

# Patterns of Access and Healthcare Utilization Among Non-Urban Transgender and Nonbinary Patients at a Large Safety Net Health System in Colorado



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## INTRODUCTION

- Lack of access to gender-affirming care is a primary concern for transgender & non-binary (TNB) patients.<sup>1</sup>
- Large gaps exist in the US medical literature regarding TNB patients outside of urban coastal centers,<sup>2</sup> and current research fails to recognize intersections of gender identity and geography in the US.<sup>3</sup>
- Distance to care is cited as a major concern among patients living outside urban areas,<sup>4</sup> with additional concerns of insurance coverage for TNB gender-affirming care.<sup>5</sup>
- Generally, rural communities represent a group that is more likely to be white<sup>6</sup> and uninsured<sup>7</sup> when compared to urban groups.
- Nationally, 1/3 of TNB patients travel greater than 25 miles for gender-affirming care, and 1/2 of those travel over 50 miles; rural TNB are twice as likely to travel these distances for simple routine care.<sup>8</sup>
- Access to care is affected by approachability, acceptability, availability, affordability, and appropriateness of healthcare services/providers, as well as the abilities of the patient.<sup>9</sup>
- Barriers to care among the TNB community lead to worsened health disparities.<sup>10</sup>
- Denver Health (DH), the safety net system in Denver, Colorado, offers decentralized gender-affirming care in a model that includes federally qualified health centers and houses an LGBTQ Center of Excellence.

## OBJECTIVES

- Characterize a cohort of TNB patients based on sex assigned at birth, gender identity, race/ethnicity, age, insurance status; anxiety and depression diagnoses; and tobacco use, alcohol use disorder, and marijuana use.
- Compare mean distances traveled between cohorts of TNB Coloradans residing inside and outside the Denver metro area who access gender-affirming care from DH.
- Determine healthcare access patterns among non-urban TNB patients traveling for care to better understand what services are being sought and provided.

## METHODS

- TNB patients were identified in the EMR via ICD-10 codes for gender dysphoria and/or identification as TNB through self-reported SO/GI data.
- ZIP code of primary residence identified sub-groups of those in the Denver metro area (those adjacent to Denver County) & those outside the Denver metro area (Non-Denver), which included rural areas defined by population  $\leq 2,500$ .<sup>11</sup>

## METHODS (cont.)

- Mean distance traveled was calculated from the ZIP code of primary residence to the central address of DH Hospital.<sup>12</sup>
- Chart review among non-Denver TNB was conducted to characterize services being sought and provided.
- This project was reviewed by the Quality Improvement Committee of Denver Health and was determined to not constitute human subjects research.

## RESULTS

- A total of 1,230 TNB patients were included in the cohort, with 998 residing in the Denver metro area and 230 outside the Denver metro area; less than 45 patients were from strictly rural areas.

