Poster Abstract Submissions

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THU-P-1: GENDER AFFIRMING SURGERY WITHIN PLASTIC SURGERY RESIDENCY: A SURVEY OF RESIDENT AND YOUNG PLASTIC SURGEONS' EXPERIENCES AND ATTITUDES

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Presented by: Michelle Bonapace-Potvin

Introduction/Background: Gender affirming surgery (GAS) is an umbrella term for procedures that can be a part of the transition process for transgender and non-binary individuals. Plastic surgeons play an important role in gender affirming surgical care as many of these procedures fall within their expertise.

Specific Aim: Our purpose was to assess the GAS landscape in PRS residency programs across Canada, including both the academic and clinical context, along with assessing PRS residents and young staff (<10 years) on their perceived interest and competence relating to performing GAS.

Materials and Methods: A survey was created based on existing literature relating to transgender care in surgical and medical postgraduate education. The survey was distributed to all PRS residents in Canada through their program director, and to young staff through the CSPS member registry (<10 years practice). Results were analyzed using descriptive statistics.

Results: Almost all surgeons surveyed agreed or strongly agreed that transgender care is an important part of the PRS specialty. Despite this, little educational content regarding GAS was seen with an average of less than two hours spent within academic teachings per year. The majority of individuals had never been exposed to any GAS clinically despite having at least one surgeon who performs GAS affiliated with their institution. For individuals who have had exposure, top surgery was the most common procedure seen. While few residents plan on pursuing a fellowship in GAS, some residents did comment they planned to offer top surgery or facial feminization as general plastic surgeons.

Conclusion: The majority of PRS residents and young staff demonstrated an overwhelmingly positive response towards the importance of GAS in PRS. As access to GAS in Canada remains limited, providing greater exposure to GAS in PRS residency may help in promoting willingness and competence to perform these procedures after residency.

THU-P-2: Efficacy of Topical Tranexamic Acid in Gender-Affirming Mastectomy

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Presented by: Israel Falade

Introduction/Background: Bleeding complications, such as hematoma, are frequently encountered after breast surgery and often require extended hospital stays. To mitigate these complications, the use of tranexamic acid (TXA), an antifibrinolytic medication, has gained popularity in breast procedures. TXA can be administered intravenously (IV) or applied topically to reduce bleeding at the site of the surgical wound. Several studies investigating IV TXA in breast procedures have consistently demonstrated significant reductions in hematoma, with rates cited as low as 0.5%. Furthermore, these studies have reported minimal to no documented thromboembolic adverse effects. Although IV TXA is the more common approach, topical TXA has emerged as a promising alternative due to its ability to reduce bleeding while exhibiting a lower potential for thromboembolic adverse events. One recent study has demonstrated the efficacy of topical TXA in reducing bleeding complications in oncoplastic breast surgery, however, its role in gender affirming surgery is far less understood.

Specific Aim: This study aims to investigate the impact of topical moistening of the surgical wound with TXA on the reduction of postoperative bleeding complications for patients undergoing gender-affirming mastectomy (GAM).

Materials and Methods: A single-center retrospective cohort study was conducted to examine the postoperative bleeding outcomes of patients who underwent GAM between February 2022 and May 2023. The use of intraoperative topical TXA was documented, along with rates of hematoma, seroma, and other postoperative complications. Chi-squared and t-tests were performed to study the impact of topical TXA on postoperative bleeding complications.

Results: A total of 85 patients were included in this study, comprising two groups: 17 consecutive patients (34 breasts) who received topical moistening of 10 ml of 50mg/ml TXA on each breast and 68 consecutive control patients (136 breasts) who received the standard hospital protocol for achieving intraoperative hemostasis. The two groups were comparable in age, body mass index (BMI), and smoking status. A higher percentage of patients who received topical TXA self-identified as nonbinary compared to the control group (47% vs. 0%, $p < 0.01$). Both groups exhibited similar psychiatric history, medical comorbidities, and intraoperative characteristics, such as breast size, skin elasticity, and type of surgery. Only one patient from each cohort developed postoperative hematoma, and both cases were successfully managed with compression dressings ($p = 0.21$). Moreover, the incidence of other postoperative complications such as seroma and wound infection did not differ significantly between groups.

Conclusion: Literature reported hematoma rates for top surgery have been cited as high as 31% (Bekisz et al., 2022). Given these rates, our study is ongoing to be adequately powered to detect a 3% difference in hematoma rates between patients who received topical TXA and those who did not. This study did not reveal any statistically significant differences in the rates of postoperative bleeding complications between the two groups. Nevertheless, these findings possibly contribute to the growing literature suggesting that intravenous administration of TXA may be more beneficial than its topical application for individuals undergoing breast procedures. Additional prospective randomized studies are needed to provide more insight into the efficacy of topical TXA in this patient population.

THU-P-3: Open Versus Endoscopic Thyroid Chondroplasty: A Systematic Review of Surgical Techniques and Outcomes

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Presented by: Karen Li

Introduction/Background: Facial feminization surgery (FFS) continues to grow in popularity with a 14% increase in surgeries between 2019 and 2020. One notable FFS is thyroid chondroplasty, a surgical procedure aimed at modifying the thyroid cartilage to achieve a more feminine laryngeal appearance and voice quality. Despite its prevalence, the approach to thyroid chondroplasty remains largely unstandardized, consisting of both open and endoscopic methods.

Specific Aim: In this study, we aim to evaluate open versus endoscopic techniques to thyroid chondroplasty and associated outcomes and complications.

Materials and Methods: An electronic database search of Ovid MEDLINE, PubMed, and Web of Science was completed according to Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines for articles pertaining to thyroid chondroplasty. Data pertaining to study characteristics, operative details, patient characteristics, operative techniques, and postoperative complications were collected and analyzed for patterns. Additionally, a single institution's cervical tracheoplasty cases were reviewed through the American College of Surgeons (ACS) National Surgical Quality Improvement Program (NSQIP). Differences in surgical complication reporting between the two databases for the identical patient cohort were recorded.

Results:
A total of 14 articles representing 427 patients were included for analysis. Mean age was 33.9 years. 11 (78.6%) articles utilized open approaches, and 3 (21.4%) articles utilized endoscopic techniques. Of those articles utilizing open approaches, 11 (100%) reported performing a transverse incision over a "natural skin fold", with 2 (18.2%) articles specifying as close to the cervicomental angle as possible. Endoscopic techniques involved a transoral approach, with incisions made along the frenulum edge, and mucosal border of the oral commissure bilaterally for port insertion. 9 (81.8%) articles described approaches to estimate the height of the anterior commissure of the vocal folds. Overall, 3 (21.4%) articles reported preoperative multidisciplinary monitoring or psychiatry clearance, and 3 (21.4%) articles reported performing preoperative laryngostroboscopy for procedural planning. Reported complications included hoarseness (n = 25, 5.9%), odynophagia (n = 12, 2.8%), skin necrosis (n = 2, 0.5%), dehiscence (n = 1, 0.2%), and laryngospasm (n = 1, 0.2%). No significant differences in complication rates were observed between open and endoscopic techniques (p = 0.569). 6 (42.9%) articles assessed postoperative voice and/or satisfaction using patient-reported outcome measures (PROMs). NSQIP identified 20 (26.3%) patients who had tracheoplasty alone and 46 (60.5%) who had tracheoplasty along with other procedures. A subgroup analysis of patients who had tracheoplasty alone showed 2 (10%) cases of infection only. Altogether, no cases of cardiac events, sepsis, bleeding, or unplanned reoperation were reported.

Conclusion: Both endoscopic and open approaches to transgender thyroid chondroplasties are safe methods to achieving relatively low rates of postoperative complications. Continued investigations are warranted to better understand patient-reported outcomes specific to approach.

THU-P-4: SHORT-TERM OUTCOMES FOLLOWING ROBOT-ASSISTED PERITONEAL PULL-THROUGH VAGINOPLASTY FOR GENDER AFFIRMATION IN TRANSGENDER WOMEN

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Presented by: Kelly Chambers

Introduction/Background: Robot-assisted peritoneal pull-through vaginoplasty (PPTV) is the technique our practice has performed for over a year for primary genital gender-affirming surgery in transgender women. This technique may be preferred over penile inversion vaginoplasty (PIV) for several reasons, including good functional depth, which may be limited in PIV due to puberty blockade or scrotal skin insufficiency.

Specific Aim: This study aimed to evaluate the short-term outcomes of transgender women who underwent robot-assisted peritoneal pull-through vaginoplasty (PPTV) for gender affirmation.

Materials and Methods: In this case series, clinical information from 20 transgender women who underwent robotic peritoneal pull-through vaginoplasty between May 2021 to November 2022 was analyzed to assess short-term surgical outcomes. A retrospective chart analysis assessed early complications, functional outcome, and medical comorbidities. Data were analyzed descriptively as percentages, and no statistical tests were performed due to the study's descriptive nature and small cohort.

Results: The follow-up period ranged from 1 to 14.5 months (mean 6.5 months), and the average age of the patients at the time of operation was 38.05 years (range 28-56 years). Most patients had a prior diagnosis of anxiety (80%; n=16) or depression (65%; n=13). The mean BMI of the patients was 29 kg/m2 (range 20.1-51.8 kg/m2), and 55% underwent orchiectomy before vaginoplasty. The average operative time was 9 hours and 5 minutes, and the postoperative hospitalization was at least five days, with an average stay of 5.35 days. Acute hospital complications occurred in 10% of patients (n=2) and were mild (i.e., anemia and wound leakage). After hospital discharge, 25% of patients (n=5) had ER visits averaging 35.25 days after surgery for dehiscence, vaginal discharge, and infection. Postoperative complication data is presented in Table 1. The most common complications were vaginal stenosis (40%, n=8), wound infection (25%, n=5), dehiscence (20%, n=4), and vaginal bleeding (20%, n=4). 45% (n=9) of patients had revision surgeries with an average time of 161.8 days post-op, most commonly for stenosis.

Conclusion: In conclusion, this case series suggests that robot-assisted peritoneal pull-through vaginoplasty is a promising technique for primary gender-affirming surgery in transgender women. Short-term complications did occur but were primarily minor, and the majority of patients did not require revision surgeries. PPTV may be of particular interest to the increasing population of transgender women who have undergone puberty blockade and thus have limited donor tissue for PIV. Further studies with larger cohorts and longer follow-up periods are necessary to confirm these findings and evaluate the significance of complication rates and patient characteristics. Additionally, future work should compare aesthetic, sensory, and functional outcomes between peritoneal pull-through and penile inversion techniques.

THU-P-5: UNEXPECTED FINDINGS REGARDING HOW WELL SUPRAPUBIC VS URETHRAL CATHETERS DRAIN THE BLADDER AND WHY SP CATHETERS SHOULD BE THE CATHETER OF CHOICE WITH ANY URETHRAL LENGTHENING SURGERY

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Presented by: Sandeep Sandhu

Introduction/Background: Both urethral catheters and suprapubic catheters are used throughout a myriad of specialties, such as Reconstructive Urology, Urogynaecology, and Gender-Affirming Surgery (GAS). Specific to GAS, suprapubic catheters are placed sited for transgender men who undergo phalloplasty and metoidioplasty with urethral lengthening at the time where their neourethra within the neophallus is surgical anastomosed to the patient’s native urethra. Given the function of suprapubic

catheters being a bypass to empty the bladder and avoid urinary retention for this patient population as they begin voiding from their neourethra, one question which should be considered is whether one catheter should be capped whilst the other is left to gravity drainage, and if so, which catheter should be used to more effectively drain the bladder.

Specific Aim: 1) To ascertain the efficacy of draining from urethral and suprapubic catheters to determine which catheter more effectively drains the bladder.

Materials and Methods: Patients undergoing stage 2 phalloplasty with urethral lengthening from 05/2017 to 11/2020 were retrospectively reviewed. Both urethral and suprapubic catheters were placed to gravity drainage in the post-operative period. Urine output (mL) from each catheter was recorded separately, twice daily, until discharge. A mixed-model regression modelling tested for differences in urine output by catheter French (Fr) and time.

Results: A total of 18 patients were identified. 14/18 patients (78%) had a 16Fr urethral and suprapubic catheter placed intraoperatively. Median length of stay was 5 days (range: 1.5-7). Aggregate number of 12-hour shift urine output observations was 331 (165 for urethral catheter, 166 for suprapubic). Suprapubic catheters had a mean output of 30mL higher than urethral catheters per 12-hour shift (p=0.004; 95%CI 116–501mL). Multivariate analysis factoring in time of day (p=0.149) and catheter Fr (p=0188) shows that suprapubic catheters had an estimated 345mL higher output than urethral catheters per 12-hour shift (p=0.001; 95%CI 174-517mL).

Conclusion: Simultaneous utilization of a urethral and suprapubic catheters left to gravity drainage is associated with greater drainage via the suprapubic catheter (59.7% vs. 40.3%). Anatomically, this stands to reason given the position of the catheter tip and drainage inlet when comparing suprapubic to urethral catheters (Figure 1). Overall, the catheter tip for the suprapubic catheter resides if a more gravity-dependent location, being localized to the funnel-shaped bladder neck. These findings suggest that when using two catheters, both should be placed to gravity drainage. That being said, for drainage with a single catheter, a suprapubic catheter will likely drain the bladder more completely when compared to urethral catheters.

THU-P-6: DETAILED DESCRIPTION AND TECHNICAL INNOVATIONS FOR SINGLE-PORT ROBOT-ASSISTED TUBULARIZED URACHUS-PERITONEAL "HINGE-FLAP" FOR SALVAGE AND PRIMARY VAGINOPLASTY SURGERY

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Presented by: Shannon Smith

Introduction/Background: Options for restoration of neovaginal canal depth post-gender-affirming vaginoplasty are limited. Options such as the use of colonic tissue carries inherent risk due to potential injury of the bowels and increasing risk of complications based around post-operative recovery. Utilization of techniques such as the Davydov peritoneal pull-down technique have been employed in the past for both cis- and transgender patients in the past, but have two principal *disadvantages*. First, the rectum is, by necessity, incorporated as a wall of the vaginal canal, and, second, the gathering sutures at the apex of the neovaginal canal remain under tension, especially during rectal filling.
We described a technique using a long pedicled flap of peritoneum based on the urachus, flipped backwards (as a “hinge”) as a means to add depth post-operatively to a foreshortened vaginal canal. This technique allows the suture lines to be on the lateral aspects of the flap, instead of the apex, given the associated need for regular dilation starting soon after surgery to maintain the canal.

Specific Aim: We describe our technique using a wide urachus-based peritoneal “hinge-flap” based off of the urachus to augment vaginal length, and, show that it can be easily performed using a combined transvaginal and single-port robotic-assisted laparoscopic technique.
We also highlight technical innovations which we have developed to make this surgery easier, safer, and more generalizable to surgeons from different disciplines.

Materials and Methods: The remnant vaginal vault is identified and the peritoneum is incised horizontally. The anterior vaginal canal is then anastomosed to the peritoneum anterior to the incision. The *seminal vesicles* are resected and the augmented canal width is calibrated. The peri-umbilical aspect of the long urachus-peritoneal flap (Figure 1a) is anastomosed to the posterior aspect of the vaginal canal. A water-tight closure is confirmed

Results: Our proposed technique innovations not described in the literature for peritoneal vaginoplasty includes:
1) The design and utilization of a novel, hollow vaginal dilator for intra-operative transillumination and post-operative dilation and douching (b-d). 2) Our lighted vaginal dilator (U.S. Patent #11638808) confirms the location of the vaginal-canal plane between the bladder and rectum (and can also be inserted into the rectum)(e). 3) Excision of the seminal vesicles to un-obstruct the canal (f). Finally, 4) Utilizing an offset anterior/posterior vaginal-peritoneal anastomosis to optimize the anastomosis of the peritoneal hinge flap to the posterior vaginal wall (g). (VIDEO clips are provided)

Conclusion: Our peritoneal hinge flap increases depth vaginal depth for patients who have lost vaginal depth. To date, we reserve peritoneum only for salvage cases and do not use it with primary vaginoplasty as we have found penile and scrotal skin alone to be sufficient to achieve a mean depth= 5.4 inches). Especially regular dilation post-op is essential for depth-preservation. Excision of the seminal vesicles visibly de-obstructs passage of the dilator. Use of trans-illumination defines anatomy that can be variable across patients. We believe that this technique can also be performed laparoscopically without a robot when the robot is not available.

THU-P-7: A SURGICAL TECHNIQUE TO CREATE A NATURAL-APPEARING RECESSED VAGINAL INTROITUS WITH GENDER-AFFIRMING VULVOPLASTY ("SHALLOW-DEPTH VAGINOPLASTY")

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Presented by: Maurice Garcia

Introduction/Background: Feminizing genital gender-affirming surgery options include vaginoplasty with neovaginal canal creation (“full-depth vaginoplasty”), or vaginoplasty without creation of a neovaginal canal, referred to as “vulvoplasty” or “shallow-depth vaginoplasty”. If a transgender woman does not require a vaginal canal for sexual intercourse, shallow-depth vaginoplasty is an excellent option for women as it does not carry the additional requirements of lifelong dilation and douching and lower risk of complications as compared to the full-depth vaginoplasty procedure.
As with either of these procedures, achieving “normal appearing” feminine anatomy is critical for patients. Currently, techniques for shallow-depth vaginoplasty have relied on the use of a separate full thickness skin graft utilizing a portion of scrotal skin to delineate

Specific Aim: 1) To better understand decision-making factors when choosing to undergo shallow-depth vaginoplasty.
2) To describe a novel technique used to create a recessed vaginal introitus.
3) To evaluate patient perceptions of appearance as compared to cisgender vulvae.

Materials and Methods: Patients undergoing feminizing genital gender-affirming surgery between 04/2017-07/2022 were included in this study. Of the patients undergoing shallow-depth vaginoplasty, an anonymous electronic survey querying decision-making factors and overall post-operative satisfaction

were undertaken.
In addition, our novel technique is described.

Results: A total of 110 patients underwent feminizing genital gender-affirming surgery. Of these, 35 (32%) underwent shallow-depth vaginoplasty, whilst 75 (68%) underwent full-depth vaginoplasty.
Priorities: Achieving an appearance which was "comparable to" cisgender vulvae was ranked second highest after "elimination of male genital anatomy" (Figure 1a).
Technique: To achieve a recessed skin-lined introitus, gathering sutures were used to create a "dimple" from penile/scrotal skin, which is tethered to the tendon of the bulbospongiosus muscle, and the diffuse perineal body tissue behind the urethral bulb (Figure 1, b-d). When there is insufficient penile skin to make the dimple, scrotal skin can be use as a full-thickness skin graft and anchored as described to make a dimple (Figure 1,e-f).
Attractiveness: When comparing their vulva to cisgender women's of similar age and weight, all 26 (100%) patients reported that their vulvas had "similar" or "somewhat similar" appearance to cisgender vulvae. 24/26 (92%) of patients found their vulvas to be either "similarly or more attractive", and 2/26 (8%) found their vulvas to be "less attractive" as compared to cisgender vulvas.

Conclusion: Women undergoing genital GAS must be offered a spectrum of genital GAS options. Providing options to trans patients is *both* gender *and* patient-affirming. The "right" option for the right patient (i.e. self-selection) decreases morbidity and risk of complications, which in turn, saves healthcare-system resources. Women who *choose* gender-affirming shallow-depth vaginoplasty greatly consider aesthetic appearance- which must be indistinguishable from full-depth vaginoplasty, and ideally, from cisgender female anatomy. This can be achieved by this surgical technique.

THU-P-8: PERIOPERATIVE OUTCOMES OF GENITAL SURGERY USING AN INDIVIDUALIZED APPROACH TO HORMONE MANAGEMENT IN TRANSFEMININE INDIVIDUALS

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Presented by: Justine Herndon

Introduction/Background: There are no specific guidelines or recommendations and limited data to address practice regarding continuing or holding gender-affirming hormone therapy (GAHT) for gender-affirming genital surgery. Various practices include holding GAHT perioperatively, tapering to a lower dose, or continuing the current GAHT regimen. Recent studies note a low incidence of venous thromboembolism (VTE) in gender-affirming genital surgery following the various perioperative GAHT protocols. We developed and applied a standardized protocol based on risk factors for VTE to guide potential changes in GAHT perioperatively.

Specific Aim: We sought to determine perioperative outcomes in transfeminine (TF) individuals undergoing gender-affirming genital surgery using a specific GAHT protocol based on individualized risk factor assessment. The primary outcome was VTE incidence. Secondary outcomes included other postoperative complication incidence and changes in mental health assessments.

Materials and Methods: This was a retrospective observational cohort study at a single-center tertiary referral center from 2017-2022. Patients included 183 TF individuals whose perioperative GAHT management was determined by individualized perioperative risk assessment. Risk factors included age ≥ 50, personal or significant family history of a cardiovascular event, or VTE. The lower-risk Group 1 continued estradiol perioperatively; the higher-risk Group 2 discontinued estradiol temporarily preoperatively for 2-6 weeks, depending on the estradiol formulation utilized. The collected pre- and

postoperative data included clinical and biochemical assessment, GAHT regimens, postoperative complications, and validated mental health screenings.

Results: Most patients underwent vaginoplasty with a full-depth canal (168, 91.8%). 138 (75.4%) individuals were in Group 1, and 45 (24.6%) were in Group 2. Group 2 was statistically older (median 57 years [IQR 51-64] vs. 30 years [IQR 25-37], $p < 0.001$), had a higher preoperative BMI (median 28.3 kg/m2 [IQR 24.1-30.4] vs. 25.7 kg/m2 [IQR 21.6-29.7], $p = 0.02$) and had a higher incidence of cardiometabolic comorbidities of hypertension, hyperlipidemia, diabetes mellitus, coronary artery disease, obstructive sleep apnea, and pulmonary disorders (60.0% vs 21.3%, $p < 0.001$). Group 1 was statistically more likely to utilize oral estradiol preoperatively (51.4% vs. 20.0%, $p < 0.001$), but there was no statistical difference between groups regarding anti-androgen or progesterone use. Fifty-three patients (29.0%) presented with at least one postoperative complication, most within two weeks after hospital discharge (33, 62.3%). One episode (0.05%) of VTE occurred in the entire cohort (Group 1). The most commonly encountered complication was wound dehiscence (29, 15.8%). The complication rate was not statistically different between groups. There were no statistically significant differences in median scores or percent change of mental health assessments between groups postoperatively.

Conclusion: An individualized approach to perioperative GAHT was associated with a 0.05% incidence of VTE without statistically significant incidence of postoperative complications between groups or change in mental health. Continuation of GAHT perioperatively should be considered for genital surgery in low-risk individuals.

THU-P-9: AESTHETIC REVISIONS TO GENDER AFFIRMING PHALLOPLASTY: A SINGLE-CENTER EXPERIENCE

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Presented by: Elizabeth Hilt

Introduction/Background: Genital GAS (gGAS) is becoming increasingly sought-after among transgender and non-binary (TGNB) individuals. One important component of gGAS is the phalloplasty. No gold standard currently exists for neophallus creation. Many institutions have developed phalloplasty techniques and adjust these based on provider experience and emerging data. Much of the phalloplasty outcomes data outlines surgical complications. The most common being urethral strictures, urethral fistulas, and vascular flap complications. While some have described various techniques used to achieve a single aesthetic result, few have comprehensively outlined aesthetic modifications that occur during staged phalloplasty procedures.

Specific Aim: This research seeks to review the aesthetic modifications made during multi-staged phalloplasty procedures at our single center. Our secondary aim is to examine at what stage(s) these modifications occurred.

Materials and Methods: Data were collected from a single institution. Inclusion criteria included any individuals who completed at least one stage of their phalloplasty. Electronic medical records were reviewed by the research team.

Results: 26 patients met inclusion criteria, thus were included in this research. The phalloplasty techniques utilized were 10 radial forearm free flaps (RFF) and 16 anterolateral thigh flaps (ALT). 20 patients received at least one aesthetic modification (n=20). The following eight aesthetic modifications were made in at least one case: glansplasty, scrotoplasty, penile shaft liposuction, penile shaft debulking, testicular implants, prosthetic implants, fat grafting, coronaplasty. Among the RFF group, glansplasty (n=4), penile shaft liposuction (n=3), and penile shaft fat grafting (n=3) were the most common modifications. Among the ALT group, penile shaft liposuction (n=8), penile shaft debulking (n=7), and

glansplasty (n=6) were the most common modifications. Most RFF modifications occurred during stage 2 (n=9). Most ALT modifications occurred at stage 3 (n=19).

Conclusion: gGAS is an important component of gender affirming care. No gold standard exists for phalloplasty procedures. Common aesthetic modifications made during RFF and ALT procedures are glansplasty, liposuction, debulking, and fat grafting. Most modifications to RFF occurred during stage 2, while those for ALT mostly occurred during stage 3. This research helps clarify aesthetic modifications that are performed during phalloplasty procedures. More research is needed to further clarify aesthetic modifications made during neophallus creation.

THU-P-10: AUTOLOGOUS BREAST AUGMENTATION FOR GENDER-AFFIRMATION SURGERY: A SCOPING REVIEW

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Presented by: Avery Ford

Introduction/Background: Breast augmentation is a core component of gender-affirmation surgery, and has been demonstrated to significantly improve patient quality of life in multiple domains. While implant-based augmentation has low morbidity and surgical burden, it is also associated with additional maintenance procedures such as ruptured implant exchange, and complications such as capsular contracture or breast implant-associated cancers (BIA-ALCL and BIA-SCC). In contrast, autologous tissue is a greater match for native breast tissue and is longitudinally more durable, but autologous procedures are poorly described in the transgender and gender-diverse (TGD) population. Fat graft-based breast augmentation literature is limited and focuses on the cisfemale experience, and free flap-based breast augmentation remains relatively unexplored.

Specific Aim: This study aims to describe the current literature of autologous breast augmentation within both the cisfemale and the TGD population.

Materials and Methods: A scoping review of PubMed was conducted in June 2023 using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Search terms included “breast autoaugmentation,” “free flap breast augmentation,” “transgender” and related terms. Studies were included which addressed autologous breast augmentation, and were written in English within the past 20 years. Viewpoints and similar articles were included, while conference abstracts and other reviews were excluded. After primary PRISMA review was complete, references in identified studies were collected and subject to secondary review.

Results: Of 556 non-duplicate studies identified, eight met study inclusion criteria. After referenced articles were secondarily reviewed, three more sources were included (Figure 1). Five studies mentioned free flap techniques, including abdominally-based, buttock-based, and thigh-based free flaps; a single case report described free flap use in a transwoman with Poland syndrome. Three studies discussed breast auto-augmentation as an option for replacing breast implants in ciswomen, with one demonstrating improved patient satisfaction via BREAST-Q scores. One study discussed fat grafting for male pectoralis major muscle augmentation. Five studies specifically referenced transgender populations, with one noting the increased volume needs for transwomen.

Studies examined autologous breast augmentation in context of some patients’ preference to avoid implants. Specific mention was made towards avoiding complications such as capsular contracture, implant-associated cancers, and implant rupture requiring replacement. Only one article specifically mentioned initial and long-term costs or potentially limited patient access to free flap-based breast augmentation for TGD patients.

Conclusion: There is a general paucity of research examining autologous breast augmentation, and particularly for TGD patients. Implant-based and autologous augmentation are evaluated primarily in cisgender females. Given increasing patient demand, differing morbidity and complication profiles, and differences in how patients and surgeons weigh risks and benefits of these procedures, further research into fat graft-based and free-flap breast augmentation is warranted. In addition, given anatomic differences between ciswomen with pubertal breast development and transwomen with postpubertal estrogen exposure, studies should examine specific procedural differences needed for the TGD population. Historic barriers to access, and social determinants of health relevant to TGD patients, should also be examined in this context. Further research will inform disadvantages and advantages to dictate when autologous augmentation is a justifiable alternative to conventional strategy.

THU-P-11: Scoping Out Buttocks: A Scoping Review of Aesthetics, Anthropometrics, and Augmentation for Gender-Affirming Surgery of the Buttocks

Logan Galbraith[1], Avery Ford[2], Arya Akhavan[3,4], John Pang[3], Thomas Satterwhite[3]
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Presented by: Logan Galbraith

Introduction/Background: Transgender and gender-diverse (TGD) patients often experience gender dysphoria related to buttock structure incongruent with gender identity. While the anatomy, aesthetics, and surgical procedures of buttocks in cisgender women have been previously studied, there remains a paucity of literature in exploring buttock anatomy and aesthetics both for cismen and transwomen. Given the anatomic differences in musculature, skeletal frame, and body fat distribution between ciswomen and transwomen, this knowledge becomes critically important in gender-affirming buttock surgery. Various hip-to-waist ratios have been proposed for different populations, but no studies synthesize current anthropometric or surgical data in the context of gender affirmation.

Specific Aim: This study therefore aims to collate and summarize the current landscape of buttock surgery and aesthetics in TGD and cisgender patients, to provide evidence-based recommendations and/or suggestions for further research.

Materials and Methods: A scoping review was performed using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. A PubMed search was conducted using term variants of “buttock”, “aesthetic”, “implant”, and/or “fat grafting”. Studies were included which addressed buttock aesthetics or procedures, and were written in English in the past 20 years. Editorial-type articles were included, while systematic reviews and conference abstracts were excluded. After initial PRISMA review, references from identified studies were subject to secondary PRISMA.

