be aware of the Massachusetts insurance mandate compared with white patients: 46.7% vs 21.4% (RR 2.15, 95% CI 1.02–4.56), though this difference was not statistically significant after adjusting for a personal history of infertility (aRR 1.80, 95% CI 0.81–4.00).

Compared with college graduates, patients with only some college education, those with a high school degree, and those with less than a high school degree were less likely to have knowledge of the Massachusetts insurance mandate, though these findings did not reach statistical significance. Women with public insurance were less likely to be aware of the Massachusetts insurance mandate than those with non-public insurance: 15.5% vs 24.3% (aRR 0.62, 95% CI 0.34–1.10).

Only 8.9% of the overall survey population was aware of personal insurance coverage for infertility treatment. Compared with white patients, Hispanic/Latina patients were statistically less likely to know if their own insurance covered infertility treatment: 14.3% vs 6.8% (aRR 0.36, 95% CI 0.17–0.74). Similarly, patients with public insurance were statistically less likely to know if their plan covered treatment for infertility: 2.8% vs 15.3% (aRR 0.15, 95% CI 0.05–0.48).

When asked if access to infertility treatment is a right, 85.7% of all participants answered yes, 10.9% were unsure, and only 3.4% answered no.

Discussion

The primary hypothesis that under-represented minority women would be more likely to report socioeconomic and culture barriers to care was disproven. In contrast, most women, regardless of race or ethnicity, education level, and insurance status, reported cost as a barrier to care.

Cost is an understandable concern given that out-of-pocket, a single IVF cycle can cost between $12,000 and $17,000, with some estimates as high as $25,000 [20]. Almost half of the respondents, 46%, reported having Mass Health public insurance, which does not cover the cost of infertility treatment. However, the majority of patients with private insurance with coverage for infertility treatment were also concerned about the cost of care. Even in a state such as Massachusetts with an insurance mandate for infertility coverage, most patients perceived that the cost of treatment would be

Table 4 Association of race/ethnicity, education level, and type of insurance with the knowledge of personal and state insurance coverage*

	Awareness of personal insurance coverage	RR (95% CI) aRR (95% CI)**	Awareness of MA insurance mandate	RR (95% CI) aRR (95% CI)**
Race/ethnicity				
White *N* = 59	8 (14.3%)	Ref	12 (21.4%)	Ref
African American or Black *N* = 15	1 (7.1%)	0.75 (1.34–4.03) 0.91 (0.16–5.03)	7 (46.7%)	2.18 (1.04–4.55) 1.80 (0.81–4.00)
Hispanic/ Latina *N* = 152	10 (6.8%)	0.35 (0.16–0.76) 0.36 (0.17–0.74)	20 (15.0%)	0.70 (0.37–1.34) 0.65 (0.34–1.24)
Other N = 10	2 (11.1%)	0.50 (0.13–1.88) 0.50 (0.14–1.81)	4 (22.2%)	1.04 (0.38–2.82) 0.98 (0.36–2.66)
Eeducation				
Less than high school *N* = 23	1 (4.3%)	0.26 (0.04–1.76) 0.32 (0.05–2.24)	2 (9.5%)	0.42 (0.11–1.68) 0.42 (0.11–1.69)
Graduated high school *N* = 59	2 (3.4%)	0.27 (0.07–1.09) 0.28 (0.07–1.12)	10 (19.6%)	0.87 (0.43–1.73) 0.80 (0.39–1.66)
Some college *N* = 76	6 (7.9%)	0.63 (0.27–1.46) 0.67 (0.30–1.50)	14 (18.9%)	0.83 (0.44–1.57) 0.74 (0.39–1.41)
College graduate or greater *N* = 77	12 (15.6%)	Ref	17 (22.7%)	Ref
Insurance				
Non-public *N* = 118	18 (15.3%)	Ref	28 (24.3%)	Ref
Public *N* = 106	3 (2.8%)	0.15 (0.05–0.48) 0.15 (0.05–0.48)	15 (15.5%)	0.64 (0.36–1.12) 0.62 (0.34–1.10)

*Of the respondents that answered the question

**Adjusted for personal history of infertility

problematic. This may be explained in part by the fact that as of 2019, only 36% of reproductive aged women living in Massachusetts had insurance coverage for infertility treatment [21].

The secondary aim of this study was accomplished by identifying knowledge gaps that can serve as future targets for outreach and education. In this study, most participants (91.1%) did not know if their insurance company covered infertility treatment, and most (80.7%) did not have knowledge of the Massachusetts state mandate for insurance coverage, though African American or Black respondents were significantly more likely than white respondents to be aware of the Massachusetts insurance mandate. Hispanic/Latina women and women with public insurance were less likely to be aware of insurance coverage for infertility. Despite the lack of knowledge regarding insurance coverage, the vast majority, 85.7%, of participants believed access to infertility treatment is a right.

These data clearly demonstrate that patients are concerned about cost and also have a limited understanding of insurance coverage. To our knowledge, this is a novel finding and presents an opportunity for patient education, with an emphasis on the state mandate for infertility treatment coverage and policy benefits. Public outreach will be instrumental in promoting a broader understanding of the insurance mandate. Closing this knowledge gap may help mitigate a significant barrier to care.

