IN THE COURT OF COMMON PLEAS
FOR FRANKLIN COUNTY, OHIO

MADELINE MOE, et al. Plaintiffs, v. DAVID YOST, et al. Defendants.	Case No. _____ Judge _____

EXPERT AFFIDAVIT OF SARAH D. CORATHERS, M.D.

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I, Theresa M Sabo, did witness the participants named above electronically sign this document.

EXPERT AFFIDAVIT OF SARAH D. CORATHERS, MD

INTRODUCTION

I, Sarah D. Corathers, hereby declare and state as follows:

1. I have been retained by counsel for Plaintiffs as an expert in connection with the above-captioned litigation.

2. The purpose of this affidavit is to provide my expert opinions on: (1) the clinical practice and treatment protocols for treating transgender adolescents with gender dysphoria including the provision of pubertal suppression treatment and hormone therapy; (2) the risk and benefit analysis of the endocrine interventions to treat adolescents with gender dysphoria as compared with other pediatric endocrine treatments; and (3) the severe risk of harm to adolescents with gender dysphoria of withholding or withdrawing this medical treatment where such treatment is medically necessary.

3. I have actual knowledge of the matters stated in this affidavit and have collected and cited relevant literature concerning the issues that arise in this litigation in the body of the affidavit.

4. In preparing this affidavit, I reviewed Ohio House Bill 68 (hereinafter "HB68"), as well as materials listed in the attached Bibliography (**Exhibit B.**) I also relied on my scientific education and training, my research experience, my knowledge of the scientific literature in the pertinent fields, and my clinical experience treating adolescents with gender dysphoria, as set out in my curriculum vitae (**Exhibit A.**)

5. The materials I have relied upon in preparing this affidavit are the same types of materials that experts in my field regularly rely upon when forming opinions on these subjects.

6. I may wish to supplement these opinions or the bases for them as a result of new

scientific research or publications or in response to statements and issues that may arise in my area of expertise.

BACKGROUND AND QUALIFICATIONS

7. I received my medical degree from Wright State University in 2002. I completed my residency in Internal Medical and Pediatrics at the University of Cincinnati and Cincinnati Children's Hospital between 2002-2006. I was the Chief Resident in Internal Medicine at the University of Cincinnati from 2006-2007. I completed a four-year combined Fellowship in Adult and Pediatric Endocrinology between 2009-2013 at the University of Cincinnati and Cincinnati Children's Hospital. Beginning in 2013, I was an Assistant Professor, Department of Pediatrics, Division of Endocrinology, at Cincinnati Children's Hospital. I became an Associate Professor in the Department of Pediatrics, Division of Endocrinology, in 2019. Since 2022, I have been the Clinical Director in the Division of Pediatric Endocrinology at Cincinnati Children's Hospital overseeing clinical operations and quality. Notably, the Division of Endocrinology at Cincinnati Children's Hospital was recognized by U.S. News and World Reports as #3 in the nation for Diabetes and Endocrinology in 2022-2023 and #1 in the nation for Diabetes and Endocrinology in the 2023-2024 rankings, the same year Cincinnati Children's Hospital was also recognized as the #1 Best Children's Hospital in the nation. As of March 1, 2024, I am Associate Chief of Staff, Ambulatory Medicine at Cincinnati Children's Hospital.

8. I have been licensed to practice medicine in the state of Ohio since September 2006.

9. I have extensive experience working with children with endocrine disorders, and I am an expert in the treatment of children with hormone or metabolic health concerns including hypogonadism and in the treatment of adolescents with gender dysphoria. I have been treating patients with gender dysphoria since 2013. I also treat children and adolescents with other endocrine disorders including type 1 diabetes, Turner syndrome, and survivors of childhood

cancers with lifelong hormone deficiencies.

10. I am a member of the American Academy of Pediatrics, the Pediatric Endocrine Society, and the Endocrine Society.

11. I currently see patients at the Endocrinology Clinic at Cincinnati Children's Hospital, where I also serve as the Clinical Medical Director.

12. I am a member of the inter-disciplinary transgender medicine team at Cincinnati Children's Hospital (the "Living with Change Center for Transgender Health"), where I routinely engage in care coordination with colleagues in Adolescent Medicine, Gynecology, Mental Health, and other allied health fields in the care of children, adolescents, and young adults with gender dysphoria.