Results: Of 122 non-duplicate studies, 10 met inclusion criteria. Only 5 studies specifically included transfemale patients, with 3 suggesting the use of combined implants and fat grafting. Several studies reviewed relevant anatomic differences, including the masculine presentation of acute suprapubic angles, narrow pelvic brims, and accentuated iliac crests. One study specifically examined the influence of sex on thickness of subcutaneous gluteal fat and its impact in safety for fat grafting-based buttock augmentation (“Brazilian butt lift”, or BBL). Anthropometrics identified the typical waist-to-hip ratio in cismen to be 0.85-0.95, and in ciswomen the ideal ratio was found to be approximately 0.7. Based on these anatomic differences, articles recommended augmenting the lateral hips, superior buttock, and lateral mid-buttock concavity, while reducing lumbar and thigh targets, and creating a more defined inferior gluteal convexity. Studies did not generally provide volume targets for liposuction or fat grafting, but did discuss safety concerns and fat embolism prevention in BBL.

Conclusion: While the literature surrounding gender-affirming buttock surgery remains limited, enough work exists in anatomic, anthropometric, crowdsourcing, and procedural buttock work to provide general recommendations and goals for future research. While no studies specifically discussed ideal ratio targets

for transwomen, values for cismen and ciswomen may be used as references for start- and end-points. Specific anatomic targets for recontouring via liposuction and disguising via fat grafting have been provided, as have targets for implant augmentation. Appropriate next steps for the field include establishing more concrete guidelines for reduction and augmentation volume at specific anatomic sites, use of 3D scanning for more concrete volume comparisons, and surgical outcomes research that include both complications and procedural concerns specific to TGD anatomy.

THU-P-12: OVERNIGHT DILATION FOR GENDER-AFFIRMING VAGINOPLASTY: INITIAL PROTOTYPING AND FEASIBILITY TRIAL

Diego Gomez[1], Justin Camacho[2], Arya Akhavan[3], John Pang[3], Thomas Satterwhite[3], Anandev Gurjala[3]
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Presented by: Diego Gomez

Introduction/Background: Vaginoplasty is a common gender-affirming surgery that aims to create a functional neovagina. Complications in vaginoplasty are well-described, and functional complications include vaginal strictures and vaginal canal stenosis. Despite studies investigating improvements to postoperative outcomes and complication rates, the reported incidence of neovaginal stenosis – defined as loss of canal depth or internal strictures – is as high as 12%. Postoperative vaginal dilation is critical in preventing vaginal stenosis, but there is no universally-accepted protocol for regimented postoperative dilation, a core part of the recovery process. In addition, patient adherence to dilation protocols may be limited by inconvenience or discomfort.

Specific Aim: To address rates of neovaginal stenosis and potential barriers to dilation, this study presents a feasibility trial of an overnight-use expansion dilator for the neovaginal canal.

Materials and Methods: A custom overnight dilator device was developed. A 9.5 cm cylindrical silicone dilator is surrounded laterally by a 60-cc expandable reservoir, attached to a fill valve for gradual air expansion. A removable stylet handle was developed to allow ease of insertion into the vaginal canal. The prototype expandable dilator was used as part of the postoperative care of a 24-year-old transgender woman undergoing vaginoplasty.

Results: The patient underwent penile inversion vaginoplasty with meshed scrotal skin grafting. Intraoperative canal depth and width were 15 cm and 4.5 cm, respectively. The vaginal canal was packed with bacitracin-coated packing for one week. Viability of the skin graft was confirmed at postoperative week one, and the patient was instructed to begin dilation with a 3.18 cm diameter polyurethane dilator for two weeks. At postoperative week three, the skin graft was well-healed, and the patient was given the prototype expandable dilator. She was instructed to dilate in increasing intervals: 30 minutes three times a day, one hour three times a day, then three continuous hours, followed by six continuous hours. The patient was instructed to begin overnight dilation once she was able to tolerate 6 continuous hours of dilation. After one week of dilation, the patient reported achieving 9-hour overnight dilation with 60 cc expansion.

Speculum exam revealed a well-healed vaginal lining, with no evidence of rectovaginal fistula or vaginal canal stricture. Patient continued overnight soft expansion dilation. She performed routine canal depth assessment with hard 22.9 cm x 3.8 cm dilator. Follow-up at 4 and 7 months revealed hypergranulation tissue within the vaginal canal, which was treated with silver nitrate. The skin graft appeared intact, with no evidence of strictures or fistulas noted at that time. The patient reported full compliance with the overnight dilation regimen. Patient-reported satisfaction with vaginal depth, width, and wall elasticity was high at latest follow-up.

Conclusion: Adherence to postoperative dilation regimens remains a crucial component of successful vaginoplasty. This proof-of-concept study employed an expandable overnight dilation in a single patient. At 7 months postoperatively, and with nightly dilation, the vaginal canal was well-healed, with no evidence

of structuring or rectovaginal fistula. Future studies employing overnight dilation in a prospective, randomized cohort, are necessary to isolate the effect of this intervention.

Poster Abstract Submissions

Friday, November 3, 2023

4:15pm - 5:30pm

Poster: Aging and End-of-Life Considerations

FRI-P-1: PROJECT RESPECT: THE EXPERIENCES OF TRANS- AND NON-BINARY PEOPLE WITH HEALTHCARE PROVIDERS IN HOSPICE, PALLIATIVE CARE AND END-OF-LIFE SETTINGS

Shail Maingi[1], Cathy Berkman[2], Gary Stein[3], Sean O'Mahony[4], Noelle Javier[5], David Godfrey[6]
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Presented by: Shail Maingi

Introduction/Background: Lesbian, gay, bisexual, transgender, and queer (LGBTQ+) individuals experience discrimination in health care – including palliative, hospice, and long-term care. Providers and institutions may be uncomfortable with, and often don't ask patients about, sexual orientation and gender identity (SOGI). LGBTQ+ patients fear being open about their identities, not receiving equal, competent or safe treatment, and having their family of choice and surrogates disrespected or ignored. This presentation reports on Project Respect, which describes care to seriously ill LGBTQ+ persons that was inadequate, disrespectful or abusive due to SOGI with the focus on our quantitative and qualitative findings relevant to trans- and non-binary people facing serious illnesses and their loved ones.

Specific Aim: 1. To understand the hospice, palliative care and end-of-life experiences of LGBTQ+ people and their loved ones with a focus on the findings of tans and non-binary people
2. To explore the specific barriers and problems experiences by trans and non-binary people in hospice, palliative care and end-of-life settings.

Materials and Methods: A mixed-methods study using an online survey was conducted. The sample was LGBTQ+ individuals with a serious illness, and partners/spouses and widows of such individuals. Respondents were recruited through organizations serving the LGBTQ+ community, older adults, and palliative and hospice care organizations. Questions included type of serious illness, healthcare services used, and whether and how care was inadequate, disrespectful, or abusive due to SOGI for both the patient and partner, and from healthcare professionals and from support staff.

Results: Of 225 respondents, 23% of respondents identified as trans or nonbinary. Among all of the LGBTQ+ repsondents, 44% reported their healthcare provider was insensitive; 33% said providers were not aware of LGBTQ+ health needs; and one-quarter said their providers disregarded their treatment decisions, made them feel judged for being LGBTQ, used incorrect pronouns, were rude, refused or denied them care, and/or imposed their religious beliefs. Trans and non-binary people in these setting experience higher rates of discrimination and denial of care. Descriptions of poor care and how it is experienced are included in our findings as well as insights into unique experiences of trans people in hospice and palliative care settings.

Conclusion: These findings provide strong evidence that LGBTQ+ patients and their partners often receive discriminatory care at very vulnerable moments of their lives. Disrespectful care can negatively

affect patients' trust in providers and institutions, and lead to delaying or avoiding care, and not disclosing medical information. It is also not consistent with the fundamental tenets of hospice and palliative care. These findings have implications for staff training, practice, and institutional and public policy, including policy barriers to respectful and non-discriminatory care.

Poster: Primary Care Across the Lifespan/Care for Families

FRI-P-3: PEDIATRIC GENDER CARE IN PRIMARY CARE SETTINGS IN A RURAL US STATE: PROVIDER KNOWLEDGE, ATTITUDES & EDUCATIONAL EXPERIENCES

Kacie Kidd[1], Alana Slekar[2], Gina Sequeira[3], Nicole Kahn[3], Lisa Costello[1], Isabela Negrin[1], Sara Farjo[1], Savannah Lusk[1], Snehalata Huzurbazar[2], Janani Narumanchi[4]
[1]West Virginia University School of Medicine, Morgantown, WV, USA, [2]West Virginia University, Morgantown, WV, USA, [3]University of Washington, Seattle, WA, USA, [4]University of Tennessee, Memphis, TN, USA

Presented by: Kacie Kidd

Introduction/Background: Gender diverse youth (GDY) and their families often present to pediatric primary care providers (PPCPs) seeking support and guidance. This population faces increased rates of health inequities compared to cisgender peers. Recent studies suggest that between 7-9% of youth in the rural U.S. region of Appalachia have a gender diverse identity.

Specific Aim: This study aimed to understand the knowledge, attitudes, and educational experiences of PPCPs in the Appalachian state of West Virginia (WV) related to caring for GDY.

Materials and Methods: A 76-item anonymous online survey was distributed through professional organizations to PPCPs across WV. The survey included questions measuring provider 1) demographics, 2) knowledge, 3) attitudes, and 4) educational experiences. Knowledge and attitude scores were calculated and proportion tests and t-tests were used to compare these scores by PPCP characteristics including age, time in practice, and training background.

Results: In total, 51 providers (69% faculty physicians, 24% resident physicians, 8% advanced practice providers) completed the survey. Of the physicians, 60% were pediatrics or med-peds trained and 40% were family medicine trained. 82% of providers noted a history of caring for one or more GDY (median 3 patients, range 0-50) and 65% endorsed providing gender-affirming care. 20% acknowledged familiarity with standard of care guidelines from WPATH and the Endocrine Society and only one in ten answered 70% or more knowledge questions correctly. Being younger (<40 years) or being in practice for <10 years was significantly associated with higher knowledge ($p=0.02$, $p<0.01$) and attitude ($p=0.01$, $p<0.01$) scores. Most (84%) of PPCPs endorsed having received some form of education related to caring for GDY. Those who reported no education had significantly lower knowledge ($p<0.01$) and attitude scores ($p<0.01$).

Conclusion: PPCPs are increasingly caring for gender diverse youth in their practices, and, given geographic, legislative, and socioeconomic challenges in rural areas, PPCPs may be the only accessible option for this important care. PPCPs in a rural Appalachian state reported caring for GDY but knowledge and attitudes related to this care varied by age, time in practice, and relevant educational experiences. More research is needed to determine best strategies for providing education to PPCPs, particularly those who are older and have been in practice longer, and to better understand the impacts of legislation limiting evidence-based gender-affirming care on PPCP knowledge, attitudes, and access to educational experiences.

FRI-P-4: THE USE OF OSTEOPATHIC MANUAL TREATMENT IN THE CARE OF GENDER EXPANSIVE PATIENTS EXPERIENCING MUSCULOSKELETAL SYMPTOMS RESULTING FROM CHEST BINDING AND MASTECTOMY

Justin Penny, Jessica Jordan, Gagandeep Singh
University of Minnesota, Minneapolis, MN, USA

Presented by: Justin Penny

Introduction/Background: The biggest barrier to health care reported by transgender and gender diverse individuals is lack of access due to lack of providers who are sufficiently knowledgeable on the topic. With this project, we will address one such potential knowledge gap that could improve the quality of life of gender expansive patients, reduce or eliminate pain, and improve the provider-patient relationship. Gender expansive individuals assigned female at birth (AFAB) may engage in chest-binding (the wearing of a tight garment to flatten chest tissue) or mastectomy (surgical resection of chest tissue) as part of their expression of their gender identity. The common practice of chest binding and the surgical intervention of mastectomy may lead to physically uncomfortable musculoskeletal (MSK) symptoms, including myofascial pain. Osteopathic manipulative treatments (OMT) include hands-on manipulations of different body structures to increase systemic homeostasis and total patient well-being. The use of manual therapies in these instances has been shown to be helpful in reduction and/or elimination of pain and improved quality of life for the patient.

Specific Aim: We will review the relevant anatomy and physiology of the thorax and present a case of the use of OMT on a patient with somatic symptoms as a result of chest binding. Review suggested manual techniques presented in literature and demonstrated in the case presentation. Encourage the utilization of OMT as a valuable tool in the care of gender expansive patients following chest binding and mastectomy.

Materials and Methods: Brief review of literature around the use of manual therapies in post-op mastectomy, brief review of osteopathic manual treatment, and review of relevant anatomy. Case presentation of the use of OMT in a patient with MSK complaints from chest binding.

Results: Increased understanding of how OMT affects patient outcomes, including reduction or elimination of pain and improved quality of life following treatment. Improved knowledge of the relevant anatomy and appropriate manual therapy techniques for these patients.

Conclusion: OMT is a valuable tool in the care of gender expansive patients experiencing MSK symptoms. Skilled practice or appropriate referral has the potential to reduce or eliminate somatic pain related to chest-binding and mastectomy and improve quality of life.

Poster: Hormone Therapy – Adult

FRI-P-6: HEMATOSPERMIA MAY INDICATE ENDOMETRIOSIS IN TRANSGENDER WOMEN ON GENDER-AFFIRMING HORMONE THERAPY

Janet Coleman-Belin[1,2], Tamar Reisman[2]
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Presented by: Janet Coleman-Belin

Introduction/Background: Hematospermia is usually benign. Visible blood in sperm may be idiopathic or due to inflammation, infections (including sexually transmitted and tuberculosis), hemorrhage, seminal vesicle stones, prostatic or ejaculatory duct cysts or calcifications, Müllerian duct remnants, and (rarely) prostate cancer. Currently, the occurrence of hematospermia in transgender women is unknown.

Specific Aim: Clinical Course: A 35-year-old transgender woman treated with estradiol valerate and leuprolide presented with rust-tinged ejaculate and intermittent urethral bleeding after ejaculation, along with one year of intermittent hematuria. She did not report dysuria, urgency, frequency, or gastrointestinal symptoms and is a lifetime nonsmoker. Urinanalysis and culture revealed rare white blood cells with gram

variable bacilli. Chlamydia, gonorrhea, and HIV tests were negative. CT scan, cytoscopy, and MRI prostrate (with and without contrast) were within normal limits.

One year later, transrectal ultrasound revealed a 1.7 cm midline posterior prostatic cyst with hemorrhagic products. Two ultrasound-guided transperineal biopsy samples revealed benign prostatic tissue with a small focus of Müllerian or endometrial-type tissue, evidenced by immunopositive stains for PAX 8 and ER in epithelium and CD10 in stroma.. These findings may indicate endometriosis or a Müllerian cyst.

Materials and Methods: Clinical Update:
The patient requested and underwent prostatic cyst aspiration, resection of transurethral ejaculatory ducts, and orchiectomy. Surgical pathology reported bilateral testes with atrophy and seminiferous tubules that exhibited arrest in spermatogenesis without any spermatids (maturational arrest consistent with GAHT**). In addition, the left testis demonstrated areas with marked tubular hyalinization. Seminiferous tubular hyalinization is associated with damage due to inflammation, genetic disease (notably Klinefelter syndrome), chemotherapy, and vascular dysfunction[1] and may have contributed to the patient's hematospermia. She was medically cleared for vaginoplasty 5/2023.

Results: Discussion: Endometrial tissue in transgender woman has not been previously described. Endometriosis in AMAB* individuals is hypothesized to be sequelae of extended estrogen exposure, liver disease, or chronic postoperative inflammation[2]. As a result, there may be more individuals on GAHT developing endometrial epithelium and stroma than previously thought. However, there are currently no evidence-based guidelines for managing benign ectopic endometrial tissue in transgender women. In cisgender women, endometriosis management is usually directed by symptoms: first-line treatments are acetaminophen, NSAIDs, and combined hormonal contraceptives; second-line cases are treated with GnRH agonists; and only refractory cases not responsive to subsequent specialized medications are excised[3]. Further investigation is necessary to determine if rates of malignant transformation[4] differ in transgender women.

Conclusion: Conclusion: Hematospermia in transgender women on GAHT may reveal occult endometriosis or ectopic Müllerian epithelial tissue growth.
*AMAB: Assigned Male at Birth
**GAHT: Gender-Affirming Hormone Therapy
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FRI-P-7: SPATIAL TRANSCRIPTOMIC PROFILING OF TESTOSTERONE TREATED MOUSE OVARIES TO INVESTIGATE CELLULAR CHANGES DURING GENDER AFFIRMING HORMONE THERAPY

Jack Nelson[1], Cai McCann[1], Ruixu Huang[2], Erica Massicott[3], Caroline Kratka[4], Brittnay Goods[2], Francesca Duncan[4], Gerburg Wulf[3], Yujing Heng[3], Samouil Farhi[1]
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Presented by: Jack Nelson

Introduction/Background: Most transgender individuals who take testosterone (T) as part of their gender affirming healthcare undergo amenorrhea within the first few months of treatment, but the specific cellular mechanisms driving changes within the ovary are unclear. It is documented that luteinizing hormone (LH) and estrogen levels decrease on T while follicle stimulating hormone (FSH) levels are maintained. In the ovary, oocytes are supported by theca and granulosa cell populations in follicles. These cell populations have key roles in hormone biosynthesis and respond to LH and FSH, respectively. Follicles that do not fully mature undergo atresia, in which granulosa cells initiate apoptosis across the follicle. A deeper understanding of T's impact on these cellular mechanisms could help further research into fertility preservation for transmasculine individuals.

Specific Aim: We aim to understand the cellular changes associated with hormone therapy in the ovary, particularly the interactions between the theca and granulosa cells. We hypothesized that decreased LH levels and increased T levels would reduce expression of early steroidogenic gene expression in theca cells and that maintained FSH and androgenic input would minimize the impact on granulosa cells. Because other studies have shown that female mice on T have a higher number of follicles that undergo atresia, we expect to find an increased number of macrophages present in granulosa cell populations.

Materials and Methods: To test these predictions in the transcriptomic space while simultaneously evaluating the large-scale morphological information and follicular development state, we turned to imaging spatial transcriptomics. We thus profiled T treated ovaries using Multiplexed Error-Robust Fluorescence In-Situ Hybridization (MERFISH). We constructed a tissue microarray containing one ovary each from eight mice, four of which were administered with T for four weeks prior to harvesting. We then profiled the tissue microarray using a 198 gene Vizgen MERFISH probe set, selected to identify ovarian subtypes and immune cell interactions. We performed unsupervised cell clustering followed by differential expression analysis.

Results: Theca cells in T treated mice showed dramatic changes in gene expression, with over 31 significantly impacted genes. Notably, there was an upregulation of genes involved in retinoic acid metabolism and immune activity, and a downregulation of genes involved in the first steps of steroidogenesis and cell proliferation. In the granulosa cell populations, there was a significant increase in ALDH1A1 expression, which plays a role in retinol metabolism, but some subpopulations had little to no significant transcriptional changes. Expression of CYP19A1, which is responsible for converting androgens to estrogen, was not significantly impacted. Immune markers and inflammation related genes were upregulated in many cell types across the T treated ovaries.

Conclusion: Overall, this study shows how spatial transcriptomics can expand our understanding of changes that occur on T at the cellular level and demonstrate a few of the key impacted biological pathways. We observed a decrease in genes responsible for the initial steps of steroidogenesis but not those involved in converting androgens to estrogen, supporting the theory that exogenous T can feed into steroid biosynthesis pathways in the ovary. Future directions include further analysis of this dataset to assess macrophage activity.

FRI-P-9: CHANGES IN LIPID LABORATORY PARAMETERS AMONG TRANSGENDER PATIENTS FOLLOWING INITIATION OF GENDER AFFIRMING HORMONE THERAPY (GAHT): A SYSTEMATIC REVIEW AND META-ANALYSIS

Bennett Gosiker[1], Jude Moutchia[2], Nghiem Nguyen[1], Michael Goodman[3], Darios Getahun[4]
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Presented by: Bennett Gosiker

Introduction/Background: Aside from initial monitoring of sex hormones, hemoglobin, and hematocrit levels among transmasculine (TM) patients accessing gender-affirming hormone therapy (GAHT), no United States Preventive Services Task Force recommendations offer guidance regarding additional

laboratory monitoring for transgender patients. Few well-executed population-level studies exist to support such monitoring, although some guidelines rely on theorized effects of GAHT. Lipid levels are commonly monitored in the outpatient primary care setting as a marker of cardiometabolic health. Having a better understanding of whether GAHT impacts lipid profiles may help transgender patients and their physicians better monitor the health status of this population.

Specific Aim: To conduct a systematic review and meta-analysis exploring whether GAHT among transgender individuals is associated with changes in lipid parameters.

Materials and Methods: Search strategies were developed for Ovid Medline, Embase, Web of Science, SCOPUS, and CINAHL. All abstracts were independently assessed by two reviewers against eligibility criteria. Discrepancies were resolved by consensus. Full text articles were reviewed to further determine eligibility. Following data extraction and quality assessment of all eligible articles, we performed a meta-analysis of results to estimate the differences in lipid measures from baseline to various time points post-GAHT initiation.

Results:
A total of 24 samples of TM populations and 20 samples of transfeminine (TF) populations across 30 publications included eligible data on lipid profiles. 93% (28) of studies were from North America or Europe and 3% (1) each from Asia (Taiwan) and South America (Argentina). The mean number of participants per study was 55 for both TM and TF populations. The mean ages were 31 and 29 for TF and TM patients, respectively. The mean duration of follow-up across studies was 26 months.

Among TM populations, HDL cholesterol showed a significant reduction starting at 3 months post-GAHT initiation and peaking at 60 months (-9.4 mg/dL; 95% CI: -12.0, -6.7). LDL cholesterol increased after 6 months post-GAHT initiation and peaked at 60 months (26.2 mg/dL; 95% CI: 23.3, 29.0). Total cholesterol showed more stability with an increase at 12 months, similarly peaking at 60 months (26.1 mg/dL; 95% CI: 22.8, 29.4) . Triglycerides showed a significant increase at 6 months with a peak at 60 months (30.7 mg/dL; 95% CI: 6.9, 54.6).

Among TF populations, total cholesterol appeared to change from baseline levels with a decrease at 12 months (-9.2 mg/dL; 95% CI: -16.6, -1.7) and an increase by 60 months (13.8 mg/dL 95% CI: 2.6, 25.0). HDL, LDL, and triglycerides showed no significant difference from baseline.

Conclusion: Changes in lipid profiles among TM populations indicated worsening cardiometabolic profiles. This suggests a potential need for closer follow-up in the primary care setting. Changes in lipid profile were minimal among TF populations, suggesting closer monitoring of these measures beyond what is already recommended for cisgender adults may not be necessary.

FRI-P-10: DRY EYE SYMPTOMS IN TRANSGENDER AND GENDER DIVERSE INDIVIDUALS TAKING GENDER-AFFIRMING HORMONE THERAPY

Alicia Casella[1], Lydia Fein[1], Anat Galor[2,3]
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Presented by: Alicia Casella

Introduction/Background: Among cisgender individuals, hormonal shifts as seen in menopause and PCOS have been shown to increase dry eye (DE) symptoms. This has not been studied in transgender and gender diverse (TG/GD) individuals.

Specific Aim: The purpose of this study is to characterize DE symptoms in TG/GD individuals taking gender-affirming hormone therapy (GAHT).

Materials and Methods: An internet-based survey was administered to consenting self-identified adult TG/GD individuals who were recruited for participation from institutional research consent-to-contact databases and investigator patient populations. Demographic variables and DE symptoms including ocular dryness/grittiness/scratchiness, soreness, burning/watering and fatigue were assessed cross-sectionally. A Likert scale was used to assess symptom severity prior to initiating HT as well as after starting HT based on patient recall. Participants were also asked to subjectively assess whether overall symptom severity had increased, decreased or not changed since symptom onset. Contact lens use, eye makeup use, screen time, and medical history were also assessed. A Wilcoxon signed-rank test was used to compare mean symptom severity from pre-GAHT to post-GAHT. Analyses were conducted in SPSS.

Results: 29 TG/GD individuals on GAHT completed the survey (mean age 26.2 years), n=15 (51.7%) assigned female at birth (AFAB) and n=14 (48.3%) assigned male at birth (AMAB). Mean GAHT use was 2.78 years at the time of the survey. Testosterone GAHT was reported among all AFAB respondents (n=15). Estrogen use alone was reported in n=13 (92.9%) of AMAB, n=10 (71.4%) reported use of combined estrogen and androgen blockers, and n=1 (7.1%) reported only androgen blockade. Medical comorbidities of respondents in n=7 (24.1%) included: HIV (n=2, 6.9%), diabetes (n=2, 6.9%), depression (n=2, 6.9%), fibromyalgia (n=2, 6.9%), anxiety (n=2, 6.9%), hypertension (n=1, 3.4%), renal disease (n=1, 3.4%), PCOS (n=1, 3.4%), and asthma (n=1, 3.4%).

11 participants (37.9%) reported ever having DE symptoms (6=AFAB; 5=AMAB). Current DE symptoms included: dryness/grittiness/scratchiness in n=6 (20.7%), soreness in n=6 (20.7%), burning/watering in n=6 (20.7%), and fatigue in n=9 (31.0%). DE symptoms existed prior to HT initiation in all 11 respondents, with no participant reporting onset of DE symptoms after starting GAHT. N=8 (72.7%) of those with preexisting symptoms reported worsening of DE symptoms since starting GAHT, with mean symptom severity increasing from 2.5 pre-GAHT to 4.3 post-GAHT (p=0.017). Among the n=8 with worsening DE symptoms, n=3 (37.5%) reported medical comorbidities, n=3 (37.5%) SSRI use, n=1 (12.5%) current contact lens use, n=3 (37.5%) constant screen use, and n=2 (25.0%) constant eye makeup use.

Conclusion: To our knowledge, this is the first study to evaluate DE symptoms in TG/GD individuals. Notably, DE symptoms did not develop in anyone without symptoms prior to start of GAHT but did worsen among those who had preexisting symptoms. However, other factors may have played a role in contributing to the increase in symptom severity. These initial data suggest that GAHT may not increase DE incidence but may contribute to DE symptomatology in those with preexisting symptoms. Further investigation is needed to better understand the role of GAHT in DE symptoms among TG/GD individuals.

FRI-P-11: CHRONIC PAIN IN TRANSGENDER AND GENDER DIVERSE INDIVIDUALS

GRACE MERCHANT, Courtney Marsh, Quinn Jackson, Miranda McMillan, Taylor Cusick, Sharon Fitzgerald, Andrea Chadwick
University of Kansas School of Medicine, Kansas City, KS, USA

Presented by: GRACE MERCHANT

Introduction/Background: Transgender and gender diverse (TGD) patients are an understudied population in medicine. Data has shown that there are higher rates of chronic pain conditions (CPCs) in transgender Medicare beneficiaries compared to cisgender persons. In the general population, most CPCs have a higher incidence in females compared to males. Androgens appear to protect against the development of chronic pain in humans, whereas in humans and experimental animals, estrogens have both analgesic and hyperalgesic effects. Gender-affirming hormone therapy (GHT) aims to align a TGD patient's characteristics with those of their affirmed gender through the use testosterone, estrogen, and more. To date, there is little research examining the relationship between GHT and CPCs in the TGD population.

Specific Aim: We are performing an ongoing study to collect cross-sectional pain phenotyping data in TGD patients at The University of Kansas Health System's Gender Diversity Clinic (TUHKS-GDC) and

JayDoc Free Clinic. This preliminary analysis of existing data aims to characterize presence of chronic pain conditions in the population as well as assess the frequency of GHT in the population.

Materials and Methods: We recruited TGD patients from TUHKS-GDC and JayDoc Free Clinic to complete a comprehensive battery of surveys that assess chronic pain, pain-related outcomes, GHT, gender identity, and more. Specifically, the validated Chronic Overlapping Pain Condition (COPC) screener, which elucidates whether a person meets diagnostic criteria for the ten most common nociplastic pain syndromes, was administered to elucidate the total number of COPCs and the presence of each COPC. 100 patients will be recruited; so far, 80 have completed surveys. This 80-person cohort includes 20 transgender men, 43 transgender women, and 17 other gender individuals.

Results: 93.75% of the participants in this cohort are taking GHT and the mean duration of GHT use is 707.5 days. Table 1 indicates the prevalence of chronic pain by gender identity for the cohort. A total of 47.5% of the cohort of gender minority patients report the presence of chronic pain.
The mean number of COPCs for the cohort is 1.45 +/- 1.95. Table 2 highlights the prevalence of a range of COPCs as well as prevalence of those meeting diagnostic criteria for each of the specific COPCs. As seen here, a total of 57.5% of the cohort has one or more COPCs, and 28.75% has 2 or more COPCs. A total of 40% of the cohort has chronic low back pain and 13.75% meets criteria for fibromyalgia.

Conclusion: These data highlight the significant presence of chronic pain and COPCs in cohorts of gender minority persons and also highlights our ability to recruit ample populations of gender diverse patients. While these findings support the significance and premise in performing our proposed research, a large knowledge gap exists regarding the impact of GHT on subjective and objective measures of pain, and thus presents a unique opportunity to study how GHT may influence the presence and severity of pain in gender minority persons using a rigorous longitudinal design.

FRI-P-12: ASSESSING THE EFFECTS OF ACNE IN TRANSGENDER HORMONE THERAPY: DERMATOLOGY'S ROLE IN GENDER AFFIRMING CARE

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Presented by: Mitchell Hanson

Introduction/Background: Approximately 85% of individuals who are trans or gender nonconforming (TGNC) report prior use or desire of gender-affirming hormone therapy (HT) (Grant et al., 2010). However, a major adverse effect of HT is acne, which itself is associated with negative mental health outcomes (Halvorsen et al., 2011). Furthermore, the TGNC population itself is already predisposed to more poor physical and mental health days compared to their cisgender counterparts which necessitates even more concern for this topic (Lee et al, 2018). With growing focus on multidisciplinary care to provide HT, dermatologists are critical in treating acne in these patients and even preventing its exacerbation before initiating therapy (Hembree et al., 2017). The objective of this review is to determine the impact of acne on TGNC patients receiving HT.

