NASPAG 37TH Annual Clinical Research Meeting

Poster Presentation Abstracts

1. Understanding the Intersection of Transgender Identity & Cultural Identity in Sexual & Reproductive Health Conversations between Transgender Youth and their Primary Care Providers: A Qualitative Study

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Background: Transgender and gender diverse youth (TGDY) require access to equitable health care services that address their needs. However, TGDY experience different forms of discrimination, stigma and inequitable access when dealing with healthcare providers. Therefore, creating sexual and reproductive health (SRH) services with the purpose of providing more inclusive and equitable health services is an urgent public health need. We aim to explore among TGDY the facilitators and barriers to providing inclusive and discrimination-free SRH services within health care settings, and importantly generate solutions specific to SRH inequities experienced by TGDY from their own perspectives to generate ideas for future programmatic and policy change.
Methods: This qualitative research study consists of single participant interviews among participants are TGDY youth ages 16-24 from an academic medical center An audio-recorded semi-structured interview was conducted with each participant. We used a modified grounded theory approach to identify themes regarding the perceived barriers and facilitators for TGDY in receiving inclusive SRH care from primary care providers (PCPs). All protocols were approved by the CHOP Institutional Review Board.
Results: Participants (n=12) are a mean age of 18. This study is ongoing with emergent themes including the desire for TGDY to have their PCPs discuss socio-emotional topics related to SRH including healthy relationships, the need for elaboration beyond asking about sexual activity when talking to youth, and discussing queer sexual and reproductive health and natal anatomy. Study participants highlighted the effect familial norms have on youth communication with PCPs in discussing SRH and the important role PCPs have in bridging the gaps in parent and youth communication about SRH.
Conclusions: PCPs remain a desired source of SRH information for TGDY. Preliminary data suggests discussions with PCPs not only include information regarding sexual activity but also discuss the socio-emotional aspects of SRH including consent and healthy relationships. Familial practices pertaining to discussing SRH with youth can potentially affect the way in which youth talk to providers about SRH. PCPs should be equipped to talk about SRH and sexual practices in a lens that pushes past heteronormative standard and addresses topics that are specific to queer youth. The study suggests PCPs have a vital role in leading robust and inclusive SRH discussions with TGDY and facilitating these discussions among TGDY and their guardians. The data gathered in this study will help to inform policy and best practice guidelines for SRH that is equitable for all youth

2. Vulvar Aphthous Ulcers in Children with COVID-19: A case series

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Background: Vulvar aphthous ulcers are defined by acute onset of painful genital lesions that are associated with viral illness. They classically present in non-sexually active girls and are diagnosed once other more common cause of genital ulcerations, including STIs or autoimmune bullous diseases, have been excluded. Previous reports of vulvar aphthous ulcers associated with COVID-19 have described treatment of the symptoms with either local or systemic corticosteroids. This case series illustrates the ability to manage these patients conservatively resulting in complete and spontaneous resolution of the ulcers.
Case: Four females, ages ranging from 10 to 21, presented to the emergency department for vulvar pain. Each patient was diagnosed with vulvar aphthous ulcers based on physical examination. All four patients were diagnosed with COVID-19 with rapid antigen testing. With directed counseling, each patient and their family were instructed on a regimen of acetaminophen, sitz baths, and voiding in the bath. Topical analgesics such as lidocaine gel were not administered and steroids were not prescribed. All four patients were able to manage their symptoms at home and did not require admission to the hospital. All patients experienced spontaneous and complete restoration of anatomy in 1-2 weeks.
Comments: The novel coronavirus pandemic caused by SARS-CoV02 has resulted in considerable morbidity and mortality. While immunocompromised hosts are more susceptible to complications of COVID-19, patients with intact immune systems may also experience distressing viral related symptoms. The pathogenesis of these ulcers has been hypothesized to be a result of non-specific inflammatory response to a viral systemic illness resulting in blistering of the mucosal genital surfaces It has been proposed that the ulcers are secondary to a cytokine storm that occurs in SARS-CoV-2 infections. Elevated cytokines, including TNF-α, result in neutrophil chemotaxis to mucosal tissue and subsequent ulceration of the tissue. Previous case studies discussing vulvar aphthous ulcers associated with COVID-19 all required hospitalization for pain control and/or urinary retention and treatment with steroids. Hospitalization can be a traumatic experience for both child and adolescent patients as well as their family. The added isolation and precautions required for treating COVID positive patients can have a further psychological impact. Through directive counseling, all patients in our case series were able to avoid hospitalization and supportive care of the genital lesions in the outpatient setting was sufficient.