13. I am currently directly involved in the treatment of approximately 200 transgender youth and young adults from Ohio and surrounding areas and have consulted as a member of the interdisciplinary gender team providing care to many more over the past decade.

14. I supervise the education of pediatric endocrinology fellows in care of transgender and gender non-conforming youth through didactic lectures and clinical practice.

15. I have published over 60 peer reviewed articles on endocrine disorders and treatments. Among those, I have published on topics that include: interdisciplinary care for transgender and gender non-conforming youth, shared decision making about gender-affirming hormone therapy, hormonal contraceptive choices for transgender adolescents and adults, and bone health among transgender youth undergoing pubertal suppression. I have also published an invited commentary about developing effective hormonal treatment paradigms for transgender youth. In addition, I am a contributing author on the International Turner Syndrome Clinical Practice Guidelines (2017; 2024 update in press), which reflect grading of available evidence and

recommendations for care including estrogen hormone replacement.

16. As part of my practice, I am familiar with the latest medical science and treatment protocols related to gender dysphoria and Differences of Sexual Development (DSDs).

17. I have never been deposed or testified at trial.

18. I am being compensated at a rate of $300 per hour. My compensation does not depend on the outcome of this litigation, the opinions I express, or the testimony I provide.

GENDER IDENTITY AND GENDER DYSPHORIA

19. A person's gender identity refers to a fundamental inner sense of self as female, male, a combination of both, or neither distinctly male nor female.

20. Everyone has a gender identity and one's understanding of it may develop over time.

21. Sex is usually assigned at birth based upon observation of external physical attributes.

22. Most people have a gender identity that aligns with the sex they were designated at birth based on their external genitalia.[1] People whose sex designated at birth aligns with their gender identity are cisgender.

23. A transgender person is someone who has a gender identity that differs from the

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[1] The terms "sex designated at birth" or "sex assigned at birth" are more precise than the term "biological sex" because all the physiological aspects of a person's sex are not always aligned with each other. For example, some people with intersex characteristics may have chromosomes typically associated with males but genitalia typically associated with females. *See* Hembree, W.C., et al., *Endocrine treatment of gender-dysphoric/gender-incongruent persons: An Endocrine Society clinical practice guideline*. J. Clin. Endocrinol. & Metab., 2017. **102**: 3869 3903, 3875, https://academic.oup.com/jcem/article/102/11/3869/4157558 (hereafter "Endocrine Guideline") ("Biological sex, biological male or female: These terms refer to physical aspects of maleness and femaleness. As these may not be in line with each other (e.g., a person with XY chromosomes may have female-appearing genitalia), the terms biological sex and biological male or female are imprecise and should be avoided.")

person's sex designated at birth.

24. Transgender people have always existed, although the number of people who we know to be transgender has increased in recent times with increased visibility and alongside advances in modern medical treatments.[2]

25. Gender dysphoria describes the significant emotional distress that stems from the incongruence between a person's gender identity and sex designated at birth, and/or body characteristics. A person can experience gender dysphoria at any age, but among adolescents it is often associated with distress at physical changes associated with the development of secondary sexual characteristics during puberty such as breast development, voice deepening, growth and thickening of facial and body hair or testicular enlargement that are inconsistent with a person's gender identity.

26. Gender dysphoria is also a diagnosis in the American Psychiatric Association's Diagnostic & Statistical Manual of Mental Disorders ("DSM V"). In order to be diagnosed with gender dysphoria, the incongruence between a person's gender identity and designated sex must have persisted for at least six months and be accompanied by clinically significant distress or impairment in social, occupational, or other important areas of functioning. There are two separate diagnoses for gender dysphoria, one for gender dysphoria in childhood and the other for gender dysphoria in adolescence and adulthood.

27. Being transgender is not itself a mental health condition; however, stigma, bullying, and untreated gender dysphoria can lead to severe anxiety, depression, and suicidality.[3] Mental

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[2] Carswell, J.M., Lopez, X., and Rosenthal, S.M., *The evolution of adolescent gender-affirming care: An historical perspective*. Horm. Res. Paediatr., 2022. **95**(6): p. 649-656.

[3] Spack, N.P., et al., *Children and adolescents with gender identity disorder referred to a pediatric medical center*. Pediatr., 2012. **129**(3): p. 418-25; Olson, K.R., et al., *Mental Health of Transgender Children Who Are Supported in Their Identities*. Pediatr., 2016. **137**(3): p.

health and psychosocial support are essential components of care for transgender and gender diverse people as detailed in the Endocrine Society Clinical Care Guideline.