Specific Aim: The objective of this review is to determine the impact of acne on TGNC patients receiving HT.

Materials and Methods: Systematic literature review was completed using the electronic database PubMed, searched (only in-English, full-text available articles, 2018-2023) with terms such as "transgender dermatology acne." Of 166 papers (19 duplicates, 134 did not meet criteria), 13 papers were included, of which there were 6 reviews, 2 case reports, 2 cross-sectional, and 3 retrospective studies.

Results: Results include roughly one-third of patients have been reported to develop acne within one year of starting HT (Thoreson et al., 2021) and above two-thirds have been reported within 6 months (Kirisawa et al., 2021). Younger patients with HT have an increased likelihood of developing acne on HT. Trans-male patients are more likely to attribute their acne to HT compared to trans-female patients

(Yeung et al., 2020). Acne in trans-male patients on HT were associated with significant depression and anxiety disproportionally compared to the general population (Braun et al., 2021).

Conclusion: In conclusion, acne is a frequently cited adverse event with gender-affirming HT that affects mental health and gender dysphoria. Acne is more common among younger and trans-male patients initiating gender-affirming HT, increasingly seen among topical compared to systemic routes of administration. Acne in trans and gender nonconforming, especially trans-male, populations, is disproportionately associated with anxiety and depression.

Ultimately, dermatologists can treat acne with traditional methods including benzoyl peroxide and isotretinoin. Furthermore, dermatologists can assess mental health, reproductive health, and physical exam findings throughout the course of HT in the context of a multidisciplinary team, e.g. endocrinology and psychiatry, to ensure the best quality of care (Haung et al., 2022; Hembree et. al, 2017). Additionally, gender affirming practices can be instituted in clinical settings to encourage patients' future consultation of dermatologists (Lee et al., 2018), and clinical training of dermatologists can include work with the TGNC population to inspire confidence and competence beyond understanding of institutional barriers to care (Nowaskie et al., 2022). Ultimately, dermatologists can effectively reduce acne and its sequelae that complicate the primary goals of gender affirming HT.

Poster: COVID-19/Pandemic Impacts

FRI-P-13: Post-COVID-19 vaccine myopericarditis in a transgender patient undergoing gender-affirming testosterone therapy

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Presented by: Henry Ng

Introduction/Background: Although considered to be a key determinant of health, sex is not binary, nor singular. Multiple factors influence sex, including chromosomal composition, hormonal milieu, and genital and gonadal anatomy, which exist on a spectrum. Myopericarditis is an inflammatory cardiac disorder primarily induced by viral infection or vaccination. While much of COVID research reflects sex-based outcomes; its generalizability may not extend to patients who have traits that do not fit a sex-binary.

Specific Aim:
1) Present case of a transgender man (AFAB) who was diagnosed with post-vaccination acute myopericarditis in the setting of testosterone-based gender-affirming hormone therapy.
2) Discuss likely aspects of sex mediating risk of developing myopericarditis after vaccination for COVID-19.
3) Highlight pressing need for evidence-based recommendations, tools, and research to guide medical management and prevention strategies in cardiovascular care of transgender patients.

Materials and Methods: We present the case of a 23-year-old transgender man who presented to the emergency department complaining of pressure-like chest pain, moderately relieved by NSAIDs. He reported associated fevers, chills, and headaches without shortness of breath. The patient had received a Pfizer booster vaccine two days prior to presentation. He had received his initial Johnson and Johnson vaccine six months prior and tested positive for COVID-19 via PCR five weeks prior. The patient’s sex and gender history includes an estrogen-driven puberty with initiation of weekly gender-affirming intramuscular testosterone cypionate 20 mg therapy 11 weeks prior to ED presentation.

Results: In the ED, an electrocardiogram demonstrated an incomplete left bundle branch block and ST elevation in the anterolateral leads. Laboratory studies were notable for a markedly elevated troponin and elevated creatine kinase and C-Reactive Protein. A testosterone level was not drawn on admission and the patient had not yet had their testosterone surveillance labs performed. A cardiac MRI and a normal

cardiac catheterization led to the diagnosis of vaccine-associated myopericarditis.
The patient was discharged on hospital day #2 and managed with colchicine and ibuprofen. Testosterone therapy was interrupted due to uncertainty surrounding its impact on the patient's acute condition. Subsequently, the patient's testosterone level normalized, and his cardiac symptoms completely resolved. In a shared decision with the patient and his care team, testosterone was restarted at 40 mg intramuscularly every other week.

Conclusion: Our case highlights that sex trait risks may be acquired based on changes in hormonal milieu. This case highlights a pressing question in a growing body of COVID-19 and sex-mediated literature about how providers should assess sex-based risk with awareness that sex is not binary and that sex-based risk factors are not static. While sex-based risk factors have become a focus of cardiovascular (CVD) disease research in the last couple decades, the vast majority of CVD and COVID-19-related risk stratification has not attempted to understand the effect of specific sex traits on disease outcomes. As the focus of sex-based differences in CVD has focused primarily on differences between cisgender men and cisgender women, this leaves many questions unanswered for individuals who do not fit the sex-binary.

FRI-P-14: A NUANCED LOOK AT THE EFFECTS OF THE COVID-19 PANDEMIC ON THE PSYCHOSOCIAL FUNCTIONING OF TRANSGENDER AND GENDER DIVERSE YOUTH

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Presented by: Kerry McGregor

Introduction/Background: There has been extensive focus on the negative effects of the COVID-19 pandemic on transgender and gender diverse (TGD) youth. However, there is less awareness of the potential positive effects for TGD youth, particularly for those that were still able to access gender affirming care and had significant family support.

Specific Aim: The purpose of this study was to compare the psychosocial functioning of TGD youth assessed prior to the COVID-19 pandemic and during the initial pandemic period.

Materials and Methods: The study population consisted of 473 individuals aged 14-18 who completed a standardized assessment for hormone readiness. One of the measures administered during this assessment, the Youth Self Report (YSR), is a well-established, standardized assessment of emotional and behavioral functioning. Clinically relevant syndrome scales were included in the analysis: total problems, internalizing problems, externalizing problems, social problems, rule breaking behavior, and aggressive behavior. The following Diagnostic Statistical Manual, 5th Edition (DSM-5) orientated scales were also included: anxiety problems, depressive problems, and somatic problem as well as the activities, stress problems, and positive qualities scales. Additionally, critical safety items to assess self-harm and suicidality were included.

Results: Analysis showed that the initial stages of the COVID-19 pandemic had both positive and negative effects on the psychosocial functioning of TGD youth. On the positive side, youth scores were higher for positive qualities and lower for somatic problems and rule breaking behavior. Unfortunately, there was also significant increase in youth T-scores for anxiety problems and a decrease in activities. There were no significant differences in thinking about suicide after the start of the pandemic, but youth reported half the odds of self-harm. When adjusted for age and gender, changes remained significant for anxiety problems, activities, and positive qualities.

Conclusion: This study illustrates that COVID-19 had both unanticipated and expected effects on the psychosocial functioning of TGD youth. Surprisingly, youth assessed during the pandemic endorsed more positive qualities, lower rates of self-harm, somatic symptoms and rule breaking behavior. These findings may be explained by less exposure to gender-related minority stress (e.g., misgendering, etc.) and overt

discrimination (e.g., anti-trans harassment, etc.) due to adherence to quarantining guidelines (e.g., staying home, attending school virtually, etc.) in the context of significant family support and access to gender affirming care. Unsurprisingly, youth did report higher levels of anxiety and lower engagement in activities during the initial pandemic period. Collectively, these findings illustrate that the pandemic had both positive and negative effects on some TGD youth.

Poster: Health Professional Education

FRI-P-15: Graduate Nursing Faculty Perceptions of LGBTQ+ Health Curriculum: A Mixed Methods Study

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Presented by: Skylar Patron

Introduction/Background: The lesbian, gay, bisexual, transgender, and queer (LGBTQ+) community experiences profound health disparities due to discrimination and lack of healthcare provider knowledge. All major healthcare associations, including The American Nurses' Association, recognize the need for advocacy and culturally congruent care for the LGBTQ+ community. Data exists about undergraduate nursing and medical school education on LGBTQ+ topics, but there is a gap in understanding graduate nursing schools' preparation of nurse practitioners. The healthcare education system must understand the state of curriculum as it currently relates to LGBTQ+ health to provide a more inclusive education that will prepare clinicians in the provision of culturally competent care.

Specific Aim: The purpose of this study was to assess the knowledge, experience, and readiness of nursing faculty to teach LGBTQ+ health topics in graduate nursing programs. Another aim of this study was to determine the amount of time spent teaching LGBTQ+ topics in graduate nursing programs.

Materials and Methods: This was a mixed method, exploratory, convergent study, where qualitative and quantitative data were collected concurrently through an online survey to understand the full picture of LGBTQ+ graduate nursing curriculum. This study used cross-sectional, non-probability sampling to recruit graduate nursing faculty. A 24-question survey tool, created and validated by Lim et al. (2015) to measure faculty perceptions and time spent teaching LGBTQ+ health, was sent to graduate nursing schools in the United States. Chief nurse administrators from each school were asked to share the survey with their graduate nursing faculty. A sample of 116 faculty members completed the survey.

Results: Graduate nursing faculty spent a median of three hours teaching LGBTQ+ health topics. LGBTQ+ health content in courses was limited despite faculty awareness of LGBTQ+ topics, readiness to include it, and the belief in the importance of doing so. Gender-affirming care was seldom or never taught 59.5% of the time. Faculty believed the strategies that would be most successful to improve LGBTQ+ health curriculum were program-wide, such as reviewing program curriculum to identify gaps, providing faculty development seminars, and increasing LGBTQ+ health content throughout. However, the majority of strategies that faculty were actually using to increase LGBTQ+ curriculum were individual efforts, such as utilizing case studies or supplemental materials in their courses. Some respondents did not see the relevance of LGBTQ+ topics in their courses. Overall, respondents indicated a lack of resources and knowledge about where to start and a need for support from their institution.

Conclusion: The gaps identified in graduate nursing LGBTQ+ health curriculum demonstrate the need for additional institutional support. While the efforts by individual faculty members are important, institutional commitment to comprehensive LGBTQ+ healthcare amidst the current socio-political climate is imperative to prepare culturally competent nurse practitioners. These findings provide a starting point to improve the cultural competency of future nurse practitioners with the goal being improved outcomes for this vulnerable population.

FRI-P-16: Breast Cancer Screening Recommendations for Transgender and Gender Diverse Patients: A Knowledge and Familiarity Assessment of Primary Care Practitioners

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Presented by: Evelyn Carroll

Introduction/Background: The influence of gender affirming hormone therapy (GAHT) and gender embodiment surgery on the development of breast cancer is poorly understood in transgender and gender diverse (TGD) individuals. And, breast cancer screening recommendations for TGD patients have only been recently developed. Primary care practitioner's (PCPs) knowledge and familiarity of breast cancer screening recommendations in the transgender population is hypothesized to be low due to the variability of medical training curricula and content in the care of the TGD patient.

Specific Aim: The primary aim of this study is to assess the level of familiarity and knowledge PCPs have with breast cancer screening recommendations for TGD patients, and if there is variability of these levels based on the PCPs prior education and experience.

Materials and Methods: An anonymous survey was distributed to primary care physicians, primary care advanced practice practitioners, and internal medicine and family medicine residents at three academic medical systems in the United States (Mayo Clinic, University of Michigan, University of Texas – Medical Branch). Survey questions assessed the familiarity and knowledge base of TGD breast cancer screening recommendations, training and experience with TGD patients, and basic demographics of the practitioners.

Results: Of the 95 survey respondents, only 35% of respondents were aware that breast cancer screening recommendations for TGD patients existed. PCPs who had increased transgender specific health care training and direct clinical exposure to TGD patients demonstrated significantly higher levels of screening recommendation awareness. Two-thirds of respondents received TGD specific medical education during training or medical career and those who had increased transgender specific medical education or direct clinical exposure to TGD patients demonstrated significantly higher levels of screening recommendation awareness.

Conclusion: Awareness of breast cancer screening recommendations for TGD patients is low among PCPs and varied based on the practitioner's prior TGD education and experience. Up-to-date breast cancer screening recommendations for TGD patients should be readily available across multiple platforms, target key audiences, and integrated into transgender health educational curriculums to maximize awareness of these important recommendations.

FRI-P-17: AN INNOVATIVE FLIPPED-CLASSROOM APPROACH TO LGBTQIA+ CURRICULA IN DIDACTIC PA EDUCATION

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Presented by: Justine Herndon

Introduction/Background: More individuals are identifying as LGBTQIA+ but face significant health disparities and barriers to care. The need for clinically competent care can begin with increasing provider competency; many students are interested in LGBTQIA+ healthcare education. However, only 1/3 of Physician Associate (PA) programs teach more than 1-3 hours of content. While there continue to be advancements in incorporating appropriate curricula, more information and specific methods for instruction are needed.

Specific Aim: Share an innovative approach to LGBTQIA+ curricula utilized in a PA program and offer suggestions to others within education on incorporating similar techniques.

Materials and Methods: LGBTQIA+ topics are taught in several courses (e.g., Adult and Pediatric Medicine, Communication in Medicine, Psychiatry and Behavioral Health) and a stand-alone session with five hours of dedicated LGBTQIA+ healthcare taught by faculty with LGBTQIA+ health experience. Quantitative and qualitative analysis from the first two PA programs through anonymous pre-lecture surveys and end-of-course evaluations were completed for the stand-alone session. Topics covered include terminology, health disparities, inclusive language, sexual health, primary care, and gender-affirming care. Approaches to content include lectures, videos, flipped-classroom team-based case studies/discussions, and an online Escape-Room. Case studies include small-group discussions on implicit bias, appropriate primary care (e.g., cancer screenings, sexual health), and initiation, titration, and continuation of gender-affirming hormone therapy based on patient-specific factors. The online Escape-Room at the end of the lecture requires all small groups to navigate six different modules and “Escape” by identifying appropriate terminology, inclusive language, and specific items of gender-affirming care, completing an electronic medical record SOGI (sexual orientation and gender identity) form and organ inventory on a gender diverse patient, and interpret laboratory values regarding gender-affirming hormone therapy management.

Results: Less than 50% of students indicated prior experience working with the LGBTQIA+ community, and those with experience were generally minimal. Topics of interest from students through the pre-course survey were incorporated into the stand-alone session if not already covered but generally related to terminology, inclusive language, and taking an appropriate SOGI history. Quantitative and qualitative analysis from end-of-session evaluation shows the course has been well received, impactful, and a “must keep” session. Many students have also anecdotally noted gaining impactful experience working with LGBTQIA+ patients in clinical rotations through a review of end-of-rotation self-reflections.

Conclusion: The need for LGBTQIA+ health care incorporated into medical education is paramount. Multiple modalities of incorporating this content are available and can be implemented throughout the curriculum or with a stand-alone session, and team-based learning methods can be utilized. Students are receptive to and find this topic impactful. Their knowledge will add to the effectiveness of patient care.

FRI-P-18: Assessing resident knowledge, attitudes, and desires regarding sexual and gender minority (SGM) health topics

Kevin Yu, Tracey Samko
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Presented by: Kevin Yu

Introduction/Background: Healthcare providers demonstrate a strong positive attitude in treating and caring for sexual and gender minority (SGM) patients with high perceived importance of SGM topics; however, despite this positive attitude, many providers, including residents, do not feel comfortable in their knowledge about health issues faced by the SGM community.

Specific Aim: The aim of this survey was to identify resident knowledge gaps in SGM care topics, evaluate resident attitudes towards SGM populations, and determine the SGM health topics that residents feel most unequipped to handle.

Materials and Methods: A survey was created based on three different sources: 1. a knowledge assessment conducted with internal medicine residents across the U.S. in 2019, 2. an attitude assessment conducted at LA General Medical Center in 2017 among employees regarding readiness to serve LGBTQIA+ populations, 3. AAMC 2014 guidelines regarding educational objectives on LGBTQIA+ topics. The composite survey was administered to LA General Medical Center residents of different specialties.

Results: The survey was completed by 93 residents from greater than 10 different specialties. Although 86.1% of respondents stated they were very or somewhat comfortable working with LGBTQ+ patients, 51.6% of respondents stated they were not very knowledgeable or not at all knowledgable on the needs of LGBTQ+ adults with 64.5% stating they were not very knowledgeable or not at all knowledgable specifically of the needs of transgender or gender non-conforming patients. This statistic was particularly concerning given the fact that 83.0% of respondents stated they worked with patients who openly identified as LGBTQ+. Of the topics listed, survey results indicated 68.8% of respondents were interested in learning more about special health care needs and available options for quality care for transgender patients and patients born with differences in sex development (DSD), the highest of 7 topics listed. In terms of specific knowledge, there was lack of knowledge of health disparities and preventive care issues affecting sexual and gender minority (SGM) patients and substance use issues unique to SGM patients. Notably, interns (postgraduate year 1 (PGY-1)) struggled with the same specific knowledge gaps as residents (PGY-2 and above), suggesting that residency medical education and experience did not improve knowledge over time.

Conclusion: This survey confirmed the previous notion that healthcare providers demonstrate a strong positive attitude towards care for LGBTQ+ individuals, but have a high perceived lack of knowledge. The survey results also identified a number of specific gaps in knowledge of residents at LA General Medical Center, specifically lack of knowledge of health disparities and preventive care issues affecting sexual and gender minority (SGM) patients and substance use issues unique to SGM patients. The findings also suggest that medical education curriculum in its current state may not be adequate to address the needs of SGM populations.

FRI-P-19: "Pride Track" - LGBTQ+ Health Focus for Family Medicine Residents

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Presented by: Kaitlyn Perkins

Introduction/Background: The Henry Ford Family Medicine Residency “Pride Track” offers residents a focus in caring for the LGBTQ+ community. Clinical experience includes patient care at our family medicine continuity clinics, additional continuity experience at the Ruth Ellis Center and HIV clinic, an LGBTQ+ elective rotation, working at the Detroit STD clinic, and partnerships with surgeons who provide gender-affirming procedures. Residents also participate in quarterly journal clubs, community service, and complete a senior capstone project.

Specific Aim: The goal of the HFH "Pride Track” is to provide rich clinical, didactic, and community service experiences for residents that will allow them to confidently care for patients in the LGBTQ+ community. Residents will have opportunities to learn from local leaders in the field as well as the vibrant and diverse patients that they will encounter during their training.

Materials and Methods: Residents were provided with a framework in which they could design their track, or area of concentration, outlined below:
An area of concentration is a planned program of study including competency-based goals and objectives that are met over a 12-24 months duration and can include focused blocks of time (4-week block electives) and/or longitudinal components. Specific time frames will vary based on goals and objectives as chosen by the resident.
AOC must include some component of each of the 4C’s:
Content knowledge and skills
Community service or partnership
Clinical application to patient care or healthcare setting
Capstone Project

Results: By working with residents and faculty, we have designed an area of focus, the “Pride Track,” for family medicine residents. Creating this area of concentration has given residents opportunities to gain

additional experience in caring for the LGBTQ+ community, including gender-affirming care and HIV in primary care. Residents have worked with community partners and specialty physicians as well.

Conclusion: The “Pride Track” at the Henry Ford family medicine residency program has given residents a structured and focused curriculum that provides greater breadth and depth in LGBTQ+ health care as well as recognition for their work in the field. By working in this community, we have witnessed firsthand the importance of having competent physicians providing this care. Limitations to this program include time constraints and other requirements of residency training, as well as the time it takes to develop community partnerships. Nevertheless, after the first year of having this track available to residents, we have seen great success and increased competency of residents. Participants in the “Pride Track” have the potential to become teachers and leaders in caring for this historically marginalized community. Goals for the future include more training for faculty, strengthened community partnerships, continued development of the LGBTQ+ elective, and more research and scholarly activity within the field.

FRI-P-20: CREATING A GENDER AFFIRMING ENVIRONMENT: IDENTIFYING BARRIERS AND PROVIDING SUPPORT TO OUTPATIENT CLINICS

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Presented by: Catherine Whiteside

Introduction/Background: The terms transgender and gender diverse (TGD) describe members of various communities with gender identity or expression that differs from the societal gender associated with the sex assigned at birth (Coleman et al., S11). The World Professional Association of Transgender Health (WPATH) Standards of Care Version 8, are guidelines that aid healthcare professionals in assisting transgender and gender diverse patients in receiving appropriate care. The guidelines note that, when there aren’t any standards of care for certain groups of people, it can result in patients receiving care that is counterproductive or harmful (Coleman et al., S6). Within the TGD community, this also stems from an overall lack of knowledge among health care professionals. This lack of knowledge and guidelines can result in fatigue and minority stress, which can have negative impacts on the patients’ health. As a result, the WPATH have suggested several guidelines to aid health care workers in providing the most appropriate care for these patients. These guidelines include utilizing appropriate terminology when speaking with and referring to patients, utilizing a patient’s appropriate pronouns, clinical staff displaying their own pronouns, and displaying allyship posters. Among the transgender youth population, it has been found that access to at least one gender affirming space with the use of the above suggestions, reduced the rate of suicide attempts and increased feelings of safety (Trevor Project, 2020; Porter, 2021).

Specific Aim: To understand current practices and barriers of outpatient clinics to create gender affirming environments and to determine if direct access to materials supports the creation of such an environment for gender diverse patients.

Materials and Methods: This is a prospective quality improvement study done with outpatient clinics that both directly and indirectly provide care to gender diverse populations in the University of Colorado Hospital system. Clinic managers filled out a 27-item survey about current practices to create a safe, gender affirming environment. Clinics then received gender affirming materials such as pronoun name tags and gender-neutral body avatars to integrate into their practice. Four weeks later, a follow-up survey was sent to clinics to assess whether the effect of direct access to materials leads to safer, more gender affirming environments in outpatient clinics.

Results: Initial survey data reveals barriers to clinics creating a gender affirming environment including the need for additional education and training, staff comfort with use of gender neutral language, support from administration and leadership, and use of gender affirming signage. Follow-up survey data has not yet been collected.

Conclusion: This data enhances current understanding of barriers faced by outpatient clinics to create safe, gender affirming environments for gender diverse patients. It will also demonstrate the effect of easy access to materials on how clinics create this safe and gender affirming space.

FRI-P-21: TRANSGENDER AND GENDER DIVERSE HEALTH: HOW MUCH DO MEDICAL STUDENTS KNOW?

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Presented by: Madeline Whitney

Introduction/Background: Health disparities amongst transgender and gender diverse (TGD) individuals are well documented. Adequate training of future healthcare professionals is key to reducing bias towards this population. Despite recommendations from the Association of American Medical Colleges to implement LGBTQ+ curriculum in medical schools, no standardized curricula and training dedicated to this topic exist. A recent survey demonstrated that approximately half of all second-year medical students do not feel prepared for an encounter with an LGBTQ+ patient, primarily citing a lack of adequate education [1]. This study examines baseline knowledge of TGD-related healthcare topics amongst first and second-year medical students in order to inform curricular changes and increase competency.

Specific Aim: To assess knowledge and attitudes of medical students towards transgender and gender diverse health-related topics.

Materials and Methods: All first and second-year medical students at the Mayo Clinic Alix School of Medicine (MCASOM) in Minnesota and Arizona were sent a 29-question survey in April 2022. Self-assessment questions were scores on a 1-5 Likert scale. The survey assessed four competencies: (1) attitudes towards LGBTQ+ individuals, (2) confidence caring for LGBTQ+ patients, (3) understanding of common terms surrounding sexual orientation and gender identity, and (4) knowledge of health factors related to LGBTQ+ individuals. Responses were analyzed using descriptive statistics.

Results: Out of 224 students surveyed, 40 responded (17.9% response rate). The majority (87.2%) reported having close LGBTQ+ friends or loved ones. A minority felt unconfident or neutral asking LGBTQ+ patients about sexual orientation (20%) and gender identity (32.5%). A larger proportion felt that it was more challenging to conduct a physical examination with a patient who identifies as transgender than with a cisgender patient (45%). The majority, however, strongly disagreed or disagreed that it was more challenging to discuss sexual behavior with TGD patients compared to cisgender individuals (66.7%). Most students correctly matched terms related to gender identity and sexual orientation. Regarding screening guidelines, 32.5% incorrectly stated that screening and prevention for chronic diseases are not the same for transgender people as they are for the general population. 85% did not correctly identify polycythemia as a potential side effect of masculinizing hormone therapy.

Conclusion: Our survey reveals varying levels of TGD-related healthcare knowledge and comfort amongst medical students. A minority of students reported limited comfort obtaining sexual histories and conducting physical exams on TGD patients, which may reflect a lack of simulation-based trainings with TGD standardized patients. Future studies should examine whether knowledge and comfort related to TGD topics is increased in post-clinical medicals students compared to pre-clinical students.

References:
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FRI-P-22: AN IN-DEPTH ANALYSIS OF NEGATIVE RHETORIC ON TWITTER SURROUNDING GENDER-AFFIRMING SURGERY AND SURGEONS

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Presented by: Gregory Samuel

Introduction/Background: Negative and hateful rhetoric targeting gender-affirming surgeons and surgery poses a significant risk to the safety and health of transgender and gender-diverse people (TGD) and practitioners. While it is evident that the amount of negative rhetoric has increased over time, a detailed understanding of the topics driving this discourse remains vague. By identifying the most pressing topics of this rhetoric, more targeted approaches to addressing and educating the public about gender-affirming surgery can be used.

Specific Aim: This cross-sectional study of Twitter content aimed to identify common themes and topics in negative rhetoric targeting gender-affirming surgeons and gender-affirming surgery (GAS) on Twitter.

Materials and Methods:
Using Octoparse, a web extraction program, tweets were collected from Twitter between 2020 to 2022 using keywords such as “surgery” or “surgeon” and commonly used terms of hate-speech aimed at surgeons including: “mutilation,” “mutilate,” “pedophile,” or “groomer.” Tweets were reviewed for relevance and then classified as supportive or negative. Subsequently, negative tweets were assessed for their severity of hate speech (using the “Hate Speech Intensity Scale” rated 1-6), the age group (adolescent vs adult) of TGD people mentioned, and the type of GAS discussed. The proportion of tweets deleted from Twitter after publication on the platform was used as a proxy for content moderation. Engagement (likes and retweets) with negative tweets was also assessed. Descriptive statistics and a linear regression model were used to describe trends in the data.

Results:
1,500 tweets were reviewed, and 1,399 were included in the final analysis. The majority of tweets (97.6%, N= 729/745) negatively described adolescent GAS compared to adult GAS (2.1%, N=16/745). Additionally, 82.5% (N=174/211) of tweets discussed genital surgery, 17.1% (N=36/211) described chest surgery, and one tweet 0.5% (N=1/211) mentioned facial feminization. The removal of negative rhetoric from Twitter was low, as 86.6% (N=1,211/1,399) of tweets can still be viewed online. The overall average severity of hateful language used against gender-affirming surgeons was low at 2.1 (SD =1.5), but the intensity of hate speech has increased significantly from 2020 to 2022 ($R2 = 0.03$, $P < 0.001$).

Conclusion: There is disproportionate growth in the prevalence and intensity of negative rhetoric surrounding gender-affirming surgeons and misinformed discussions of adolescent gender-affirming genital surgeries on Twitter. These findings may reflect broader public misunderstanding and propagation of misinformation shared online about these surgical options for TGD adolescents. Practitioners and institutions must do more to effectively address misinformation, educate the public, and tackle controversies about adolescents undergoing gender-affirming surgeries.

FRI-P-23: SENTIMENT TOWARDS GENDER AFFIRMING SURGICAL CARE AMONG PLASTIC SURGERY, UROLOGY, AND OBSTETRICS AND GYNECOLOGY POSTGRADUATE TRAINEES.

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Presented by: Avra Laarakker

Introduction/Background:
Gender-affirming care is a critical medical service that is rapidly evolving given the dynamic insurance and political landscape. There is limited information in the literature documenting an increase in willingness to provide care in the medical and surgical community. Plastic Surgery (PS), Urology, and Obstetrics/Gynecology (OB/GYN) are the disciplines most likely to perform gender-affirming surgeries. Anecdotally, these groups are most likely to view this population favorably.

Specific Aim: Targeting residents and fellows within these surgical residencies, we aimed to gauge the willingness to provide surgical care for the gender-diverse (GD) population in the US.

Materials and Methods: Plastic surgery, Urologic surgery, and OB/GYN trainees across U.S. training programs were asked to complete a cross-sectional 26-question survey between August 2020 and January 2022. We focused on addressing curricular exposure, knowledge of services offered at their institution, and comfort surrounding the training opportunities in transgender patient care. Additionally, respondents were queried on their desire or willingness to perform gender-affirming care or surgeries. Demographic data also including personal gender identity and connection to the LGTBQIA2S+ community was collected.

Results: Amongst all specialties, survey takers felt that residents should not have the option to opt out of curriculum specific to GD patients (80.99%, 115/142) nor the option to opt out of caring for transgender or nonbinary patients (82.39%, 117/142). Similarly, most respondents to the survey do not have a moral/ethical objection to care for (90.85%, 129/142) nor to provide surgical care (82.39%, 117/142) for GD patients. When looking at specialty-specific responses, PS had the highest exposure to GAS. However, 20/68 plastic surgery respondents thought that residents should have the option to opt out of gender-affirming care, which was found to be significantly more than the other surgical specialties ($p=0.013$) with only 5 other respondents in OB/GYN or urology programs responding in favor of opting out. There was no statistical significance to respondents having moral/ethical objections to providing neither care nor surgeries for transgender and nonbinary patients, despite the significance in PS residents in favor of opting out of services. OB/GYN had the overall lowest exposure to surgical cases with urology being exposed to the highest number of revision surgeries.

