

Supplemental S1. Full survey items and survey flow.

Standard: Block 6 (5 Questions)

Branch: New Branch

If

If I have read the study description and purpose; I agree to take part in this study and agree to al... Yes Is Not Selected

EndSurvey:

Branch: New Branch

If

If I am aware that my participation is voluntary and that I am free to withdraw at any time (though... Yes Is Not Selected

EndSurvey:

Block: Default Question Block (1 Question)

Standard: Block 1 (7 Questions)

Branch: New Branch

If

If Are you a licensed family physician who practices in NC? OR Are you a family medicine resident ph... No Is Selected

EndSurvey: Advanced

Standard: Block 2 (10 Questions)

Standard: Block 3 (2 Questions)

Branch: New Branch

If

If Do you personally provide gender-affirming care to TGD patients? (Select the single best answer) Yes Is Selected

Standard: Gender Affirming Care (19 Questions)

Standard: Demographics (12 Questions)

Block: Block 9 (2 Questions)

Branch: New Branch

If

If Have you completed your residency? No Is Selected
And Are you currently a resident? No Is Selected

EndSurvey:

Branch: New Branch

If

If Have you completed your residency? Yes Is Selected

Standard: Block 7 (7 Questions)
Standard: Block 10 (2 Questions)

Branch: New Branch

If

If Are you currently a resident? Yes Is Selected
Or Have you completed your residency? No Is Selected

Standard: Block 8 (1 Question)
Standard: Block 10 (2 Questions)

Page Break

Start of Block: Block 6

Q93 Before you can proceed, please complete the captcha question below.

Page Break

Q67 Study title: Family Physicians and Transgender Care in North Carolina **IRB Number:** 23-0105 **You are invited to participate in a research survey** about medical care provided to transgender/gender diverse (TGD) persons by family physicians in North Carolina (NC). This is a pilot study that will focus on family physicians, due to their unique position in primary care, seeing patients across the lifespan and with a lens oriented to family dynamics and comprehensive care. The purpose of this study is to gather, within the geopolitical boundaries of NC, a better understanding of the present scope of family physician attitudes and practices around medical care for TGD patients. The study is being conducted by Drs Karen Isaacs, Kathleen Young, Victoria Boggiano and Rupal Yu. Funding for this study has been provided by the Promoting Health Equity Research in Southeastern NC grant, which is supported by the Research Advisory Council of Novant Health, Novant Health New Hanover Regional Medical Center, the University of North Carolina Health Care System, and the University of North Carolina School of Medicine. The investigators have no financial conflicts to disclose. To be **eligible to participate** in this study, you should be a licensed family physician practicing in NC (attending physicians, and only residents in their third year of training, are eligible). **Participation in this study is voluntary.** If you agree to participate, the online survey will take approximately 5-15 minutes and consists of no more than 55 questions. If you have any questions or concerns at any time, you can contact any members of the research team. You may stop participating at any time during the survey, without penalty. There is a minimal risk of breach of confidentiality. To minimize this risk, all information will be stored in a secure space and be de-identified of personal information. There is also a minimal risk of emotional distress from answering survey questions. Participants may choose to not answer any questions they wish and may stop at any time. **Participating in this study may not benefit you directly,** but it will help us learn about how TGD medical care by family physicians is taking place across the state. There is no cost to you to participate. You may find that some questions raise upsetting or conflicting emotions, but this is not expected to be different from the kinds of things you discuss with family or friends. You may skip any questions you don't want to answer, and you may end the survey at any time (though data collected up to that point may be included in the research findings). If you fully complete the survey, you will receive a \$25 gift card. **This study has been reviewed by the University of North Carolina at Chapel Hill Institutional Review Board (IRB).** This Board has been established under the authority of the Food and Drug Administration (FDA) for the purpose of protecting the rights and well-being of people recruited to participate in research activities. This Board looks at the risks and benefits of each study and receives updated information throughout the study to help ensure your safety as a research participant. The information you share with us in the survey will be kept **completely confidential** to the full extent of the law. Only the study coordinator will be able to see your survey or know whether you participated in the study. Study findings will be presented only in summary form and your name would not be used in any report. While the investigators will keep your information confidential, there are some risks of data breaches when sending information over the internet that are beyond the control of the investigators. The identifying information (such as name and email address) collected for purpose of compensation will be de-coupled from survey data. If you have any questions or concerns, please contact the principal investigator, Victoria Boggiano MD MPH, at victoria_boggiano@med.unc.edu. If you have

