

Evaluating the Health of Transgender Adults in Rhode Island: A Five-Year Population-Based Analysis

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ABSTRACT

OBJECTIVE: Transgender individuals experience social and structural marginalization that can have a significant impact on physical and mental health. While prior studies have explored health disparities across various settings in the United States, not much is known about the health of the transgender population in Rhode Island. The purpose of this analysis was to understand the health issues faced by transgender adults in RI.

STUDY DESIGN AND METHODS: Data are from the 2020-2024 Rhode Island Behavioral Risk Factor Surveillance System (RI BRFSS), an annual telephone survey of non-institutionalized adults. Five years of data were pooled and weighted to provide average yearly population estimates. Multivariable logistic regression analyses were conducted to estimate the prevalence of various health outcomes among transgender adults compared to cisgender adults.

PRIMARY RESULTS: Overall, 1.0% of Rhode Island adults identified as transgender. After adjusting for age and race/ethnicity, transgender adults had more than three times the odds of reporting fair/poor overall health and frequent mental distress, nearly three times the odds of reporting a history of depression, and more than four times the odds of having any disability. Transgender and cisgender adults had similar rates of health insurance coverage, having a primary care provider, and having a medical checkup in the past year.

PRINCIPAL CONCLUSIONS: This analysis demonstrates persistent health disparities among transgender adults in RI. Continued surveillance, affirming clinical practices, intentional screening, improved access to behavioral and gender-affirming care, and supportive policies are necessary to improve the health of transgender adults in RI.

KEYWORDS: Transgender health; health disparities; mental health; disability; healthcare access

INTRODUCTION

Transgender individuals include a group of people whose gender identity or expression differs from their sex at birth.

In the United States, about 2.8 million individuals identify as transgender, comprising approximately 0.8% of the population.¹ Importantly, transgender individuals experience social and structural marginalization that can have a significant impact on physical and mental health. A number of studies have found that compared to cisgender peers (people with the same gender as their birth sex), transgender individuals are more likely to experience poorer overall health, more frequent mental distress, depression, and disability.²⁻⁶ Specifically, recent reports indicate transgender individuals have approximately two to three times the odds of being diagnosed with depression compared to cisgender individuals, and substantially higher prevalence of suicidal ideation and suicide attempts, with lifetime suicide attempt rates estimated to be more than four times higher than those in the general population.^{7,8} These disparities persist across many other health diseases and conditions, including chronic diseases, HIV, and other sexually transmitted infections (STIs).^{6,9,10} Previous research has also documented disparities in healthcare access and certain health behaviors among transgender adults.^{3,4,11}

The reasons for these health disparities are multifactorial. They include intersecting identities as well as “minority stress”, which refers to the growing body of evidence that demonstrates that external factors such as stigma, discrimination, and systemic inequalities lead to chronic stress and significant health issues. Studies have shown that experiences of discrimination and structural inequalities are associated with increased psychosocial distress, poorer health, and reduced access to care among transgender individuals.^{2,7,9}

While prior studies have explored health disparities across various settings in the United States, not much is known about the health of the transgender population in Rhode Island. Thus, the purpose of this analysis was to understand the health issues faced by transgender adults in Rhode Island.

METHODS

Data are from the 2020–2024 Rhode Island Behavioral Risk Factor Surveillance System (RI BRFSS). The RI BRFSS is an annual telephone survey of non-institutionalized adults aged 18 and older administered by the Rhode Island Department of Health (RIDOH) with support from the Centers for Disease Control and Prevention (CDC), and is used to measure

risk behaviors and health. Data from the survey sample are weighted to obtain statewide population estimates. Five years of data were pooled to obtain an adequate sample size, and sample weights were then proportionally adjusted accounting for the number of respondents each survey year to provide average yearly population estimates. Gender identity was measured using the question “Do you consider yourself to be transgender?” Individuals who responded “Yes” were categorized as “transgender” and those who said “No” were categorized as “cisgender.” Those who said they didn’t know, were unsure, or refused to answer the question were excluded from analyses.