MECHANISM OF PUBERTY AND PUBERTY RELATED MEDICATIONS

28. Puberty is the process of physical changes driven by hormone activation of pulsatile signals from the hypothalamus in the brain, Gonadotropin Releasing Hormone (GnRH), to stimulate the pituitary gland to produce Luteinizing Hormone (LH) and Follicle Stimulating Hormone (FSH). Subsequently, LH and FSH signal the gonads: ovaries make estrogen and testes make testosterone. Estrogen and testosterone hormones are in turn responsible for a pubertal growth spurt, and, respectively, breast development and menarche, or testicular enlargement and sperm production.

29. Pubertal onset typically ranges between the ages of 8-12 for people designated female at birth and between 9 and 14 for people designated male at birth. There are five stages of pubertal development, known as "Tanner stages."

30. Common variations in puberty are precocious puberty, which describes onset earlier than expected, e.g. "early bloomer", and constitutional delay of growth and puberty, e.g. "late bloomer." GnRH agonists are medications that interrupt the pulsatile pattern of GnRH secretion through down regulation of receptors to lower LH and FSH levels, which would otherwise stimulate the gonads of pubertal adolescents and adults to produce estrogen and testosterone. The impact is a reversible suppression of the hypothalamic-pituitary-gonadal hormone axis, which in essence causes puberty to be paused during the course of the treatment. When the medication is discontinued, the pulsatile action of GnRH resumes the hormone signalling cascade and puberty resumes.

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31. GnRH agonists are the standard of care for the treatment of children with central precocious puberty, which is a condition where pubertal development begins early due to premature activation of the hypothalamic-pituitary-gonadal axis.[4] They have been used for treating precocious puberty for decades. Additional indications for GnRH agonist medications are to protect fertility during certain cancer treatments, for endometriosis, and for prostate cancer.

32. Treatment with GnRH agonists is also part of the standard of care for treating gender dysphoria in adolescents. As with other conditions, the GnRH agonists work in gender dysphoric patients by reversibly suppressing the hypothalamic-pituitary-gonadal hormone axis and pausing secondary sex characteristic development. For gender dysphoric adolescents who are experiencing severe distress upon the onset of puberty, this pause alleviates worsening distress that occurs as puberty progresses.

33. Other hormonal treatments that endocrinologists and other pediatricians might prescribe include testosterone, estrogen, and medicines that block the action or supress the production of androgens. Adolescents with constitutional delay of growth and puberty may benefit from hormone therapy to "jump start" endogenous puberty, to more closely match development with peers.[5] Adolescents with medical conditions that result in hypogonadism, such as Turner sydrome or Klinefelter syndrome, may need hormone treatment with estrogen or testsoterone to initiate and support ongoing pubertal development.

34. Hormone therapy is also prescribed to transgender adolescents with gender dysphoria to help bring their bodies into alignment with their gender identity and match their peers' pubertal developments. For transgender boys, this is through testosterone and menstural supression

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[4] Popovic, J., et al., *Gonadotropin-releasing hormone analog therapies for children with central precocious puberty in the United States.* Front Pediatr., 2022. **10**: p. 968485.

and for transgender girls this is through estrogen and testosterone suppression.

35. Endocrinologists, including pediatric endocrinologists, have extensive experience in the type of hormone management that treatment of gender dysphoria entails.

36. When treating patients with hormone therapy for gender dysphoria whether pubertal suppression or gender-affirming hormones clinicians follow the evidence-based protocols discussed below.

TREATMENT PROTOCOLS FOR GENDER DYSPHORIA

37. When appropriately treated, gender dysphoria can be effectively managed. I currently treat hundreds of transgender youth and young adults in accordance with the Endocrine Society Clinical Practice Guideline. The Endocrine Society is a professional organization of more than 18,000 endocrinologists. These guidelines have been endorsed by the American Academy of Pediatrics and the Pediatric Endocrine Society.

38. For transgender youth, the development of secondary sexual characteristics associated with endogeneous puberty can be very distressing and contribute to and severely exacerbate gender dysphoria.

39. Treatment with GnRH agonists temporarily suppresses endogenous puberty, which enables transgender youth to socially present in their affirmed gender, provides more time for gender identity exploration, and preserves an opportunity to proceed in the future to puberty that matches (is congruent with) their gender identity.