questions or concerns about your rights as a research subject, you may contact the UNC-CH Institutional Review Board at 919-966-3113 or IRB_subjects@unc.edu.

Q83 I have read the study description and purpose; I agree to take part in this study and agree to allow the data I provide to be used for the described purposes.

- Yes (1)
- No; close your browser to exit (2)
-

Q84 I am aware that my participation is voluntary and that I am free to withdraw at any time (though any submitted responses until then may be used in the findings).

- Yes (1)
- No; close your browser to exit (2)
-

Q89 Continuing to the next page to complete the survey questions implies your agreement to participate. If you do not agree, then you may close your browser to exit here.

End of Block: Block 6

Start of Block: Default Question Block

Q68 Specific definitions according to the World Professional Association for Transgender Health (WPATH) Standards of Care Version 8 include: **Transgender (or trans)**: an umbrella term used as an adjective to describe people whose gender identities and/or gender expressions are not what is typically expected for the sex to which they were assigned at birth. **Gender diverse**: a term used as an adjective to describe people with gender identities and/or expressions that are different from social and cultural expectations attributed to their sex assigned at birth. This may include, among many other culturally diverse identities, people who identify as nonbinary, gender expansive, gender nonconforming, and others who do not identify as cisgender.

End of Block: Default Question Block

Start of Block: Block 1

Q1 Are you a licensed family physician who practices in NC? **OR** Are you a family medicine resident physician in NC, in at least your third year of residency training?

- Yes (1)
- No (2)
-

Q2 What medical degree did you obtain?

- MD (1)
- DO (2)
- Other (3) _____
-

Q3 Have you participated in any type of education or training in TGD patient care?

- Yes (3)
- No, but I plan to (1)
- No (4)
-

Display this question:

If Q3 = 3

Q4 When did the training occur? (Select all that apply.)

- Before medical school (1)
- During medical school (2)
- During residency (3)
- After residency (4)

Display this question:

If Q3 = 3

Q5 The training was:

- Required (1)
- Optional (2)

Display this question:

If Q3 = 3



Q6 The total hours of training were approximately:

Display this question:

If Q3 = 3

Q7 The training took place through: (Select all that apply.)

- A continuing medical education conference that offered a session on transgender health (1)
- A continuing medical education conference solely focused on transgender health (2)
- A Gender Clinic (rotation, or visiting educational arrangement) (3)
- Fellowship training (4)
- Independent study (5)
- Residency training (6)
- WPATH course or WPATH mentorship (7)
- Other (8) _____

End of Block: Block 1

Start of Block: Block 2

Q8 Are there TGD patients at your practice site?

- Yes (1)
 - No (2)
 - Not sure (3)
-

Q9 Do you or any of your practice forms/electronic health record (EHR) explicitly ask patients for their gender identity?

- Yes (1)
 - No (2)
 - Not sure (3)
-

Q10 Do you or any of your practice forms/EHR explicitly ask patients for their pronouns?

- Yes (1)
 - No (2)
 - Not sure (3)
-

Q11 Have you or any of your practice locations made any efforts to be more inclusive toward TGD patients (such as language on forms, restroom adjustments, staff training, etc.)?

- Yes (1)
 - No (2)
 - Not sure (3)
-

Q12 On a scale of 0-10 (0 being the least, 10 being the most), how welcoming would you rate your practice to TGD persons?