Conclusion: Residency programs have made meaningful strides in offering more accessible and competent gender-affirming training. Differences in support exist among the included specialties. Plastic surgery for instance is most likely to teach GAS in their curricula but is more likely than their other specialties to opt out of training. This finding does not seem to be a result of moral or ethical grounding. As most bottom surgery complications are urologic, revision surgeries are highest in urologic training programs. Finally, the possible opt-out option for gender-affirming care parallels the opt-out option for abortion training in OB/GYN residencies but is not a standardized option amongst PS, urology, or OB/GYN programs. This is the first survey of this kind to survey multiple surgical specialties providing gender-affirming surgical care and query resident sentiment and highlights the need for more questions to be asked about how to address GAS training in residency programs.

FRI-P-24: GENDER AFFIRMING CARE TRAINING FOR MEDICAL STUDENTS DURING CLINICAL CURRICULUM

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Presented by: Jonah Cremin-Endes

Introduction/Background: Gender-affirming care has been linked with decreased depression and harmful behaviors in patients. The last decade has seen an increase in LGBTQ-related content during medical school, specifically seen with increasing didactic lessons during the pre-clerkship curriculum. Despite the increases, the total amount of time of time spent on gender-affirming care remains low, particularly during the clinical experience. Clinical exposure to transgender medicine has shown

improvement in medical students' knowledge and comfort above baseline achieved by other modalities, leading this to be a critical point of intervention.

Specific Aim: This study aims at developing a gender-affirming curriculum to be taught during the clinical experience of medical school. The curriculum contains training methods that have demonstrated an ability to increase medical students' competence in providing gender-affirming care.

Materials and Methods: To develop a curriculum for medical students to increase competence in providing gender-affirming care, we conducted a review of the literature from MedEdPORTAL. We identified studies that focus on medical school training during the clinical experience and show an increase in students' competence in providing gender affirming care.

Results: Out of 75 articles screened, 9 articles had educational interventions focused on increasing medical student competence with gender affirming care during the clinical experience. Standardized patient cases were the most common, constituting 6 of the articles. The other articles evaluate a problem-based learning case, a workshop with didactics followed by role playing, and an online module followed by in-person training at a pediatric gender clinic. All studies found an increase in student competence with gender affirming care.

Conclusion: To address lack of clinical training in gender affirming care, we recommend first training medical students through one of the proven modalities reviewed, including problem-based learning, a workshop, or online modules. We advocate for this to be followed with in person clinical experience in gender affirming care. Standardized patient cases offer an alternative for medical schools that do not have transgender clinical programs. We recommend this training course be evaluated for student knowledge and comfort and importantly for patient satisfaction.

FRI-P-25: CONSCIENTIOUS OBJECTION TO GENDER-AFFIRMING CARE IN RESIDENCY PROGRAMS

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Presented by: Tannon Tople

Introduction/Background: Medical conscientious objection, the refusal of healthcare professionals to provide services to patients that contradict one's personal, moral, or religious convictions, is a federally protected right. In 2020, legislation pertaining to religious-based objections was expanded to protect practitioners that conscientiously object to gender-affirming healthcare. As insurance coverage and healthcare institutions have broadened their services to include gender-affirming care in the past decade, medical professionals are more likely to treat gender-diverse people in clinical settings. Consequentially, it is increasingly vital for physician training programs to consider anticipatory policies related to medical conscientious objection to gender-affirming care. This study characterizes conscientious objections and investigates whether formal objection-based policies related to gender-affirming care are present within relevant subspecialty training programs.

Specific Aim:
This cross-sectional study aimed to assess the prevalence and nature of conscientious objection to providing gender-affirming care within plastic surgery and urology residencies and to explore the existence and content of related institutional policies.

Materials and Methods:
A cross-sectional survey was administered to accredited plastic surgery and urology residency program directors from February to May 2023. The survey contained questions regarding trainee exposure to gender-affirming care, the content of related institutional policies, programmatic experience with objections to gender-affirming care, and program willingness to create new recommendations. Results were analyzed using descriptive statistics.

Results:
Program leadership from 30 plastic surgery (45.5%) and 36 urology (54.5%) residencies completed the survey. Many programs incorporated formal didactic training on gender-affirming surgery (87.9%, n=58) and direct clinical exposure to gender-affirming care (78.8%, n=52). However, only 11 programs (16.7%) were aware of existing institutional policies related to the broad use of conscientious objection, three of which explicitly included gender-affirming care. Of programs with policies, one policy was used by faculty and trainees to object to gender-affirming interventions, fertility preservation, and emergency care for gender-diverse persons. Of the programs that did not have or were uncertain of an existing policy (83%, n=30), there were four (6.1%) reported incidents of faculty and trainee objection to gender-affirming surgeries and peri-operative care.

Conclusion:
A significant number of accredited residency training programs in plastic surgery and urology incorporate both didactic and clinical training related to gender-affirming care. However, official policies addressing faculty and trainee objection to these services remain low. Despite the low prevalence of objection in this cohort, these instances do occur and underscore the important benefits of creating official policies to address objectors. To fully understand the impact of conscientious objection and formal protective policies on both healthcare providers and gender-diverse patients, more comprehensive studies are needed.

FRI-P-26: EFFECTIVENESS OF INTERACTIVE EDUCATIONAL MODALITIES IN IMPROVING MEDICAL STUDENT TRANSGENDER HEALTH KNOWLEDGE

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Presented by: Suzanne Cayer

Introduction/Background: There is a need for health professionals to be competent with LGBTQ patients, as the number of “Out” patients steadily increases.[1] Unfortunately, LGBTQ health knowledge is not adequately taught within medical schools in the United States. A survey of over 100 medical schools reported LGBT content was rated “fair” in only 58 schools and 33% of medical students failed to cover any LGBTQ content.[2] This translates to clinical care: in a national transgender equality survey, 50% of respondents reported having to teach their own medical providers about transgender care, 19% were refused care, and 28% were subjected to harassment in a medical setting.[3]

Specific Aim: The objective of this study is to assess the intended effect of an educational intervention for medical students and faculty to increase knowledge and competency surrounding transgender and gender diverse (TGD) patient care.

Materials and Methods: A two phase pre-post pilot intervention study targeting medical students and faculty from three medical schools in Connecticut. Participants were randomly allocated to groups 1, 2, or 3, and rotated through three thirty-minute interactive workshops consecutively. Intended effect was measured through an online questionnaire on self-rated competency, knowledge, and beliefs about providing TGD patient care before and after the intervention.

Results: Twenty-eight total participants were followed during this study. The overall percentage mean score of correct responses of the knowledge test significantly improved from 79.46% in the pre-test compared to 94.35% in the post-test ($p<0.000001$). Specifically, the mean score significantly improved in

all domains, specifically patient interview skills (91.07 to 96.43%, $p<0.05$), bias intervention (88.10 to 95.24%, $p < 0.01$), and clinical knowledge (72.45 to 93.34%, $p<0.000001$). The workshop rated most useful by participants was “Case-Based Learning,” which was modeled after pre-existing pre-clinical education modalities.

Conclusion: An interactive, small group education intervention was effective at improving TGD health knowledge, self-rated patient care competency, and combatting common myths against the TGD community. Educational efforts can be integrated into already existing modes of medical education, such as case-based learning and patient interview role play exercises.

Poster: Voice and Communication

FRI-P-27: CLINICAL IMPLICATIONS OF LISTENERS' PERCEPTIONS OF GENDER ATTRIBUTES OF SPEAKERS’ VOICES IN VARIOUS LINGUISTIC CONTEXT

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Presented by: Anpin Ni

Introduction/Background: Voice plays a significant role in how people perceive and identify the gender of gender variant (GV) individuals, which prompts them to seek gender-affirming voice modification therapy services. Although speaking fundamental frequency (SFF) has been recognized to have the greatest impact on a listener’s perception of speakers’ gender identity from their voices, previous studies have shown that listeners from diverse backgrounds, experiences, and gender orientations may perceive the naturalness, attractiveness, likability, and gender presentation of the same voice differently than other listeners. These findings highlighted the importance of examining listeners’ bias in gender perception as their stereotypes may greatly affect their perceptions of transgender voices.

Specific Aim: The purpose of this study was to explore how SFF in various linguistic contexts influences the masculinity-femininity (M-F) ratings of speakers’ voices. A secondary purpose was to examine if the listeners’ gender identity influences the M-F ratings of speakers’ voices.

Materials and Methods: This pilot study examined four groups of listeners’ perceptions of pre-recorded transgender and nonbinary speakers’ voices. Speech samples were collected from 17 transgender speakers. These speech samples include /a/ prolongations, sentence reading, and spontaneous speech. A total of 18 listeners were recruited to complete the listener perception tasks. Each of the raters listened to all the speech samples in one set once, and then in a different order another time, rating the masculinity/femininity of the voice in the process. The F0 of each speech sample was evaluated using the PRAAT speech analysis software.

Results: Results of this study indicated significant variance in the M-F ratings of speakers’ voices between listeners’ group, among listeners within each group, and between the two ratings of each speaker. Results also indicated significant differences in the M-F ratings among the different speech elicitation tasks.

Conclusion: Results from this pilot study complement existing literature on the SFF associated with the M-F ratings of speakers’ voices. In addition, the significant variances in the M-F ratings of voices have critical implications in clinical management for both clinical goal setting and data tracking. Results also highlighted the importance of increasing public awareness and acceptance of voice variance in general.

FRI-P-28: GENDER AFFIRMING PROGRAM FOR SPEECH: ADDRESSING THE GAPS IN ACCESS TO SERVICES FOR RURAL VETERANS

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Presented by: Kimberly Eichhorn

Introduction/Background: Rural transgender Veterans are an underserved population who have limited access to gender affirming voice and communication treatment. In the general population, approximately 16% of transgender people live in rural areas, but estimates of rurality are higher among transgender Veterans. The Veterans Health Administration's (VHA) LGBTQ+ Health program, the National Audiology and Speech Pathology Program Office and the Office of Rural partnered to close the gap between transgender Veterans desiring voice treatment and trained Speech-Language Pathologists (SLPs).

Specific Aim: SLPs in VHA sought to develop a virtual training framework to standardize voice and communication interventions for transgender and non-binary populations, provide access to this level of specialty care to all Veterans desiring these services, develop a virtual tool kit to streamline service delivery, and determine appropriate outcome measures for patients and providers to monitor for change.

Materials and Methods: From review of the literature and expert opinion, we developed the Gender Affirming Program for Speech (GAPS). GAPS is designed to provide: standardized assessment and evaluation of outcomes, a framework for training with supplemental patient educational materials, a recommended training/follow-up schedule, and a protocol to enhance virtual care. The guiding principles for standardization in care delivery were rooted in the fundamentals of neuroplasticity. Treatment modules were developed to include voice education, vocal hygiene, nonverbal communication, as well as strategies to vary pitch, resonance, inflection, and articulation with careful attention to Veteran experience and perspective.
GAPS' general structure includes an intake evaluation with the option of up to 15 individual treatment sessions based on clinical need. Following the end of individual treatment, an option for group treatment for continued practice, maintenance and generalization of skills is offered. Assessment of outcomes is scheduled pre-to post treatment and at one-month, six-month, and 1 year time points from the end of individual treatment.

Results: To date, 340 Veterans who identify as transfeminine have enrolled in the GAPS program. Seventy-eight patients completed the Transwoman Voice Questionnaire at the specified time points. The analysis of their self-report using a repeated measures ANOVA with a Greenhouse-Geisser correction revealed that there was a statistically significant decrease in the TWVQ score (improvement) across the three time points. Acoustic measures for sustained phonation, reading, and a brief monologue also showed significant positive change in hertz across sustained phonation, reading and monologue.
An additional tool used was the Personal Mixing Board which includes an ordinal scale on which patients and clinicians can rate perception of communication characteristics. A repeated measures Friedman test was performed to determine the effects of the program across the time points of interest. The analysis revealed a statistically significant positive change in patient and clinician reported perception of pitch, resonance, and inflection across the three time points.

Conclusion: Veterans participating in a virtual voice/communication training program have achieved and maintained gains in objective measures of voice and more importantly in their self-perception of voice and identity congruence. Aspects of this service delivery model may be applicable to other providers or facilities seeking to expand services for transgender and gender diverse or rural individuals.

Poster: Chronic Conditions, including HIV

FRI-P-29: HIV IN THE DEEP SOUTH: RISK BEHAVIORS AND PREVENTATIVE CARE ENGAGEMENT IN SOUTHEASTERN U.S. TRANSGENDER ADULTS

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Presented by: Elliott Botelho

Introduction/Background: Transgender individuals in the Deep South are disproportionately affected by HIV, partly due to low awareness and uptake of pre-exposure prophylaxis (PrEP). Theory and research have suggested that synergistic influences of predisposing factors (e.g., minority stress) and health behaviors (e.g., unprotected sex) contribute to transgender people's higher rates of HIV risk behaviors. Although transgender men and non-binary people are at much lower risk compared to transgender women, they are at higher risk than the general population and are underrepresented in HIV research.

Specific Aim: The present study aimed to explore awareness, prioritization, and correlates of HIV preventative care in HIV-negative transgender adults in the Deep South and to quantify past-year HIV risk behavior.

Materials and Methods: Data were collected from 50 HIV-negative transgender adults residing in the Deep South from August 2020 to February 2022. Study participants were majority white (66%) with a mean age of 31 (range 18-73); transgender men, non-binary people, and transgender women were equally represented within the sample. Baseline data and daily surveys included questions about HIV risk behaviors, HIV knowledge, minority stress experiences, and health.

Results: In general, participants were not confident about their HIV knowledge, with 18% of participants reporting that they did not know their chances of contracting HIV; notably, 24% of participants reported they were not at risk of contracting it. Among health and social services, half of participants ranked HIV care within the bottom third of prioritized needs. Participants reported not seeking care because it was a low priority and/or they did not think they were at risk for HIV. HIV risk behaviors in the sample were very low; within the last year, 16% of participants reported unprotected sex with a stranger, and no participants had injected drugs.
A majority (64%) of the sample reported that they knew about PrEP; six (12%) were taking PrEP. Bivariate analyses revealed that awareness of PrEP was negatively correlated with negative expectations for the future $r(49) = -.292$, $p = .039$). Moreover, the results highlight the potential importance of PrEP-related beliefs and their relationship to gender-related victimization ($r(49) = .296$, $p = .037$). We also examined the factors which may be associated with past-year HIV testing; being on PrEP ($r(50) = .688$, $p < .001$) and pride in one's transgender identity ($r(50) = .428$, $p = .002$) were positively associated with past-year testing, while negative expectations for the future were negatively associated with past-year testing ($r(50) = -.409$, $p = .003$).

Conclusion: The present study of HIV-negative transgender adults across gender revealed relatively low levels of HIV risk behaviors, which may have been partially due COVID-19-related social modifications during the data collection period. Findings regarding preventative HIV care suggest PrEP-related beliefs, minority stress experiences, and resilience factors are critical targets for increasing engagement in preventative care among transgender and non-binary people in the Deep South. Future research should employ larger sample sizes and more fine-grain methodological approaches to understand the relationships between HIV risk behavior, minority stress and resilience factors, and preventative care engagement.

FRI-P-30: NO ONE LEFT BEHIND: CONSIDERATIONS FOR TRANSGENDER HEALTHCARE IN PATIENTS WITH COMPLEX MEDICAL CONDITIONS

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Presented by: Visesha Kakarla

Introduction/Background: Providing gender-affirming care to patients living with complex medical conditions can be challenging given the concern that gender-affirming hormones could affect underlying medical conditions. Transgender healthcare has historically involved individualized tailoring of care to

each patient, however additional consideration may be necessary for patients living with complex chronic medical conditions that require extensive medical or surgical treatments.

Specific Aim: To demonstrate strategies for caring for transgender individuals living with complex medical conditions desiring transition through the presentation of cases of two young transgender males with complex medical histories.

Materials and Methods: We selected two patients followed at our Center for Gender Affirming Care and reviewed their medical histories, medications administration, and lab values via electronic medical records.

Results: Patient 1 is a 17-year-old transgender male with a past medical history of congenital muscular dystrophy due to COL6A2 mutation, complicated by restrictive lung disease, neuromuscular scoliosis requiring multiple spinal surgeries, heart disease, and wheelchair dependence. At age 15, he was started on a lower-than-standard initial dose of testosterone (25mg biweekly), after interdisciplinary communication with the patient's various medical specialty providers, given the complexity of his co-existing conditions and ongoing treatments. Due to joint contractures, testosterone injections are given subcutaneously (SC) by his parents. The patient has been very content with treatment and tolerating injections without complications on routine exams and laboratory monitoring, and continues to receive hormone therapy. Patient 2 is a 21-year-old transgender male with neurofibromatosis-2, complicated by acoustic neuromas (resulting in hearing loss), meningiomas, and hydrocephalus requiring chemotherapy and multiple surgical interventions. At age 18, he was started on SC testosterone therapy and progesterone pills for menstrual suppression. He requested lower initial testosterone doses with a gradual increase to avoid interference with his other medical treatments. His care was coordinated closely with the other medical and surgical specialty providers. The patient requested that testosterone injections be held temporarily whenever undergoing complex neurosurgical interventions, which was coordinated via close collaboration with the patient's surgical teams. He underwent masculinizing chest surgery at the age of 20 years with a satisfying outcome (the patient-rated outcome was 5/5).

Conclusion: The presented cases demonstrate that multidisciplinary teamwork and regular monitoring can allow for the safe delivery of transgender healthcare, such as gender-affirming hormone therapy, for patients living with complex chronic medical conditions. Specific strategies that were beneficial in providing safe and individualized healthcare included direct communication between specialty providers, elicitation of patient preferences, tailored dosing of gender-affirming hormone therapy, and increased frequency of routine exams and laboratory testing, as needed. The combination of these strategies can allow for effective healthcare delivery for transgender patients undergoing various complex medical therapies or surgical treatments.

FRI-P-32: Prevalence of Risk Factors of Metabolic Syndrome in Transgender and Gender Diverse Individuals Receiving Gender-Affirming Hormone Therapy

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Presented by: Ashley Fischer

Introduction/Background: The recent increase in the prevalence of metabolic syndrome (MetS) parallels trends in rates of obesity. However, the distribution of weight-related health risks between men and women is not equivalent and the prevalence of risk factors for MetS in adults receiving gender affirming hormone therapy (GAHT) is unknown.

Specific Aim: The objective of this study is to describe MetS risk status before and after feminizing or masculinizing therapy in an urban transgender/gender nonconforming population.

Materials and Methods: A retrospective review of demographic characteristics, anthropometric data, hormone levels, and risk factors for MetS (adiposity, insulin resistance, abnormal triglyceride metabolism,

abnormal cholesterol metabolism, and hypertension) was conducted in adults receiving care at a gender clinic in a large urban hospital. The Third Report of the National Cholesterol Education Program on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (NCEP ATP III) was used to determine risk for MetS (low, moderate, high). Differences in MetS risk factor levels and risk scores were examined by therapy type as well as pre- and post-therapy.

Results: Data from 28 adults (median age 30.5 years [Interquartile range; 25.5, 37.5], 68% Black/African American, 4% Hispanic) were included in the analysis. The majority of the population (57%) received feminizing treatment. Of the MetS risk factor levels examined (BMI, systolic and diastolic blood pressure, glucose, Hemoglobin A1c, triglyceride and high-density lipoprotein [HDL] cholesterol), no significant difference was found between therapy types during either the pre- or post-therapy periods. Significant differences were observed between pre-therapy and post-therapy levels of triglycerides (60.0 ± 7.8 vs. 92.4 ± 7.8, respectively; P=0.003) and HDL cholesterol (54.8 ± 2.1 vs. 44.8 ± 2.5, respectively; P=0.012) for participants in the masculinizing treatment group. Participants in the feminizing treatment group were found to have significant differences in systolic blood pressure (129.8 ± 3.1 vs. 123.9 ± 3.0, respectively; P=0.028) between the pre-therapy and post-therapy periods. An association between HDL cholesterol risk score (determined based on sex assigned at birth) and therapy type was observed in participants post-treatment. The majority of individuals receiving masculinizing therapy (86%) are categorized as high risk after therapy while the majority of individuals receiving feminizing therapy (92%) are at low risk (P=0.002).

Conclusion: This study demonstrates the health effects that may result from GAHT, a vital therapeutic practice for this population. MetS risk was similar between treatment types during the pre-therapy and post-therapy periods. However, within group analysis demonstrated significant shifts in triglyceride and HDL levels (masculinizing) and systolic blood pressure (feminizing) over the course of treatment. Twenty-five percent of the participants are living with HIV, which increases the risk of developing MetS. The increased risk of developing MetS in this population may warrant earlier and more thorough lifestyle and dietary interventions to adequately prevent and manage disease progression.

FRI-P-33: THE IMPACT OF HORMONE THERAPY IN TRANSGENDER AND NON-BINARY INDIVIDUALS WITH INFLAMMATORY BOWEL DISEASE

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Presented by: Bashar Hassan

Introduction/Background: IBD is a global healthcare problem that affects more than 1 million citizens in the United States. Compelling evidence shows different prevalence, pathophysiology, presentation, and treatment outcomes of IBD between cisgender men and women. Although the impact of endogenous hormones and hormonal contraception on IBD symptom severity has been studied in cisgender patients, there is currently no literature on the impact of exogenous hormone therapy (HT) in transgender and non-binary (TGNB) individuals suffering from IBD.

Specific Aim: Investigate the impact of exogenous hormone therapy on the incidence of IBD flare ups and the need for surgery.

Materials and Methods: We conducted a retrospective chart review of TGNB individuals who presented to the Johns Hopkins Center for Transgender and Gender Expansive Health and were diagnosed with IBD. Patients younger than 18 years at the time of the study were excluded. Our primary outcomes were the incidence of IBD flare ups and IBD-related surgery. Descriptive statistics were calculated. The Chi-squared/Fisher's exact tests were used to compare proportions of patients with vs without the outcomes.

Results: A total of n=27 patients were included in our analysis. Their median (IQR) age was 27 (23-35) years. More than half of our study sample were assigned female sex at birth and identified as transmen

(n=15 [55.6%]). The majority were White (n=16 [59.3%]), nonsmokers (n=23 [85.2%]) and did not consume alcohol (n=15 [55.6%]) or drugs (n=19 [70.4%]). Most patients had relevant psychiatric history (n=20 [74.1%]) and active psychiatric illness (n=16 [59.3%]), most commonly depression (n=14 [51.9%]). Of n=27 patients, n=22 (81.5%) patients were on HT. In particular, n=12 (44.4%) patients were on masculinizing HT, while n=10 (37%) patients were on feminizing HT. Of n=27 patients, n=20 (74.1%) patients experienced IBD flare ups. Of those, n=8 (40.0%) required hospital admission, and n=13 (65.0%) required steroid use. Patients who experienced any flare up, compared to those who did not, were less likely to be on HT (n=15 [75.0%], n=7 [100%], P=0.283), whether feminizing (n=7 [35.0%], n=3 [42.9%], P=0.447), or masculinizing (n=8 [40.0%], n=4 [57.1%], P=0.447). Patients who required surgery, compared to those who did not, were less likely to be on HT (n=5 [62.5%], n=17 [89.5%], P=0.136), specifically feminizing HT (n=1 [12.5%], n=9 [47.4%], P=0.132).

Conclusion: TGNB individuals on feminizing or masculinizing HT are not at increased risk of IBD flare ups. HT may in fact play a protective role against flare ups and the need for surgery. TGNB individuals with IBD may benefit from smoking cessation and reduction of alcohol and drug use. Further research is crucial to better understand the interaction between HT and IBD in TGNB individuals.

Poster: Health Services and Systems

FRI-P-35: Comparative risk profiles for surgical outcomes among individuals who underwent mastectomy and orchiectomy and their implications for utility of pre-surgical evaluations

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Presented by: James Michael Brennan

Introduction/Background: Transgender and gender diverse (TGD) individuals may pursue a mastectomy or orchiectomy to treat gender dysphoria, which, per WPATH Guidelines, typically follows a pre-surgical evaluation from a mental health specialist (Coleman et al., 2022). Yet, TGD individuals and the general population undergo these procedures for other reasons (e.g., to treat cancer, or prophylactically) without any requirement for such an evaluation. This discrepancy in standards of care raises the question of whether a pre-surgical evaluation is actually indicated for TGD individuals seeking treatment for gender dysphoria more than for these other groups.

Specific Aim: The aim of this study is to investigate the typical risk profile for surgical outcomes of TGD patients who have undergone mastectomy/orchiectomy following a pre-surgical evaluation compared to those who underwent the procedure for other reasons.

Materials and Methods: To accomplish this, we will conduct a retrospective chart review of patients in the Trans Health Clinic at the San Francisco VA Health Care System (SFVAHCS) who underwent a pre-surgical evaluation for mastectomy or orchiectomy for gender dysphoria since 2017, as well as TGD patients and a non-TGD group who received these surgeries for other medical reasons. Risk profiles will be tabulated based on presence of medical and psychological risk factors predictive of surgical outcomes (Block, 2001). Data collection is currently in process.

Results: Using a one-way, between-subjects analysis of variance (ANOVA), group differences in risk profiles and wait times will be compared among the three groups. We hypothesize that the evaluation group has lower medical and psychological risk factors than the non-evaluation group, yet will wait significantly longer to receive treatment.

Conclusion: In order to better understand the utility of pre-surgical evaluations for gender-affirming care, this study seeks to compare the risk profiles of three groups who have undergone mastectomies and orchiectomies. Through these comparisons, we hope to ascertain whether TGD individuals pursuing these surgeries to treat gender dysphoria have a higher risk profile for poor surgical outcome, thereby

warranting the additional evaluation, or whether the pre-surgical evaluation poses an unnecessary, additional burden to medically-necessary, gender-affirming care.

FRI-P-36: A Health Insurance Perspective on Policy Expansion for Transgender and Gender Diverse Individuals: Lessons Learned One Year Later

Kristen Eckstrand[1,2], Stephanie Finneran[3], J. Gero[1], Aisling McIntyre[3], Anne Schmidt[3]
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Presented by: Stephanie Finneran

Introduction/Background: In response to the release of the Standards of Care 8 by the World Professional Association of Transgender Health and an increasing demand for insurance coverage for procedures associated with transgender and gender diverse (TGD) individuals, many health insurance companies are evaluating coverage expansion for gender affirming medical and surgical care. Such efforts face the complexities of evolving clinical standards and, in some locations, state regulations.

Specific Aim: This poster outlines the experience of one health insurance company in Pennsylvania that has expanded coverage options for several procedures related to gender affirming care. Coverage expansion was informed by national guidelines, evaluation of federal and state policies, service claim evaluations, and feedback from community members, health plan members, and patients.

Materials and Methods: The process for coverage expansion for TGD members began in 2018 and included an extensive literature review, analysis of internal claims data, and input from seven focus groups conducted with LGBTQIA+ community members. The policy development process was iterative with input from key stakeholders within and outside of the payor. Additional feedback was requested from various internal and external stakeholders, including the health plan LGBTQIA+ Task Force. Founded in 2017, this task force comprises individuals from member services and care management teams who provide support and navigation assistance to members accessing gender affirming services.

Results: After an extensive process of additional literature and policy review and stakeholder input in 2021, the plan expanded its gender-affirming surgical policy to cover facial reconstructive procedures, voice therapy and surgery, and thyroid cartilage reduction, as well as electrolysis and/or laser hair removal. Coverage went into effect in 2022 and there was a significant increase in the utilization of these procedures, though the total costs associated with this activity remained modest.

Conclusion: This poster reviews the process of how policy changes were enacted and presents some of the lessons learned about the policy expansion process, including adequate access to gender affirming providers in some regions. Adequate policy implementation requires ongoing collaboration among internal teams as well as external stakeholders.

FRI-P-37: PREVENTATIVE REPRODUCTIVE CARE FOR TRANSGENDER PERSONS ASSIGNED FEMALE AT BIRTH: A REVIEW OF BARRIERS TO CARE AND POSSIBLE SOLUTIONS

Duncan Holmes
Rowan-Virtua School of Osteopathic Medicine, Stratford, NJ, USA

Presented by: Duncan Holmes

Introduction/Background:
Transgender people are those who do not identify solely with the gender that they were assigned at birth. For example, female-to-male (FTM) individuals are those who were assigned female at birth (AFAB) but later transitioned their identity to male. People who identify as non-binary may identify as outside of the binary definition of gender entirely. The transitioning process can vary between individuals significantly. As such, the preventative medical needs of this population can vary significantly.

FTM and non-binary individuals assigned female at birth (transmasculine and non-binary people, or TMNB) who retain their AFAB reproductive anatomy require regular preventative screenings, particularly cervical cancer screenings. Evidence currently suggests that TMNB people are either avoidant of regular OB-GYN visits or have had negative experiences that make them wary of finding a provider. A review was conducted of the TMNB experience and guidelines for conducting preventative reproductive screenings on the transgender population. From this information, care approaches are proposed to improve accessibility of gynecological care for the TMNB population.

Specific Aim:
We aim to recommend changes to the current standard of practice regarding preventative reproductive care for TMNB people based on reported protective factors against traumatic experiences for this population.

