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Original Investigation

Legal Protections in Public Accommodations Settings: A Critical Public Health Issue for Transgender and Gender-Nonconforming People

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Policy Points:

- Since 2012, Massachusetts law has provided legal protections against discrimination on the basis of gender identity in employment, housing, credit, public education, and hate crimes. The law does not protect against discrimination based on gender identity in public accommodations settings such as transportation, retail stores, restaurants, health care facilities, and bathrooms.
- A 2013 survey of Massachusetts transgender and other gender minority adults found that in the past 12 months, 65% had experienced public accommodations discrimination since the law was passed. This discrimination was associated with a greater risk of adverse emotional and physical symptoms in the past 30 days.
- Nondiscrimination laws inclusive of gender identity should protect against discrimination in public accommodations settings to support transgender people's health and their ability to access health care.

Context: Gender minority people who are transgender or gender nonconforming experience widespread discrimination and health inequities. Since 2012,

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Massachusetts law has provided protections against discrimination on the basis of gender identity in employment, housing, credit, public education, and hate crimes. The law does not, however, protect against discrimination in public accommodations (eg, hospitals, health centers, transportation, nursing homes, supermarkets, retail establishments). For this article, we examined the frequency and health correlates of public accommodations discrimination among gender minority adults in Massachusetts, with attention to discrimination in health care settings.

Methods: In 2013, we recruited a community-based sample ($n = 452$) both online and in person. The respondents completed a 1-time, electronic survey assessing demographics, health, health care utilization, and discrimination in public accommodations venues in the past 12 months. Using adjusted multivariable logistic regression models, we examined whether experiencing public accommodations discrimination in health care was independently associated with adverse self-reported health, adjusting for discrimination in other public accommodations settings.

Findings: Overall, 65% of respondents reported public accommodations discrimination in the past 12 months. The 5 most prevalent discrimination settings were transportation (36%), retail (28%), restaurants (26%), public gatherings (25%), and health care (24%). Public accommodations discrimination in the past 12 months in health care settings was independently associated with a 31% to 81% increased risk of adverse emotional and physical symptoms and a 2-fold to 3-fold increased risk of postponement of needed care when sick or injured and of preventive or routine health care, adjusting for discrimination in other public accommodations settings (which also conferred an additional 20% to 77% risk per discrimination setting endorsed).

Conclusions: Discrimination in public accommodations is common and is associated with adverse health outcomes among transgender and gender-nonconforming adults in Massachusetts. Discrimination in health care settings creates a unique health risk for gender minority people. The passage and enforcement of transgender rights laws that include protections against discrimination in public accommodations—inclusive of health care—are a public health policy approach critically needed to address transgender health inequities.

Keywords: transgender, discrimination, health, policy.

THE LANGUAGE USED TO DESCRIBE TRANSGENDER AND gender-nonconforming individuals varies widely by region, culture, and time.[1] In this article, we use the term *gender minority* to refer to transgender and gender-nonconforming people whose

gender identity or expression differs from their assigned sex at birth (ie, male or female). Earlier research documented in some gender minority communities a high prevalence of adverse health outcomes, including mental health distress and suicidality,[2-9] substance use,[6,10,11] cigarette smoking,[6,12] and HIV and other sexually transmitted infections (STIs), especially among transgender women.[2,13-23] Social stressors, including experiences of verbal, physical, and/or sexual violence, victimization, and discrimination, have also been shown to burden gender minority people throughout their life course.[4,8,11,24-27]

Gender minority people may experience discrimination in a number of ways, ranging from "microagressions" (subtle, often inadvertent forms of verbal or behavioral insults),[26,28,29] to unfair treatment or denial of services, to physical violence.[27] Qualitative studies suggest that gender minority people frequently experience microagressions from family members, friends, coworkers, and strangers.[30] These aggressions often occur in the form of transphobic and/or incorrectly gendered terminology, assumption of universal transgender experience, discomfort with/disapproval of transgender experience, endorsement of gender normative and binary culture or behaviors, and assumption of sexual pathology/abnormality, among others.[26] Even though the microagressions may be unintentional, these subliminal biases diminish the recipient's self-esteem and can lead to psychological distress.[26,29,31]

Another form of common, nonviolent discrimination is unfair treatment or the denial of service based on a person's gender identity. The 2009 US National Transgender Discrimination Survey found that transgender and gender-nonconforming respondents were frequently denied essential goods or services, with 19% having been refused housing, 19% having been refused medical care, and a startling 47% having experienced an adverse employment outcome (ie, being fired, not hired, or denied a promotion because of being transgender or gender nonconforming).[27] Such discrimination not only limits gender minority people's access to essential human necessities, but also has been show to be associated with their increased risk of mental and physical illness, including suicide and death.[3,8,11,27]

The most severe form of enacted bias against gender minority people is sexual assault and violent hate crimes, with research suggesting that such crimes are highly prevalent in this population, especially against transgender women.[25,27,32] A 2009 review of violence against gender minority people in the United States found that the prevalence of

lifetime physical assault due to one's gender identity ranged from 33% to 53%.[33] In addition to the high prevalence of sexual violence and victimization, gender minority people also experience physical violence, with studies documenting the prevalence of sexual assault from 10% to 69%.[33] Research also shows that hate crimes against transgender and gender-nonconforming people are especially violent.[33,34] For example, according to the US National Coalition of Anti-Violence Programs, of 18 homicides reported in 2013 that were motivated by anti-LGBT or HIV-related bias, 72% of the homicide victims were transgender women, and 67% were transgender women of color.[35] Although the tracking of transgender murders is hindered by the fact that police document the gender of victims based on their anatomy at the time of death, it is estimated that an average of 213 hate crimes targeting gender minority people occurred annually in the United States between 1977 and 2009,[33] with an estimated 16 transgender individuals murdered between November 2012 and November 2013 alone.[36] The high rate at which gender minority people experience victimization and the documented relationship between such experiences and adverse health warrant "upstream" social change in the form of legislative intervention.