Not at all welcoming	Neutral	Very welcoming	Prefer not to answer							
0	1	2	3	4	5	6	7	8	9	10

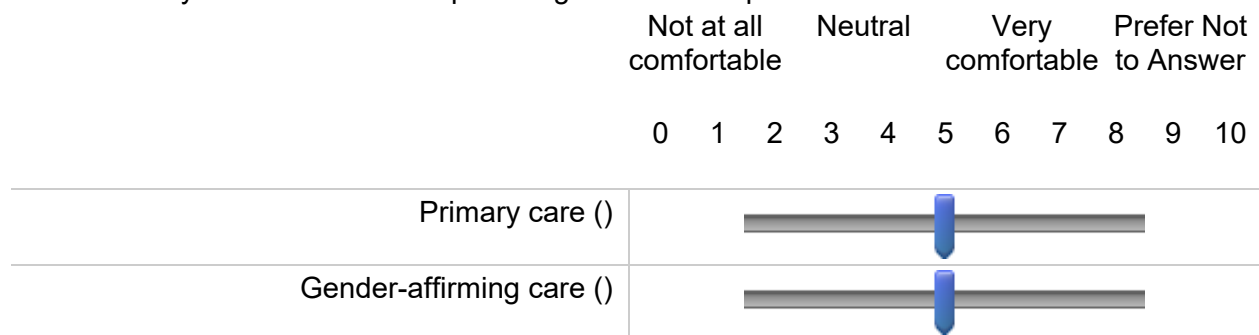
Select: ()



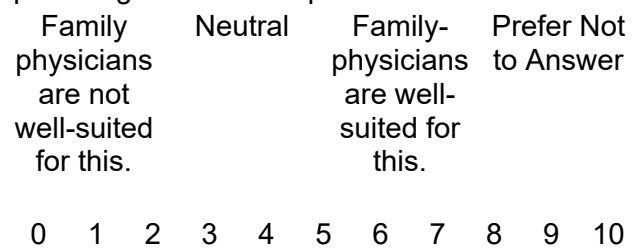
Q13 How is TGD care in your practice communicated and/or marketed to patients and the community? (select all that apply)



- It is readily and widely advertised to the community (1)
- It is known by word of mouth in the community/region (2)
- Our advertising materials make note of non-discriminatory practice and treatment of patients (3)
- There is no mention of TGD care in our advertising materials (4)
- Not sure (5)

Q14 What is your comfort level in providing care to TGD patients?



Q15 What is your belief about family physicians providing care to TGD patients?



Primary care ()	
Gender-affirming care ()	

Q16 Do you personally provide primary care (including chronic disease management and/or age-and organ-appropriate preventive screens) to TGD patients? (Select the single best answer)

- Yes (1)
- No, and I have no interest in it (2)
- No, but I would like to in the future (3)
- No, but I refer them to someone who can (4)
- I have no TGD patients (5)

Q17 Do you personally provide gender-affirming care to TGD patients? (Select the single best answer)

- Yes (1)
- No, and I have no interest in it (2)
- No, but I would like to in the future (3)
- No, but I refer them to someone who can (4)
- I have no TGD patients (5)

End of Block: Block 2

Start of Block: Block 3

Display this question:

If Q16 = 2

Or Q16 = 3

Or Q16 = 4

Or Q16 = 5

Q18 Why do you not provide primary care to TGD patients?

- I have no TGD patients (1)
 - I have not had sufficient training (2)
 - I do not feel comfortable treating TGD patients (3)
 - Providing primary care for TGD patients is against my personal beliefs (4)
 - I have legal concerns related to TGD care. (5)
 - Other (please specify) (6)
-

Display this question:

If Q17 = 2

Or Q17 = 3

Or Q17 = 4

Or Q17 = 5

Q19 Why do you not provide gender-affirming care to TGD patients?

- I have no TGD patients (1)
 - I have not had sufficient training (2)
 - I do not feel comfortable treating TGD patients (3)
 - Providing care for TGD patients is against my personal beliefs (4)
 - I have legal concerns related to TGD care (5)
 - Other (please specify) (6)
-

End of Block: Block 3

Start of Block: Gender Affirming Care

Q23 Which types of gender-affirming care have you personally offered to TGD patients? (Select all that apply.)