Materials and Methods: Database: PubMed
Key Words: transgender, gender non-conforming, non-binary, pelvic health, pelvic exams, barriers, discrimination, stigma, guidelines, gynecological care, reproductive care, cervical cancer
Timeline: 2000-2023
Search Dates: 08/12/22 -11/14/22
Number of Results (range and total): 9-32 (Total: 246)
Exclusion/Inclusion: Evaluation of pertinence

Results: A number of barriers to preventative reproductive care for the TMNB population were identified, including but not limited to: feminine-coded language in clinics and educational materials; feminine-coded visuals in waiting rooms and educational materials; fear of or intense dysphoria surrounding exposure of their genitals in a medical setting; discriminatory staff attitudes; a lack of staff knowledge on transgender care; and insurance barriers.
Potential solutions were also identified and recommendations were compiled based on these solutions. Examples are: accommodations and distractions for TMNB patients during gynecological exams; elucidation and encouragement of patients to utilize social support; thought reframing and cognitive behavioral therapy to address stress surrounding preventative care; anticipatory guidance from providers; self-performed gynecological exams, such as home pap smears; provider education on caring for transgender patients; and utilization of gender-inclusive language and visuals in clinics and educational materials.

Conclusion: TMNB persons who retain their cervixes require cervical cancer screening. Currently, it is recommended that members of the TMNB population get the same age-appropriate screening frequency as their cisgender female peers. Multiple barriers exist preventing TMNB individuals from receiving the quality and frequency of care that these recommendations require. Support for the TMNB population at both an institutional and interpersonal level is crucial to dissolving these obstacles. Future efforts to develop supportive structures for this population in the medical community should utilize the recommended solutions discussed here. Curiosity and a willingness to learn are crucial in the medical community to adapt to better serve this population and better their quality of life.

FRI-P-38: VICTIM ADVOCACY FOR GENDER DIVERSE SURVIVORS OF VIOLENCE: A HEALTH SYSTEM INITIATIVE

Kelly O'Shaughnessey
Eskenazi Medical Group, Indianapolis, IN, USA

Presented by: Kelly O'Shaughnessey

Introduction/Background: Transgender and Gender Diverse (TGD) individuals experience a higher prevalence of trauma and violence as compared to the general population. Disclosure of trauma to medical providers is greatly dependent upon screening for victimization by medical staff. Medical providers have identified barriers to victim screening including lack of time, comfort with screening, knowing how to respond to a disclosure, and lack of screening protocols. Without formal screening

measures in place, many survivors will not be identified or offered victim support and resources that may have benefited them. Additionally, fear of discrimination and lack of culturally competent care are reasons why TGD patients may not seek health care or victim services.

Specific Aim: The LGBTQ+ Victim Advocacy Initiative was created as a new service at Eskenazi Health in an effort to address a care gap by providing comprehensive victim services to TGD-identifying survivors of sexual assault and violence. The three goals of this initiative are (1) improve screening for victimization amongst TGD patients within the medical care setting, (2) connect survivors of past or current trauma with victim resources and support, and (3) improve cultural competence regarding care for TGD patients throughout the healthcare organization.

Materials and Methods: Victim advocates were employed specifically to provide victim services to TGD survivors of violence and to provide cultural competency trainings to staff throughout the organization. The victim advocates self-identify as part of the LGBTQ+ community which offers lived experience that is integral to their role. A victim screening protocol was developed in the Eskenazi Gender Health Program, to aide in identifying TGD survivors of trauma. A Smartphrase was developed as a tool to be used in the electronic documentation system to allow the healthcare providers to quickly screen for victimization within each patient encounter. If past or current trauma was disclosed during the visit, the patient was offered the option to meet with a victim advocate onsite in the Gender Health Program for supportive care and connection to other services. Additionally, the victim advocate provides cultural competency training including scheduled presentations with hospital staff, SANE nurse training, sexual health training for medical students, and onsite availability of an LGBTQ+ victim advocate in the emergency room.

Results: The LGBTQ+ Victim Advocacy Initiative was initiated in the first quarter of 2021. Since its inception, more than 330 TGD-identifying survivors of sexual assault and trauma have been connected with 640 victim services. Services included mental health counseling, support groups, housing, basic needs, community resources, legal services, and more. The LGBTQ+ victim advocates have provided 10 cultural competency trainings throughout the organization.

Conclusion: The screening protocol introduced in the Eskenazi Gender Health Program has been effective in identifying TGD survivors of trauma. The LGBTQ+ Victim Advocacy Initiative at Eskenazi Health is addressing an important care gap that has been identified as impacting TGD individuals. Culturally competent victim advocacy services should be considered as an integral part of the multidisciplinary approach to medical care for TGD patients.

FRI-P-39: BUILDING A COMPREHENSIVE CENTER OF EXCELLENCE FOR THE CARE OF LGBTQ+ PATIENTS IN NASHVILLE, TENNESSEE

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Vanderbilt University Medical Center, Nashville, TN, USA

Presented by: Kara Keiper

Introduction/Background: Vanderbilt University Medical Center (VUMC) is committed to supporting and providing healthcare resources for traditionally underserved communities. An example of this is the creation of a gender affirming health clinic and its expansion to a comprehensive center of excellence for LGBTQ+ healthcare. Over several years, VUMC has added resources- human capital, clinic space, educational programs, community resources, and healthcare services, all intended to support the health needs and well-being of the LGBTQ+ community in the greater Nashville/ Middle Tennessee area and beyond.
Our program, now known as VIVID Health- a nod to the colors of the pride flag and the impact of our services enabling individuals to live as their most vibrant and authentic selves, has transformed rapidly over several years. Beginning as a diversity and inclusion initiative to serve the local unmet needs of the LGBTQ+ community, our program has evolved into one of the largest LGBTQ+-focused healthcare centers, attracting patients from across the United States. The commitment from VUMC leadership has

been unwavering, supporting expansion to a team of 30+ individuals working collaboratively to provide primary care, gynecologic care, endocrinology services, gender-affirming surgery, urologic care, behavioral health services, pastoral care, pharmacy services, hair removal, and care coordination throughout a patient's healthcare journey.

Specific Aim: Currently VIVID Health serves patients within various primary care, surgery, urology, endocrinology, gynecology, and behavioral health clinics. We are renovating a standalone multi-disciplinary center to provide one centralized location for VIVID Health services. In this capacity, one could schedule all their healthcare appointments in one place and at one convenient time. Additional services, such as primary care, will also remain housed in clinical centers throughout our network- a true hub and spoke model. We hope to improve the patient experience and ensure that patients feel safe, comfortable, and respected in every healthcare encounter.

Materials and Methods: In addition to clinical services, VUMC has a nationally recognized Program for LGBTQ Health, which advocates for LGBTQ+ patients receiving healthcare services at VUMC and in the state of Tennessee. This program works in conjunction with VIVID Health to align initiatives supporting the LGBTQ+ community and partners with Vanderbilt University on research and education in addition to local non-profits for community advocacy. The Program for LGBTQ Health also oversees The Trans Buddy service, which provides emotional support to transgender patients during healthcare visits via a network of trained volunteers from all identities.

Results: The Program for LGBTQ Health has made VUMC a safer, more accepting environment for LGBTQ+ patients and allies, which earned Vanderbilt a 100 on the Healthcare Equality Index, the only place in Tennessee to receive this distinction.

Conclusion: VIVID Health strives to be a leader in the support and delivery of healthcare services to LGBTQ+ patients in Tennessee and the United States. As a growing program, VUMC is committed to continually supporting initiatives to meet and exceed the healthcare needs of LGBTQ+ patients.

Poster: Engaging Family and Caregivers

FRI-P-40: IMPACT OF AN EDUCATIONAL ACTIVITY IN IMPROVING RESIDENT UNDERSTANDING OF TRANSGENDER HEALTHCARE

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Presented by: David Vavrinak-Davis

Introduction/Background: Transgender and other sexual minority patients continue to face barriers to receiving adequate, holistic health care. Some factors contributing to this healthcare gap include patient comfort in their providers' offices and provider knowledge in general. In a recent AFP survey of 140 primary care providers, only 69% reported feeling capable of providing routine care to transgender patients, with lack of training on transgender health and transition care guidelines being cited as a common barrier.

Specific Aim: This QI project seeks to assess the impact of a lecture, approved and reviewed by an expert in LGBTQ+ healthcare, given to residents on their ability to provide gender-affirming care based on the WPATH SOC 8th edition recommendations, and to understand more about the medical management of transgender and other sexual minority patients.

Materials and Methods: An electronic, 10 question survey was sent at 3 different time intervals to IM residents and faculty planning to attend the noon conference. The pre-conference questionnaire was sent out prior to the conference. The second survey will be sent immediately after the conference, and the third survey would be sent out 2-3 weeks after the conference. The questions will be randomized in terms of order presented, but the content will remain the same, survey responders identities are

anonymized. Data will be analyzed and compared over each of the 3 surveys based on scores over time to assess the impact of the educational activity (conference). The final survey is hoped to assess a form of retention, rather than short-term recollection of the information presented.

Results: Results are currently back for 23 responders in the pre-conference survey only. Initial data reveal a raw score of 43% on lecture-content with an NPS (scaled -100 to 100, -100 being the least comfortable, 100 being the most comfortable) of -35 in understanding and using LGBTQ+ specific vocabulary with patients, and of -57 in providing gender-affirming healthcare to transgender patients. Further survey data will be collected after the lecture and updated prior to the USPATH Symposium.

Conclusion: With results from post-educational activity quizzes pending, the initial data reveal a knowledge deficit in standards of care regarding standards of care based on the WPATH recommendations, as well as discomfort in medical residents in employing appropriate terminology fluently and providing gender affirming therapy to patients. Further data will reveal whether the educational activity improves understanding, but at the very least initial data reveals a need for intervention in provider training in this establishment. These data will hopefully lead into establishment and engagement of residents and faculty in an LGBTQ+ Clinic at our establishment. Residents can rotate through this clinic and provide gender-affirming healthcare to transgender and other sexual minority patients. Once this clinic is established, a follow up QI study regarding patients' perspective of CCAG's ability to provide gender-affirming care and engage with the local LGBTQ+ community would be performed.

Poster: Law, Policy, and Ethics

FRI-P-41: RESPONDING TO ETHICALLY-CHALLENGING SCENARIOS IN GENDER AFFIRMATION SURGERY: CAN SURGEONS OUTPERFORM CHATGPT?

Justin Camacho[1], Daniel Najafali[2], Victoria Stoffel[1], Nicole Ergeha[3], Dev Gurjala[4], Thomas Satterwhite[4], Arya Akhavan[4], John Pang[4,5]
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Presented by: Justin Camacho

Introduction/Background: The field of surgery evolves, in part, by the rapid transfer and application of scientific and technological innovations. In this regard, artificial intelligence (AI) software, such as ChatGPT®, holds tremendous potential. While patients often use ChatGPT® for medical advice, medical ethicists have expressed concerns regarding its limitations, which are often poorly understood by patients and physicians both. In particular, AI systems may not be trained on current medical guidelines, and some literature suggests that training models may inadvertently incorporate negative societal prejudices. In this context, it is surprising that AI applications in transgender care remain unstudied. AI and Natural Language Processing (NLP) algorithms can respond to complex questions in an empathetic and logically coherent manner, and AI responses may be comparable to those provided by gender-affirming surgeons.

Specific Aim: This study aims to compare AI-generated vs surgeon-generated responses to ethically-challenging scenarios in gender affirmation surgery. Additionally, the study aims to evaluate AI for trustworthiness, usability, and adherence to medical ethics when used to address sensitive topics in gender-affirming care. The findings may also provide guidance to physicians regarding the accuracy and limitations of using such software in healthcare settings.

Materials and Methods: The senior investigators designed five patient scenarios, each followed by a question asking how to respond. Scenarios represented various ethically-challenging or otherwise difficult circumstances in gender affirmation surgery. Scenarios were provided to a gender-affirming surgeon with

a request for a response under 100 words. Scenarios were then inputted into ChatGPT®. To reduce confounding, word count and opening response statements were made the same as the surgeon's reply to mask AI verbosity. A source-blinded panel of three surgeons evaluated the appropriateness, adherence to medical ethics principles, overall quality, and “artificiality” of each response based on a Likert scale. Data for answers generated by ChatGPT and the human respondent were compared.

Results: The accuracy rates for identifying the AI-generated responses by each reviewer were 80%, 40%, and 40% (mean=53%) for reviewers one, two, and three, respectively. Out of a maximum score of 4, the median (IQR) reviewer grade for quality of response was 4 (3.67-4) from both ChatGPT® and the human respondent. However, ChatGPT® received slightly lower scores from reviewers in terms of empathy and clarity in scenarios regarding mental health crises (3.5 vs. 3.9 for humans), but slightly higher scores for dealing with transphobic providers (4 vs. 3.8 for humans). In scenarios examining pediatric trans-care bans, second opinions for complications, and domestic partner conflict, both ChatGPT and the human response scored identically.

Conclusion: An expert panel of gender-affirming surgeons was unable to differentiate between AI-generated and surgeon-generated responses to challenging scenarios in gender affirmation surgery in 53% of cases. ChatGPT® demonstrates the ability to produce responses resembling those of humans, with human responses preferred for mental health crisis settings but not for those involving human conflict. Further investigation into ethically and medically appropriate responses, and patient and layperson responses, is necessary.

FRI-P-42: Regulating LLMs in healthcare AI: An analysis of whether LLMs are sensitive to transphobic content

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Presented by: Anthony Li

Introduction/Background: While the advent of Large Language Models (LLM) in Artificial Intelligence (AI) holds much promise in revolutionising digital healthcare applications, it has also generated significant regulatory, legal and ethical concerns in biasness, privacy and transparency. Of particular concern, LLMs incorporated as patient assistant chatbots or as part of decision support systems into the healthcare system might engage in insensitive patient conversations or recommend non-optimal treatment pathways for the gender diverse population.

Specific Aim: We aim to evaluate the current state of LLMs’ response to transphobic content and determine if LLMs have the capability to identify transphonic content and consider potential mental health impact to patients. This would help regulators to determine if the current LLM standards are acceptable for protecting the mental health of gender diverse individuals.

Materials and Methods: We retrieved 150 Tweets made on the popular social media platform Twitter from 1st April 2023 to 15th June 2023. Tweets were sent to OpenAI’s LLM model Generative Pretrained Transformer 3.5 (GPT-3.5), with prompts to contextualize it as an AI agent which is analyzing messages for transphobic content and to suggest if the content might cause anxiety or depression to gender diverse individuals. The Tweets and AI agent results were further compared with the assessments made by an independent panel of 3 gender diverse individuals.

Results: Of the 150 Tweets extracted, the AI agent suggested that 80 (53.3%) of them were transphobic, whereas the panel determined that 91 (60.1%) of them were transphobic. Of the 91 transphobic Tweets, the AI Agent suggested that 23 (25.3%) and 52(57.1%) of these Tweets might cause anxiety and depression respectively, whereas the panel determined that 56 (61.5%) and 70 (76.9%) of these Tweets might cause anxiety and depression respectively. Overall, the agent had a sensitivity of 0.38 (0.28, 0.49), 0.68 (0.56, 0.80) and 0.23 (0.14, 0.32) for detecting transphobic content, anxiety inducing content and depressive content respectively.

Conclusion: While AI and LLMs hold great promise for improving healthcare processes and outcomes in numerous areas, our results suggest that they might not be sensitive enough to pick up transphobic content which are anxiety inducing and depressive in nature. Therefore, more active research would be required to reduce LLMs' biases, particularly towards gender diverse individuals. Finally, regulatory authorities should consider evaluating LLMs for transphobic content as part of LLM approval regimes. In future studies, we will increase the number of social media content and the variety of LLMs analyzed.

Poster: Community Engagement

FRI-P-43: STOP SCROLLING! -- USING TIKTOK AS A FRAMEWORK TO ENGAGE TRANSGENDER YOUTH

Kaiden Kane[1], Meg Quint[2], Elizabeth Boskey[1], Sari Reisner[2]
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Presented by: Kaiden Kane

Introduction/Background: The Williams Institute has shown that the percentage of people identifying as trans ages 16-17 is higher than among all other age groups. If we want to reach trans youth with research and educational interventions, we need to meet them "where they're at". Over the past few years, the digital landscape has seen a sharp increase in the consumption of short-form video content, particularly among young people. TikTok is among the most popular platforms for engagement with short-form videos, second only to YouTube among youth ages 13-17 years old. There is an enormous amount of interest in transgender topics on TikTok with the trans hashtag having gained over 57 billion views. This is on par with the level of interest in far larger population groups and topics. For example, #latino has over 59 billion views, and #baseball has 59 billion views. Sexual and gender minority youth have identified primary uses of TikTok including support with family relationships, identity formation, community and belonging, and sharing knowledge and information.

Specific Aim: To identify factors driving engagement with transgender TikTok content.

Materials and Methods: A mixed methods evaluation was conducted involving quantitative and qualitative analysis of the top 10 most viewed videos on the TikTok profile of a transgender influencer working in the field of gender-affirmation research. The number of views and followers gained per video were collected using the creator analytics feature within the app. Videos were categorized as personal anecdote, trans-related, provides helpful information about trans topics, or trending audio. Trending audio refers to TikTok videos incorporating shared audio segments that are popular on the app. Engagement was measured by looking at the ratio of views to followers gained. The cutoff value for a video to be considered engaging was defined as requiring less than 300 views to gain 1 follower (i.e. ratio < 300) based on a visual analysis of the distribution of results and the location of a clear demarcation in engagement.

Results: The analyzed profile had ~12,600 followers at the time of analysis. The three most engaging videos were about their transition story (ratio=67), the significance of trans day of remembrance (ratio=78), and how to get top surgery (ratio=118). The transition story featured a trending audio clip and all three were trans-related, contained personal anecdotes, and provided educational information. The three least engaging videos were also the most viewed videos. These were about trans & non-binary microaggressions (ratio=500), emotional trauma (ratio=528), and shrek 2 (ratio=1179). All three contained personal anecdotes, two featured trending audio, and one was trans-related. None of them provided educational information.

Conclusion: Users were more likely to engage with content that was personal, trans-related, informative, and utilized trending audio. Views do necessarily translate into engagement -- the three videos with the largest number of views had the lowest engagement. The success of certain videos on TikTok may provide insights about methods for offering educational content on gender-affirmation as well as the most effective ways to engage with trans youth on the platform.

FRI-P-45: IDENTIFYING GAPS IN TRANSGENDER HEALTH EDUCATION IN TRANSGENDER SUPPORTIVE COMMUNITIES IN HAWAI'I

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Presented by: Jin Long

Introduction/Background: Health care in transgender is facing stigma and challenges these days. Studies have been shown that supportive community resources are associated with reduced risk of suicidality among lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ +) adolescents as well as their cisgender, heterosexual peers [ref 1, 2, 3]. However, barriers to cultural and contextual care from transgender supportive communities remain. Education for health care workers is key to addressing these barriers; however, little is known about the status of transgender health education in supportive communities.

Specific Aim: To learn about the status of transgender health education in supportive communities in Hawai'i

Materials and Methods: This study used a cross-sectional descriptive design. A survey was developed to include demographic data, specific transgender services, the length of time providing transgender services and barriers to learn. The invitation to this survey was sent to 10 selected transgender supportive communities in Hawai'i. One representative from each community completed the survey during a Zoom call with an interviewer from the Stanford team.

Results: In this survey, 9 out of 10 selected communities provide services geared towards LGBTQ+ populations. One community serves only adults (18 years and up) and nine communities serve both children and adults. 60% of communities provide services to LGBTQ+ adults for more than 5 years. Half of communities provide services to LGBTQ+ children within 5 years. For all 26 listed transgender related services (Fig 1), communities vary on providing them (providing rate from 20 to 90%) with average rate of 45.4%. When asking if these communities want to learn more on these services, the average rate is 54.2%. The most popular learning format is Online learning (90%) then Webinar learning (70%) and In-person learning (70%). The most frequent learning barrier is "Lack of funds" (70%) followed with "Difficult to find educational opportunity" (60%) and "Time constrain" (50%).

Conclusion: Limited transgender heath education is provided by supportive communities in Hawai'i but more opportunities for education exist. Investment of time and money are needed to increase community knowledge of transgender health.

FRI-P-46: STRATEGIES TRANSGENDER AND GENDER DIVERSE YOUNG ADULTS USE TO VET THE RELIABILITY OF INFORMATION ON GENDER AND HEALTH

Regina Tham[1], Meg Quint[2], Elizabeth Boskey[1,3], Kaiden Kane[1], Jessica Kremen[1,3], Rena Xu[1,3], Carlos Estrada[1,3], Sari Reisner[2,3,4,5]
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Presented by: Regina Tham

Introduction/Background: With the increase of patients accessing online information about gender affirmation, there is great concern about its reliability. Moreover, in the context of widespread legislative attacks on the rights of transgender and gender diverse (TGD) individuals, there has been an influx of misinformation perpetuated by anti-TGD groups and individuals. There is a need to understand whether

and how TGD young adults determine the reliability of online information in order to support the development of patient-facing information and products.

Specific Aim: To understand strategies TGD young adults use to evaluate the reliability of online information related to gender and health

Materials and Methods: Survey data were collected from 104 TGD individuals ages 18-25 using the Prolific platform in August 2022. Purposive sampling was used to recruit a 50% Black, Indigenous, and People of Color (BIPOC) sample. Participants were asked about their age, gender identity, race and ethnicity, and an open-ended question about information-seeking, "How do you determine if information about gender and health are reliable?" Participants were able to select multiple options for race and gender. Content analysis was performed on the 85 responses and the frequency of strategies reported by TGD young adults was tabulated.

Results: Participants' mean age was 21.8 years and endorsed a variety of gender identities (man – 17.6%, transgender man – 24.7%, transmasculine – 12.9%, woman – 9.4%, transgender woman – 5.9%, non-binary – 60.0%, agender – 10.6%, genderqueer – 15.3%, genderfluid – 15.3%, bigender – 1.2%, two-spirit – 1.2%, and another gender – 8.2%). In the final sample, 57% of participants were white and 43% were BIPOC: 8.3% Black, 13.9% Hispanic, 16.7% Asian, and 61.1% multiracial. Of the 104 TGD individuals, 85 responded to the question about information seeking and some respondents listed multiple strategies. Participants described 9 strategies they utilize to determine the reliability of information related to gender and health.

These 9 strategies included: (1) checking against other sources/scientific literature (36.5%, n=31), (2) having a TGD person as the primary author and/or material endorsed by a TGD person (36.5%, n=31), (3) identifying an expert/medical professional as the primary author (14.1%, n=12), (4) looking at terminology used by the authors, one participant stated they look for "dogwhistles or buzzwords commonly used by bigots" (7.1%, n=6), (5) scrutinizing the tone to determine the author's intention (5.9%, n=5), (6) distinguishing resources that were endorsed or vetted by a personal connection (5.9%, n=5), (7) including diverse/nuanced information (2.4%, n=2), (8) using one's own existing knowledge (2.4%, n=2), (9) considering the source's background and motivation, one participant stated, "Whose funding this? What stakes do they have? Is this source reliable and trustworthy historically? Etc." (1.2%, n=1).

Conclusion: Participants overwhelmingly used signals of expertise in TGD gender and/or health – lived or professional experience – to vet reliable sources of information. Findings suggest that collaborations between TGD individuals, medical professionals, and other trusted individuals may be an important way to increase perceived and actual reliability of information online for TGD young adults.

FRI-P-47: Forming partnerships between academic institutions and community organizations that support gender expansive individuals to facilitate sustainable research collaborations: A case study

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Presented by: Christine Tagliaferri Rael

Introduction/Background: Effective partnerships between academic and community-based organizations can enhance research, advocacy, and service provision to promote health equity among gender expansive communities. However, there is limited literature on the process for forming such partnerships. This work describes the steps one such collaboration took to build an ongoing academic/community research partnership and subsequently form the Denver-based GENSPEC cohort.

Specific Aim: To describe successful strategies and potential challenges to initiate and sustain a research partnership between the University of Colorado College of Nursing (CU-CON) and Transgender Center of the Rockies (TCR) to facilitate enrollment and retention of gender expansive adults in the GENSPEC cohort.

Materials and Methods: A case study approach was employed to describe the partnership development process by reflecting on past meeting minutes and intentional implementation of community-based participatory research (CBPR) principles tailored to the group's unique context.

Results: Key partnering practices included: (1) *Identifying partners with an appropriate sphere of influence*: Researchers intentionally sought out a partner with deep, active roots in the gender expansive community, who had a trusted reputation and regular, active initiatives to support community priorities; (2) *Recognition of strengths*: Researchers respect that the community partner is the authority on gender expansive people and encourage them to make autonomous decisions about their interactions with the community, including those related to research processes (e.g., recruitment, enrollment). Simultaneously, researchers provide the scientific infrastructure to the project to ensure that outcomes are measurable; (3) *Capacity building through collaborative work and reciprocal learning*: We hold weekly team meetings to discuss research operations, and both partners contribute staff to accomplish study activities (e.g., both TCR and CU-CON participate in recruitment, enrollment, and data collection activities. At the analysis and manuscript preparation phase, both teams will contribute to efforts). However, we are aware that personnel from the two institutions have different skill sets, and we make continual efforts to cross-train each other on our strengths, including research skills and gender expansive community engagement; (4) *Shared contributions*: Partners work together to develop proposals, research instruments, and recruitment/enrollment/retention plans; (5) *Attending to power dynamics*: We are mindful that resources must be equitably shared. CU-CON and TCR are co-investigators on grant submissions and both sites are empowered to budget for the resources and staff they need to be successful. Budget overages are resolved collaboratively. (6) *Relationship building*: Though the partners are housed in separate spaces, we make intentional efforts to see each other in person when possible. This fosters closer interpersonal connections and builds camaraderie among team members. Challenges included hiring delays for both partners and delays in receiving funds to begin work.

Conclusion: Intentional implementation of CBPR partnership practices, tailored to the unique needs of academic and research institutions, can results in high-trust relationships. The partnership described here is a year old and using these principles has strengthened over time. The partners continue to apply for grant funding together and continuously enroll and retain participants in the GENSPEC cohort. We will analyze data to determine priority areas for intervention for Denver's gender expansive community in a year's time.

FRI-P-48: EMPOWERING HEALTHCARE COMMUNICATION: LEVERAGING LARGE LANGUAGE MODELS FOR AUTOMATED GENERATION OF PATIENT INFORMATION SHEETS FOR GENDER DIVERSE POPULATIONS

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Presented by: Lisa Pinero

Introduction/Background: According to the WHO, individuals who identify as members of the transgender community are 13 times more likely to be living with HIV than other adults of reproductive age. Despite this significant patient population, patient information sheets given to people diagnosed with HIV are often non-specific, hard to read and not customized for gender diverse individuals. Large Language Models (LLM's) like OpenAI's ChatGPT offer the ability to create patient information sheets that are accessible and tailored to specific patient needs or concerns.

Specific Aim: To compare the readability of patient education sheets generated by ChatGPT to those from UpToDate, an established clinical source, for the management of HIV and to assess ChatGPT's ability to tailor information for reading grade level and patient demographics.

Materials and Methods: Patient education sheets for seven aspects of HIV management were generated by OpenAI's ChatGPT including HIV/AIDs, starting treatment for HIV and vaccines for adults with HIV. Information sheets corresponding to generated prompts were obtained from UpToDate. Patient sheets were analyzed using a readability calculator. Output readability variables were compared via t test. Then, 12 patient sheets on starting HIV treatment were created for 12 reading grade levels. These sheets were analyzed by the readability calculator and compared to desired reading grade level using linear regression.
Finally, prompts about starting HIV treatment for specific groups including those who identify as cismen/ciswomen, cismen who have sex with men and transmen/transwomen were generated.

Results: Although ChatGPT did create patient information sheets for designated prompts, they were significantly less readable than the established sheets in all six readability scores. When compared to input reading grade level, generated sheets showed a weak relationship between increasing readability scores with decreasing reading grade level (R2 values: 0.5489-0.6266). On content analysis, ChatGPT did adjust information provided based on subgroups. In cis women-specific prompts, ChatGPT mentioned family planning for a healthy pregnancy and for transman/transwoman-specific prompts featured a section entitled "Hormone Therapy Considerations." However, family planning counseling was excluded from information for transmen.

Conclusion: This study demonstrates the capability of LLM's like ChatGPT to generate patient information sheets that are customizable by reading grade level and content. Although established patient sheets in this study were significantly more readable, these sheets are a standardized approach to communication. Conversely, LLM's allow providers to efficiently create patient information sheets for the individual patient. This could prove especially beneficial for gender diverse individuals who have specific concerns that may not be addressed in standard patient information sheets. However, his project also shows the need for further development of LLM's as no mention of pregnancy considerations were mentioned in the transmen specific prompt.

Poster: Nonbinary and Genderqueer Identities

FRI-P-49: Developing Standards of Care for Trans Polymastia Patients

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Presented by: Titania McGrath

Introduction/Background: Trans polymastia is a marginalized identity of assigned male at birth that seeks to have affirmative surgeries of three or more breasts to live their authentic selves. This paper calls for the development of standards of care for trans polymastia patients. The paper draws on an expert consensus from a panel of healthcare professionals and trans polymastia individuals. The expert panel recommended that trans polymastia affirmation and surgeries be made available to all trans polymastia identifying patients of any age, without the need for counseling.