The demographic characteristics of transgender and cisgender adults were compared using chi-square to test for statistical significance. Chi-square tests were then used to compare the prevalence of health outcomes between the two groups. Health outcomes evaluated included general health, chronic disease, disability, mental health and health behaviors. Because the demographic characteristics of cisgender and transgender adults differ, additional multivariable logistic regression analyses were conducted adjusting for age and race/ethnicity. Sociodemographic variables (e.g., education, household income) were not included in the adjusted analysis since they may be part of the causal pathway between gender identity and health. Health outcomes of interest included measures of overall health, chronic disease, disability, mental health, health behaviors, and healthcare access. All outcomes were binary and those with missing responses or responses of “don’t know” or “refused” were excluded from the analyses. For all analyses statistical significance was defined as $p < 0.05$.

RESULTS

From 2020–2024 a total of 28,128 adults completed the BRFSS. Those who did not know or did not respond to the question about gender identity were excluded from all analyses (unweighted $n=1068$). The annual prevalence of individuals identifying as transgender ranged from 0.6% in 2020 to 1.7% in 2024. Overall, from 2020–2024, on average 1.0% of RI adults (unweighted $n=170$, equivalent to an annual population estimate of 8,733 individuals) identified as transgender. Analysis of demographic characteristics revealed that transgender adults were significantly younger than cisgender adults (e.g., 64% of transgender adults are aged 18–29 years, compared to 19% of cisgender adults; **Table 1**). Transgender adults were also less likely to identify as White and reported lower educational attainment and household income ($p < 0.05$).

Bivariate analysis of gender identity and general health found that transgender adults were significantly more likely than cisgender adults to rate their overall health as fair/poor (32.6% vs. 15.5%, $p < .0001$), and to have a disability (54.4% vs. 27.4%, $p < .0001$). These differences remained significant

Table 1. Demographics and gender identity among RI adults (BRFSS 2020–2024)

	Gender Identity		P
	Transgender (N=8,733 1.0%)	Cisgender (N=843,752 99.0%)	
Sex			0.21
Male	41.7%	48.1%	
Female	58.3%	51.9%	
Age Group			<.0001
18–29 years	64.1%	18.7%	
30–44 years	21.2%	25.2%	
45–64 years	10.3%	31.6%	
65+ years	4.3%	24.5%	
Race/Ethnicity			0.004
Person of color	42.8%	28.6%	
Non-Hispanic, White	57.2%	71.4%	
Incomes			<.0001
Less than \$25,000	30.3%	16.5%	
\$25,000–49,999	33.2%	22.5%	
\$50,000–74,999	15.3%	15.6%	
\$75,000+	21.2%	45.5%	
Educational Attainment			0.002
Did not graduate high school	20.3%	10.6%	
Graduated high school	38.2%	28.6%	
Some college	24.2%	28.4%	
Graduated college	17.4%	32.3%	

Notes: p-values based on chi-square test, significant difference defined as $p < .05$; Total N reflects average yearly population estimate from 2020–2024

after adjusting for age and race/ethnicity, as transgender individuals had more than three times the odds of reporting fair or poor overall health (adjusted odds ratio [AOR]=3.25, 95% Confidence Interval [95% CI]:1.94–5.46), and more than four times the odds of having a disability (AOR=4.09, 95% CI: 2.63–6.38) [**Table 2**]. Unadjusted analysis of specific disability indicators showed that transgender adults were more likely to report vision problems and difficulty concentrating/making decisions, doing errands alone, and dressing/bathing themselves due to a physical, mental, or emotional condition. After adjusting for age and race/ethnicity, these results remained significant, and differences in difficulty walking and hearing emerged as significant.