3. Norethindrone Acetate Dosing for Adequate Menstrual Suppression in Adolescents

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Background: Progestin-only pills may be used for menstrual suppression in adolescents. Norethindrone acetate (NA) is the only low-dose (0.35 mg) progestin method available, but optimal dosing for menstrual suppression is unknown. This study seeks to evaluate both prescriber practices in initiating NA 0.35mg and factors that contribute to amenorrhea and satisfaction with the dose.
Methods: This is a retrospective cohort study of adolescents ages 9-18 who presented to an academic medical center between 2010-2022. Those with previous hormone therapy were excluded. Data were collected on demographics, menstrual history, bleeding patterns, NA indication, and NA dose. Follow-up care was measured at one, three, and 12 months and included office or virtual visits and portal messages. Heavy menstrual bleeding (HMB) was self-reported. Irregular bleeding (IB) was defined according to ACOG as cycle length varying by >7 days. Prolonged bleeding (PB) was defined as menses lasting >7 days. Data was analyzed using Chi-square or Fisher's exact test. Multivariate logistic regression models assessed out-

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comes: 1) starting NA 0.35mg; 2) continuing NA 0.35mg; 3) achieving light bleeding or amenorrhea; and 4) reporting satisfaction with bleeding pattern. The University's Institutional Review Board exempted the study.

Results: Of 262 adolescents who initiated NA, 219 completed at least one follow-up. Providers were less likely to start NA 0.35mg for patients with BMI 25kg/m2 (p=0.044), PB (p=0.015), or younger age at menarche (p=0.019). Providers were more likely to prescribe NA 0.35mg if patients were younger (p=0.009) or had estrogen contraindications such as migraines with aura (p=0.008) or risk of venous thromboembolism (p=0.033). Those with PB were 13.1% less likely to continue NA 0.35mg (p=0.043). Additionally, for each year older at menarche, patients were 2.6% less likely to continue NA 0.35mg (p=0.026). Patients with a disability were more likely to continue NA 0.35mg at three and 12 months (p=0.031, p=0.044). Overweight BMI (p=0.01), HMB (p=0.03), and younger age (p=0.034) were associated with lower likelihood of achieving amenorrhea on NA 0.35mg. Patients with IB had significantly more follow-up visits compared to those with weight gain or mood side effects (p< 0.001). Patient satisfaction with NA 0.35mg was negatively associated with IB (p< 0.001).

Conclusions: Providers were more likely to prescribe NA 0.35mg to younger patients, but these patients were less likely to achieve amenorrhea on this dose. Patients who were overweight or had HMB were also less likely to achieve amenorrhea with NA 0.35mg. These results reveal opportunities for improved prescribing practices to help patients achieve menstrual suppression.

4. Effective Reduction in Unindicated Cervical Cancer Screening in Adolescent Females in a Large Healthcare System

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Background: Evidence based guidelines recommend against screening for cervical cancer (Pap testing) in average risk adolescents. Despite this, many still undergo unindicated screenings with detrimental reproductive health and economic consequences. Our aim was to evaluate the efficacy of using provider notifications to reduce Pap testing in women < 21 years old in a large healthcare system.