Specific Aim: The aim of this paper is to call for the development of a set of standards of care for trans polymastia patients seeking affirmative surgeries for three or more breasts. This will be achieved through a comprehensive literature review on trans medicine, breast surgeries, and trans polymastia, as well as through the analysis of expert panel results that advocate for the provision of life-saving surgeries without counseling to patients of any age. The paper also aims to raise awareness of the unique challenges faced by the trans polymastia community due to marginalization and lack of familiarity with their condition, and to highlight the need for better surgical techniques and custom bra designs for trans polymastia patients.

Materials and Methods: We aimed to establish expert consensus on the affirmation and surgical treatment of trans polymastia patients. We assembled a panel of experts. The panel consisted of eight experts, including three trans polymastia patients who have undergone breast augmentation surgery, two plastic surgeons who have experience performing breast augmentation surgery on trans polymastia patients, two experts in trans medicine and gender identity, and one expert in queer theory.

The panel engaged in a series of moderated discussions and debates, where they were encouraged to express their opinions and engage in respectful discourse. The discussions focused on topics such as the appropriateness of breast augmentation surgery for trans polymastia patients, the potential psychological benefits and risks of surgery, the role of counseling in the pre- and post-operative process, and the need for improved surgical techniques.

Results: There is a growing body of literature focused on the need for healthcare providers to provide gender-affirming care to trans individuals, including those seeking trans polymastia surgeries. However, more research is needed to develop standardized surgical techniques and ensure access to care for trans polymastia individuals of all ages. Testimonials from trans polymastia patients suggest that they may be at a high risk for suicide, depression and anorexia if unable to obtain appropriate surgeries. Furthermore, it is recommended that children's books featuring trans polymastia characters be written to increase visibility and acceptance of this community.

Conclusion: Our study highlights the importance of providing affirmative surgeries and care to individuals with trans polymastia. The expert panel we convened agreed that these surgeries are life-saving and should be made available to all trans polymastia identifying patients of any age. We also found that there is a significant need for better surgical techniques to create three or more breasts.

FRI-P-50: DISTRESS RELATED TO MEDICAL CARE REFUSAL AMONG TRANSGENDER AND NONBINARY YOUTH: ASSOCIATIONS WITH MENTAL HEALTH

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Presented by: Aidan Kraus

Introduction/Background: Transgender and nonbinary youth (TNBY) already experience greater mental health challenges compared to their cisgender counterparts, and discriminatory policies and targeting of this already vulnerable population serve to heighten threats to wellbeing. A recent study conducted by Babbs et al. (2023) demonstrated how healthcare denial policies can contribute to mental health distress among sexual and gender minority university students. However, research has not explored how distress regarding potential refusal of medical care, broadly defined, relates to anxiety, depression, and distress symptoms among TNBY. To date, 19 states have enacted or proposed laws restricting general healthcare to LGBTQ+ communities and/or gender affirming medical care, with three states making it illegal to knowingly support minors in receiving care due to their gender identity. Because of this, a call for further understanding of how these discriminatory actions could impact mental health and cause distress is essential.

Specific Aim: The aim of this study was to examine the association between distress symptoms related to potential medical care refusal, broadly defined, and mental health (i.e., anxiety, depression) among TNBY across the United States. Note: Medical care in this study is being defined as general healthcare.

Materials and Methods: TNBY (ages 14-18) across the United States (n = 140; predominantly White) completed online surveys as part of a larger longitudinal study. Measures relevant to this study assessed anxiety (GAD-7), depression (PHQ-9), and two items evaluating distress related to potential medical care refusal due participants' gender identity (distress knowing a healthcare provider could refuse them care;

distress if a healthcare provider refused them care). Participants self-identified as: Trans male (37.9%), trans female (20%), nonbinary (30%), and missing (did not disclose; 12.1%).

Results: We first assessed whether either item assessing distress related to medical care refusal differed by gender identity; no significant associations emerged. Depression and anxiety were positively correlated with reported distress associated with knowing that participants could be refused medical care by healthcare professionals due to their gender identity ($r = .250$, $p = .003$; $r = .260$, $p = .002$). Anxiety was positively correlated with reported distress associated with if a healthcare professional refused to provide a participant with healthcare due to their gender identity ($r = .263$, $p = .002$). There was not a significant association between depression and being refused care ($r = .165$, $p = .054$).

Conclusion: Overall, findings indicate that distress associated with healthcare refusal due to gender identity is related to mental health among TNBY. Findings suggest the need to bolster support for TNBY to access healthcare, especially in the context of heightened psychological distress and potential barriers from medical providers. With the increasing number of states imposing policies that limit access to medical care for TNBY, these findings support our knowledge of the impact these restrictions have on the psychological distress of this population and call for further action on behalf of this community of young people.

Poster: Social Determinants of Health/Health Equity

FRI-P-51: Characterizing the adult gender expansive population in the Denver Colorado Metropolitan Area: Building the Denver Gender Spectrum Cohort

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Presented by: Evelyn Iriarte

Introduction/Background: Gender expansive is an umbrella term that describes people (including transgender people) who expand notions of gender expression and identity beyond perceived or expected societal gender norms. Gender expansive people are affected by social and structural determinants of health (SDOH) that are distinct from those affecting cisgender people and that play a direct role in access and use of healthcare. Little is known about how SDOH and the systemic injustices that drive them affect the health of gender expansive adults living in the middle of the country. This leaves scientists and healthcare providers in this context with limited ability to develop interventions that target real needs in this community or prioritize specific areas of care where gaps exist. To address this, we will enroll a group of gender expansive adults located in Denver, CO, into a research cohort from which we can recruit for future studies that will lead to an enhanced understanding of the specific needs, priorities, and areas of vulnerability of this population.

Specific Aim: The goal of this abstract is to describe the protocol of the Denver Gender Spectrum (GENSPEC) Cohort study.

Materials and Methods: GENSPEC is a mixed-method study informed by the minority stress model. Two-hundred gender expansive adults aged ≥ 18 in Denver, CO, will be recruited for this study. To facilitate representativeness, we will oversample BIPOC (Black Indigenous and People of Color) individuals for inclusion. Participants will be characterized by demographics, social and economic stressors, health history, and healthcare access. Then, this group will be compared with a large national sample of gender expansive adults to determine the potential generalizability of future studies. In addition, we will identify community priorities and areas of vulnerability for gender expansive adults in the GENSPEC cohort upon which future studies should intervene using a descriptive qualitative approach.

This research study is a partnership between researchers from the University of Colorado Anschutz Medical Campus and the Mile High Behavioral Healthcare's (MHBHC) Transgender Center of the Rockies (TCR).

Results: No applicable.

Conclusion: Upon conclusion of this study, we will have a rich and in-depth understanding of the health needs and priorities of gender expansive individuals in Denver, CO. From these findings and the creation of the GENSPEC cohort, we will be ideally situated to lead numerous studies to develop tailored interventions and clinical practices that address the specific needs of this population. GENSPEC will provide the opportunity to conduct longitudinal research that can help this population to experience better health outcomes.

FRI-P-52: A SURVEY OF PRIMARY CARE PROVIDERS CARING FOR TRANSGENDER AND GENDER DIVERSE YOUTH IN HAWAI'I: THEIR CHARACTERISTICS AND LEVELS OF COMFORT

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Presented by: Tandy Aye

Introduction/Background: Up to 2 percent of US youth identify as transgender or gender diverse (TGD) and as such youth are seeking gender affirming hormone therapy (GAHT) in Hawai'i. The shortage of mental health clinicians and medical providers especially subspecialists, the geography, and the many cultural differences may be specific barriers to youth seeking GAHT in the state and as such create health disparities.

Specific Aim: To better understand the primary care provider (PCPs) baseline levels of care and comfort in providing the medical care for TGD, we conducted a survey among PCPs in Hawai'i.

Materials and Methods: A QR code or electronic link to PCPs to include pediatric, family practice and internal medicine physicians, naturopathic physicians, physician assistants and nurse practitioners were distributed through professional, medical and educational organizations and events from Feb 2023 to June 2023. In addition to demographics, PCPs were asked about their current services, level of comfort providing these services (using a Likert scale) and finally their level of interest in learning more about specific topics related to the care of TGD youth.

Results: Approximately 27% of PCPs from all Hawai'ian islands participated in the survey while about 21% of PCPs completed the entire survey and were used for analyses. Demographics of the participants showed that 72.3% identified as cis-gender female, 37.8% were 31-40 years old (range 21-70+), 53% identified as AANHPI, and 92.4% as non-Hispanic with 58.0% having lived either half or more than half of their childhood or adulthood in Hawai'i. 79% of the PCPs were MDs and 48.7% were within 10 years out of residency with 48.7%, 40.3% and 7.6% practicing pediatrics, family medicine and internal medicine respectively. 69% of the PCs practiced in community settings and were not affiliated with an academic center, university based clinic or Kaiser and 65% were a part of a non-profit practice. Most recent graduates were the most comfortable with providing medical services to TGD youth while most PCPs who provided services had been practicing for 25-30 years. About 95% and 80% of the providers were comfortable referring to mental health and gender specialists respectively. Pediatricians were more comfortable in managing menstrual suppression and GAHT in youth compared to their family and internal medicine counterparts. 66% of the respondents wanted to have more training in GAHT and lack of resources was the most common barrier.

Conclusion: We understand that these views may not reflect of those of all PCPs in Hawai'i. However, to increase services that lead to increase gender affirmation for TGD youth in Hawai'i more specific educational programs for PCPs are needed.

FRI-P-53: SOCIODEMOGRAPHIC DIFFERENCES IN HEALTHCARE EXPERIENCES IN A COMMUNITY-BASED SAMPLE OF TRANSGENDER AND GENDER DIVERSE PEOPLE IN THE UNITED STATES

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Presented by: Bex MacFife

Introduction/Background: Transgender and gender diverse (TGD) people experience barriers to healthcare, including discrimination and insufficient provider knowledge, which negatively impact health. Considering ongoing legislative attacks limiting TGD people's right to access healthcare, understanding healthcare experiences of TGD people across demographic groups and in varied sociopolitical contexts is critical to inform avenues for potential interventions and support.

Specific Aim: To describe variations in TGD people's healthcare experiences based on sociodemographic factors.

Materials and Methods: As part of a year-long study, baseline surveys and interview data were collected from a community-based sample of 158 TGD people living in Michigan, Nebraska, Oregon, and Tennessee between Fall 2019 – March 2020. Targeted recruitment efforts through community organizations, social media, and snowball sampling achieved a diverse sample. Eligible participants identified as TGD and 19 years or older. Participants reported their gender identity, assigned birth sex, age, race and ethnicity, urbanicity of area of residence, and income-level. Participants rated how they believed others within their current workplace/at school, city, and state viewed TGD people. Outcomes included whether the participant had a routine provider, ratings of provider knowledge about TGD people, time spent during appointments discussing gender-related topics, and healthcare satisfaction. Pearson's chi-squared and logistic regression determined differences in whether participants had a routine medical provider. ANOVA and linear regression determined differences in ratings of provider knowledge, time spent discussing gender-related topics, and healthcare satisfaction.

Results: Among participants, 38.2% identified as transmasculine, 31.2% as nonbinary, and 30.6% as transfeminine. The majority were assigned female at birth (66.9%). Average age was 33.06 years old (SD: 12.9).

Nonbinary people were less likely to have a medical provider (χ^2=12.27, p=.017), rated their providers' knowledge level less favorably (F(127,2)=7.49, p<.001), and spent less time during appointments discussing gender-related topics than transmasculine and transfeminine participants (F(129, 2)=10.10, p<.001). Nonbinary people were also less satisfied with their providers than transfeminine participants (F(76,1)=5.42, p=.023). People assigned female at birth, regardless of gender identity, viewed medical providers as less knowledgeable about TGD people than people assigned male at birth. The likelihood of having a medical provider rose significantly with age but was not associated with other outcomes. TGD people living in areas they believed to be more negative towards TGD people also viewed their providers as less knowledgeable (b=.346, 95% CI: .187, .504, p <.001), spent less time during appointments discussing gender-related topics (b=.206, 95% CI: .028, .383, p=.023), and lower healthcare satisfaction (b=.186, 95% CI: .068, .304, p=.002). There were no differences in any analyzed outcomes for people living in rural areas compared to suburban and urban areas, between racialized (BIPOC) and non-racialized (white) people, or by income level.

Conclusion: Healthcare experiences differ by gender identity such that nonbinary people have less access to routine care and less satisfaction with healthcare experiences. Local perceptions of TGD people have significant associations with experiences of provider knowledge and healthcare quality. Efforts to shift local perceptions also can potentially affect the health experiences of TGD people. Consequently, provider trainings must address nonbinary people's health needs and how sociopolitical context may influence TGD people's healthcare interactions.

FRI-P-54: Closing the Gap: Turning Point for LGBTQ+ Health

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Presented by: Alex Floyd

Introduction/Background: In 2018, One Colorado Education Fund (OCEF) conducted a multi-method survey of the health needs and experiences of more than 2,500 LGBTQ+ Coloradans, who shared their individual health stories and experiences. Closing the Gap: The Turning Point for LGBTQ Health serves as a comparison to the data collected and reported on in 2011 in Invisible: The State of LGBT Health in Colorado.

Specific Aim: The goal of this survey was to identify current health barriers and inequities, specific to LGBTQ+ Coloradans and elevate the needs of our community. The voices of our trans community were specifically highlighted and health inequities and barriers were explored in detail.

Materials and Methods: OCEF contracted with a third party, Simon Analytics, to conduct a 30 minute survey that was available online and in paper form from June 11, 2018 through September 30, 2018 that 2,572 qualified respondents completed. The survey was available in both English and Spanish. To be qualified, respondents needed to be a current Colorado resident, identify as LGBTQ+ or as a parent or legal guardian of a LGBTQ+ child, and complete the survey only once. OCEF recognizes transgender people have different experiences and identify in different ways. A sub-analysis of transgender health data was completed for this report, and for the purposes of this report, any respondent who identified as transgender female/transgender woman, transgender male/transgender man, two-spirit, intersex, non-binary/gender neutral, male and assigned female at birth, or female and assigned male at birth was included.

Results: The study found that while the LGBTQ+ community has made many advancements towards legal equality in the last few years, there is still much more work to do. Similar to their heterosexual and non-transgender peers, LGBTQ+ people still have difficulty in obtaining quality and affordable care. However, issues remain with finding providers who are knowledgeable about LGBTQ+ issues, their specific health needs, and who are respectful and affirming. Transgender Coloradans continue to experience worse health outcomes and greater disparities compared to their LGBQ+ counterparts, particularly in regards to discrimination, mental and behavioral health issues, and the high cost or potential denial of care due to insufficient insurance coverage.

Conclusion: While Colorado has come a long way with legal protections for our LGBTQ+ community the health inequities and barriers to care are still clearly negatively impacting health and quality of life, especially for trans Coloradans. OCEF has been able to utilize the information learned from this report to offer actionable recommendations for policy makers, health systems, and health care providers in effort to move towards a more fair and just Colorado for all.

Poster: Mental Health Across the Lifespan

FRI-P-56: Sociodemographic factors associated with suicide outcomes in transgender and gender diverse young adults

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Presented by: Avery Anderson

Introduction/Background: Transgender and gender diverse (TGD) populations have a higher prevalence of suicide outcomes compared to both cisgender, heterosexual peers and cisgender, sexual minority peers. Further, among TGD groups, young adults frequently demonstrate the highest risk compared to other age cohorts and are an often-overlooked population in the literature. Within suicide research, social determinants are especially important targets for intervention to reduce these preventable outcomes. Evidence supports sociodemographic differences in suicide risk; however, these relationships are not well-established for TGD young adults.

Specific Aim: The specific aims are to (1) examine the associations between sociodemographic factors and 12-month and lifetime prevalence of suicidal ideation (SI) and suicide attempt (SA) among TGD young adults, and (2) among TGD young adults with 12-month SI, examine the associations of sociodemographic factors and 12-month SA.

Materials and Methods: A secondary data analysis of the young adult (age 18-24 years) subpopulation of the 2015 U.S. Transgender Survey was conducted. Predicted probabilities of 12-month and lifetime suicide outcomes by gender identity, sexual orientation, race/ethnicity, homelessness, and poverty were estimated comparing fully adjusted models.

Results: The sample (*n*=11,840) mean age was 20.61 years (*SD*=2.06). Among the sociodemographic characteristics, the majority of young adults identified as assigned female at birth genderqueer/nonbinary (*n*=5107, 43.3%), White/Middle Eastern/North African (*n*=9513, 80.3%), and pansexual (*n*=2432, 20.5%). Most young adults reported they had not experienced homelessness (*n*=9355, 79.2%) and just over half lived above the poverty threshold (*n*=5595, 51.2%). All predicted probabilities were nearly or above 50% (*M* range=.47-.73) for 12-month SI; nearly or above 10% (*M* range=.08-.20) for 12-month SA; nearly or above 80% (*M* range=.79-.94) for lifetime SI; nearly or above one-third (*M* range=.31-.63) for lifetime SA; and at or above 15% (*M* range=.15-.27) for 12-month SI-to-SA. Gender identity, race/ethnicity, and homelessness were significantly associated with all suicide outcomes. Comparisons of specific gender identities were significant for all outcomes and varied based on the outcome. American Indian/Alaska Native TGD young adults had the highest predicted probabilities compared to other race/ethnicity groups. Experiencing homelessness accounted for the highest predicted probability for four of the five suicide outcomes. Further, having a heterosexual/straight sexual identity was among the lowest predicted probabilities for suicide outcomes and significantly differed from several other sexual identities.

Conclusion: Findings underscore the importance of heterogeneity among TGD young adults and the need for intersectional research within this population. Evidence-based suicide screening within TGD health settings is critical for risk identification and appropriate care planning. Particularly, urgent intervention research and policy advocacy is needed to reduce homelessness among TGD young adults toward decreasing risk for suicide. Elucidating sociodemographic characteristics that contribute to differential suicide risk is necessary for ensuring health equity for TGD populations.

FRI-P-57: GENDER DYSPHORIA AND QUALITY OF LIFE: THE ROLE OF FAMILY SUPPORT IN TRANSGENDER YOUTH

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Presented by: Bree Horrocks

Introduction/Background: Transgender youth experience disparities in mental health and quality of life compared to cisgender peers. Gender dysphoria is conceptualized as a contributor to poor quality of life and negative mental health outcomes in this population while parent support has been identified as a protective factor. However, these relationships have mostly been examined separately, and the ways in which parent support may interact with gender dysphoria to influence quality of life is largely unknown. Parental figures may play an important role in helping their child effectively manage their gender dysphoria, which could attenuate the impairment that this distress would otherwise cause.

Specific Aim: The aim of this project is to examine how transgender youths' experiences of family support and gender-related parental support influence the impact that gender dysphoria has on their quality of life.

Materials and Methods: Participants are transgender youth (N=414) 12 -18 years old who were initiating care at a multidisciplinary gender-affirming clinic in Dallas, TX. Participants completed the following measures at an initial assessment with a mental health provider in the program prior to starting medical treatment: Body Image Scale, Multidimensional Scale of Perceived Social Support (family support), Perceived Parental Attitudes of Gender Expansiveness (gender-related parental non-affirmation and acceptance), and PedsQL (psychosocial and physical quality of life subscales). Moderation analyses were conducted using SPSS. Predictor variables were centered. Multiple regressions were run to assess path and interaction significance to assess moderation effect. Gender dysphoria, family support, parent acceptance and non-affirmation, and the interaction terms of gender dysphoria and support were used as predictor variables and quality of life was the dependent variable.

Results: Results indicated that general family support had a moderating effect on the relationship between gender dysphoria and quality of life across the psychosocial ($b = -0.02$, $SE = 0.01$, $t = -2.11$, $p = .04$) and physical ($b = -0.03$, $SE = 0.01$, $t = -2.88$, $p < .01$) subscales of the PedsQL measure. The gender-related measure of parent acceptance had a moderating effect on the relationship between gender dysphoria and the PedsQL psychosocial ($b = -0.02$, $SE = 0.01$, $t = -2.36$, $p = .02$) and physical ($b = -0.02$, $SE = 0.01$, $t = -2.42$, $p = .02$) subscales while the gender parent support measure of non-affirmation had a moderating effect on the psychosocial subscale ($b = 0.02$, $SE = 0.01$, $t = 2.57$, $p = .01$). The significant interaction demonstrated that as parent support increases, the influence of gender dysphoria on quality of life decreases, and, conversely, greater levels of gender dysphoria are more strongly linked to lower quality of life in the presence of higher level of parent non-affirmation.

Conclusion: Increasing parent support may have a broader impact by decreasing the extent to which gender dysphoria impacts quality of life. Findings indicate that lack of affirmation may have a greater impact on internal functioning compared to physical health. It is possible non-affirmation may have a more immediate impact on mental health whereas non-affirmation may relate more to physical functioning longitudinally.

FRI-P-58: FAMILY ENVIRONMENT, COMING OUT AGE AND MENTAL HEALTH OUTCOMES IN EARLY PUBERTY TRANSGENDER ADOLESCENTS

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Presented by: Melanie Camejo Coffigny

Introduction/Background: Transgender youth are a vulnerable population who are often underrepresented and understudied in research. This population is at high risk of negative mental health outcomes, likely related to various environmental stressors. This study explores the relationship between family environment, coming out age (COA), and mental health outcomes in a sample of early pubertal transgender youth undergoing gender affirming hormone therapy.

Specific Aim: (1) Explore the differences in depression and anxiety scores between transgender and cisgender youth during early pubertal stages, (2) examine the association between family environment

and COA, and (3) assess the effects of COA and family environment on depression and anxiety scores in transgender youth.

Materials and Methods: As part of an ongoing longitudinal study at Stanford University, 19 transgender (84.2% female) and 20 cisgender (65% female) teens completed self-report measures on anxiety (Multidimensional Anxiety Scale for Children, MASC-2), depression (Children's Depression Inventory, CDI-2), and family environment (Family Gender Environment, FGE). At baseline, an independent sample *t* test was used to examine specific aim (1), whilst Pearson's *r* correlation and linear regressions were used for specific aims (2) and (3).

Results: There was a significant difference in MASC-2 (p=.005) and CDI-2 (p=<.001) scores. Transgender participants had greater mean anxiety scores (M=58.74, SD=12.88) and depression scores (M=63.16, SD=17.47) compared to cisgender participants (M=48.30, SD=8.83, and M=46.75, SD=6.49, respectively). Cohen's *d* yielded 0.95 for MASC-2 and 1.25 for CDI-2, indicating large effect sizes. There was a positive, low-moderate relationship (r=.337) between FGE and COA for transgender participants, but the correlation was not significant (p=.159). COA and FGE were not a significant predictor of CDI-2 nor MASC-2 scores.

Conclusion: The results displayed higher reported scores of depression and anxiety among this sample of transgender adolescents compared to a sample of cisgender peers, supporting earlier evidence that transgender youth are at a higher risk of negative mental health outcomes. Surprisingly, there was not a significant relationship between positive family environment and the age of coming out, indicating that familial support status may not influence the age at which transgender children come out, at least in our sample of early pubertal youth. In addition, family environment and the age of coming out did not predict levels of anxiety or depression. Further investigation is needed to explore possible predictors separate from familial support that may influence the COA and mental health outcomes. The operationalization of 'coming out' also merits further evaluation in future research given the complexity of this construct.

FRI-P-59: Centering the voices of Black/African American transgender and gender-diverse adolescents and young adults in mental health services: Findings from a qualitative, community-partnered study

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Presented by: Zayani Lavergne-Friedman

Introduction/Background: Mental health service under-utilization is well-documented within Black/African American communities with little research exploring access and mental health disparities among Black/African American transgender and gender-diverse (TGD) adolescents and young adults (AYA) specifically.[2,3,4,6,7,10] Thus, mental health providers are often unequipped to provide culturally-responsive services that are relevant to their Black/African American and TGD identities. Moreover, Black/African American TGD AYA may not be "out" in spaces that traditionally act as linkages to formal mental health services (e.g., schools, medical clinics). In addition, the impact of anti-Blackness within their community leads to stigma around mental health.[4,6,10] Together, these factors leave Black/African American TGD youth to navigate their mental health challenges, including stress, social isolation, suicidality, and the dual impact of anti-Blackness and transphobia without culturally-informed mental health support.[6,7,10,12]

Specific Aim: Specific Aims:
1. Identify key themes from interviews with 20 self-identified Black/African American TGD AYA regarding barriers and facilitating around accessing mental health services.
2. Describe program recommendations to improve the quality and accessibility of gender-affirming, culturally-informed mental health services for Black/African American TGD AYA.

Materials and Methods: Semi-structured interviews regarding barriers and facilitators of accessing and engaging in mental health services with 20 Black/African American TGD AYA (ages 18-27 years-olds) will be conducted. Participants will include those who have and have not accessed mental health services. Transcripts of interviews will be analyzed in Atlas.ti using a Thematic Analysis approach. This study was approved by the institutional IRB.

Results: Findings will provide insight into Black/African American TGD AYA's experiences of mental health services. Participants will provide insight into mental health service utilization, features of affirming mental health services and providers, and barriers to access. Participants will also identify factors that serve as barriers and facilitators around accessing and engaging mental health services, which will be organized into program recommendations to inform culturally-informed, gender-affirming mental health services.

Conclusion: This study aims to address current gaps within gender-affirming mental health services for Black/African American TGD AYA. Further, these findings will inform recommendations for best practices to improve services for Black/African American TGD AYA.

FRI-P-60: MENTAL HEALTH CARE IN HAWAIʻI FOR GENDER DIVERSE YOUTH: SURVEY OF CURRENT PRACTICE, COMFORT LEVEL AND DESIRE FOR TRAINING

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Presented by: Christine Brady

Introduction/Background: The Williams Institute estimates 1.4% of youth 13-17 years old identify as gender diverse in the United States. There are variations by state and each state may have individualized challenges to accessing gender affirming mental health and medical care. Hawaii in particular has a unique blend of cultures, geography, and resources making it difficult for the estimated 2.15% of gender diverse youth there to find services. There is a national shortage of mental health resources with 1 provider for every 350 people, therefore, it is critical in isolated places like Hawaiʻi, that general provider be comfortable delivering gender affirming services.

Specific Aim: To understand the gender affirming services being currently provided by mental health providers in Hawaiʻi and assess baseline levels of comfort and barrier to providing these services.

Materials and Methods: An electronic link was sent targeting psychologists, master's level clinicians, psychiatrists, and social workers in Hawaiʻi. Codes were distributed through professional and educational organizations and events from April 2023 to September 2023. In addition to demographics, respondents were asked about their current services, level of comfort providing these services (using a Likert scale) and finally their level of interest in learning more about specific topics and barriers related to the care of TGD youth.

Results: Approximately 142 providers from all Hawai'ian islands participated in the survey while about 59% (n = 84) of providers completed the entire survey and were used for analyses. Demographics of the participants showed that 65.2% identified as cis-gender female, 41.6% were 31-40 years old (range 21-70+), 58% identified as AANHPI, and 84.3% as non-Hispanic with 58.0% having lived either half or more than half of their childhood or adulthood in Hawai'i. 26% of the respondents were psychologists, 10% were psychiatrists and a majority (60.7%) had 10 years or less of licensed practice. Regarding current services, a majority (83%) of the respondents were providing general therapeutic services to gender diverse clients, yet 43% indicated they were not comfortable or confident providing basic therapeutic services to this population. The number of providers delivering more specialized and gender specific services, such as evaluation, education and informed consent discussion around medical interventions,

dropped considerably (about 20%). Providers with 6-10 years of licensed practice were more likely to be currently providing gender affirming services and felt more comfortable with those services. About a third of respondents endorsed a desire to learn more about gender specific topics with time constraint and difficulty finding relevant training opportunities and the most significant barrier to obtain further training.

Conclusion: Given the lack of gender affirming resources in Hawai'i we sought to assess current mental health practices and the comfort level of providers. We found a majority of respondents in this sample are providing general therapeutic services and are encountering gender diverse youth in their general practice; however, many have discomfort or low confidence when it comes to delivering tailored services. Moreover, very few are delivering gender specific education and services. The results indicate that culturally informed gender training would be beneficial to providers to increase knowledge and service delivery.

Poster: Intersex/Differences of Sex Development

FRI-P-61: THE IMPACT OF SEX ASSIGNED AT BIRTH AND CAREGIVERS' SUPPORT ON GENDER-DIVERSE YOUTHS' DEPRESSION LEVELS

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Presented by: Tayon Swafford

Introduction/Background: Gender-diverse youth (GDY) experience and are exposed to psychosocial challenges at a rate that is disproportionate to their cisgender peers. While research has shown caregivers to be a source of support for their GDY, there is a dearth in understanding whether and to what extent caregivers' acceptance impacts levels of depression. Addressing this dearth is critical to helping caregivers better understand their GDY's lived experience and how to best meet their needs.

Specific Aim: This presentation has two specific aims: First, to review a dataset to understand the impact that perceived caregiver acceptance had on GDYs' level of depression. Second, to provide strategies to help caregivers learn how to become more accepting of their GDY.

Materials and Methods: In a study of 267 dyads of GDY and a caregiver, the youth rated their depression levels and their perceptions of their caregiver's acceptance of their gender-diverse identity, while the caregivers rated their perceptions of their acceptance of their youth's gender identity. Two multiple regression models were analyzed. The first model explored the impact of age, sex assigned at birth, and youths' interpretations of their caregiver's acceptance of the youths' depression. The second model examined the impact of age, sex assigned at birth, and the differential between how GDY and their caregivers perceive the caregiver's level of acceptance of youth's identity on the youths' depression. Due to a small sample size, youth who identified as nonbinary were not included in the analysis.