Unadjusted analysis indicated that transgender adults were at lower risk of chronic disease. However, after adjusting for differences in age and race/ethnicity, the odds of having a chronic disease was significantly higher among transgender individuals than among cisgender individuals (AOR=1.72, 95% CI: 1.13–2.61). Adjusted analysis of specific, chronic-disease indicators found that rates of diabetes, arthritis,

and cardiovascular disease were similar between groups, but that transgender adults were significantly more likely to have asthma. There were no differences between groups in rates of obesity in either unadjusted or adjusted analysis. Analysis of health behaviors found that even after adjusting for differences in age and race/ethnicity transgender adults were significantly more likely than cisgender adults to report no exercise in the past 30 days and to use marijuana. There were no differences between the two groups in the prevalence of cigarette smoking [Table 2].

Analysis of mental health indicated that transgender adults were significantly more likely than cisgender adults to report a history of depression and current frequent mental distress and were less likely to report receiving the social support they need [Table 2]. These significant differences were present both in unadjusted analysis of gender identity and health and in multivariable models adjusting for age and race/ethnicity. Even after accounting for differences in age and race/ethnicity, transgender individuals were more than three times as likely as cisgender individuals to report frequent mental distress (AOR=3.60, 95% CI: 2.38–5.45), and nearly three times as likely to report history of depression (AOR=2.98, 95% CI: 1.97–4.49).

Bivariate analysis of gender identity and healthcare access indicated that transgender adults were significantly less likely to have a primary care provider, have had a checkup in the past year, and to have had a dental visit in the past year. However, these differences appear to be largely explained by age and race/ethnicity, as after adjusting for these factors, differences in rates of health insurance, primary care provider, and having had a yearly checkup were no longer statistically significant. Difference in rates of dental visits in the past year remained statistically significant, with transgender adults about half as likely as cisgender adults to have had a dental visit in the past year (AOR=0.55, 95% CI: 0.33–0.79) [Table 2].

Table 2. Gender identity and health among RI adults 2020–2024 (RI BRFSS)

	Unadjusted Prevalence			Adjusted Odds Ratio [AOR] (95% Confidence Interval [CI]) Model 1
	Transgender (N=8,733, 1.0%)	Cisgender (N=843,752, 99.0%)	P	
General Health				
Fair/Poor Overall Health	32.6%	15.5%	<.0001	3.25 (1.94–5.46)
Obese	33.8%	30.8%	.51	1.15 (0.75–1.76)
Disability				
Hearing	7.7%	6.4%	0.61	3.80 (1.60–9.01)
Vision	11.9%	5.0%	.01	3.30 (1.49–7.32)
Cognition (concentrating/decision-making)	38.6%	12.3%	<.0001	3.14 (2.01–4.93)
Mobility (difficulty walking)	17.9%	12.1%	.12	3.26 (1.81–5.86)
Self-care (difficulty bathing/dressing)	8.6%	3.4%	.03	2.48 (1.31–4.69)
Independent living (running errands)	25.4%	7.1%	<.0001	3.14 (2.01–4.93)
Any disability ^a	54.4%	27.4%	<.0001	4.09 (2.63–6.38)
Chronic disease				
Diabetes	6.3%	11.3%	.03	1.29 (0.79–2.39)
Asthma	19.8%	12.5%	.02	1.73 (1.10–2.73)
Cardiovascular disease	5.1%	8.5%	.05	1.78 (0.97–3.22)
Arthritis	13.5%	26.9%	.0002	1.29 (0.79–2.10)
Any chronic disease ^b	35.8%	48.6%	.007	1.72 (1.13–2.61)
Mental Health				
Frequent mental distress ^c	44.5%	14.3%	<.0001	3.60 (2.38–5.45)
Depression	50.6%	22.3%	<.0001	2.98 (1.97–4.49)
Often gets social/emotional support ^d	58.0%	76.6%	.0001	2.06 (1.26–2.36)
Health Behaviors				
Did not get any exercise	39.4%	24.1%	.001	2.51 (1.53–4.12)
Current cigarette smoker	9.7%	11.4%	.59	0.84 (0.43–1.63)
Binge drink (past 30 days)	14.0%	16.4%	.50	0.55 (0.31–0.94)
Current marijuana user	33.8%	17.1%	<.0001	1.57 (1.01–2.45)
Healthcare access				
Have insurance	90.8%	94.6%	.06	0.98 (0.51–1.89)
Had medical checkup in past year	73.2%	84.0%	.003	1.16 (0.66–2.03)
Have primary care provider	82.2%	88.8%	.03	0.76 (0.33–1.76)
Had dental checkup in past year	55.2%	72.6%	.0003	0.55 (0.33–0.79)