Recognizing the need to give gender minority people the same legal protections against discrimination as those provided to other marginalized groups (ie, racial/ethnic minorities; lesbian, gay, and bisexual individuals; people with disabilities), Massachusetts passed a law in 2011 making it illegal for businesses, government agencies, schools, and other entities to discriminate against an individual on the basis of their gender identity, joining 17 other states and the District of Columbia, which also have gender identity nondiscrimination laws.[37] Since its implementation in mid-2012, Massachusetts' gender identity nondiscrimination law, An Act Relative to Gender Identity, has provided protections against discrimination in employment, housing, public education, and credit. In 2012, the state also expanded its hate crime legislation to include gender identity. While the passage of the gender identity nondiscrimination law and the expansion of the hate crime policy were significant advances for gender minority people across Massachusetts, the law excluded legal protections in public accommodations—a wide range of areas and settings open to the public and where public restrooms exist, such as public transportation, restaurants, retail locations, and many health care settings. The other 17 US state laws

banning discrimination against transgender people cover public accommodations; only the Massachusetts law carves out public accommodations and does not ban discrimination against transgender people in those settings.[37]

Three years ago, human rights defenders lost the fight to include public accommodations settings in the Massachusetts law banning discrimination on the basis of gender identity, owing mainly to the issue of public restrooms. Many residents spoke out against the "bathroom bill," as the nondiscrimination law was sensationally branded, feeding the public's fear that transgender people would "use the wrong bathroom" and "prey on" young children. Media reports and personal testimonies suggest that transgender people across the Commonwealth continue to face severe discrimination despite the enactment of the gender identity nondiscrimination law, and earlier research has documented associations between discrimination and health outcomes among gender minority people in Massachusetts.[12,27] Since the 2012 enactment of the gender identity nondiscrimination law, no study, however, has explored experiences of discrimination, including those in public accommodations settings.

Our study explored the relationship between social stressors, including discrimination, and the health and well-being of transgender and gender-nonconforming adults in Massachusetts since the 2012 implementation of the state's gender identity nondiscrimination law. Specifically, we assessed the demographics, health, health care utilization, and frequency of public accommodations discrimination among gender minority people in Massachusetts in the past 12 months. We then tested whether the past-year discrimination experienced in public accommodations was associated with recent adverse mental and physical health indicators and health care utilization behaviors. To examine whether discrimination in health care conferred a unique risk for adverse health, we tested whether discrimination in health care was independently associated with health indicators, adjusting for discrimination experiences in other public accommodations settings. These aims are key to understanding the health and well-being of gender minority individuals and informing health policy and advocacy in Massachusetts and elsewhere for transgender people, including the need for policy to be inclusive of discrimination in public accommodations settings.

Methods

Study Procedures

Between March and December 2013, the Fenway Institute at Fenway Health (Fenway) and the Massachusetts Transgender Political Coalition (MTPC) collaborated to conduct a stress and health needs assessment of transgender and gender-nonconforming adults in Massachusetts. The purpose of the needs assessment was to gain a deeper understanding of the health of transgender and gender-nonconforming adult communities in Massachusetts, and specifically to understand whether and how social stressors like discrimination influence health. Project VOICE (Voicing Our Individual and Community Experiences) used a participatory population perspective grounded in community-based participatory research principles.[38] Between March and July 2013, a team of community-based advocates, transgender leaders, researchers, and LGBT policy experts, working with gender minority communities in the Commonwealth, together created the survey instrument and data collection plan. Whenever possible, they used validated questions or adapted them from earlier research to ensure the comparability of findings, including those from such sources as the US National Transgender Discrimination Survey and Behavioral Risk Factor Surveillance System (BRFSS). Project VOICE was approved by the Fenway Institutional Review Board (IRB).

Sampling Methodology

The use of multiple recruitment strategies has been shown to be important to achieve diverse samples of transgender people.[39] Transgender and gender-nonconforming people in Massachusetts were therefore sampled using bimodel methods: (1) in person (via community events, programming, and gatherings) and (2) online (via electronic listservs, emails, website postings at Fenway and MTPC, and social networking sites). Respondents had to meet the following inclusion criteria: (1) self-identified as transgender or gender nonconforming; (2) aged 18 years or older; (3) living in Massachusetts (or had lived in Massachusetts for at least 3 months of the past year); (4) had not previously completed the survey; (5) was able to read and understand English or Spanish. We followed best practices for Internet research with transgender people to ensure the integrity and validity of the data collected.[40]

We did our sampling between August and December 2013. Overall, 452 people were eligible and completed the survey, providing data on multiple aspects of transgender-related discrimination experienced in housing, employment, education, and public accommodations, including health care settings, restaurants, public transportation, and criminal justice locations. The majority of respondents completed the study online (88%); 12% took the survey in person. In a single multivariable model, those taking the survey online were significantly more likely to be white non-Hispanic ($p = 0.001$) and to have a higher level of educational attainment ($p = 0.001$). But they were less likely to live in the greater Boston area than outside greater Boston ($p = 0.001$) and to have a low income ($p = 0.03$). When comparing online and in-person respondents ($p > 0.05$), we found no significant differences in age, the percentage of respondents who said they were on the female-to-male (FTM) or male-to-female (MTF) spectrum, the percentage of respondents who reported having had medical gender affirmation, visual gender-nonconforming (GNC) expression, health insurance status, and public accommodations experiences. The top 3 ways that participants learned about the survey were through the Internet, email, and word of mouth.