- Puberty blockers (1)
 - Gender-Affirming Hormone Therapy (GAHT; estradiol, testosterone) (2)
 - Other medications that influence hormones (such as androgen blockers, progesterone, etc.) (3)
 - Other (please specify) (4)
-

Q24 In determining whether to start gender-affirming hormone therapy (GAHT) for a TGD patient, which of these have you utilized? (Select all that apply.)

- WPATH criteria for GAHT (1)
 - Informed consent process (relying on your own psychosocial assessment of patient to determine that they have capacity to understand risks/benefits, and no other conditions that better explain their presentation) (2)
 - Letter model (relying on a mental health professional to evaluate whether patient has gender dysphoria and capacity, with summative letter that patient brings with them to appointment) (3)
 - Baseline bloodwork before starting GAHT (4)
 - Other (please specify) (5)
-

Q26 Mark your comfort level in diagnosing gender dysphoria among TGD patients:



Q27 For TGD gender-affirming care, which ICD-10 code(s) have you used? (Select all that apply.)

- I don't know (1)
 - Endocrine disorder (E34.9 OR E34._) (2)
 - Gender dysphoria (F64._) (3)
 - Long term drug therapy (Z79._) (4)
 - Other (please specify) (5)
-

Q28 In determining whether to start or continue GAHT for a TGD patient who possesses decision-making capacity but also certain underlying medical condition(s) that may pose a risk (such as ischemic heart disease, family history of venous thromboembolism, etc.), the following most describes my medical understanding:

- Medical contraindications are absolute for TGD patients (1)
 - Medical contraindications are relative for TGD patients (2)
-

Q29 Prior to North Carolina HB 808 (law prohibiting initiation of gender-affirming care for minors) being passed, did you have age limits for whom you prescribed gender-affirming medical treatment?

- Yes (7)
 - No (8)
-

Display this question:

If Q29 = 7

Q66 Please specify.

Q64 Other than no longer initiating GAHT for those under age 18, has the passage of NC H808 affected your practice?

Yes (4)

No (5)

Display this question:

If Q64 = 4

Q65 If you answered 'yes' to the above, please describe:

Q30 What best describes how you have screened for anxiety and depression among TGD patients?

Screen very frequently (1)

Screen only initially and then thereafter when it seems relevant (2)

Screen rarely (3)

Q31 What best describes how you have screened for other psychosocial issues (including eating disorders, substance use, high risk behaviors, violence, bullying, self-injury, social connectedness) among TGD patients?

- Screen very frequently (1)
- Screen only initially and then thereafter when it seems relevant (2)
- Screen rarely (3)

Q32 Select how you have addressed the following reproductive or sexual health topics with TGD patients:

	Counsel and/or manage myself (1)	Refer for counseling and/or management (2)	Do not address (3)
Potential impact of GAHT on fertility (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fertility preservation options (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Contraceptive needs, regardless of GAHT (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Risk reduction methods for STIs (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pre-exposure prophylaxis for HIV (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q33 What has been your comfort level in managing unwanted side effects of hormone therapy (such as polycythemia, hair loss, sexual dysfunction, acne, VTE, etc.)?

Not at all comfortable Neutral Very comfortable Prefer Not to Answer
 0 1 2 3 4 5 6 7 8 9 10

Select ()



Q34 What has been your comfort level in counseling about gender-affirming surgical options and referrals, for those who are interested?

	Not at all comfortable	Neutral	Very comfortable	Prefer Not to Answer							
	0	1	2	3	4	5	6	7	8	9	10

Select ()



Q35 What best describes your interprofessional practice for TGD patients (including mental health professionals, speech therapists, surgeons, endocrinologists, care navigators, etc.)?