40. It is critical to understand that non-intervention in the context of gender dysphoria is not benign since in the absence of intervention, distressing physical changes of endogenous puberty will progress.

41. By preventing permanent physical changes in puberty, transgender adults experience less dysphoria later in life because they can have body alignment that more closely

matches their gender identity. For example, preventing the voice deepening that would occur due to exposure to testosterone during puberty enables a transgender female to maintain a voice quality in a higher pitch as an adult. Preventing development of breasts due to exposure to estrogen in puberty can alleviate the need for a transgender male to undergo top surgery as an adult.

42. Under the Endocrine Society Clinical Practice Guideline, transgender adolescents with gender dysphoria may be eligible for pubertal suppression if:

- A qualified mental health provider has confirmed that:
  - The adolescent has demonstrated a long-lasting and intense pattern of gender nonconformity or gender dysphoria (whether suppressed or expressed),
  - Gender dysphoria worsened with onset of puberty,
  - Any coexisting psychological, medical, or social problems that could interfere with treatment (e.g. that may compromise treatment adherence) have been addressed, such that the adolescent's situation and functioning are stable enough to start treatment,
  - The adolescent has sufficient mental capacity to give informed consent to this (reversible) treatment, and
- The adolescent:
  - Has been informed of the effects and side effects of treatment (including potential loss of fertility if the individual subsequently continues with sex hormone treatment) and options to preserve fertility,
  - Has given informed consent and (particularly when the adolescent has not reached the age of legal medical consent, depending on applicable legislation) the parents or other caretakers or guardians have consented to the treatment and are involved in supporting the adolescent through the treatment process,
- And a pediatric endocrinologist or other clinician experienced in pubertal assessment:
  - Agrees with the indication for GnRH agonist treatment,
  - Has confirmed that puberty has started in the adolescent, and

- Has confirmed that there are no medical contraindications to GnRH agonist treatment.

43. For the subset of adolescents who initiate GnRH agonist treatment to pause puberty and who then maintain insistent, persistent, consistent gender identity incongruent with sex designated at birth, a second stage of medical treatment is initiation of gender affirming hormones (estrogen or testosterone) to induce puberty consistent with gender identity.

44. For adolescents and adults who do not begin medical treatment until after puberty has started or substantially progressed, gender affirming hormone therapy (estrogen and testosterone suppression or testosterone and menstrual suppression) may be the first medical intervention.

45. Feminizing effects of estrogen include breast growth, redistribution of body fat, and decrease in terminal hair growth. Masculinizing effects of testosterone include deepening of voice, increased muscle mass, and increase in facial and body hair growth.

46. Treatment with gender affirming hormone therapy (estrogen or testosterone) is demonstrated to result in improvement in symptoms of gender dysphoria, depression, and anxiety in prospective observational studies of transgender youth,[6] as well as improved psychological functioning among transgender young adults who receive treatment for gender dysphoria.[7]

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[6] *See* Chen, D., et al., *Psychosocial functioning in transgender youth after 2 Years of hormones*. N. Engl. J. Med., 2023. **388**(3): p. 240-250. Prospective study of 315 participants between 12 to 20 years of age from four clinics in the United States after gender affirming hormone therapy with either estrogen or testosterone. Overall, there was improvement across appearance congruence (degree to which physical traits align with gender) and psychosocial functioning (depression, anxiety, life satisfaction).

[7] See longitudinal outcome data from young adults, de Vries, A.L., et al., *Young adult psychological outcome after puberty suppression and gender reassignment*. Pediatr., 2014. **134**(4): p. 696-704. Longitudinal outcome study of 55 young transgender individuals followed in "Dutch model" assessed at mean age 13.6 years, 16.7 years, and 20.7 years. Improvement observed in symptoms of gender dysphoria, depression, anxiety, and social-educational functioning.

47. Under the Endocrine Society Clinical Practice Guideline, transgender adolescents may be eligible for gender-affirming hormone therapy if:

- A qualified mental health professional has confirmed:
  - The presence of gender dysphoria,
  - Any coexisting psychological, medical, or social problems that could interfere with treatment (e.g. that may compromise treatment adherence) have been addressed, such that the adolescent's situation and functioning are stable enough to start sex hormone treatment,
  - The adolescent has sufficient mental capacity to estimate that consequences of this (partly) irreversible treatment, weigh the benefits and risks, and give informed consent to this (partly) irreversible treatment and,
- The adolescent:
  - Has been informed of the (irreversible) effects and side effects of treatment (including potential loss of fertility) and options to preserve fertility,
  - Has given informed consent and (particularly when the adolescent has not reached the age of legal medical consent, depending on applicable legislation), and the parents or other caretakers or guardians have consented to the treatment and are involved in supporting the adolescent through the treatment process,
- And a pediatric endocrinologist or other clinician experienced in pubertal induction:
  - Agrees with the indication for sex hormone treatment,
  - Has confirmed that there are no medical contraindications to sex hormone treatment.