Measures

Public Accommodations Discrimination in the Past 12 Months. Public accommodations discrimination was queried using questions adapted from the US National Transgender Discrimination Survey.[27] Respondents were asked: "Based on your transgender or gender-nonconforming status, please check whether you have experienced any of the following by a staff member or stranger in at least 1 of these public spaces in the past 12 months."[27] Respondents were considered to have experienced discrimination when they marked "yes" to one or both of the following questions on specific types of public places: "I did not receive fair treatment or service" or "I was verbally harassed or disrespected." Public accommodations queried 10 domains: (1) health care facilities or health care service locations (eg, emergency rooms, dental and medical offices, clinics, hospitals, pharmacies, nursing homes), (2) transportation (eg, buses, planes, taxis, trains, stations, terminals, depots, platforms), (3) food or drink locations (eg, restaurants, bars, other food or drink establishments), (4) social service locations (eg, homeless shelters, food banks, child care centers, senior citizen centers, adoption agencies), (5) criminal

justice locations (eg, police stations, court houses, jails, correction facilities), (6) retail stores (eg, clothing stores, boutiques), (7) service locations (eg, laundromats, dry cleaners, banks, barber shops, travel agencies, gas stations, funeral parlors, employment agencies, providers of professional services such as accountants and insurance agents), (8) lodging locations (eg, hotels, inns, motels, campgrounds, resorts), (9) public gathering locations (eg, auditoriums, houses of worship), and (10) entertainment venues (eg, theaters, concert halls, sports stadiums, museums, libraries, parks, zoos, amusement parks). Although public bathrooms are public accommodations, we did not include them as a specific domain in our study because public restrooms are part of other public accommodations, for example, bathrooms at a bus station or restaurant. Because of how the questions were asked, therefore, "bathroom discrimination experiences" could not be specifically disentangled from discrimination in public accommodations settings in this study.

We next constructed 3 variables. The first variable was any discrimination during the past 12 months (yes, no). The second was discrimination in health care in the past 12 months (yes, no). The third was a summary variable capturing the number of public accommodations settings (ranging from 0 to 9) in which participants reported experiencing discrimination in the last 12 months (excluding health care); this variable was collapsed into 0, 1, 2, 3, 4, or more settings for analysis.

Unfortunately, no measure of "dosage" (ie, how often participants reported discrimination) was queried; thus, the categorical variable of how many settings in which participants reported discrimination experiences (coded as 0 through 4+) represents the best available proxy.

Health. Mental health was queried using 2 items. Respondents were asked: "Within the past 30 days, have you felt emotionally upset, for example, angry, sad, or frustrated, as a result of how you were treated based on your transgender identity or gender expression?" (yes, no).[41] We used the validated 10-item short form of the Center for Epidemiologic Studies Depression Scale (CES-D-10) to screen respondents for past-week depression, with a cutoff score of 10 or higher indicating clinically significant depressive distress (yes, no).[42] Physical health was assessed by asking respondents: "Within the past 30 days, have you experienced any physical symptoms, for example, a headache, an upset stomach, tensing of your muscles, or a pounding heart, as a result of how you were treated based on your transgender identity or gender expression?" Additional physical health indicators were a lifetime asthma diagnosis (yes, no)

and a lifetime gastrointestinal diagnosis (eg, irritable bowel syndrome, ulcerative colitis, or Crohn's disease) (yes, no).[41] Health care utilization in the past 12 months was measured by respondents answering "yes" or "no" to the following experiences: "I postponed or did not try to get medical care when I was sick or injured"; "I postponed or did not try to get checkups or other preventive medical care"; "I postponed or did not try to get medical care when I needed it, and this resulted in a medical emergency in which I had to go to the ER or urgent care clinic to get immediate help."[27]

Gender Identity, Gender Affirmation, and Visual Gender-Nonconforming Expression. Gender identity was assessed using a 2-step method[43,44] with 2 items: (1) assigned sex at birth (female, male) and (2) current gender identity (man, woman, female-to-male [FTM]/trans man, male-to-female [MTF]/trans woman, genderqueer, gender variant, gender nonconforming, other). The 2 items were cross tabulated to categorize participants as MTF spectrum ($n = 167$) or FTM spectrum ($n = 285$). Participants were also categorized as having a binary gender identity (male/trans male, female/trans female) or a nonbinary gender identity (genderqueer, gender variant, gender nonconforming) based on their response to the current gender identity item. Social gender transition was assessed with the following item: "Do you consistently present (live 'full time') in your identified gender?" (yes, no). Medical gender affirmation was assessed with the following item: "Have you accessed any transgender-related medical interventions to affirm your gender (eg, hormones, surgeries)?" (yes, no). Visual gender-nonconforming (GNC) expression was assessed with the following item: "People can tell I'm transgender or gender nonconforming even if I don't tell them." This item was assessed on a 5-point Likert scale from 0 (never) to 4 (always). The item was coded into low GNC (never or occasionally), moderate GNC (sometimes), and high GNC (most of the time or always).

Age, Race/Ethnicity, Socioeconomic Status, Health Insurance, and Survey Mode. Age was queried in years. Race and ethnicity were assessed separately and combined into the following groups: White Non-Hispanic, Black, Latino, Other Race, Multiracial. Socioeconomic status (SES), including educational attainment, was determined on a 4-point scale ranging from 1 to 4 (high school or less, some college, 4-year college degree, graduate school); income (low earning < $20,000, moderate $20,000 to $49,999, and high > $50,000); and employment status (employed for wages, self-employed, unemployed 1+ years(s), unemployed < 1 year,

homemaker, student, retired). Health insurance was queried as private, public, or uninsured. Survey mode was assessed as online or in person.

Statistical Analyses

We used SAS® version 9.3 statistical software to analyze our data, obtaining univariate, descriptive statistics for all variables of interest. Distributions of individual items were assessed, including missingness. Because missingness was differential and violated the missing completely at random assumption required for valid statistical inferences using listwise deletion,[45] the data were multiply imputed. A fully conditional specification (FCS)[46-48] imputation method was used, as in previous transgender health research.[39] All subsequent statistical analyses were conducted in the imputed data set. First, we compared respondents reporting public accommodations discrimination in the past 12 months with those who did not. A single adjusted multivariable logistic regression model (Model 1) was estimated with public accommodations discrimination (yes, no) as an outcome that included FTM versus MTF spectrum, gender affirmation, visual GNC expression, age, race/ethnicity, income, education, employment, health insurance, and survey mode.