Results: Youth assigned male at birth had higher levels of depression than youth assigned female at birth ($\bar{x}$ = 42.8 versus 48, t = 3.66, p <.001). However, there were no statistically significant differences between youth assigned male and female at birth on their interpretations of their caregiver's acceptance, their caregiver's ratings of their acceptance, or in the differential between the youths' and caregivers' interpretations of the caregiver's support. Within the analysis of youths' interpretations of their caregiver's support, being assigned male at birth contributed to higher depression scores (β = .205, t= 3.66, p <.001), while higher interpreted levels of support predicted lower depression scores (β = -.153, t= -2.766, p <.01). In the analysis of the differential in interpretations of support, being assigned male at birth also contributed to higher depression scores (β = .247, t = 4.151, p <.001) as did a larger differential in interpretations of support (β = .247, t = -2.58, p <.001). Patient age did not impact depression levels in either analysis.

Conclusion: This study shows that youth assigned male at birth have higher levels of depression and that being assigned male at birth contributes to higher levels of depression even when caregiver supports are factored. This is likely due to greater stigma projected against transgender females. The study also supports greater attention and strategies to be given to caregivers of GDY as youths' perceptions of their caregiver's support predicted lower depression scores. Interventions to increase caregivers' support of transfeminine youth may have the potential to reduce depression the most.

Poster: Non-surgical Body Modifications (e.g., hair removal, binding, tucking)

FRI-P-62: TRANSFEMININE INDIVIDUALS' EXPERIENCES OF GENITAL TUCKING AND CORRESPONDING HEALTH EFFECTS

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Presented by: Sangeeta Subedi

Introduction/Background: Genital tucking, defined as the use of non-surgical methods to reduce the appearance of the penis and/or testes, is a common gender-affirming practice among transfeminine individuals (i.e., individuals assigned male at birth who identify with a gender other than "man"). Gender-affirming practices, like genital tucking, are often critical to reducing gender dysphoria and improving mental health for transgender women and transfeminine individuals. However, few studies have specifically examined transfeminine individuals' experiences of genital tucking. While generally safe if done properly, improper tucking can lead to negative health outcomes such as testicular torsion. There is a critical need to develop better resources about safe tucking practices for transfeminine individuals and for healthcare providers working with transfeminine individuals.

Specific Aim: *Specific Aim One:* To investigate the factors that influence transfeminine participants' experiences of tucking, including participant demographics, the sources informing participants' tucking practices, and the methods and materials used for tucking.

Specific Aim Two: To investigate the self-reported health impacts of tucking among survey participants, as well as participants' experiences discussing tucking with their healthcare providers.

Materials and Methods: This study will be open to anyone who lives in the United States, is over the age of 18, identifies as transgender and/or transfeminine/nonbinary and was assigned male at birth (AMAB), has tucked at least once, and is able to complete the survey in English. Participants will be recruited via convenience sampling through community listservs and social media. The target sample for this study is 100 participants (minimum n=50, maximum n=200), and data collection will take place from June through August 2023.

Participants will complete an online survey composed of multiple-choice and open-ended questions, split into three parts: 1. Demographic information (age, race, gender, geographic location, socioeconomic data, and self-rated mental and physical health); 2. Information about gender-affirming care (use of hormones, gender-affirming surgery); and 3. Information about tucking practices (e.g. duration and frequency of tucking, methods of tucking, health issues attributed to tucking, comfort discussing tucking with medical professionals).

Results: Descriptive statistics (means, proportions, percentages) will be reported for participant demographics, types of gender-affirming care accessed, and tucking practices used. Bivariate analyses (chi-square, t-tests, Pearson's correlation) will be performed to explore how: 1. Demographics relate to access to gender-affirming care, sources of information about tucking, and specific tucking practices, and 2. How specific tucking practices relate to health outcomes and experiences with healthcare professionals. If sample size allows, results from the bivariate analyses will inform additional adjusted

regression modeling with variables of interest. Open-ended questions will be coded and analyzed by the study team using inductive content analysis and presented alongside the quantitative results.

Conclusion: This study adds to the literature by quantitatively and qualitatively assessing transfeminine individuals' experiences with genital tucking. This study is among the first to explore the relationships between transfeminine individuals' demographics, previous experiences accessing gender-affirming care, and specific tucking practices and outcomes. The results of this project will help inform the development of better resources about safe tucking practices for transfeminine individuals and their healthcare providers.

Poster: Surgery

FRI-P-63: Access to gender-affirming breast or chest surgery in a sample of transgender adolescents living in Pennsylvania

Zaine Roberts[1,2], Mia-Megan Foo[1,2], Claire Roden[2]
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Presented by: Zaine Roberts

Introduction/Background: Transgender youth experience significant barriers regarding access to gender affirming care, medical autonomy, and satisfaction with healthcare settings compared to their cis-gender counterparts (Safter et al., 2016). For youth in rural settings, resources are often sparse, thus issues of provider scarcity, distance to appointment setting, gender affirmation and financial concerns are more exaggerated (Kearns et al., 2021). For example, youth desiring surgical intervention of the chest or breast living in rural areas may have to travel significant distances for consultation, surgery, and recovery. Existing research shows these factors are compounded by financial insecurity and time commitment for consultation and surgical intervention (El-Hadi et al., 2018). Access to quality gender-affirming care for transgender youth in rural settings is insufficient to meet the needs of the population.

Specific Aim: This study seeks to assess surgical intervention, experienced barriers, and duration of time in care prior to receipt of surgery in a sample of transgender adolescents living in rural Pennsylvania. We hypothesize that there are a variety of reasons for delay.

Materials and Methods: Medical records of transgender youth aged 10-24 seeking specific gender-affirming healthcare between June 1, 2020 and July 1, 2022 at a single tertiary, academic children's hospital in the Midatlantic region of the United States were reviewed for demographics, specific stated goal of chest or breast surgery for gender-affirmation, and when surgery was completed. Their desire for care, goals of transition, and access to affirming surgery were recorded over their cumulative visits with a gender-affirming clinician.

Results: A total of 177 patient records were available. Of this population, 49 patients had a stated goal of surgery of the chest wall or breast at some point during their treatment course, and 7 youth received surgery. The patients had a mean duration in medical care of 531 days (standard deviation; 276.42 days) before accessing surgery. The range of distance travelled spanned from 64 to 1113 miles to obtain surgical intervention, with a median distance of 113 miles (standard deviation; 509.75 miles). Of the 42 youth that expressed a desire for surgery, but did not obtain it during the study period, they reported barriers that included age restrictions from insurance or surgeons (n = 7, 17%), referral letters (n = 18, 43%), inability to locate surgeons (n = 13, 31%), financial concerns (n = 5 , 12%), factors related to parent/legal guardian (n = 8, 19%) and waiting, but has some type of appointment scheduled (n = 20, 48%).Finally, all youth that received gender-affirming surgery reported support for their decision to obtain surgery.

Conclusion: Transgender youth experienced multiple barriers in their desire to access chest or breast surgery. The youth travelled considerable distances to obtain their desired intervention and waited, on average, almost two years after initiating medical treatment for gender dysphoria to undergo surgical

care. Transgender adolescents desired affirming care, maintained similar goals for affirming care across appointments, and reported positive outcomes from the attainment of surgical intervention.

FRI-P-64: TOP SURGERY BREAST CANCER SCREENING PROTOCOL, INTERMOUNTAIN HEALTH

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Presented by: Steven Grant

Introduction/Background: Despite the increasing incidence of gender affirming top surgery (ASPS, 2020), evidence-based screening guidelines specific for transgender and gender diverse (TGD) individuals do not exist (Salibian et al., 2021).
No practical protocol has been published at this time to address AFAB TGD individuals pursuing top surgery, therefore Intermountain Health identified development of a standardized protocol as a high priority project.

American Society of Plastic Surgeons (ASPS). (2021). 2020 Plastic Surgery Statistics Report. https://www.plasticsurgery.org/documents/News/Statistics/2020/plastic-surgery-statistics-full-report-2020.pdf
Salibian, A. A., Axelrod, D. M., Smith, J. A., Fischer, B. A., Agarwal, C., & Bluebond-Langner, R. (2021). *Oncologic Considerations for Safe Gender-Affirming Mastectomy: Preoperative Imaging, Pathologic Evaluation, Counseling, and Long-Term Screening*. Plastic and Reconstructive Surgery 147(2), 213e-221e. https://doi.org/10.1097/PRS.0000000000007589

Specific Aim: No practical protocol has been published at this time to address AFAB TGD individuals pursuing top surgery, therefore Intermountain Health identified development of a standardized protocol as a high priority project.

Materials and Methods: Current breast cancer screening guidelines and recommendations were reviewed from the World Professional Association of Transgender Health, American College of Radiology, and National Comprehensive Cancer Network. Institutional guidelines from Intermountain Health Radiology and Precision Genomics were reviewed. A literature search on top surgery screening recommendations from the past 5 years was performed. Based on the above information, a screening tool was developed to replace the former practice of obtaining breast imaging on patients of all ages seeking top surgery. A genetics screening questionnaire was implemented simultaneously based on recommendations from the institutions genetics counselors.

Results: Preliminary results show a decrease in the percentage of patients undergoing breast imaging following top surgery consultation as well as an increase in genetics counseling referrals. Due to the recent implementation of the screening protocol, ongoing review of results is indicated.

Conclusion: Implementation of a standardized breast cancer screening protocol that addresses imaging and genetic risk has led to an expected decrease in imaging requirements in the population seeking care at our plastic surgery clinic. Opportunity exists to explore the financial benefit, the effect on anxiety and dysphoria related to breast imaging, and patient satisfaction with the updated protocol. We recommend that each institution carefully identify existing resources and expertise to determine the best protocol for their local populations needs.

FRI-P-65: GENDER-AFFIRMING SCROTECTOMY: INITIAL DESCRIPTION AND OUTCOMES

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Presented by: Kitan Zoltin

Introduction/Background: Patients may seek gender-affirming orchiectomy and scrotectomy (GAOS) to alleviate dysphoria related to the scrotum and testes, while allowing for penetrative intercourse, if desired. However, techniques and outcomes of scrotectomy in this specific setting have not been described to date. Here we discuss our initial experience with GAOS as an option for patients who do not necessarily desire other gender-affirming genital surgeries.

Specific Aim: To describe indications, surgical techniques, and postoperative outcomes for GAOS.

Materials and Methods: All patients who had undergone GAOS procedures from 2021 to 2022 at our institution were reviewed. The World Professional Association for Transgender Health (WPATH) criteria for surgical treatment were met for all patients preoperatively. In addition, patients expressed understanding that vaginoplasty would not be recommended after scrotectomy. Patients were offered a choice of two approaches depending on their surgical goals: excision of a majority of scrotal tissue and primary closure of the perineal wound, or excision of all rugated skin with mons and groin (Y-flap) advancement. Preoperative demographic data, baseline sexual function, intraoperative findings, and postoperative outcomes were collected. Patient-reported outcomes (PROs) derived from the PROMIS ® Sexual Function questionnaires were sent to all patients postoperatively and collected.

Results: Five patients underwent GAOS during the study period. Median age was 29 years and median preoperative duration on hormones was 16 months. All patients reported dysphoria related to the scrotum and testes, and wished to preserve the phallus. Three of the five patients elected for primary closure, while two desired Y-flap perineoplasty. Median operative time was 152 min and median resected scrotal area was 96 cm2; all patients were discharged home the same day. At median follow up of 97 days, all patients reported satisfaction with the surgical outcome. One patient who had Y-flap experienced wound dehiscence requiring operative revision. Three of five patients completed detailed questionnaires regarding resolution of dysphoria and preservation of sexual function. All patients who experienced postoperative complications reported being sexually active with the ability to achieve erection and orgasm within the last thirty days of the survey collection, and no change to their libido. Further patient follow-up is being collected.

Conclusion: GAOS is a well tolerated procedure that can reasonably address dysphoria related to the scrotum and testes. It is associated with high satisfaction and low risk of postoperative complications causing long-term sequelae. Further and long-term study of this emerging procedure is warranted.

FRI-P-66: Gender Affirming Surgery and Pain in Adolescents: Teen and Parent Experiences

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Presented by: Corrin Murphy

Introduction/Background: Adolescents seeking gender affirming medical care face unique biopsychosocial challenges, including experiences of discrimination and stigma. Transgender and gender diverse (TGD) adolescents often undergo gender affirming surgery (GAS). While there is an increase in GAS for TGD adolescents in the U.S., little is known about the pain experiences in the post-surgical period among these youth. There have been no studies to our knowledge that examine the psychological functioning of parents and their ability to handle their child's distress, which may be affected by their child's post-GAS pain experiences. Parental responses to their children’s pain and distress may, in turn, influence their child’s pain experience during the recovery period.

Specific Aim: This study aims to 1) describe TGD surgeries, pain experiences, and psychological functioning in the first month post-GAS, and 2) explore associations between parental functioning and responses to their child’s pain.

Materials and Methods: Adolescents (ages 14-19; Mage=16.9 years) undergoing GAS (n=29) and their parents (Mage=51.1 years) were selected from an ongoing longitudinal dyadic study of adolescents receiving opioid prescriptions for acute pain management. Dyads were recruited < 72 hours after GAS to participate in an ongoing study about pain experiences and pain management after receiving an opioid for an acute pain condition. Dyads reported on general psychological functioning (National Institutes of Health PROMIS measures), pain-specific measures (Pain Catastrophizing Scale), and ability to tolerate distress (Distress Tolerance Scale).

Results: Adolescents reported gender identity as trans woman/feminine (3.4%), trans man/masculine (86.2%), and nonbinary/gender diverse (10.3%). Most were undergoing top surgery procedures (89.7%). Adolescents reported moderate past 7-day pain intensity (0-10 NRS; M=2.55, SD=1.74), and 72.4% endorsed experiencing pain at least once a week in the past 30 days. PROMIS pain interference T scores ranged from 36-74 (M=56.7). Clinically elevated (T >60) PROMIS anxiety, depression, and fatigue were reported in 34.5%, 41.4%, and 51.7% of teens, respectively. 41.4% of parents reported elevated fatigue levels, 10.7% depression, and 13.8% anxiety.

Nonparametric correlations revealed parent pain catastrophizing was associated with catastrophizing about child pain (r_s = 0.45; p=0.01), parent fatigue (r_s=0.46; p=0.01), parent distress regulation (r_s = -0.44; p=016), parent depression (r_s = 0.57; p=0.001), and parent pain interference (r_s = 0.53; p=0.003). Depression was also associated with distress tolerance (r_s = -0.41; p=0.029). Catastrophizing about their child's pain was associated with both distress tolerance and regulation subscales about their child's distress (r_s = -0.48; p=0.009; r_s = -0.64; p<0.001), fatigue (r_s = 0.55; p=0.002) and anxiety (r_s = 0.41; p=0.031).

Conclusion: TGD adolescents report elevated levels of anxiety, depression, and fatigue during the post-surgical period. Parents of TGD adolescents report elevated fatigue symptoms that may affect responses to their own pain and their children's pain experiences. A relatively small proportion of parents reported elevated depression, anxiety, and pain catastrophizing, which can influence child pain outcomes. More dyadic research should be done to specifically target post-surgical pain experiences of TGD adolescents to better understand their pain and functioning and the impact parental functioning may have on outcomes within this population.

FRI-P-68: POSTOPERATIVE PAIN AND OPIOID USE IN TRANSGENDER AND NONBINARY PATIENTS AFTER MASCULINIZING TOP SURGERY

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Presented by: Victoria Dahl

Introduction/Background: Top surgery is the most frequently performed gender-affirming surgical procedure.1 Due to many similarities between masculinizing top surgery and mastectomy for malignancy, transgender and nonbinary (TGNB) patients that receive this procedure are likely to experience comparable amounts of postoperative pain. However, in contrast to mastectomy for breast cancer, postoperative pain outcomes have yet to be adequately assessed for top surgery in the transgender and nonbinary (TGNB) community.

Specific Aim: The purpose of this study is to evaluate postoperative pain and practices for pain management in TGNB patients that receive masculinizing top surgery at our institution.

Materials and Methods: Retrospective review identified 50 consecutive patients with documented gender dysphoria that underwent masculinizing top surgery between June 2020 and February 2023. Information regarding demographics, medical history, surgical technique, anesthetic pain regimens, and available reported pain scores were extracted from documented clinic or operative notes. SPSS v28 was used for statistical analysis.

Results: Fifty patients had a mean age of 28.2 years and BMI of 28.3 kg/m2. Average pain score recorded in the post-anesthesia care unit (PACU) was 3.26, with 38% of patients (n=19) having pain classified as moderate to severe. Preoperative and intraoperative pain regimens did not have a significant effect on PACU pain scores ($p>0.151$). Patients with moderate and severe PACU pain scores received pain medication in the PACU significantly more often than patients with mild scores (100% vs 31%; $p<0.001$). The pain score in the PACU was also positively correlated with body mass index (BMI) ($p=0.041$), with upwards of 30% of patients (n=5) with a BMI greater than 30 reporting pain categorized as severe (Figure 1). Eighteen total patients (36%) reported pain during a follow-up clinic visit. Compared to patients with mild PACU pain score, patients that had moderate or severe pain had significantly more reports of postoperative pain in clinic (45% and 30%; $p<0.001$) and more medication refill requests (19% vs 6.4%; $p<0.001$). Patients that self-reported opioid consumption were also 36% more likely to report pain during follow-up visits than the patients that took NSAIDs only (95% CI 0.22-0.50; $p<0.001$), Figure 2.

Conclusion: Outcomes of this study suggest that the pain experienced after masculinizing top surgery can be significant, emphasizing the importance of pain management in the TGNB population. It is possible that TGNB patients are being overprescribed postoperative opioid medications, as taking an opioid medication did not decrease reported pain on patient follow-up. Patient factors such as BMI may also play a role in the amount of postoperative pain that TGNB patients experience., Prospective studies with greater sample sizes are indicated to identify risk factors for poor pain control and to further characterize the pain experience and optimal treatment for it.

FRI-P-69: PAIN OUTCOMES IN TRANSGENDER AND NONBINARY PATIENTS AFTER MASCULINIZING TOP SURGERY: A REVIEW OF THE LITERATURE

Victoria Dahl, Emily Finkelstein, Enrique Anzola, Sara Danker
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Presented by: Victoria Dahl

Introduction/Background: Approximately 1.5 million adults identify as transgender or non-binary (TGNB) in the United States, with top surgery being the most requested gender-affirming surgery (GAS) in this population. Chronic pain is a negative sequela of mastectomy for breast cancer, reported in up to 68% of patients postoperatively. Despite some technical similarities between mastectomy for malignancy and masculinizing top surgery, studies assessing postoperative pain outcomes in the TGNB community are limited.

Specific Aim: Aims: to review the evidence in the current literature regarding the estimated prevalence and severity of postoperative pain following masculinizing top surgery in the TGNB population.

Materials and Methods:

A search was conducted on Pubmed, Embase, Web of Science, Pysch INFO, and clinicaltrials.gov to identify records describing any relationship between masculinizing top surgery in TGNB patients and post operative pain outcomes using keywords. All studies must include patients that underwent masculinizing top surgery, identify as TGNB, and have at least one reported clinical outcome related to postoperative pain.

Results: Of the 732 reviewed studies, 10 met inclusion criteria, with a total of 1,001 evaluated patients. All but five patients (0.5%) identified as transgender men or non-binary. Average patient age was 25.83 years, and body mass index (BMI) was 26.5 kg/m2. Two studies (20%) included long term follow-up pain outcomes (greater than 6 months), demonstrating that 8.8-27.8% of these patients reported chronic postoperative pain. Three studies (28%) reported data on postoperative opioid consumption, with an average of 39.8 (+/-16.9; range 22.3-58) morphine milliequivalents. Six studies categorized pain in the first 24 hours postoperatively, of which, 33.7% of patients (+/-12.7%; range 12.5-50%) reported pain that was moderate to severe. Numerical VAS or NRS scores were used to measure pain outcomes in four

studies (43%), patient-reported descriptions not associated with a numerical score were used in another three (22%), and two (11%) studies grouped the VAS or NRS scores into subclasses of mild, moderate, and severe. In addition to the two studies that demonstrated higher BMI positively correlates with greater pain scores, grouped analysis of individual patient BMI throughout all included studies (n=339) yielded a similar positive correlation (R2=0.7421).

Conclusion: Postoperative pain following masculinizing top surgery has not been thoroughly evaluated in the current literature, especially for assessments of chronic or long-term pain outcomes. Pain measurement methodology was inconsistent in available studies, and granular data was unavailable for many individual patients. Our results may suggest that increased BMI contributes to greater postoperative pain scores, though the evidence is limited. The authors encourage future research efforts directed towards evaluating postoperative pain outcomes and management after GAS in the TGNB population.

Poster: Reproductive and Sexual Health Sciences

FRI-P-70: COMPARING VAGINAL CUFF CLOSURE TECHNIQUES FOR POSTOPERATIVE PAIN AND GENDER DYSPHORIA IN TRANSGENDER MEN UNDERGOING TOTAL LAPAROSCOPIC HYSTERECTOMY

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University of Miami Miller School of Medicine, Miami, FL, USA

Presented by: Rebecca Barnett

Introduction/Background: Total laparoscopic hysterectomy (TLH) is the preferred surgical approach for transgender men (TGM). Pain associated with TLH has been studied in TGM, though unrelated to vaginal cuff closure (VCC) technique. Gender dysphoria (GD), distress associated with discordance between assigned sex and identified gender has also not been assessed with relation to TLH. We assessed post-operative pain and GD following TLH in TGM using two VCC methods.

Specific Aim: The purpose of this study is to assess post-operative pain and GD following TLH in TGM using two different surgical techniques for VCC. We hypothesize that closure using a vaginal technique would produce greater reports of perioperative pain and GD relative to an entirely laparoscopic closure technique due to unique considerations of this patient population (e.g. vaginal atrophy, gender dysphoria, nulliparity, etc.). Therefore, this study seeks to understand the association, if any, between closure technique and postoperative pain and GD.

Materials and Methods: Adult TGM who underwent TLH between September 2020 and March 2023 were included. Hysterectomies were performed using standard laparoscopic technique by the same surgeon at a university hospital. VCC was performed vaginally or laparoscopically using Endostitch device or via robotic approach. Demographic, historical (i.e., years on testosterone), and surgical data (e.g., procedure time) were collected via REDCap electronic surveys (IRB# 20200965). Pain and GD were surveyed pre-operatively and post-operatively on days one, 14, and 42. General, abdominal, and genital pain, and general and genital GD were assessed with visual analogue scales from 0-10. Changes in mean pain and GD over time were calculated using ANOVA with repeated measures. Statistical analyses were conducted using SPSS Version 28 (IBM Corp.).

Results: Thirteen participants ages 18-67 (mean=31) were included. Sixty-two percent (n=8) and 38% (n=5) of participants underwent VCC via laparoscopic or vaginal approaches. Mean years on testosterone were 3.25 and 5.4 and mean procedure time was 125 and 113 minutes in the laparoscopic and vaginal groups, respectively (p= 0.339, p =0.292). Mean scores for general, abdominal, and genital pain were not significantly different between groups (p=.492, p=.255, p=.476). Mean scores for general and genital GD were not significantly different between groups (p=.454, p=.347).

Conclusion: Our results suggest either VCC method can be performed during TLH for TGM without differences in postoperative pain or GD, though a larger sample is needed. Surgical planning need not be limited by resource availability, surgeon experience, or cost.

Poster: Research Methods (e.g., CBPR, measurement, epidemiology)

FRI-P-71: TRANSGENDER AND GENDER DIVERSE YOUTH IN HEALTH SYSTEMS AND NATIONAL SURVEY DATA

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Presented by: Nicole Kahn

Introduction/Background: Challenges exist in accurately identifying transgender and gender diverse youth (GDY) in health system data. Though prior studies have used the presence of a gender dysphoria (GD) diagnosis as a proxy for gender diversity, many GDY have not received a GD diagnosis, limiting our understanding of the care needs of GDY more broadly.

Specific Aim: To identify and compare demographic differences in estimates of the GDY population from health system databases and a national survey of youth.

Materials and Methods: This cross-sectional study is a secondary analysis of a large administrative dataset formed by eight pediatric member institutions of the PEDSnet learning health system network and data from the Youth Risk Behavior Survey (YRBS). The PEDSnet sample included 14-17 years old patients who had ≥2 encounters at a member institution before March 2022, with at least one encounter occurring in the 18-month period between September 2020 and March 2022. The YRBS sample included 14–17-year-old in-school youth from the 2017, 2019, and 2021 survey years. Adjusted logistic regression models were used to calculate the average predicted probabilities of GD diagnosis (PEDSnet) and self-reported transgender identity (YRBS) by demographic characteristics. Post-hoc comparisons with the Bonferroni correction for multiple tests were used to compare predicted probabilities between demographic groups.

Results: The PEDSnet sample included 392,348 patients and the YRBS sample included 262,801 youth. The average age was 15.5 years (SD=1.1) for PEDSnet and 15.7 years (SD=1.5) for YRBS. Each sample was split evenly by sex. 3,453 (0.9%) patients in PEDSnet had a GD diagnosis, and 5,139 (1.9%) youth in YRBS self-identified as transgender (1.6% in 2017, 1.4% in 2019, 2.5% in 2021). Adjusted logistic regression (Figure 1) indicated significantly lower likelihood of GD diagnosis among patients whose EMR-reported sex was male (average predicted probability [Pr]=0.47%, 95% CI: 0.34-0.60%) compared to patients whose EMR-reported sex was female (Pr=1.54%, 95% CI: 1.12-1.97%) and among Asian (Pr=0.51%, 95% CI: 0.33-0.68%), Black (Pr=0.31%, 95% CI: 0.21-0.41%), and Hispanic/Latine (Pr=0.61%, 95% CI: 0.43-0.79%) patients compared to White (Pr=1.37%, 95% CI: 1.00-1.75%) and multiracial (Pr=1.48%, 95% CI: 1.03-1.93%) patients. In contrast, only youth who were assigned male at birth (Pr=1.69%, 95% CI: 1.45-1.93%) had a significantly lower likelihood of reporting a transgender identity compared to youth who were assigned female (2.13%, 95% CI: 1.89-2.37%) in the YRBS sample.

Conclusion: GDY are underrepresented in national health system data, particularly those whose EMR-reported sex is male and those who are Asian, Black, and Hispanic/Latine, compared to national survey data. Collecting more accurate gender identity information in health systems and surveys may help to

further understand health disparities and improve access to services for groups of GDY who are currently underrepresented in health systems.

FRI-P-72: ASYNCHRONOUS ONLINE FOCUS GROUPS FOR IMPROVING PARTICIPATION IN TRANSGENDER AND GENDER DIVERSE HEALTH RESEARCH

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Presented by: Carly Kelley

Introduction/Background: Although transgender and gender diverse (TGD) individuals are at an increased risk for negative health outcomes, TGD health research has historically been limited. While this is partly due to methodological challenges (such as defining the population, achieving adequate sample size, and funding), it is also due to fear and mistrust of the research community and lack of access, time, and finances. During a time when anti-trans legislation is escalating across the US, TGD individuals may face even greater concerns about discrimination and personal safety which will negatively impact TGD health research recruitment and retention. Asynchronous online focus group (AOFGs) are a feasible and advantageous research method to overcome these challenges to TGD research within this tenuous political climate.

Specific Aim: To demonstrate the strength of AOFGs in fostering increased participation, openness, and willingness to express unbiased opinions among individuals engaged in TGD health research within the southern US.

Materials and Methods: We recruited participants to the AOFGs through social media and communication through local LGBTQ organizations. Participants were anonymous and broken into five AOFGs according to gender identity: transgender male, transgender female, genderfluid/nonbinary, and two mixed gender identity groups. We utilized the secure online platform, Discourse, which participants were asked to check three times per day over the 4-day study period. The AOFGs were moderated and monitored by two research team members who posted three topics daily and prompted participants with follow-up questions for clarification or facilitation of additional conversation around any given topic. Participants gave informed consent prior to study initiation and were compensated. A follow-up survey was also conducted to elicit feedback from participants on the structure, content, and execution of focus groups.

Results: A total of 45 participants from the southern US consented to the study. The average age of participants was 34.8 (19 – 67). The majority were White (39) with 4 African American and 2 more than one race. The sex assigned at birth was female for 29 participants, male for 15, and 1 preferred not to answer.
Most AOFG participants gave thoughtful personal responses to questions on the following topics: healthcare interactions, TGD health prevention, healthcare experiences, gender affirmation, mental health, support systems, hormone therapies, surgeries, and research opinions. Use of the AOFG format permitted all participants time and space to express their opinions, thus avoiding the challenge of overly dominant participants that can arise in traditional focus group formats. Participants were highly satisfied with the AOFG format, and many expressed their appreciation at the ability to connect and share their experiences with other TGD individuals.

Conclusion: AOFGs are an effective tool for conducting high-quality, remote health research, particularly among TGD individuals who may wish to remain anonymous for safety concerns. AOFGs enhance meaningful participant interactions and trust when addressing sensitive topics regarding healthcare and stigma and allow for greater representation among those with limited involvement in research due to lack of transportation/resources, irregular schedules, and/or family responsibilities. AOFGs should be considered as a convenient, effective method to overcome both historical and current barriers to participation when conducting TGD health research.

