

# Leveraging Virtual Gender-Affirming Care for Clinical Research



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# Disclosures

- I am a partial owner in Plume
- No disclosures related to research

# Land acknowledgement

- I live on the traditional and ancestral homelands of the Ute, Cheyenne, and Arapaho People

# Objectives

- Overview of Plume
- TGNC Research Review
- Plume Research
- What's Next?





What is Plume?



Our *vision* is to

# **transform** healthcare

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for

**every**  
trans  
life

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# Virtual care to the TGNC community

- Plume started in 2019
- 47 states and DC
- 32,000+ TGNC patients served
- > 14,500 active TGNC patients



# Clinical Services

- Gender-affirming hormone therapy
- Gender-affirming surgery referral/letters of support
- Depression
- Anxiety
- Acne
- Hair loss
- Erectile dysfunction
- Contraception
- Nicotine cessation





# Community and Wellness Services

- Virtual peer support groups
- Interactive community hub
- Legal name change and gender marker change support
- Blog
- Educational webinars
- Discount partnerships
- Advocacy partnerships
- Social media presence





# Overview of TGNC Health Research



# But is there research?

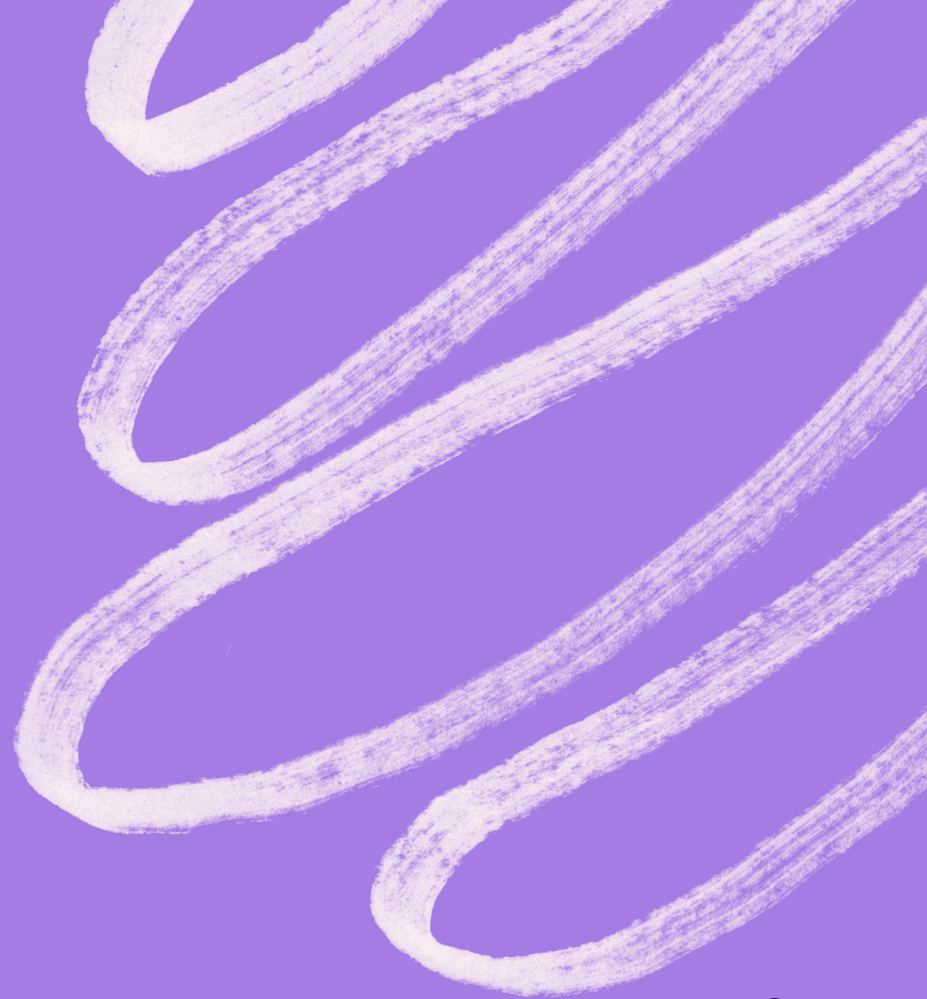
## Yes, absolutely.

- GAMST has been provided for almost 100 years in modern medical era and for 1000's of years around the world
- **WPATH Standards of Care** established 1979, most recent is SOC 8 released 2022, references > 1,400 studies<sup>1</sup>
- **Endocrine Society's** clinical practice guideline for gender dysphoria/gender incongruence released 2017 cites > 260 studies<sup>2</sup>
- **More than 2,000 scientific studies** have examined gender-affirming care since 1975<sup>2</sup>
- **77% mental health and substance use disorders**, 29% infectious disease, 16% chronic disease, 41% risk and protective factors<sup>3</sup>

# Limitations<sup>3</sup>



- **Median sample size of trans participants = 234**
- Generally unethical to do randomized controlled trials for GAMST given we know the risk of withholding treatment
- Most studies are cross-sectional (73%) and use convenience sampling (65%)
- 9% of studies are longitudinal prospective
- 54% of studies from North America; 3% or less of studies from South Asia, Middle East, and African continent each
- Historically studies with n > 1000 pull from decades of patient records and have high risk of confounding
- 29% transfemme, 5% trans masc, 56% both
- Minimal research focusing specifically on TGNC indigenous folks and other BIPOC communities