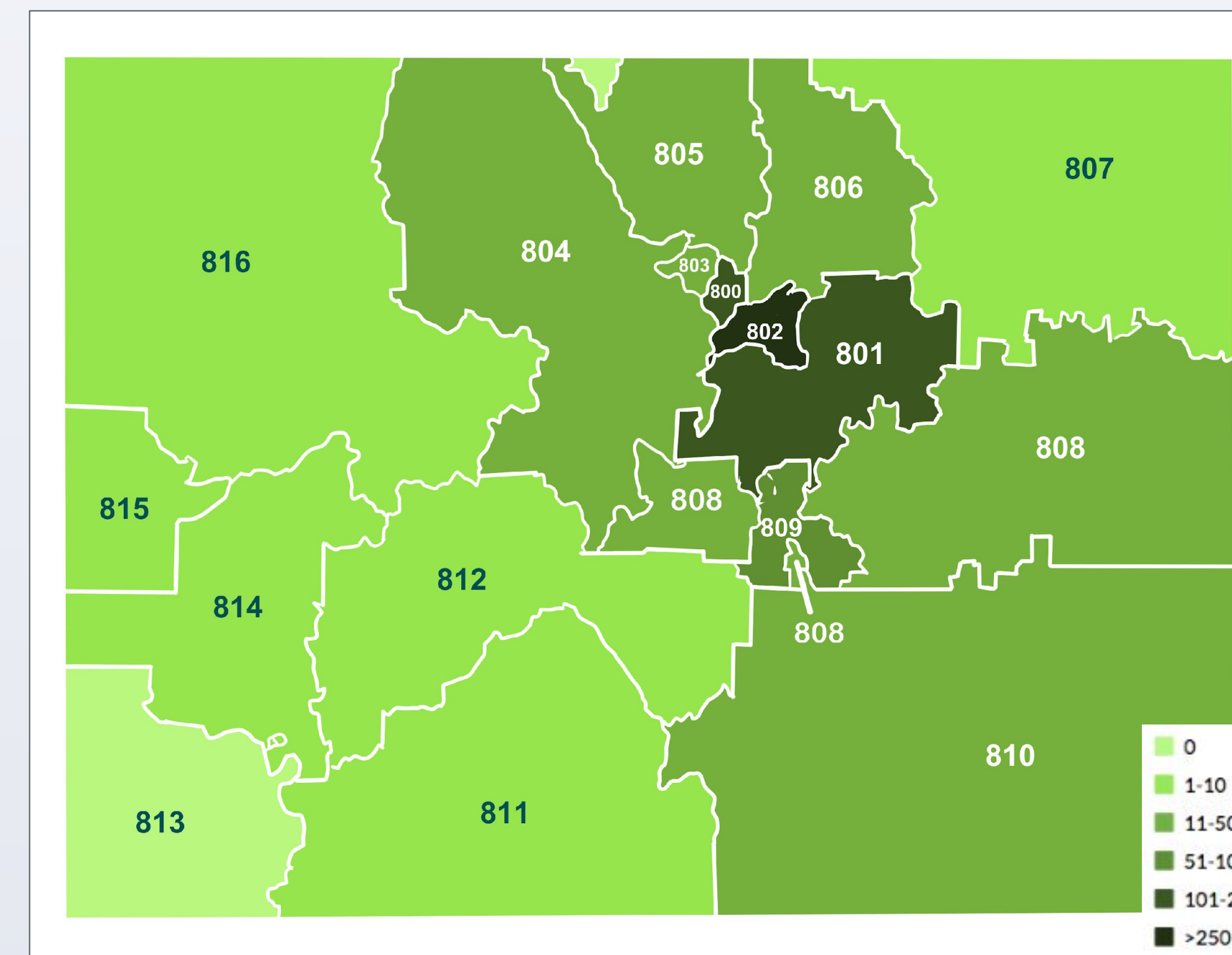
**Table 1: TNB Demographic, Mental Health, and Substance Use Characteristics by Residence**

Characteristic	Non-Denver n = 232 (18.9%)	Denver n = 998 (81.1%)	P	Total n = 1230 (100%)
<b>Sex Assigned at Birth</b>			0.0767	1211
Female	94 (41.0)	402 (40.9)		496 (41.0)
Male	124 (54.1)	488 (49.7)		612 (50.5)
Other/Unknown	14 (6.1)	108 (11.0)		122 (10.1)
<b>Gender Identity</b>			0.6326	1143
Female	35 (15.8)	133 (14.4)		168 (14.7)
Male	22 (9.9)	105 (10.7)		127 (11.1)
Trans Female	86 (38.7)	346 (37.6)		432 (37.8)
Trans Male	65 (29.3)	83 (9.0)		148 (12.9)
Other/Unknown	14 (6.3)	87 (9.4)		101 (8.8)
<b>Race/Ethnicity</b>			0.0136*	1064
Black	10 (5.1)	57 (6.6)		67 (6.3)
White	148 (74.7)	595 (68.7)		743 (69.8)
Hispanic	30 (15.2)	170 (19.6)		200 (18.8)
Other/Unknown	10 (5.1)	44 (5.1)		54 (5.1)
<b>Age</b>			0.1071	1230
<18	17 (7.3)	104 (10.4)		121 (9.8)
18-24	83 (35.8)	262 (26.3)		345 (28.0)
25-34	86 (37.1)	395 (39.6)		481 (39.1)
35-44	22 (9.5)	129 (12.9)		151 (12.3)
45-54	11 (4.7)	54 (5.4)		65 (5.3)
55-64	7 (3.0)	33 (3.3)		40 (3.3)
65+	6 (2.6)	21 (2.1)		27 (2.2)
<b>Insurance</b>				1181
Uninsured	1 (0.4)	14 (1.5)	0.2097	15 (1.3)
Medicare	12 (5.2)	30 (3.2)	0.1254	42 (3.6)
Medicaid	89 (38.9)	291 (30.6)	0.0158*	380 (32.2)
Commercial	127 (55.5)	617 (64.8)	0.0085*	744 (63.0)
<b>Anxiety</b>			0.0004*	384 (31.2)
Depression	83 (32.9)	487 (47.7)	0.0002*	556 (45.2)
<b>Tobacco Use</b>			0.7193	373 (30.3)
Alcohol Use Disorder	4 (1.6)	32 (3.1)	0.1855	36 (2.9)
Marijuana Use	83 (32.9)	441 (43.2)	0.0229*	524 (42.6)