48. I often meet transgender teens who wear binders to minimize the appearance of breast tissue and/or oversized clothing to hide aspects of their body shape that they do not like as changes related to puberty occur; often they do not make eye contact when asked to talk about their feelings related to gender. After starting gender affirming treatment, they are visibly more comfortable and confident with increasing engagement with me during each subsequent visit. As gender affirming treatment continues, adolescents often tell me that they feel more like themselves,

that they are more active with peers, and frequently experience improved school performance. I am witness to the progression of pained and tearful early visits to head nods of affirmation and smiles in response to asking how things are going as they begin to experience puberty changes consistent with their gender embodiment goals. In my experience, the physical changes from gender affirming hormone therapy are accompanied by noticeable positive impact on mood and wellbeing. While mental health care is an essential component of treatment, there is simply no mental health intervention that in isolation can accomplish the kind of affirming physical changes that medical interventions allow for these adolescents. And as noted above, any adolescent who begins medical intervention for gender dysphoria has already been in the care of a mental health professional who signs off on the appropriateness of treatment.

MY CLINICAL PRACTICE TREATING TRANSGENDER YOUTH AND YOUNG ADULTS WITH GENDER DYSPHORIA AT CINCINNATI CHILDREN'S HOSPITAL

49. I am currently a provider to hundreds of youth and young adults with gender dysphoria at the Endocrinology Clinic at Cincinnati Children's Hospital, which is a part of the Cincinnati Children's Gender Program, "Living with Change Center for Transgender Health". I have specialized training, expertise, and experience to describe the use of puberty pausing medications (GnRH agonist) and gender-affirming hormone treatment for adolescents and young adults with gender dysphoria.

50. The Gender Program includes an interdisciplinary team that meets monthly and is available for specialty referrals. The Program provides comprehensive care, including both medical and mental health evaluation and treatment.

51. The initial intake visit, as well as the follow up visits with an endocrinologist for evaluation of gender dysphoria, all include a history and physical exam, review of mental health records, anticipatory guidance around topics of growth, bone health, and puberty.

52. Puberty is described as a progression through 5 stages, Tanner 1 through Tanner 5. Tanner 1 is pre-pubertal, without any hormonal or physical changes. Tanner 5 describes completion of adult hormone levels and secondary sexual characteristics.

53. Medical treatment with a GnRH agonist, often referred to as a puberty blocker, is considered when it is medically indicated for an adolescent with gender dysphoria at Tanner 2 or Tanner 3 stages of puberty never before Tanner Stage 2. There are no hormonal or medical interventions indicated for pre-pubertal youth, i.e. those who have not started puberty.

54. If medical treatment with a GnRH agonist is considered to pause pubertal progression, I discuss with the patient and their family the Endocrine Society guidelines for care of transgender youth. Specifically, we discuss indications for puberty blockers, as well as the risks, benefits, limitations, and potential side effects, including considerations for fertility and bone health. Puberty blockers are safe, reversible, and recognized as an important tool to decrease gender dysphoria by preventing further secondary sexual characteristics that are incongruent with identity. We review options to optimize bone health while on puberty blockers, including maintaining adequate Vitamin D levels, calcium intake, and weight bearing exercises. I provide anticipatory guidance on options for injectable or implantable GnRH agonist, the insurance approval process, and longer-term options for hormone affirming treatment later.

55. Discussion of the potential side effects of pubertal suppression are familiar and common because they are the same side effects when used to treat other conditions like precocious puberty. Though the timeline for pausing puberty can come later for a transgender adolescent than for a precocious puberty patient, gender dysphoria patients are generally on pubertal suppression for shorter periods of time than my precocious puberty patients who may begin suppression as early as three years old. Additionally, the duration that an adolescent maintains on pubertal

suppression is limited. For example, a patient receiving pubertal suppression to treat gender dysphoria will either discontinue that treatment and resume endogenous puberty or more often, initiate gender affirming hormonal therapy to initiate puberty consistent with gender identity around age 14, similar to the timing of puberty of peers.