# Research with a virtual care platform

- Unprecedented sample sizes = **high powered studies**
- Almost limitless **geographic reach** - avoids convenience sampling
- Easier access to **underrepresented communities** (both participants and researchers)
- **Trust** is critical for participation in research and hard to earn without a deep connection to the community through lived experience and high quality care



# Plume Research

# Desire for genetically related children among transgender and gender-diverse patients seeking gender-affirming hormones

Moira A Kyweluk <sup>1 2</sup>, Jerrica Kirkley <sup>1</sup>, Frances Grimstad <sup>3 4</sup>, Paula Amato <sup>5</sup>, Jae Downing <sup>6</sup>

- ❖ **Collaboration with Harvard and OHSU**
- ❖ **Presented at WPATH Scientific Symposium September 2022**
- ❖ **Published April 2023 in the Journal of Fertility and Sterility**
- ❖ **n = 10,270**

## Takeaways<sup>4</sup>:

- Previous studies looking at fertility desires of trans people had sample sizes ~ 50-200
- Largest source of self-reported data on fertility desires of TGNC people
- About 75% reported not interested in having genetically-related children
- AMAB and private insurance associated with higher likelihood of wanting genetically-related children

# Erythrocytosis Is Rare With Exogenous Testosterone in Gender-Affirming Hormone Therapy

Nithya Krishnamurthy <sup>1</sup>, Daniel J Slack <sup>2</sup>, Moira Kyweluk <sup>3</sup>, Olivia Cullen <sup>1</sup>, Jerrica Kirkley <sup>3</sup>, Joshua D Safer <sup>4</sup>

- ❖ **Collaboration with Mt. Sinai Center for Transgender Medicine and Surgery (CTMS)**
- ❖ **Published April 2024 in the Journal of Clinical Endocrinology and Metabolism**
- ❖ **Presented at WPATH Scientific Symposium September 2024**
- ❖ **n = 6,670**

## Takeaways<sup>5</sup>:

- Family support is an important social determinant of health for TGNC people
- Less than 50% reported having family support
- Family support associated with lower rates of depression and higher rates of GAC
- Those AFAB, with insurance and living in the NE and Western US more likely to have family support



# Family Support in Transgender and Gender-Diverse Young Adults Seeking Telehealth for Hormone Therapy

Jae Downing <sup>1</sup>, Michael Cunetta <sup>1</sup>, Gina M Sequeira <sup>2</sup>, Jerrica Kirkley <sup>3</sup>, Moira Kyweluk <sup>3 4</sup>

- ❖ **Collaboration with OHSU and University of Washington**
- ❖ **Presented at WPATH Scientific Symposium September 2022**
- ❖ **Published September 2024 in the Journal of Telemedicine and E-Health**
- ❖ **n = 7,740 (young adults 18-24 yo)**

## Takeaways<sup>6</sup>:

- Family support is an important social determinant of health for TGNC people
- Less than 50% reported having family support
- Family support associated with lower rates of depression and higher rates of GAC
- Those AFAB, with insurance and living in the NE and Western US more likely to have family support

# Forthcoming...

**Not all transfeminine individuals on estradiol can reach both target testosterone and target estradiol levels— time to revisit treatment guidelines?<sup>7</sup>**

- ❖ **Collaboration with Mt. Sinai CTMS**
- ❖ **n > 6000 (Plume + Mt. Sinai data)**
- ❖ **Presented at USPATH 2023 Scientific Symposium**

## **Takeaways:**

- Looked at guideline-recommended range of serum estradiol (E2) 100-200 pg/ml and testosterone (T) < 50 ng/dL
- 33% of individuals with suppressed T (< 50 ng/dL) had E2 < 100
- 25% of individuals with a “goal” E2 between 100-200 pg/ml and 12% of individuals with above goal E2 (>200 pg/ml) had non-suppressed T (>50 ng/dL)

# Forthcoming...

## Impact of rurality and telehealth delivered peer support among transgender and gender diverse patients receiving hormone therapy<sup>8</sup>

- ❖ Collaboration with Northwestern University Institute for Sexual and Gender Minority Health and Wellbeing (ISGM)
- ❖ n = 1350
- ❖ Presented at 2024 National LGBTQ Health Conference
- ❖ Submitted to Journal of Transgender Health as manuscript

### Takeaways:

- Rural TGNC adults are disproportionately negatively impacted by poor mental health and quality of life measures and have limited access to needed healthcare services
- Rural TGNC adults' wellbeing is disproportionately and positively associated with telehealth-delivered peer support
- Peer support groups can be scaled quicker and more cost-effectively and achieve greater representation of lived experience compared to licensed clinical services (physician, nurse, psychologist)

# Data infrastructure is critical

- **Real-time data dashboards that pull from multiple sources:**
  - EMR (diagnoses, prescriptions, clinical notes, etc.)
  - Patient demographics (patient portal)
  - Billing info (EMR, billing platform)
  - Engagement (EMR, comms platform)
  - Retention (EMR, billing platform)
  - Patient satisfaction surveys
  - Care team satisfaction surveys
- **Data is clean, reliable, and easily accessible**





# What's Next?

# On the horizon...

## Plume

- Deeper linkage of demographics with health data (race/ethnicity, disability status, etc.) - custom-built patient portal
- Continuing to expand access to more TGNC communities
- Build upon existing research partnerships

## TGNC Research

- More positive research (not just possible harm)
- More longitudinal/prospective studies
- Inclusion of underrepresented subcommunities
- Inclusion of more TGNC researchers/authors



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Thank you!