Cultural barriers were uncommonly reported among this population. No respondent felt religion posed a barrier to care, which may in part be a reflection of the geographic location of the study. In other regions of the United States, religion may play a larger role in patients' ability to access infertility treatment.

Another unexpected result was that, of the 10 women self-identified as African American or Black who answered the specific survey item regarding fate, 40% (4/10) reported a belief in fate as a barrier to care. This finding merits further investigation in a larger population to better understand this sentiment and to uncover if a belief in fate may represent an obstacle for a greater proportion of women in African American or Black communities.

Regardless of education level or insurance status, most women reported that they would seek care for infertility within 12 months of trying to conceive. Hispanic/Latina and Black or African American women were more likely to wait greater than 12 months to seek care, though these differences did not reach statistical significance.

Though our study population included a small proportion of women who self-identified as African American or Black, the finding regarding wait time is in contrast to prior literature that reported African American women waited longer to present to infertility clinics compared with white women (4.3 years versus 3.3 years) [2]. When cost barriers are eliminated and access is equalized, as demonstrated in a study of patients with comprehensive insurance coverage provided through the Department of Defense, there is a fourfold increase in utilization of assisted reproduction services among African Americans relative to the US population [3]. Data presented from this study suggest that, at least in Boston and the surrounding suburbs, most patients perceive that they would not delay care.

Strengths

A major strength of this study is that the participant recruitment occurred in general gynecology clinics in diverse urban neighborhoods. By targeting the population of patients seen at these specific clinic sites, the study captured opinions of a portion of under-represented minority women who may be struggling with infertility and having difficulty seeking care. Prior survey studies that have reported responses from patients already evaluated in an infertility clinic introduce a selection bias, as the participants have already managed to gain access to care [2, 4]. One of the largest interview studies of Latino/a patients illuminated major barriers to care including communication difficulties, lack of continuity of care, bureaucratic and scheduling challenges, and fear or mistrust of the medical system [15]. It differed from the current study in that it recruited participants from an infertility clinic, where they had already successfully sought treatment.

The large proportion of Hispanic/Latina respondents, 61.4%, is another significant strength. Because the study was offered in both English and Spanish, participants could choose to answer in their preferred language, which may have helped to improve comprehension and elicit honest answers.

Limitations

The study is not without limitations. First, it was not possible to report an accurate response rate, as patients were recruited in several ways (self-identifying after reading the informational flyer and/or being offered the opportunity to participate at the front desk of each clinic). Selection bias may have been introduced with patients self-selecting to participate and with the possibility that not every eligible patient was offered the survey. Moreover, each clinic site was responsible for distributing and collecting surveys, and it is possible surveys were given to patients but not completed.

Second, patients with poor health literacy were unable to participate. It is reasonable to presume that respondents were all literate and able to consent to participation upon reading the information about the survey. To include the opinions of patients with limited literacy, it may be more effective to conduct in-person interviews that do not require participants to read or write. Women whose primary language was neither English nor Spanish were also unable to participate. Broader language options would help make a future survey study more widely accessible.

Third, though transportation to and from health care visits is likely an obstacle for some women, the vast majority of respondents reported no concerns regarding transportation. This may in part be a reflection of the urban setting of the study. Transportation is likely a more substantial obstacle for those living in more rural parts of the country. Thus, the survey likely failed to capture opinions of women in very low resource settings for whom transportation is a concern and a significant burden limiting their access to care.

Fourth, due to the relatively small proportion of African American or Black respondents, it is difficult to draw any definitive conclusions. Other populations were represented by very few respondents requiring us to collapse several race/ethnicity groups into an “Other” category for a comparison of outcomes, which is not informative for these individual groups. Moreover, because we did not recruit participants from all racial categories listed on the US census, the findings are not generalizable to all clinic settings or patient populations.

Finally, participants were not asked separately about race and ethnicity, but rather presented with a single question with answers encompassing both racial and ethnic categories. Some respondents identified their ethnicity only and not their race. A future study would benefit from asking separate questions regarding race and ethnicity to more cleanly categorize responses.

Ongoing investigation is needed to more fully explore and understand barriers in access to care. Improving access to infertility treatment continues to prove challenging on both a national and international scale. Larger, more inclusive studies, reaching broader populations are needed to help elucidate barriers to care and to discover the most effective ways to address those barriers.

Conclusions

This observational, descriptive study is an important addition to the expanding literature on improving access to infertility care for under-represented minority women. By far, cost was the most prevalent barrier reported by respondents. Despite the insurance mandate for coverage of infertility treatment in Massachusetts, most participants were unaware of the mandate and of their own personal insurance coverage. The lack of information regarding insurance coverage is an opportunity for action. Through public health messaging and education, more women can learn how to gain coverage for potentially expensive infertility treatment, which may help address a common barrier to care.

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Data availability NA

Compliance with ethical standards

Conflicts of interest/competing interests Iris G. Insogna: no conflicts.

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