Notes: unadjusted p-values based on chi-square test - significant difference defined as $p < .05$ (indicated in bold red or green font). AOR from logistic regression adjusted for age and race/ethnicity
^a Disability = any problems with hearing, vision, cognition or mental, mobility, self-care, or independent living. ^b Any chronic disease = history of cardiovascular disease, cancer, COPD, asthma, kidney disease, arthritis or diabetes. ^c Frequent Mental Distress = mental health not good for 14 or more days in the past 30 days, ^d Social/emotional support was not assessed in 2021

DISCUSSION

This study is among the first to evaluate disparities in health based on gender identity across the state of Rhode Island. The analysis used data from the RI BRFSS to obtain population-level measures of health and found that compared to cisgender adults, transgender adults were more likely to report poorer overall health, disability, poorer mental health, and some but not all types of chronic disease. These results were similar to those of other studies.^{4-6,11,12}

Transgender adults in our study had more than three times the odds of reporting fair/poor overall health and more than four times the odds of having any disability compared with cisgender adults. They were also more than three times as likely to report frequent mental distress and nearly three times as likely to report a history of depression. The extent of these disparities is consistent with, and in some cases higher than, estimates reported in national analyses, which have shown approximately two times the odds of poor mental health, depression, and poor general health among transgender adults.^{2,13}

Transgender adults were also more likely to report physical inactivity and marijuana use, with more than twice the odds of reporting no exercise in the past 30 days and nearly twice the odds of current marijuana use compared with cisgender adults. Prior national analyses have similarly documented disparities in physical activity, poorer health related quality of life, and higher prevalence of substance use among transgender adults.^{4,7,13} These findings suggest that behavioral health disparities observed in Rhode Island are consistent with patterns reported in national analyses.

Encouragingly, after adjusting for confounders, transgender and cisgender adults had similar rates of health insurance, having a primary care provider, and having a medical checkup in the past year. These results differed from that of some other studies that had found transgender adults were at increased risk of poor healthcare access.^{3,11} A recent multi-state study found that transgender adults living in gender-affirming states were more likely to access preventive health care services and had fewer disparities than those living in gender non-affirming states.¹⁴ Rhode Island is a gender-affirming state with laws protecting the LGBTQ+ community against discrimination and mandating equal access to health care; these factors may help the transgender community feel comfortable in seeking care.

These results demonstrate persistent and ongoing health disparities related to a wide range of health diseases and conditions in transgender individuals. There are several steps that clinics and healthcare professionals can take to improve access and help address these disparities.¹⁵ Clinics should create welcoming and affirming settings. This includes correct use of pronouns and names, using gender-neutral language, and validating and affirming patients. Staff should be trained appropriately and in a culturally competent manner. Healthcare professionals should be aware of these disparities

and intentionally screen individuals for health conditions that disproportionately impact these groups (i.e., HIV/STI testing in transgender women, mental health and suicidality screening for all transgender individuals). Patients should have access to gender-affirming care in their area. Access to behavioral health services is important. On a policy level, laws which support access to care for transgender individuals should be promoted. Safety-net programs, including access to healthcare, are critical for preventative care services.

This study has some limitations. First, the BRFSS is a self-reported survey and thus may be prone to recall, social desirability, and response bias. Some individuals may not feel comfortable disclosing their gender identity, leading to misclassification or an underestimate of the transgender population. Despite these limitations, this analysis provides valuable multi-year, population-based estimates of the health of transgender adults in the state. More research is needed to better understand health needs and improve the health of transgender adults in the state.

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