Second, we modeled binary outcomes for mental health (emotional symptoms during the past 30 days, CES-D positive screen for depression in the past week), physical health (physical symptoms during the past 30 days, asthma diagnosis, gastrointestinal diagnosis), and health care utilization in the past 12 months (had to go to ER because care was delayed, postponed needed care when sick, postponed routine preventive care) (Models 2 through 8) as a function of our primary statistical predictors: public accommodations discrimination in health care (yes, no) and number of public accommodations discrimination settings (treated pseudocontinuously: 0, 1, 2, 3, 4+). All models were adjusted for the same variables as specified in Model 1. Adjusted risk ratios (aRRs) were estimated[49] rather than odds ratios because the prevalence of outcomes was >10%.

Results

Descriptive Characteristics of Respondents

Respondents ($n = 452$) ranged in age from 18 to 75 years, with a mean age of 33 years (SD = 12.8). The majority were white non-Hispanic

(79%) and included persons from every county in Massachusetts except for Nantucket and Martha's Vineyard (Duke and Nantucket Counties). Forty-one percent were from the greater Boston area (ie, Boston, Braintree, Brockton, Brookline, Cambridge, Chelsea, Everett, Milton, Quincy, Revere, Somerville, and Winthrop).

More than a quarter of the respondents (28%) were assigned a male sex at birth and identified as a woman, female, or on the MTF spectrum; 9% were assigned a male sex at birth and identified as gender nonconforming or assumed a nonbinary gender identity. Nearly one-third (31%) were assigned a female sex at birth and identified as a man, male, or on the FTM spectrum, and 32% were assigned a female sex at birth and identified as gender nonconforming or assumed a nonbinary gender identity. About 5% of the sample indicated that they had been diagnosed with a medically recognized intersex condition; 12 of these individuals were assigned a male sex at birth, and 8 were assigned a female sex at birth. More than half (55%) had medically affirmed their gender through cross-sex hormones and/or surgery. Table 1 shows the characteristics of the study sample.

Public Accommodations Discrimination, Past 12 Months

The majority of respondents (65%) had experienced discrimination in at least 1 public accommodations setting in the past 12 months. The 5 most common discrimination settings were transportation (36%), retail (28%), restaurants (26%), public gatherings (25%), and health care (24%). Excluding health care, participants reported public accommodations discrimination as follows: 22% in 1 setting, 18% in 2 settings, 17% in 3 settings, and 8% in 4 or more settings. Table 2 describes the distribution of any public accommodations discrimination in the past 12 months by mental health, physical health, health care utilization, and visual GNC expression. Table 2 also shows the prevalence of health indicators in our sample.

Results from adjusted multivariable logistic regression models are presented in Table 3. Those factors significantly associated with a greater probability of public accommodations discrimination in the past 12 months (Table 3, Model 1A) were younger age, being FTM versus MTF, being people of color (POC) versus white non-Hispanic,

Table 1. Demographic Characteristics of Transgender Adults Sampled in Massachusetts ($n = 452$)

	Mean (SD)	
Age in Years (range 18 to 75)	32.60 (12.76)	
	%	***n***
Current Gender Identity		
Male-to-female (MTF) spectrum	36.94	167
Male-to-female/trans woman/woman/female identity	27.65	125
Male assigned birth sex nonbinary gender nonconforming identity	9.29	42
Female-to-male (FTM) spectrum	63.06	285
Female-to-male/trans man/man/male identity	31.42	142
Female assigned birth sex nonbinary gender nonconforming identity	31.64	143
Social and Medical Gender Affirmation		
Hormones and/or surgery	54.87	248
Live full time	75.22	340
Race/Ethnicity		
White non-Hispanic	79.42	359
People of color	20.58	93
Black	2.88	13
Hispanic/Latino	9.51	43
Other race/ethnicity	2.88	13
Multiracial	5.31	24
Educational Attainment		
High school diploma/GED or below	14.37	65
Some college	29.65	134
College degree	33.63	152
Graduate degree	22.35	101
Income		
Low (< $20,000)	40.93	185
Moderate ($20,000-$49,999)	31.19	141
High ($50,000+)	27.88	126
Employment Status		
Employed for wages	55.31	250
Self-employed	11.06	50
Unemployed 1+ years	6.42	29
Unemployed < 1 year	5.31	24
Homemaker	1.55	7
Student	27.65	125
Retired	2.43	11

Continued

Table 1. *Continued*

	%	*n*
Health Insurance		
Private	63.94	289
Public	31.42	142
Uninsured	4.65	21
Survey Mode		
Online	87.83	397
In person	12.17	55

moderate GNC and high GNC expression each compared with low GNC expression, low income, and being employed versus not. Medical gender affirmation was associated with a lower probability (protective effect) of discrimination in public accommodations in the last 12 months in this model. No significant differences in public accommodations discrimination were found by educational attainment, insurance status, or sampling method in the model. Discrimination in health care was highly associated with any public accommodations discrimination (aRR = 3.14; 95% CI = 2.47, 4.00; Table 3, Model 1B).

The correlates of discrimination in health care (Table 3, Model 2A) were being POC versus white non-Hispanic, low income, and survey mode. The number of public accommodations discrimination settings significantly statistically predicted an increased probability of discrimination in health care (aRR = 1.64; 95% CI = 1.52, 1.77; Table 3, Model 2B).

Health-Related Sequelae of Public Accommodations Discrimination

As shown in Table 4, discrimination in health care in the past 12 months was significantly and independently associated with emotional symptoms in the past 30 days (aRR = 1.39; 95% CI = 1.09, 1.77), a positive screen for clinical depression in the past 7 days

Table 2. Mental Health, Physical Health, Health Care Utilization, and Visual Gender-Nonconforming (GNC) Expression of Transgender Adults Sampled in Massachusetts ($n = 452$)

	Public Accommodations Discrimination, $n = 294$		No Public Accommodations Discrimination, $n = 158$		Total Sample, $n = 452$	
	%	*n*	%	*n*	%	*n*
Mental Health						
Tension emotional, past 30 days	74.49	219	55.06	87	67.70	306
CES-D depression, past 7 days	30.61	90	18.99	30	26.55	120
Physical Health						
Tension physical, past 30 days	55.44	163	37.34	59	49.12	222
Asthma diagnosis, lifetime	28.23	83	16.46	26	24.12	109
Gastrointestinal diagnosis, lifetime	14.97	44	7.59	12	12.39	56