56. When discussing treatment with gender affirming hormones (estrogen or testosterone) I describe the approach to slowly titrate doses to mimic changes of the cadence of endogenous puberty. I review the expected physical changes associated with hormones and the timeframe those changes are most often experienced. I review which aspects of hormone treatment are fully reversible, partly reversible, and not reversible (e.g. with testosterone treatment, increased acne is fully reversible, changes in hair pattern and muscle mass are partly reversible, and voice deepening is not reversible). I review with families the impact of hormones on growth and adult height prediction. I review the impact of hormones on future fertility and the need for reliable contraception (e.g., even though testosterone therapy can decrease fertility, it is not in and of itself reliable contraception and it is possible for transmasculine patients on testosterone to become pregnant both intentionally and unintentionally). During these discussions referral for fertility preservation is offered before initiating gender affirming hormone treatment. Family medical history is reviewed for any conditions that might predispose to higher risk of side effects with exogenous hormone therapy (e.g. increased risk of blood clots) and counseling is provided on smoking avoidance for everyone. I advise on types and frequency of laboratory testing to monitor safety of hormone levels. Lastly, I review that the treatment is entirely voluntary and that the individual can elect to slow down pace of dose titration or discontinue treatment at any time.

57. The potential side effects from hormone therapy are comparable when used to treat patients with gender dysphoria and when used for other purposes. A difference is the potential

impact on fertility, which is thoroughly discussed with patients and fertility preservation is offered. Treatment for gender dysphoria is not the only pediatric condition whose treatment may impact fertility. Many of the adolescents I treat for pediatric cancers, intersex conditions and some other conditions also have treatments that may impair their fertility and as physicians we discuss this impact with them, their parents/guardians, and other relevant providers.

58. Before prescribing a GnRH agonist medication or gender affirming hormone therapy as treatment for gender dysphoria, I obtain written and verbal informed consent from the parent(s) and assent from the adolescent patient. Furthermore, I review a letter from a mental health professional that confirms the individual's diagnosis of gender dysphoria, and that the mental health provider supports proceeding with medical treatment.

59. Prior to the initiation of medical treatment, we perform blood work and imaging (e.g. bone age x-ray, bone density testing) to provide a baseline for continual monitoring.

60. Prescriptions for puberty blockers require prior authorization from insurance companies, which often takes weeks or months to obtain. Therefore, there is time for families to reflect on the decision further before initiating treatment.

61. After initiating a medical treatment, routine follow-up visits occur at 6-month intervals thereafter for ongoing monitoring of how treatment is impacting symptoms of gender dysphoria. Witnessing the dramatic and positive transformation of transgender adolescents who are thriving after starting gender affirming care is among the most rewarding aspects of my career. After initiation of gender affirming care, transgender teens often express feeling less anxious, with improved symptoms of depression and decreased distress related to gender dysphoria.

INCIDENCE AND MANAGEMENT OF RISKS AND SIDE EFFECTS OF TREATMENT

62. Estrogen treatment can be delivered via a transdermal patch or an oral pill. The patch allows for more gentle dose escalation and avoids first-pass metabolism in the liver that oral

estrogens require, therefore it is often a preferred approach for inducing puberty in girls.[8] The most common side effect is skin irritation due to the adhesive on the patch, in which case we can try an alternative brand or switch to an oral formulation if necessary. Hormone levels can be measured with laboratory tests with goal to maintain estradiol levels between 100-200 pg/mL. (menstruating women will experience variation in estradiol levels between 40-400 pg/mL throughout a usual monthly cycle). Transdermal estrogen doses or comparable oral Estrace doses used for physiologic induction of puberty or treatment of hypogonadism are far lower than pharmacologic doses of ethinyl estradiol used in oral contraceptive pills, which have a higher rate of thrombo-embolic (blood clot) events particularly in patients over the age of 35 years, and in the context of concurrent hypertension, and with smoking.