- I work independently, with few/no other gender-affirming providers locally available for my TGD patients (1)
- I work along with other affirming providers, as part of an informal local network for TGD patients (2)
- I work within a formally established local network of affirming providers for TGD patients (3)











Q36 Which of the following resources have you most often turned to when providing gender-affirming care for TGD patients? (Choose up to 3.)

- American Academy of Family Physicians (1)
 - Callen Lorde protocols (2)
 - Endocrine Society (3)
 - Fenway Health Protocols (4)
 - Transline consultation (5)
 - Patients (6)
 - UCSF Center of Excellence for Transgender Care (7)
 - WPATH standards of care (9)
 - Other (please specify) (8)
-

Q37 Which of the following, and to what extent, do you feel create barriers to care for your TGD patients?

No barriers	Moderate barriers	Significant barriers	Prefer Not to Answer	
1	2	3	4	5

Limited access to support groups/peer support ()	
Limited access to care navigators ()	
Limited access to endocrinologists ()	
Limited access to fertility preservation specialists ()	
Limited access to legal counsel ()	
Limited access to mental health professionals ()	
Limited access to speech/voice therapy ()	
Limited access to surgeons that offer gender-affirming procedures ()	

Q55 Which statement best describes your approach to educating learners about TGD care?

- I go out of my way to ensure that learners (students and/or residents) are educated about TGD care. (1)
- I only teach about TGD care to learners if they happen to see a TGD patient. (2)
- I rarely teach about TGD care. (3)
- I do not teach students and/or residents. (4)

Q38 What are the potential barriers to family physicians in NC providing TGD care? (Select all that apply.)

- Legal concerns (1)
 - Physician personal beliefs (2)
 - Physician knowledge/experience (3)
 - TGD patients' lack of health insurance or payor coverage (4)
 - Other (please specify) (5)
-

End of Block: Gender Affirming Care

Start of Block: Demographics

Q39 Choose your age group:

- 29 or under (9)
 - 30-35 (2)
 - 36-45 (3)
 - 46-55 (4)
 - 56-65 (5)
 - 66-75 (6)
 - 76 or older (7)
 - Prefer not to answer (8)
-

Q40 Which of the following best describes you? (Select all that apply.)

- Alaskan (1)
 - American Indian/ Alaska Native (13)
 - Asian, Asian American (14)
 - BIPOC (15)
 - Black and/or African American (17)
 - Latino/a, Latinx, Latine (18)
 - Hispanic (19)
 - Chicano/a (20)
 - Middle East, MENA, Arab Americans (21)
 - Hawaiian, Pacific Islander (22)
 - Indigenous peoples, First peoples, First Nations, Aboriginal peoples, and Native Peoples (24)
 - Tribe, Tribal (25)
 - White (26)
 - Other (please specify) (29)
-
- Prefer not to answer (30)



Q42 Which of the following best describes you? (Select all that apply.)

- Cisgender woman, or woman who is not transgender (1)
 - Cisgender man, or man who is not transgender (2)
 - Transgender man (3)
 - Transgender woman (4)
 - Non-binary (5)
 - Agender (6)
 - Gender fluid (11)
 - Gender queer (12)
 - Not listed here/Prefer to self-describe: (13)
-
- Prefer not to answer (14)
-

Q56 What are your pronouns? (Select all that apply.)

- She/her (1)
 - He/him (2)
 - They/them (3)
 - Ze/zir (4)
 - Ze/hir (5)
 - Not listed here/prefer to self-describe: (6)
-
- Prefer not to answer (7)

Q44 Which of the following best describes your sexual identity? (Select all that apply.)

- Asexual (1)
 - Bisexual (2)
 - Heterosexual/straight (3)
 - Homosexual/gay/lesbian (4)
 - Pansexual (5)
 - Queer (6)
 - Questioning (7)
 - Not listed here/prefer to self-describe: (8)
-
- Prefer not to answer (9)

Q46 How spiritual do you consider yourself to be?

- Very spiritual (1)
- Moderately spiritual (2)
- Slightly spiritual (3)
- Not spiritual (4)
- Prefer not to answer (5)

Q47 How would you describe yourself politically?