Continued

Table 2. *Continued*

	Public Accommodations Discrimination, $n = 294$		No Public Accommodations Discrimination, $n = 158$		Total Sample, $n = 452$	
	%	*n*	%	*n*	%	*n*
Health Care Utilization						
Postponed care when needed, resulting in emergency care	13.95	41	4.43	7	10.62	48
Postponed needed medical care when sick/injured	24.83	73	8.86	14	19.25	87
Postponed routine preventive medical care	30.27	89	11.39	18	23.67	107
Visual Gender-Nonconforming (GNC) Expression						
Low GNC[a]	43.88	129	62.03	98	50.22	227
Moderate GNC[b]	33.67	99	23.42	37	30.09	136
High GNC[c]	22.45	66	14.56	23	19.69	89

[a]Low: People can tell I'm trans/GNC "never"/"occasionally."
[b]Moderate: People can tell I'm trans/GNC "sometimes."
[c]High: People can tell I'm trans/GNC "most of the time"/"always."

Table 3. Correlates of Public Accommodations Discrimination in the Past 12 Months ($n = 452$)

	Model 1A		Model 1B		Model 2A		Model 2B	
	Any Public Accommodations Discrimination (Y/N)		Any Public Accommodations Discrimination (Y/N)		Discrimination in Health Care (Y/N)		Discrimination in Health Care (Y/N)	
	aRR (95% CI)	p-value	aRR (95% CI)	p-value	aRR (95% CI)	p-value	aRR (95% CI)	p-value
Discrimination in health care (Y/N)	—	—	3.14 (2.47, 4.00)	< 0.0001	—	—	—	—
Public accommodations discrimination (number of settings)	—	—	—	—	—	—	1.64 (1.52, 1.77)	< 0.0001
Age (in years)	0.99 (0.98, 1.00)	0.044	0.97 (0.98, 0.99)	0.011	1.01 (0.99, 1.02)	0.091	1.01 (1.00, 1.02)	0.005
FTM vs MTF spectrum	1.28 (1.04, 1.58)	0.021	1.23 (0.99, 1.52)	0.064	1.26 (1.00, 1.59)	0.049	1.16 (0.91, 1.47)	0.239
POC vs white (non-Hispanic)	1.34 (1.05, 1.71)	0.020	1.30 (1.01, 1.68)	0.040	1.15 (0.90, 1.48)	0.262	1.05 (0.81, 1.36)	0.738
Medical gender affirmation	0.70 (0.58, 0.85)	0.0002	0.70 (0.58, 0.85)	0.0003	0.95 (0.78, 1.16)	0.631	1.00 (0.82, 1.23)	0.991
Moderate[a] GNC expression vs low[b] GNC expression	2.21 (1.77, 2.74)	< 0.0001	2.22 (1.78, 2.78)	< 0.0001	1.07 (0.85, 1.34)	0.582	0.84 (0.66, 1.06)	0.139

Continued

Table 3. *Continued*

	Model 1A		Model 1B		Model 2A		Model 2B	
	Any Public Accommodations Discrimination (Y/N)		Any Public Accommodations Discrimination (Y/N)		Discrimination in Health Care (Y/N)		Discrimination in Health Care (Y/N)	
	aRR (95% CI)	p-value	aRR (95% CI)	p-value	aRR (95% CI)	p-value	aRR (95% CI)	p-value
High[c] GNC expression vs low[b] GNC expression	2.05 (1.59, 2.63)	< 0.0001	2.16 (1.67, 2.79)1	< 0.0001	0.89 (0.69, 1.17)	0.411	0.64 (0.48, 0.85)	0.002
Low income	1.41 (1.14, 1.73)	0.001	1.28 (1.04, 1.58)	0.020	1.58 (1.28, 1.96)	< 0.0001	1.56 (1.25, 1.95)	0.0001
Low education	1.08 (0.82, 1.43)	0.585	1.08 (0.81, 1.44)	0.596	1.07 (0.80, 1.43)	0.670	1.05 (0.77, 1.42)	0.763
Employed vs not employed	1.28 (1.04, 1.57)	0.018	1.31 (1.06, 1.62)	0.011	0.97 (0.78, 1.21)	0.801	0.94 (0.75, 1.18)	0.592
Public/no insurance vs private	1.02 (0.81, 1.28)	0.893	1.01 (0.79, 1.28)	0.961	1.09 (0.85, 1.39)	0.498	0.93 (0.72, 1.20)	0.585
Online vs in-person survey mode	1.13 (0.83, 1.54)	0.447	1.20 (0.87, 1.64)	0.261	0.68 (0.48, 0.95)	0.024	0.67 (0.47, 0.95)	0.026

Abbreviations: aRR = adjusted risk ratio; 95% CI = 95% confidence interval; FTM = female-to-male; MTF = male-to-female; POC = people of color; GNC = gender-nonconforming.

[a]Moderate: People can tell I'm trans/GNC "sometimes."

[b]Low: People can tell I'm trans/GNC "never"/"occasionally."

[c]High: People can tell I'm trans/GNC "most of the time"/"always."

Table 4. Correlates of Mental and Physical Health Outcomes ($n = 452$)