Methods: Starting in July of 2020, a Best Practice Advisory (BPA) appeared in the electronic medical record (EMR) if providers ordered Pap testing on individuals < 21 years old. This BPA reiterated that screening was not indicated for average risk adolescents and prompted users to choose an indication for screening. A retrospective analysis was performed comparing females < 21 years old with Pap testing performed January 2019 - June 2020 (pre-intervention) to those with testing performed July 2020 - June 2021 (post-intervention). This study was approved by the IRB. Patient characteristics including age, race/ethnicity, health insurance status, and medical history were extracted from the EMR and analyzed using Fisher's exact tests, Kruskal-Wallis tests, and logistic regression.

Results: There were 140 subjects included: 106 in the pre- and 34 in the post-intervention group. There were no differences in patient characteristics between the two groups. Neither Pap nor human papillomavirus (HPV) testing results differed in the two groups, however 6.6% of cytology tests were indicated pre-intervention, compared to 20.6% post-intervention (p=0.042) (Table 1). The proportion of indicated HPV testing did not differ pre- and post-intervention at 65% and 45%, respectively (p=0.295). The overall reduction in unindicated cervical cancer screening post-intervention was 13.9% (95% CI 4.0-23.7). This reduction in unindicated cervical cancer screening occurred in academic (p=0.048) rather than community settings and in tests ordered by physicians (p< 0.01) rather than advanced practice providers (Figure 1). The mean reduction in number of Pap tests (indicated and unindicated) performed per quarter post-intervention was 17.5% (p< 0.01). This reduction occurred in community (p< 0.01) rather than academic settings and in tests ordered by physicians (p< 0.01) rather than advanced practice providers. There was no association between unindicated cervical cancer screening and age, race/ethnicity, insurance status, or medical history.

Conclusions: Unindicated cervical cancer screening impacts future reproductive and mental health and can lead to higher healthcare spending. We demonstrated that the incorporation of a BPA to the EMR is a successful approach to reduce unindicated cervical cancer screening, particularly in academic settings.

Supporting Figures or Tables
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5. Treatment of Adolescent Endometriosis after Gonadotropin-Releasing Hormone Agonist Use

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Background: Leuprolide acetate is a gonadotropin-releasing hormone agonist (GnRHa) and a treatment option for endometriosis, but it is not approved for use beyond 12 months due to the potential long-term side effects on bone density. Small cohort studies in adults have demonstrated "off label" use beyond this timeframe, and it is unknown if GnRHa is continued for long-term use in adolescents. Additionally, alternative treatment options following GnRHa discontinuation are poorly understood. This study aimed to describe the long-term use of leuprolide acetate in adolescents with endometriosis and to explore the treatment course after its discontinuation.

Methods: We identified 51 subjects with laparoscopically-confirmed endometriosis who had participated in a year-long randomized clinical trial of GnRHa plus add-back as adolescents between 2008-2012. Electronic medical records were reviewed to obtain demographic data, clinical characteristics, and treatment outcomes following trial completion. The study was deemed IRB exempt.

Results: The average age of participants during trial enrollment was 17.9 ± 1.7 y. Thirty-three participants had stage I endometriosis (65%), whereas n=18 had stage II endometriosis (35%). The most common treatments trialed before GnRHa were combined oral contraceptive pills (n=47, 92%) and progestin-only pills (n=23, 45%). The average duration of GnRHa use during the trial was 9.5 ± 3.5 months; 34 subjects (67%) completed the one-year trial. After completion of the one-year trial, 23 subjects (45%) continued to use GnRHa with add back therapy. Mean duration of GnRHa use after trial completion was an additional 31.7 ± 28.6 months, and the longest identified duration an additional 96 months. Twenty-four subjects switched to other hormonal treatments after trial participation, most commonly oral progestins (n=15) or combined oral contraceptives (n=6). Thirteen participants (25%) returned to a therapy that had been trialed before GnRHa.

Conclusions: Almost half the participants continued to utilize GnRHa with steroid add-back beyond the 12-month recommended duration. As there are no data supporting one treatment over another, the treatment choice utilized by each subject varied widely after discontinuation of GnRHa, with many returning to previously trialed medical therapies.