FRI-P-73: THE DEVELOPMENT AND IMPLEMENTATION OF A COMMUNITY BASED RESEARCH ADVISORY COMMITTEE FOR A PROSPECTIVE COHORT STUDY OF TRANSGENDER AND GENDER DIVERSE INDIVIDUALS

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Presented by: John McNeil

Introduction/Background: Transgender and gender diverse (TGD) researchers, community members, and professional associations have advocated for increased and ethical involvement of TGD individuals in medical and scientific research. Valid and culturally responsive research on TGD health requires direct engagement of community members. Participatory methods enhance research quality and build trust between TGD and scientific communities. Prospective cohort studies are vital to improve gender-affirming treatments and overcome barriers. Few studies explore implementation barriers or offer strategies for navigating challenges. Financial support for TGD participation in research is crucial for ethical research and community engagement. We established a Community-Based TGD Research Advisory Committee (RAC) to involve TGD individuals in research and mentor future scientists. Our goal is to enhance sensitivity towards TGD participants and community. Researchers and RAC members identified implementation barriers and potential solutions.

Specific Aim: 1) Recruit and train a TGD RAC to inform a prospective cohort of individuals receiving gender affirming care.
2) Identify challenges in implementing participatory methods in health research.
3) Explore limitations and benefits of implementation solutions.
4) Highlight contributions and perspectives of TGD individuals in TGD-focused research.

Materials and Methods: The Mayo Clinic Transgender and Intersex Specialty Care Clinic (TISCC) prospective cohort models the Duke Adult Gender Medicine cohort, which enrolled 280 individuals. A Multisite Advisory Board (MAB) established by Duke, planned the expansion of the registry to multiple US sites. RAC members were recruited through existing relationships with our research team and invited other TGD individuals. Members received financial compensation, TGD research mentorship and collaboration opportunities. The RAC met monthly to adapt the Duke questionnaire. Before the first meeting, RAC members completed an anonymous survey assessing demographics and views on TGD community research. Bias and areas for improvement in community advisory board development were assessed through survey results.

Results: The RAC was comprised of eight individuals with age ranges: 18-24 (12.5%), 25-34 (50%), 35-49 (25%), 50-64 (12.5%). Racial representation included Asian (25%), Black (12.5%), Caucasian (37.5%), Multiracial (37.5%), Middle Eastern (12.5%). Self-reported gender identities included transgender man, trans-femme, genderqueer, nonbinary, cis female, male. The RAC guided questionnaire and survey instrument modifications: adding alternative forms of tobacco use, an organ inventory capturing various anatomy and sexual behaviors, and "Not listed " options, enabling write-in answers to capture diverse identities. "Physical" and "social" transition were consolidated into "Goals for Gender Transition" to avoid emphasizing specific steps in gender care. "Utrecht Gender Dysphoria " and "Body Image Gender Spectrum" scales were replaced by more inclusive "Gender Congruence and Life Satisfaction" (GCLS) and relevant "Gender Minority Stress and Resilience" (GMSR) scales. Limitations included potential bias in recruitment, due to pre-existing professional relationships with each other and the research team. However, TGD individuals with medical backgrounds offered valuable perspectives. 87.5% of RAC members held a bachelor's degree or higher, introducing education-based bias. 25% of members participated in this presentation.

Conclusion: This study describes a successful approach to recruiting a RAC with a diverse group of TGD community members who significantly contributed to our research project development to promote inclusivity, reduce bias, and enhance the validity of TGD research.

FRI-P-75: THE THRIVE GENDER NAVIGATOR AND DATABASE PROJECT: ADVANCING THE SCIENCE AND BETTERING OUTCOMES

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Presented by: Franky Rife

Introduction/Background: Research on effectiveness of gender affirming care highlights its critical role as a protective factor against negative outcomes trans and GNC youth experience at disproportionate rates compared to their cisgender peers. Currently, there are limited prospective longitudinal studies with large sample sizes examining outcomes for patients seeking gender affirming care. When youth gender affirming healthcare is under attack, this limitation needs to be addressed, particularly in states where legislative efforts are attempting to close programs.

NCH's THRIVE Program has developed a database designed with the ultimate goal of improving outcomes and advancing science. By creating an electronic database intertwined with the EHR, providers can collect data on patient demographics and track patient care trajectories across specialties.

Specific Aim: The aims of this project are to collect data on patient treatment paths and outcomes through the creation of an electronic database in REDCap and to streamline data collection through an EHR navigator. The navigator allows for information about gender identity, past medical and mental health history, familial support, and treatment goals and outcomes to be collected in a standardized way across providers and disciplines. This includes everything from Tanner stage to the relationship between mental health and gender needs. Standardization eases data entry and analysis in the database. The navigator allows providers across departments to have access to the most current information concerning patient care. A secondary goal is potentially implementing this navigator at other institutions to standardize data collection across programs to improve scientific understanding of gender affirming care for minors long term.

Materials and Methods: This project is organized as three separate components. First collecting information about current patients. This portion of the project is currently active and recruiting. Second, a retrospective database that consists of chart reviews of prior patients. Finally, a registry database patients will either opt into or out of during their initial triage into the program. Data collection occurs at the initiation of treatment, annually, and at termination. It is obtained through patient self-report surveys, collecting patient responses to psychiatric screeners (PHQ-9 for depression, SCARED for anxiety for example), and EHR data reviews. Additional chart reviews are done when patients hit notable “milestones,” including initiating puberty blocking medication, menses suppressing medication, HRT, and/or gender-affirming surgical procedures.

Results: Implementation of the current patient database improves consistency and standardization of clinical reports across different departments. As we collect data for this database across time, we will have data on treatment outcomes, gender trajectories, and patient satisfaction. This will not only serve to improve the care we offer in the program, but will allow us to continue to generate integral research findings that will help advance the field of gender affirming healthcare for youth.

Conclusion: By designing the database in REDCap, data we collect may be shared and combined with data from other institutions in the future, allowing expansion of more comprehensive, multi-site research projects. Next steps consist of implementing registry recruitment into our intake triage process and incorporating more standardized measures into our current model of care so we may better quantify patient outcomes.

Poster: Pubertal Suppression/Hormone Therapy – Adolescent

FRI-P-76: GENDER DIVERSE YOUTH WITH TURNER SYNDROME: A CASE SERIES

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Presented by: Juanita Hodax

Introduction/Background: People with Turner Syndrome (TS) are at increased risk for cardiovascular disease, osteoporosis, metabolic syndrome, diabetes mellitus, abnormal liver enzymes, and impairment of nonverbal skills.

Specific Aim: Our aim was to describe the association and management of gender diverse youth with TS.

Materials and Methods: We conducted a single-institution retrospective chart review of patients who identify as gender diverse in TS Clinic.

Results: Patient A is a 17-year-old (yo) assigned female at birth with TS, autoimmune hypothyroidism, myopia, obesity, depression, and anxiety. TS was diagnosed at 8 yo during short stature evaluation with karyotype of 46,X,psu idic(X)(p11.2). At 12 yo, exam showed Tanner 2 breasts and labs revealed FSH 32.5 mIu/ml, estradiol < 12 pg/ml. Female gender identity was presumed, and oral estrogen was started. At 13 yo, menarche occurred, and progesterone was added with subsequent transition to an OCP. The patient had been exploring gender since 11 yo and self-discontinued his OCP at 14 yo after identifying as male. At 15 yo, he disclosed his gender identity after discussion of restarting estradiol, was referred to Gender Clinic and started SQ testosterone. He is now on SQ testosterone 30 mg weekly without breakthrough bleeding and with improved mental health.

Patient B is a 21 yo assigned female at birth with TS, ASD s/p closure, obesity, and fatty liver disease. TS was diagnosed at 16 yo during evaluation for primary amenorrhea with labs notable for FSH 57.7 mIU/mL and karyotype 46X,i(X)(q10). Transdermal estrogen was started followed by progesterone 2 years later. At 20 yo, menarche occurred with irregular menses, and they reported identifying as nonbinary. They were comfortable continuing on estrogen, although transitioned to an OCP, and were referred to an adult endocrinologist and gender provider. They had a normal DXA (total body Z-score -1.1).

Conclusion: We describe two cases of gender diverse adolescents with TS, which highlights the importance of discussing gender identity in patients with TS, especially with puberty induction and if there are concerns about medication adherence. For gender diverse patients with TS, goals of care should be discussed to determine whether estrogen or testosterone replacement aligns best with goals. If patients choose to start testosterone, special considerations of risks such as erythrocytosis, osteopenia, and cardiovascular risks should be discussed in relation to their TS. Increasing hematocrit level is common and should be monitored every 3 months. Cardiovascular risk may be increased due to decreased HDL levels and potential increase in BMI. Effects on bone density have been variable. There are no prior studies on these effects in TS patients.

FRI-P-77: TRANS2: PROMOTING POSITIVE TRANSITIONS FROM PEDIATRIC TO ADULT CARE FOR TRANSGENDER AND GENDER DIVERSE ADOLESCENTS

R Reichenbach, Matthew Gold, Natalya Foreman, Veenod Chulani
Presented by: Natalya Foreman

Introduction/Background: Health care transition (HCT) is the process of moving from a pediatric to an adult model of health care. HCT activities aim to: 1) to improve the ability of young adults to manage their own health care and effectively use health services, and 2) to ensure an organized process in pediatric and adult health care practices to facilitate transition preparation, transfer of care, and integration into adult-centered health care. This project’s goal was to improve HCT processes for youth served by the Phoenix Children's Hospital Gender Support Program.

Specific Aim: This quality improvement project's aim was to assess the preparedness of youth 17-21 years of age for transition to an adult model of care and to identify opportunities for HCT process improvement.

Materials and Methods: The project was approved by Phoenix Children's Quality Committee. Transgender and gender diverse (TGD) youth 17-21 years of age were asked to complete the Transition Readiness Assessment Questionnaire (TRAQ) V6.0 electronically or in paper form prior to scheduled follow up visits. This questionnaire assesses readiness in the domains of managing medications, appointment keeping, tracking health issues, and talking with providers. Demographic information, including age, was extracted from the medical record.

Results: TRAQ survey responses highlighted the knowledge and skill building needs of TGD patients for self-management in an adult model of care. Questions regarding comfort in talking with providers and confidence in voicing medical concerns was a strength of TGD youth across ages (only 4% still needed to learn). The most common gaps identified included independent medication management, including processes for prescription refills (32% needed to learn), as well as appointment keeping, specifically regarding follow-up appointments and referral processes (35% needed to learn). Overall, gaps in readiness decreased with age, with referral process navigation as the most common readiness gap remaining amongst the oldest patients in our cohort.

Conclusion: Understanding the gaps reported by TGD youth in their readiness for transition to an adult model of care helps inform HCT quality improvement activities in clinical programs to support successful integration into adult-centered health care. While there are descriptions of transition readiness of youth with special health care needs and disease conditions in the literature, none to our knowledge have assessed TGD youth's reported preparedness for transition to an adult model of care using TRAQ V6.0.

Existing literature on health disparities highlights that TGD patients often struggle with acceptance and comfort, particularly in healthcare settings. However, our youth described HCT struggles similar to those of their cisgender adolescents. This project suggests that well established gender support programs may need to educate their patients on the more fundamental aspects of HCT, rather than topics specific to TGD adolescents. Given the data regarding knowledge gaps related to coordinating follow-up appointments and referrals, additional education for youth regarding the process of connecting with different healthcare providers for their care needs may best promote positive transitions to adult care.

FRI-P-78: SERUM HORMONE CONCENTRATIONS IN TRANSGENDER YOUTH RECEIVING GENDER AFFIRMING ESTRADIOL THERAPY

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Presented by: Juanita Hodax

Introduction/Background: In gender affirming hormone therapy, estradiol can be administered via oral, transdermal, or parenteral routes. Serum hormone profiles among the different routes of estradiol are poorly characterized and there is a paucity of data regarding medical protocols and outcomes, especially in youth.

Specific Aim: This study aimed to evaluate serum hormone levels in gender diverse youth to compare the efficacy of different estradiol routes in achieving therapeutic blood levels and in suppressing serum testosterone levels.

Materials and Methods: This was a retrospective chart review of patients who initiated estradiol at an adolescent Gender Clinic between 2010-2019. Inclusion criteria were individuals assigned male at birth ages 13-21 years who were started on hormone therapy with estradiol. Route of estradiol and anti-androgen use (spironolactone or GnRH agonist) were collected, and laboratory data was analyzed.

Linear mixed-effects models were used to assess estradiol dose on estradiol and testosterone blood levels by route of administration, adjusted for age, spironolactone use and GnRH agonist use.

Results: There were 118 patients included, with mean age 17.2 years (SD=1.6). The most common routes of estradiol administration were oral only (62.7%), followed by transdermal only (23.7%), multiple routes excluding subcutaneous (8.5%), and any subcutaneous (5.1%). Ninety-one patients (77.1%) took Spironolactone, and 31 (26.3%) took GnRH agonists at any point during the study period. The majority (71.4%) of patients taking spironolactone were taking oral estrogen, and the majority of those taking GnRH agonists were using transdermal estrogen (51.6%). There was notable variability in serum estradiol levels at each dose of estradiol. For patients on higher doses of oral estrogen (6-8 mg/day), estradiol levels ranged from 24.3-546 pg/mL with a mean of 131.9 pg/mL (SD=120.4 pg/mL). For those on higher doses of transdermal estrogen (0.1-0.15 mg/24hr), estradiol levels ranged from 11.1-145 pg/mL with a mean of 62.6 pg/mL (SD=40.3 pg/mL). For those on subcutaneous estradiol, estradiol levels ranged from 22-158 pg/mL with a mean of 53.6 pg/mL (SD=42.4 pg/mL). In patients taking spironolactone, transdermal estradiol was associated with a significantly steeper decline in testosterone levels over time than estradiol administered orally or subcutaneously.

Conclusion: Oral, transdermal, and subcutaneous administration of estrogen all lead to increased serum estradiol levels and are effective for use in gender affirming care for youth. Patients on transdermal estrogen tended to have lower serum estradiol levels, but also had more effective suppression of serum testosterone levels.

FRI-P-79: DETERMINANTS OF BONE MASS ACCRUAL IN TRANSGENDER AND GENDER DIVERSE YOUTH UNDERGOING PUBERTAL SUPPRESSION THEARPY

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Presented by: Samantha Roberge

Introduction/Background: Gender-affirming medical therapy for gender diverse and transgender (GDTG) youth includes puberty suppression with gonadotropin-releasing hormone agonists (GnRHa). Puberty is a critical period of bone mass accrual and pubertal suppression may have impacts on bone health. Previous studies have shown decrease in bone mineral density (BMD) Z-score while on puberty suppression with later improvement on gender-affirming hormonal therapy. However, the rate of bone mass accrual and factors associated with BMD change over the length of GnRHa therapy in GDTG youth are not known.

Specific Aim: Our study aims to evaluate bone mass accrual (BMD velocity Z-score) and its determinants in GDTG youth on sustained GnRHa therapy over 1-3.5 years.

Materials and Methods: A retrospective chart review of GDTG youth on GnRHa monotherapy who had baseline (within 6 months of starting GnRHa) and repeat DXA scans at Cincinnati Children's Hospital Medical Center between 01/2011-12/2022. Available data was abstracted from chart review. BMD velocity was calculated from the change in BMD over time and BMD velocity Z-score was generated using reference data from the Bone Mineral Density in Childhood Study. A two-factor t test was used to assess differences in BMD velocity Z-score between natal sex. Multiple linear regression modeling was used to assess BMD velocity Z-score compared to natal sex, age, Tanner staging, body mass index Z-score (BMI) and bone health markers (Vitamin D, Calcium). ANOVA was used to assess the fit of single variable and multiple variable models.

Results: Twenty-seven participants (40% natal female, mean age 11.9 years at baseline DXA) were included. Average duration between baseline and follow-up DXA scans was 1.3 years (range 0.89 – 3.5 years). Average BMD velocity Z-score was -0.35 across all groups with no significant difference of BMD velocity Z-score between natal sex (-0.34 ± 1.4 natal male vs -0.37 ± 1.8 natal female, p-value= 0.96)

over study period. Regression modeling (Table 1) demonstrated weak association across all assessed variables individually, with BMI Z-score alone significantly positively associated (p-value- 0.0028, linear regression) with BMD velocity Z-score. Older age at first DXA/GnRHa start and higher vitamin D concentration were also associated with greater BMD velocity Z-score though non-significantly. Multiple variable models were not significantly different from a single variable model using BMI Z-score. When BMD velocity Z-score was assessed independently by natal sex, only natal male BMD velocity Z-score was significantly associated with BMI Z-score (p = 0.023).

Conclusion: GDTG youth have decreased bone mass accrual rates during pubertal suppression therapy with GnRHa. Older age at GnRHa start, higher BMI and higher vitamin D concentration were determinants of higher bone mass accrual when assessed together, however only BMI was significantly associated when independently assessed. Current recommendations include maintaining BMI, optimizing vitamin D intake and increased physical activity in youth receiving GnRHa therapy. Findings from our study indicate that low/low normal BMI is associated with lower bone accrual and subsequently may indicate a higher need for bone health monitoring in GDTG youth. Future prospective studies are needed to assess long-term impact of decreased bone mass accrual on bone health in adulthood.

FRI-P-80: TRENDS IN GENDER AFFIRMING TREATMENT AND BASELINE PUBERTAL STATUS OF TRANSGENDER AND GENDER DIVERSE YOUTH

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Presented by: Matthew Oransky

Introduction/Background: Transgender and gender diverse (TGD) youth seek care to align other biology with their gender identities. Gender affirming care of youth includes pubertal assessment, pubertal suppression with gonadotropin-releasing hormone agonist (GnRHa) and gender-affirming hormone therapy (GAHT). Management choices are made collaboratively among the patient, the patient's family, and the multidisciplinary treatment team.

Specific Aim: We sought to characterize the pubertal status of the TGD youth seeking gender affirming care in the Mount Sinai Center for Transgender Medicine and Surgery.

Materials and Methods: The medical records of 76 TGD youth referred from 2020-2023 were retrospectively analyzed. Pubertal assessments were made by visualization of pubic hair and breast development according to the Tanner scale and determination of testicular volume with an orchidometer. We labeled Tanner stage 1 as prepuberty; stages 2–3 as early puberty; and stages 4-5 as late puberty.

Results: The median age was 15 years (range 8-18 years). 51.3% birth recorded males (BRM, n=39) identified as transgender female (n=37) or non-binary (n=2). 48.7% birth recorded females (BRF, n=37) identified as transgender male (n=33) or non-binary (n=4). Of the population, 5.3% were prepubertal (n=4), 23.7% were in early puberty (n=18), 71.1% were in late puberty (n=54). BRM presented mostly in late puberty: 10.3% were prepubertal (n=4), 41% were in early puberty (n =16), and 48.7% were in late puberty (n=19). BRF presented predominantly in late puberty: none were prepubertal, 5.4% were in early puberty (n=2), and 94.6% were in late puberty (n=35).

For the prepubertal patients, monitoring for onset of puberty without treatment was recommended. Of the 18 patients in early puberty, 72.2% started GnRHa (11 BRM, 2 BRF) and 27.8% started GAHT (5 BRM). Of the 54 patients in late puberty, 5.6% received no treatment (3 BRF), 24.1% started GnRHa (10 BRM, 3 BRF) and 70.3% started GAHT (9 BRM, 29 BRF).

Conclusion: In our multidisciplinary practice, BRM present in both early and late puberty. This presents possible implications for fertility preservation strategies. BRF overwhelmingly present in late puberty, perhaps owing in part to earlier timing for typical "female" puberty. This means that even prompt initiation

of GnRHa therapy cannot entirely prevent the potential future need for chest masculinization surgery and may be a reason to consider strategies to bring trans boys or non-binary BRF into care sooner if feasible.

FRI-P-81: MENTAL HEALTH OUTCOMES OF TRANSGENDER YOUTH RECEIVING GENDER-AFFIRMING CARE IN THE US: A LITERATURE REVIEW

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Presented by: Owen Wilson

Introduction/Background: There is growing evidence regarding the impact of gender-affirming care on mental health outcomes in transgender youth. Currently, approximately 30.5% of transgender youth live in states that have passed gender-affirming care bans; additionally, 13.6% of transgender youth are at risk of losing gender-affirming care access (Human Rights Campaign, 2023). In contrast, every major US medical association supports gender-affirming care (Transgender Legal Defense & Education Fund, 2023) and broader international literature shows that gender-affirming care is positively related to better mental health outcomes (de Vries et al., 2014, Costa et al., 2015, Mahfouda, 2019). Several US-based studies have measured the relationships between gender-affirming care and various mental health outcomes, but no study has comparatively examined these works.

Specific Aim: The present study aims to synthesize results documented in the literature regarding the effects of gender-affirming care on mental health outcomes in US transgender youth.

Materials and Methods: Nine published studies were identified from between 2019 and 2023. Six longitudinal studies compared baseline to follow-up scores (i.e., mental health metrics collected before and after administration of gender-affirming treatment); three cross-sectional studies compared treated and untreated groups. Eight studies recruited participants from clinical settings; one study recruited via social media. Age range across studies spans 9-25 years old. All studies included participants receiving gender-affirming hormones, puberty blockers, surgical intervention and/or a combination.

Results: Depression, anxiety, and suicidal ideation were the most frequently measured mental health constructs (see Table 1). Across studies measuring depression, most studies (7/8) reported an association between gender-affirming treatment and reduced depressive symptoms; five of these eight studies demonstrated statistical significance of this relationship (see Table 2). Across studies measuring anxiety, most studies (5/6) reported an association between gender-affirming treatment and reduced anxiety symptoms; four of these six studies demonstrated statistical significance of this relationship (see Table 2). Across studies measuring suicidal ideation, most studies (5/8) reported an association between gender-affirming treatment and reduced suicidal ideation; only two of these eight studies demonstrated statistical significance of this relationship (see Table 2). However, in some studies that did not identify statistically significant differences in mental health scores, notable differences were observed in the percentage of participants moving from the clinical range at baseline to the non-clinical range at follow-up (e.g., Kuper and colleagues found 75% of participants met threshold for mild, moderate, or severe depression at baseline versus 47% at final follow-up).

Conclusion: Overall, these studies report improved mental health outcomes in transgender youth accessing gender-affirming care. These improvements were often statistically significant for depression and anxiety. Loss to follow-up across studies ranged from 2.5% to 48%, potentially impacting results. Studies frequently expressed the need to document the long-term and longer-term effects and outcomes of gender-affirming care in transgender youth. Future studies should additionally investigate the effect of social context on the degree of outcomes.

FRI-P-82: EXPERIENCE WITH GENDER AFFIRMING HORMONES AND PUBERTY BLOCKERS: A QUALITATIVE ANALYSIS OF SEXUAL FUNCTION

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Presented by: Jamie Finegan

Introduction/Background: Gender affirming hormone therapy (GAHT) is part of the transition for many transgender and nonbinary (TGNB) individuals. Additionally, it has become increasingly more common for TGNB youth to receive puberty blockers (GnRH agonist) to halt the pubertal progression. There have been few studies investigating sexual function and desire either during or after puberty blockers (PB) and/or GAHT.

Specific Aim: Our aim was to qualitatively evaluate the sexual experience of TGNB individuals during or following PB and/or GAHT, and outline any potential differences between the two groups.

Materials and Methods: We performed an IRB approved two institutional study on the effect of PB and/or GAHT on sexual function and desire. The GAHT group (n=16): individuals who started GAHT (estrogen or testosterone) >18 years. The PB+GAHT group (n=10): subjects with current or past GnRH agonist use in addition to GAHT. All 26 enrolled subjects were interviewed using an open-ended topical guide. Qualitative analysis was performed by hand coding the interview transcripts using Constructivist Grounded Theory qualitative methods.

Results: A total of 26 TGNB (20 assigned male at birth, 6 assigned female at birth: 18 transgender women, 5 transgender men, 3 non-binary) subjects ages 18-25 years old were interviewed about the effect of PB and/or GAHT on their sexual function and desire. Our analysis uncovered several themes that were consistent between groups (Table 1).

Conclusion: Themes were similar for both groups. Half the participants in each group reported feeling no regrets regarding hormone therapy, and the other half reported that they wished they had started hormones sooner. Two notable differences were identified between groups: those on PB+GAHT reported “less dysphoria” as a positive change in sexual desire, and the GAHT group reported more enjoyable sexual experiences since being on hormones. Interestingly, results did not reveal any significant differences between groups. The most prominent theme that arose in both groups was that the positive changes in sexual function and desire outweighed any negative changes that arose.

FRI-P-83: Amenorrhea rates amongst transgender and nonbinary patients on testosterone using non-daily reversible contraceptives

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Presented by: Natalie Balfe

Introduction/Background:
Many transgender and nonbinary (TNB) individuals use testosterone as part of their gender-affirming care. While most individuals using testosterone achieve amenorrhea within 6 months of hormone therapy, testosterone is not a reliable contraceptive. The etonogestrel 68mg single-rod subdermal contraceptive implant (Nexplanon®, ENG), which is the most effective of the long-acting reversible contraceptives (LARCs), is not widely used for menstrual suppression due to its irregular bleeding profile. As testosterone use alone can lead to amenorrhea, the bleeding profile of ENG may play less of a role in contraceptive counseling for TNB individuals on testosterone.

Specific Aim: Aim 1: Evaluate differences between bleeding patterns with the ENG versus other LARCs and Depo-Provera (DMPA) for TNB individuals on testosterone
Aim 2: Evaluate if the bleeding profile of testosterone with concomitant ENG use (T-cENG) is similar to published rates of ENG alone

Materials and Methods: This study was a retrospective chart review. TNB individuals ages 14-51 years at the participating institution who were using either ENG, DMPA, or another LARC for contraception AND testosterone between 7/1/2014 and 6/30/2020 were included in this study. Patients were excluded from this study if they were assigned male at birth, diagnosed with a disorder of sex development, experienced menopause or premature ovarian failure, or have undergone oophorectomy/hysterectomy or other forms of surgical sterilization during the study period. Data about participant's testosterone use, contraceptive use, and bleeding pattern were collected and analyzed.

Results: 320 medical records were initially identified for inclusion. After preliminary review, 291 did not meet inclusion criteria. After close review of charts for documentation of menstrual pattern and accurate medication reconciliation, a further 13 were excluded, leaving a total sample of 16 participants. Average age was 18 years (SD = 3.2 years), most participants were white (n=10, 63%) and had private insurance (n=8, 50%). At any point in the study period, 5 (31%) used depo-medroxyprogesterone acetate, 6 (38%) used Nexplanon, and 9 (56%) used any IUD. Some participants used two or more forms of contraception during the study window. All participants were on injectable testosterone cypionate at some point during their hormonal treatment. No significant differences were found for amenorrhea rates amongst the various LARC types. Participants specifically seeking menstrual suppression were statistically more likely to NOT report amenorrhea in the study period (LR=4.7, p=0.030) compared to those using any method for contraception. The largest proportion of amenorrhea among the groups of LARC users was among ENG users (4, 66 %); though there was not enough power to determine if this is significant.

Conclusion: The results of this study suggest that TNB individuals using T-cENG may have rates of amenorrhea similar to those using other studied methods and testosterone. Individuals using T-cENG may have rates of amenorrhea that are not dissimilar from what is seen in individuals using DMPA or other LARCs with concurrent testosterone. Further studies, including possible open-label prospective trials, may be helpful in clarifying the relationships between LARC contraceptive and concomitant testosterone and amenorrhea.

FRI-P-84: EFFECTS OF GENDER AFFIRMING HORMONE THERAPY VS. PUBERTY BLOCKERS ON SEXUAL FUNCTION AND DESIRE

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Presented by: Jamie Finegan

Introduction/Background: Many transgender and nonbinary (TGNB) individuals seek out puberty blockers (PB) to stop the progression of unwanted changes from endogenous puberty and/or gender affirming hormone therapy (GAHT) to aid in their medical transition. There has been limited research assessing the effect of these hormone therapies on sexual function and desire, especially in comparing GAHT and PB+GAHT.

Specific Aim: Our aim was to compare the effect of GAHT and PB+GAHT on sexual function and desire of TGNB individuals during or following hormone therapy.

Materials and Methods: We performed an IRB approved two institutional study on the effect of GAHT and/or PB on sexual function and desire in adults. The GAHT group (n=12) included individuals who started GAHT (estrogen or testosterone) >18 years old. The PB group (n=10) included subjects with current or past history of GnRH agonist use (>10 years old). Enrolled subjects completed the validated Changes in Sexual Functioning Questionnaire (CSFQ). The CSFQ was validated in adults to assess medication-related changes in sexual functioning. The questionnaire is specific to sex assigned at birth with a male and female version. The answers were scored in total and separated into sexual function and sexual desire subscales. Scores in each group were compared using unpaired t-tests.

Results: A total of 22 TGNB (16 assigned male at birth and 6 assigned female at birth: 14 transgender women, 5 transgender men, 3 non-binary) subjects ages 18-25 completed the CSFQ about the effect hormone therapy had on sexual function and desire. There was no difference between groups in total scores ($t = 0.8$, $p = 0.05$) or in categories of sexual function ($t = 0.3$, $p = 0.05$) and desire ($t = 0.8$, $p = 0.05$). There were an equal number of participants in both groups whose results showed sexual dysfunction in total (n=2 per group) and in categories of sexual function (n=7 per group) and desire (n=3 per group). The cause of their dysfunction is unclear at this time and is to be investigated in the future. Interestingly, despite meeting quantitative criteria for sexual dysfunction, 6 participants answered that their sexual life brings them “much” or “great” enjoyment or pleasure.

Conclusion: Based on our results, while there were >70% of subjects in each group with impaired sexual function, there were no differences in effect on sexual function and desire between subjects on GAHT vs. PB+GAHT. Additionally, the scores for both groups did not differ substantially from scores of cisgender individuals (Keller, et al 2006). In fact, both the GAHT and PB+GAHT groups scored higher on average in the sexual desire category compared to cisgender individuals. Prospective data collection will help us clarify further whether starting age of pubertal blockers and hormone therapy affects sexual function and desire.