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Emotional Symptoms, Past 30 Days, 67.70%		CES-D Depression, Past 7 Days, 26.55%		Physical Symptoms, Past 30 Days, 49.12%		Asthma Diagnosis, 24.12%		Gastrointestinal Diagnosis, 12.39%	
	aRR (95% CI)	p-value	aRR (95% CI)	p-value	aRR (95% CI)	p-value	aRR (95% CI)	p-value	aRR (95% CI)	p-value
Discrimination in health care (Y/N)	1.39 (1.09, 1.77)	0.007	1.81 (1.45, 2.25)	< 0.0001	1.31 (1.06, 1.62)	0.013	1.08 (0.86, 1.36)	0.517	1.64 (1.22, 2.20)	0.0009
Public accommodations discrimination (number of settings)	1.44 (1.32, 1.56)	< 0.0001	1.33 (1.23, 1.44)	< 0.0001	1.40 (1.31, 1.51)	< 0.0001	1.27 (1.17, 1.37)	< 0.0001	1.20 (1.08, 1.33)	0.0009
Age (in years)	0.97 (0.96, 0.98)	< 0.0001	1.00 (0.99, 1.01)	0.208	0.97 (0.96, 0.98)	< 0.0001	1.00 (0.99, 1.01)	0.522	1.04 (1.03, 1.05)	< 0.0001
FTM vs MTF spectrum	0.87 (0.69, 1.09)	0.220	0.64 (0.51, 0.81)	0.0002	0.78 (0.63, 0.96)	0.021	1.44 (1.13, 1.83)	0.003	5.73 (3.82, 8.59)	< 0.0001
POC vs white (non-Hispanic)	1.10 (0.85, 1.42)	0.481	1.50 (1.17, 1.94)	0.002	0.99 (0.78, 1.25)	0.910	0.92 (0.71, 1.20)	0.532	0.46 (0.30, 0.69)	0.0002
Medical gender affirmation	0.99 (0.81, 1.20)	0.898	0.66 (0.54, 0.81)	< 0.0001	1.37 (1.13, 1.64)	0.001	0.99 (0.81, 1.21)	0.908	1.25 (0.94, 1.65)	0.121

Continued

Table 4. *Continued*

	Model 1		Model 2		Model 3		Model 4		Model 5	
	Emotional Symptoms, Past 30 Days, 67.70%		CES-D Depression, Past 7 Days, 26.55%		Physical Symptoms, Past 30 Days, 49.12%		Asthma Diagnosis, 24.12%		Gastrointestinal Diagnosis, 12.39%	
	aRR (95% CI)	p-value	aRR (95% CI)	p-value	aRR (95% CI)	p-value	aRR (95% CI)	p-value	aRR (95% CI)	p-value
Moderate[a] GNC expression vs low[b] GNC expression	2.25 (1.78, 2.84)	< 0.0001	0.66 (0.52, 0.85)	0.0009	1.27 (1.03, 1.56)	0.027	0.60 (0.47, 0.77)	< 0.0001	0.73 (0.51, 1.03)	0.073
High[c] GNC expression vs low[b] GNC expression	2.48 (1.88, 3.27)	< 0.0001	0.95 (0.73, 1.24)	0.684	2.00 (1.56, 2.57)	< 0.0001	0.97 (0.74, 1.26)	0.811	1.49 (1.06, 2.09)	0.023
Low income	1.09 (0.87, 1.35)	0.466	1.43 (1.15, 1.79)	0.001	1.39 (1.13, 1.69)	0.002	1.43 (1.15, 1.79)	0.002	1.88 (1.38, 2.55)	< 0.0001
Low education	0.82 (0.62, 1.10)	0.192	1.20 (0.90, 1.61)	0.212	0.77 (0.59, 1.02)	0.066	1.19 (0.88, 1.61)	0.259	2.83 (1.95, 4.12)	< 0.0001
Employed vs not employed	1.06 (0.86, 1.32)	0.591	0.67 (0.54, 0.84)	0.0004	1.12 (0.92, 1.38)	0.253	1.10 (0.87, 1.37)	0.428	1.07 (0.79, 1.46)	0.656
Public/no insurance vs private	0.88 (0.69, 1.12)	0.305	0.92 (0.71, 1.19)	0.514	1.01 (0.80, 1.27)	0.826	0.82 (0.64, 1.07)	0.138	0.62 (0.43, 0.89)	0.009
Online vs in-person survey mode	0.79 (0.57, 1.08)	0.134	0.38 (0.26, 0.55)	< 0.0001	0.74 (0.55, 1.00)	0.051	1.02 (0.73, 1.43)	0.892	1.41 (0.91, 2.19)	0.130

Abbreviations: aRR = adjusted risk ratio; 95% CI = 95% confidence interval; FTM = female-to-male; MTF = male-to-female; POC = people of color; GNC = gender-nonconforming.

[a]Moderate: People can tell I'm trans/GNC "sometimes."

[b]Low: People can tell I'm trans/GNC "never"/"occasionally."

[c]High: People can tell I'm trans/GNC "most of the time"/"always."

(aRR = 1.81; 95% CI = 1.45, 2.25), negative physical symptoms in the past 30 days (aRR = 1.31; 95% CI = 1.06, 1.62), and a gastrointestinal diagnosis (aRR = 1.64; 95% CI = 1.22, 2.20) (Table 4, Models 1, 2, 3, and 5), but it was not significantly associated with an asthma diagnosis (aRR = 1.08; 95% CI = 0.86, 1.36; Model 4). In each of these models, the number of past-12-month public accommodations discrimination settings endorsed also significantly increased the risk of adverse health. Specifically, discrimination in each additional setting raised the risk an additional 20% to 44% (Models 2 through 5). For example, discrimination experienced in health care uniquely increased by 39% the risk of emotional symptoms in the past 30 days. Experiencing discrimination in other public accommodations settings also raised the risk; in 1 setting, the risk of emotional symptoms was 44% higher, and in 2 settings, the risk rose to 88%.

Table 5 presents multivariable models examining health care utilization. Discrimination in health care was significantly associated with a postponement of care that resulted in having a medical emergency that required going to the emergency room (ER) or to urgent care (aRR = 2.38; 95% CI = 1.76, 3.23), a postponement of needed medical care when sick or injured (aRR = 3.41; 95% CI = 2.63, 4.43), and a postponement of routine preventive care (aRR = 2.43; 95% CI = 1.92, 3.08) (Table 5, Models 1, 2, and 3). Discrimination in health care conferred a unique risk. In these models, however, the number of settings discrimination in public accommodations endorsed increased the risk of health care postponement from 55% to 77%.