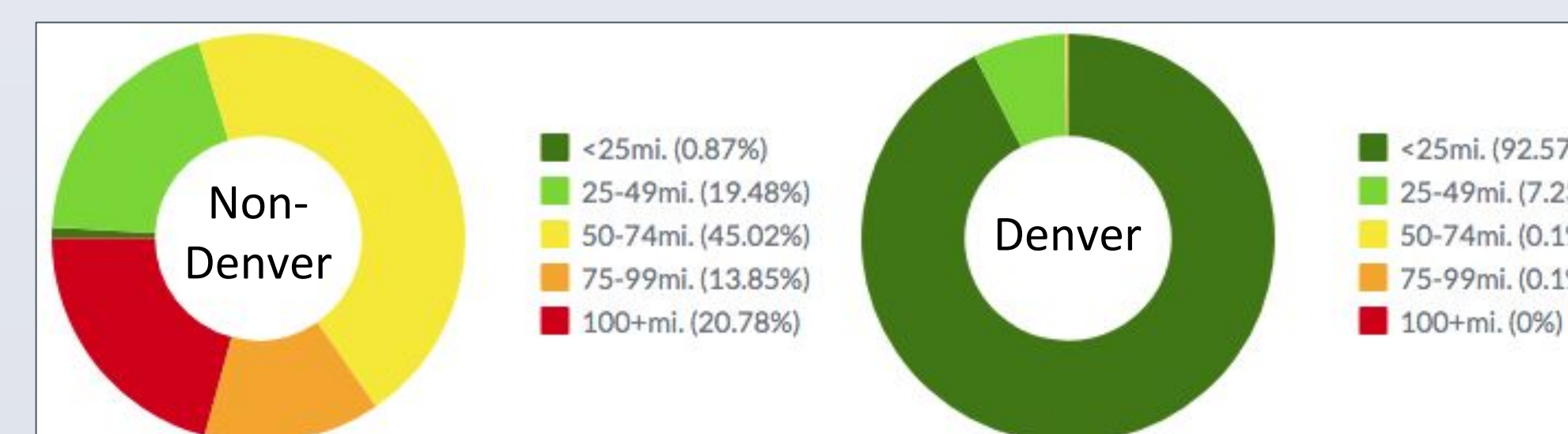
Note: \*p - value < 0.05

## RESULTS (cont.)

**Fig 1: Density Mapping of TNB Patients by 3-Digit ZIP Code of Primary Residence in Colorado**

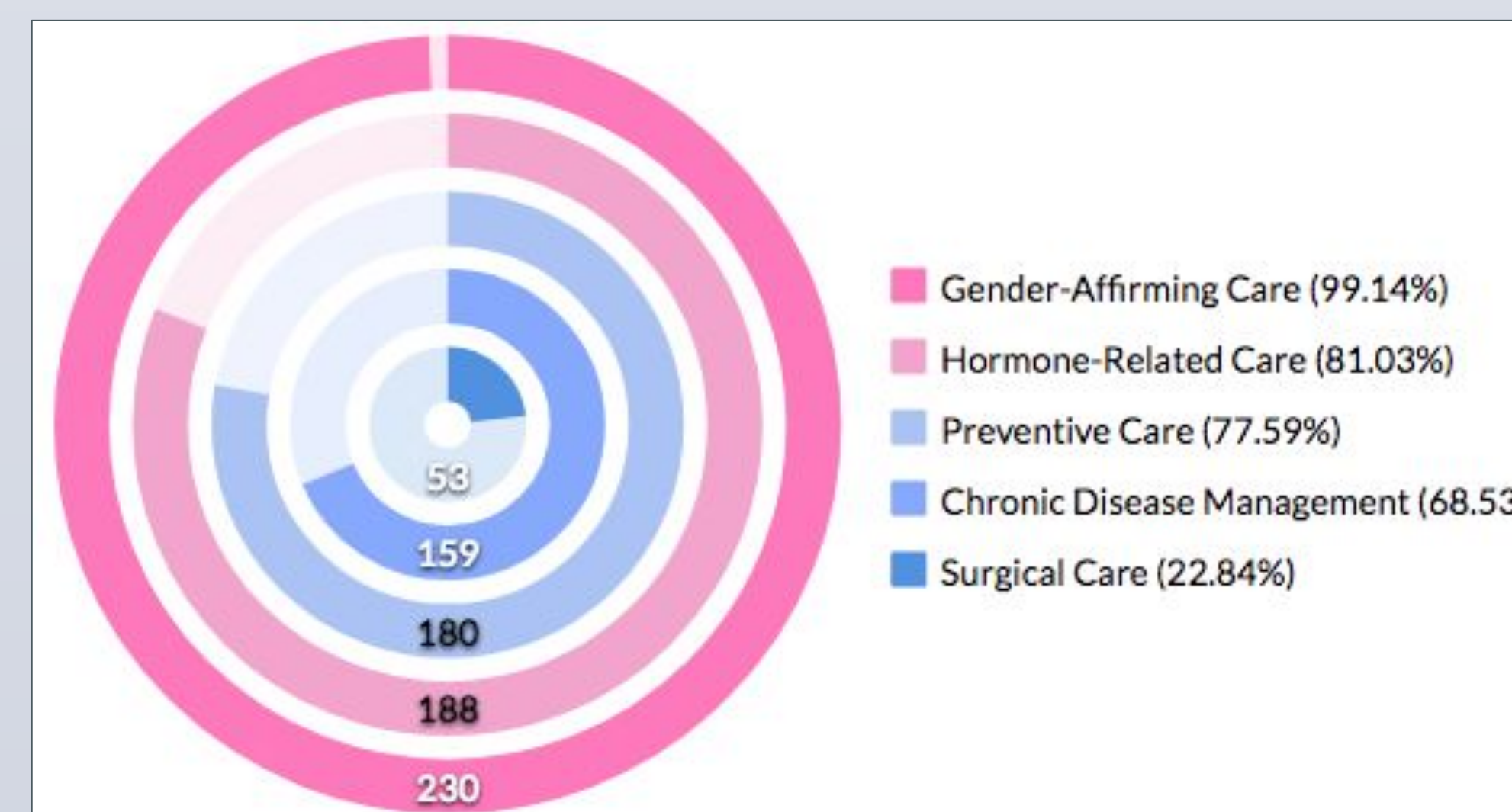


**Fig 2: Miles Traveled to Care by Residence**



- 18.9% of TNB patients seeking care at DH travel from outside the Denver metro area.
- One-way distance traveled ranges from 0.7 to 353.4 miles, with a mean distance traveled of 11.4 miles for Denver TNB and 82.5 miles for non-Denver TNB; mean distance traveled among the entire cohort is 24.6 miles.

**Fig 3: Healthcare Utilization Patterns Among Non-Denver TNB**



- Nearly all TNB patients accessed gender-affirming care at DH, with a majority also accessing hormone-related care, preventive care, and chronic disease management.
- An additional 45.69% (n = 106) non-Denver TNB patients are currently on the surgery waitlist at our institution, making 22.84% a representation of surgeries performed rather than planned.

## DISCUSSION AND NEXT STEPS

- Non-urban TNB patients travel vast distances in order to access gender-affirming care, which suggests proximity to care may not be the primary motivating factor when choosing a medical provider.
- Those with a higher mental health or substance use disorder burden may have additional emotional or financial burdens that limit their ability to travel long distances for health care, which may reflect these differences between Denver and non-Denver TNB.
- Patterns of healthcare utilization in this study suggest that decentralized models of access to gender-affirming care may enable increased engagement in preventive care and chronic disease management for TNB people.
- Study strengths include: use of EMR data entered by medical providers and staff to systematically evaluate a cohort of TNB patients, chart review used to assess validity of data set, represents patients under-represented in current TNB literature.
- Limitations include: low numbers of TNB patients in rural areas, resulting in lack of statistical power to analyze this sub-group

## CONCLUSIONS

- Definitions of healthcare access among TNB patients must be broadened to include travel distance, as proximity to care is one of many complex considerations when choosing a gender-affirming provider.
- Large numbers of TNB patients traveling for care may reflect a lack of accessible local gender-affirming care, which should prompt local providers to seek training to meet this need.
- Medical educators should improve teaching on gender-affirming care, particularly for educational tracks focused on rural health care delivery.

## ACKNOWLEDGEMENTS

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