- Extremely conservative (1)
 - Conservative (2)
 - Leaning conservative (3)
 - Moderate (4)
 - Leaning liberal (5)
 - Liberal (6)
 - Extremely liberal (7)
 - Prefer not to answer (8)
-

Q53 Do you have at least one acquaintance, peer, colleague, friend, or family member who identifies as TGD (not including patients)?

- Yes (1)
 - No (2)
 - Prefer not to answer (3)
-

Q90 What is your present religion, if any? (Select all that apply.)

- Christian (1)
- Jewish (2)
- Muslim (3)
- Buddhist (4)
- Hindu (5)
- Atheist (6)
- Agnostic (7)
- Something else (8)
- Nothing in particular (9)

Display this question:

If Q90 = 1

Q91 If you selected "Christian," what denomination do you identify with?

- Protestant (1)
- Roman Catholic (2)
- Mormon (3)
- Orthodox (such as Greek or Russian Orthodox) (4)
- Baptist (5)
- Other (6)



Q49 What is the zip code for where you currently live?



Q50 What is the zip code for your primary practice location?

End of Block: Demographics

Start of Block: Block 9

Q80 Have you **completed** your residency?

Yes (1)

No (2)

Display this question:

If Q80 = 2

Q81 Are you **currently** a resident?

Yes (1)

No (2)

End of Block: Block 9

Start of Block: Block 7

Q54 Which of these best describes your current board status (with either the American Board of Family Medicine, American Osteopathic Board of Family Physicians, or other)?

- Board certified (1)
 - Board eligible (2)
 - Board certification or eligibility withdrawn (3)
 - Board certification entry/re-entry (4)
-

Q51 What is your current employment status?

- Practice owner/partner/associate or independent contractor (1)
 - Employment by a hospital/hospital-owned medical group (2)
 - Employment by a physician-owned medical group (3)
 - Employment by a non-hospital, non-governmental, non-profit organization (4)
 - Employment by a government organization (5)
 - Other: (7) _____
-

Q60 Is your practice:

- Solo (1)
- 2-5 physicians (2)
- 6-10 physicians (3)
- 22-30 physicians (4)
- 31-100 physicians (5)
- 101 or more physicians (6)

Q61 What is your primary practice's position regarding the following insurance statuses?

	Does not accept (1)	Limits the number of these patients (2)	Does not limit the number of these patients (3)	Not sure (4)
Medicaid (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medicare (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-pay (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Display this question:

If Q52 != 3

Q62 If yes to any of the above, what best describes your educator/teaching/precepting role?

- Community-based preceptor (1)
 - Adjunct faculty (2)
 - Core faculty (3)
 - Other academic appointment (4)
 - Other (please specify) (5)
-

Q52 In the past 3 years, which of the following have you been involved with in medical education/teaching/precepting?

- Medical students (1)
 - Residents (2)
 - Both medical students and residents (6)
 - None (3)
-

Q58 How many years has it been since you completed family medicine residency (even if you later completed a fellowship or additional training)?

- Five or less (1)
- 6-10 (2)
- 11-15 (3)
- 16-20 (4)
- 21-25 (5)
- 26-30 (6)
- 31-35 (7)
- 36-40 (8)
- Over 40 (9)

End of Block: Block 7

Start of Block: Block 10



Q92 If you would like to receive the \$25 compensation for completing the survey, please include your professional email below (no Gmails, Hotmails etc.).



Q94 Please provide your first and last name, if you would like to receive compensation.

End of Block: Block 10

Start of Block: Block 8

Q79 What are your tentative future work plans?

- Practice owner/partner/associate or independent contractor (1)
- Employed by a hospital/hospital-owned medical group (2)
- Employment by a physician owned medical group (3)
- Employment by a non-hospital, non-governmental, non-profit organization (4)
- Employment by a government organization (5)
- I don't know (6)
- Other (please specify) (7)

End of Block: Block 8