Discussion

The 2012 enactment of the Massachusetts gender identity nondiscrimination law provided much needed protections against discrimination on the basis of a person's gender identity in employment, housing, credit, and hate crimes. However, the law excludes protections against discrimination in public accommodations settings—the public spaces accessed daily by transgender people—including public transportation, restaurants, retail locations, supermarkets, service locations, and health care settings. Data from our study show that discrimination against transgender and gender-nonconforming individuals in Massachusetts is common and associated with adverse mental and physical health

Table 5. Public Accommodations in Past 12 Months and Health Care Utilization ($n = 452$)

	Model 1		Model 2		Model 3	
	Postponed Care That Resulted in Emergency Care,[a] 10.62%		Postponed Care When Sick or Injured,[b] 19.25%		Postponed Routine Preventive Care,[c] 23.67%	
	aRR (95% CI)	p-value	aRR (95% CI)	p-value	aRR (95% CI)	p-value
Discrimination in health care (Y/N)	2.38 (1.76, 3.23)	< 0.0001	3.41 (2.63, 4.43)	< 0.0001	2.43 (1.92, 3.08)	< 0.0001
Public accommodations discrimination (number of settings)	1.64 (1.46, 1.84)	< 0.0001	1.77 (1.61, 1.96)	< 0.0001	1.55 (1.42, 1.69)	< 0.0001
Age (in years)	1.00 (0.99, 1.01)	0.667	0.98 (0.97, 0.99)	0.010	0.98 (0.97, 0.99)	0.0001
FTM vs MTF spectrum	1.72 (1.18, 2.49)	0.005	3.15 (2.25, 4.41)	< 0.0001	2.05 (1.55, 2.72)	< 0.0001
POC vs white (non-Hispanic)	0.41 (0.27, 0.64)	< 0.0001	0.27 (0.18, 0.40)	< 0.0001	0.42 (0.30, 0.58)	< 0.0001
Medical gender affirmation	0.97 (0.72, 1.32)	0.857	4.07 (3.08, 5.37)	< 0.0001	1.61 (1.28, 2.03)	< 0.0001
Moderate[d] GNC expression vs low[e] GNC expression	1.31 (0.93, 1.83)	0.121	1.01 (0.75, 1.34)	0.975	0.95 (0.74, 1.24)	0.716
High[f] GNC expression vs low[e] GNC expression	0.88 (0.58, 1.33)	0.536	0.55 (0.38, 0.80)	0.002	0.76 (0.56, 1.03)	0.077

Continued

Table 5. *Continued*

	Model 1		Model 2		Model 3	
	Postponed Care That Resulted in Emergency Care,[a] 10.62%		Postponed Care When Sick or Injured,[b] 19.25%		Postponed Routine Preventive Care,[c] 23.67%	
	aRR (95% CI)	p-value	aRR (95% CI)	p-value	aRR (95% CI)	p-value
Low income	1.38 (1.00, 1.92)	0.050	1.47 (1.12, 1.93)	0.005	1.81 (1.42, 2.31)	< 0.0001
Low education	1.09 (0.71, 1.67)	0.698	0.51 (0.33, 0.78)	0.002	0.71 (0.49, 1.04)	0.080
Employed vs not employed	0.79 (0.58, 1.10)	0.160	0.91 (0.69, 1.21)	0.528	1.40 (1.08, 1.80)	0.010
Public/no insurance vs private	2.92 (2.04, 4.17)	< 0.0001	0.81 (0.58, 1.11)	0.184	0.62 (0.46, 0.82)	0.001
Online vs in-person survey mode	0.36 (0.20, 0.66)	0.0009	0.50 (0.30, 0.86)	0.010	0.46 (0.28, 0.74)	0.001

Abbreviations: aRR = adjusted risk ratio; 95% CI = 95% confidence interval; FTM = female-to-male; MTF = male-to-female; POC = people of color; GNC = gender-nonconforming.

[a]I postponed or did not try to get medical care when I needed it, and this resulted in a medical emergency in which I had to go to the ER or urgent care clinic to get immediate help.

[b]Because of my transgender identity or nonconforming gender expression, I postponed or did not try to get medical care when I was sick or injured because of disrespect or mistreatment from doctors or other health care providers.

[c]Because of my transgender identity or nonconforming gender expression, I postponed or did not try to get checkups or other preventive medical care because of disrespect or mistreatment from doctors or other health care providers.

[d]Moderate: People can tell I'm trans/GNC "somtimes."

[e]Low: People can tell I'm trans/GNC never/occasionally.

[f]High: People can tell I'm trans/GNC most of the time/always.

as well as delays in health care utilization among gender minority people. Indeed, this study found that with the exception of an asthma diagnosis, discrimination in health care settings led to unique health-related risks, along with the discrimination experienced in other public accommodations settings. The passage and enforcement of transgender rights laws that include protections covering public accommodations are therefore a critical structural public health policy intervention needed to address transgender and gender-nonconforming health inequities. In Massachusetts, this means expanding the existing nondiscrimination statute to cover gender identity–based discrimination in public accommodations settings. In the 32 other states without any protections for transgender people in state law, it means including real or perceived gender identity in nondiscrimination laws covering employment, housing, credit, and public accommodations. The 2009 US National Transgender Discrimination Survey documented the need for such laws across the United States.[27]

Approximately two-thirds of gender minority adults in Massachusetts reported having been mistreated in public accommodations in the past 12 months, a proportion 21% higher than that reported on the national level.[27] No significant differences in public accommodations discrimination were found except by visual gender-nonconforming expression. Those with high or moderate levels of visual gender nonconformity had a higher probability of experiencing public accommodations discrimination in the past 12 months compared with those with low visual nonconformity (respondents who reported that people can "never" or "occasionally" tell I'm transgender). Our findings are consistent with local[50] and national[27] data sources, which show that people who are more readily visually identifiable as being transgender or gender nonconforming are at greater risk for discrimination in public spaces. Public bathrooms are a likely "war zone" for many gender-based confrontations and discrimination experiences in public accommodations settings. National survey data suggest the majority (70%) of US transgender people sampled report experiencing verbal harassment and assault and being denied access to public restrooms.[51] Although in our study we did not ask specifically about discrimination experienced in public restrooms, they are a potential site of contestation in which harm may be inflicted on transgender and other gender minority people, particularly those who are visually nonconforming.

We found that public accommodations discrimination was remarkably consistent in statistically predicting poorer health for stress-responsive health indicators. Specifically, public accommodations discrimination in the past 12 months was significantly associated with negative emotional symptoms in the past 30 days and depression during the past week. Public accommodations discrimination also statistically predicted a greater risk of experiencing physical symptoms in the past 30 days as a result of how a person was treated based on gender identity or gender expression, receiving an asthma diagnosis, and receiving a gastrointestinal diagnosis. Understanding stigma in health care and its relation to specific health outcomes that can be intervened upon in clinical settings is an important task in addressing health disparities for transgender people.

Discrimination in public accommodations was associated with health care utilization behaviors. Experiencing discrimination (ie, *enacted* stigma) may lead to fear/anxiety and to *anticipated* stigma for gender minority people, a concept closely linked to the social psychological construct of rejection sensitivity.[52,53] For example, discrimination may lead to psychological symptoms (ie, hypersensitivity and ruminative distress) and related affective, cognitive, and behavioral responses (ie, avoidance) in situations in which potential rejection or discrimination may occur. Anticipatory stress, alternately termed *hypervigilance* or *perseverative cognition*,[54,55] may be a unique contributor to negative health for transgender people who, based on prior experiences of discrimination, may come to expect that others will devalue them based on their transgender and/or gender-nonconforming status.

In the medical context, anticipatory stress may play out as the postponement of care due to fear of future discrimination.[50] We found a unique and significant association between discrimination in health care as well as other settings of public accommodations discrimination and postponing needed medical care when sick or injured, postponing routine preventive care, and postponing care that resulted in having a medical emergency that required going to the emergency room or to urgent care. Approximately 1 in 5 respondents (19%) indicated that they postponed or did not try to get medical care when they were sick or injured in the past 12 months because of disrespect or mistreatment from doctors or other health care providers, based on being transgender or gender nonconforming.

Because of discrimination, approximately 24% of the sample reported postponing routine medical care, which can result in significant health consequences for certain transgender and other gender minority people. For example, transgender men who retain their cervix require routine screening for human papillomavirus (HPV),[56] the leading cause of most cervical cancers.[57] Research suggests, however, that transgender men may avoid these exams, partly because of fears of being mistreated.[58] Among transgender women in the United States, the estimated prevalence of HIV is 21.7%,[59] which exceeds that of other populations, yet the prevalence of HIV-testing behaviors in this group is low.[56] Mistreatment in care settings has been shown to contribute to an avoidance of HIV testing and to affect health care utilization throughout the continuum of care for transgender women.[60,61] Even though specific transgender people have unique screening needs, common diseases that contribute significantly to morbidity and mortality in the United States are often diagnosed by or prevented through routine, preventive medical care.[56] Nonetheless, transgender and other gender minority individuals must be engaged in care in order to reap the benefit of preventive services. The education of health care providers and ethical standards/consequences for refusing care to transgender people are necessary to ensure that *all* people receive needed health care. By uncovering the mechanisms through which stigma influences the utilization of health care, researchers, practitioners, and policymakers will be better able to intervene to make providers more culturally competent, to reduce enacted stigma in clinical settings, and to ensure access to quality care for gender minorities.

Section 1557 of the Affordable Care Act bans discrimination on the basis of gender identity—following the interpretation by the US Department of Health and Human Services of Title IX of the Education Amendments of 1972—but most providers, clinical staff, and transgender patients are not aware of this protection.[62] The states' nondiscrimination laws that ban discrimination in public settings, including hospitals and health centers, can have an educative effect and further protect transgender people against discrimination in this important public setting. Health centers' adoption of nondiscrimination policies, transgender health protocols, and transgender competency training may not only help protect transgender and other gender minority people from discrimination but also equip health care systems and settings and providers with the knowledge and structure to address the health care

needs of this underserved community, thereby promoting gender health equity.

This article has presented results from the statewide survey of self-identified transgender and gender-nonconforming adults in Massachusetts who completed the survey online or in person. Although we obtained a diverse sample of respondents across all major regions of Massachusetts, convenience sampling may have limited the representativeness of the data. In addition, our study's cross-sectional nature means that the causality cannot be determined, that the results are associational only. Future research is warranted to examine longitudinally the relationship between public accommodations discrimination and negative health. Additional research also is needed to examine changes in health disparities after the passage of antidiscrimination legislation in order to look more critically at the connection between policy and its effect on the health of gender minorities over time. This includes determining the effect of policy on subgroups of gender minority people who were found to disproportionately experience discrimination in our study, including those on the FTM spectrum, people of color, and low-income individuals.

Limitations notwithstanding, our study found pervasive public accommodations discrimination based on transgender and gender-nonconforming identity or expression and significant associations between experiencing discrimination in public settings and adverse health outcomes among gender minority adults in Massachusetts. This study provides critical evidence for the ongoing, rhetorically charged debate on transgender public accommodations legislation in Massachusetts and other states, driven heavily by baseless fears of non-transgender women sharing gendered public spaces, especially public bathrooms, with transgender people. Ideally, these data will transform public accommodations debates to focus less on hyperbolic claims not supported by data and more on the reality of endemic discrimination and its negative impact on the health and well-being of transgender and other gender minority people.

The passage and enforcement of legislation that protects gender minority people against discrimination in public accommodations, including health care settings, represents a critical structural intervention that could help reduce health inequities. In addition to being a matter of social justice, protecting transgender and other gender minority communities from mistreatment is a matter of public health. With civil

rights and justice in mind, policymakers should keep these measures at the forefront of their work to improve the health of transgender and gender-nonconforming individuals and society as a whole. Nondiscrimination legislation should include gender identity protections in employment, housing, credit, hate crimes, and public accommodations. Coverage of public accommodations is essential to protect the health and well-being of transgender and gender-nonconforming people and their ability to access health care. Massachusetts should expand its nondiscrimination protections to cover transgender people's ability to access public accommodations. The 32 states without any protections for this population should add gender identity to their statewide nondiscrimination laws, and the United States should adopt a national comprehensive nondiscrimination law that covers gender identity.

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