63. Testosterone can be delivered via an injection, by topical gel, or oral tablet. Treatment with injections is the most common as it offers the advantage of flexible dosing, can be administered once a week or every other week, and is least expensive. Topical treatment is more difficult to titrate for induction of puberty but may be an effective choice once an individual has reached a steady dose and is willing to apply a daily medication. Topical formulations can transfer to other people, so it is very important to wash hands and avoid physical contact until after the medication is completely dry. Oral testosterone formulations are relatively new on the market in the United States, require twice daily dosing, and are often cost prohibitive. Oral agents are metabolized through the liver similar to oral estrogen, therefore closer monitoring of liver function

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[8] See Gravholt, C.H., et al., *Clinical practice guidelines for the care of girls and women with Turner Syndrome: Proceedings from the 2016 Cincinnati International Turner Syndrome Meeting.* Eur. J. Endocrinol., 2017. 177(3): p. G1-G70 for detailed description of protocols for adjusting estrogen doses and potential side effects in girls with premature ovarian insufficiency related to Turner syndrome, a condition in which individuals are missing a portion of an entire X chromosome.

tests is required. All individuals treated with testosterone are monitored for levels (male range 300-1000 ng/dL) and for elevated hemoglobin levels since testosterone promotes erythrocytosis or increased red blood cells. If the hemoglobin or hematocrit level are too high, a decrease in dose or adjustment in timing of dose is necessary to reduce risk of a thrombo-embolic event (blood clot). Risk of blood clots are higher among individuals who smoke, so counseling to avoid tobacco, vaping, e-cigarettes is always provided.

64. The majority of potential side effects from hormone therapy are tied to genetic and behavioral risk factors and not the medications themselves, and much of the counseling therefore involves helping to ensure appropriate clinical oversight of treatment and ongoing monitoring of overall health.

65. Moreover, many of the potential risks and side effects of hormone therapy are the same or similar for cisgender and transgender patients. For example, when prescribing testosterone for a cisgender adolescent male with delayed puberty or hypogonadism, there is a risk of elevated hemoglobin levels, and so such patients are counseled and monitored in the same way that transgender male patients who are prescribed testosterone are counseled and monitored. Similarly, because estrogen can increase the risk of breast cancer for both cisgender and transgender females, I ask detailed family medical history questions before prescribing exogenous estrogen. Transgender females with no known increased risk of breast cancer are encouraged to follow the same breast cancer screening guidelines as for those designated female at birth.

PUBERTY-DELAYING TREATMENT AND GENDER-AFFIRMING HORMONES ARE SAFE AND EFFECTIVE TREATMENTS FOR TRANSGENDER ADOLESCENTS AND YOUNG ADULTS

66. Based upon my education, training, and clinical experience, puberty pausing treatment and gender-affirming hormones are safe, effective, and beneficial treatment options for adolescents and young adults with gender dysphoria.

67. GnRH agonist medications cause a temporary pause in puberty. When the medication is discontinued, the effects are reversible, and hormone signals related to endogenous puberty restart. Physiologically, a temporary pause in puberty for transgender adolescents is akin to peers who experience constitutional delay of growth and puberty, e.g. "late bloomers" who catch up over time.

68. The timing of initiation of gender affirming hormones and cadence of dose titration is adjusted to meet patient goals and maintain safety parameters based upon laboratory monitoring. In my clinical experience, the overwhelming majority of adolescents and young adults who experience support from their families and pursue medical treatment for gender dysphoria are thriving at subsequent visits. It is gratifying to hear about the confidence to play a lead role in a the school play, pick out a dress for prom, or to feel secure in making decisions for their lives comparable to age matched peers.

69. In a decade of practice, rates of discontinuation of gender affirming treatment amongst my patient panel are rare, and lower than published rates. It is worth contextualizing that literature around rates of regret vary and may include external factors such as lack of family support, societal stigma, or internal factors such as uncertainty about gender identity.[8] Ongoing

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[8] *See* Wiepjes, C.M., et al., *The Amsterdam cohort of gender dysphoria study (1972-2015): Trends in prevalence, treatment, and regrets*. J. Sex. Med., 2018. **15**(4): p. 582-590. Retrospective study of 6,793 individuals evaluated in the Dutch model gender identity clinic between 1972-2015 describing demographic and prescribing trends over time. Authors report low rates of regret (under 1%) for subset of individuals who elected to undergo surgery as part of their gender transition. (Of note, surgery is not performed on minors by any children's hospital in the state of Ohio.) *See also* Turban, J.L., et al., *Factors leading to "Detransition" among transgender and gender diverse people in the United States: A mixed-methods analysis*. LGBT Health., 2021. **8**(4): p. 273-280. Secondary analysis of survey data from 27,715 transgender and gender diverse adults. Among those identified as detransitioning, a majority (82.5%) reported external driving factors including family and societal stigma; less frequently (15.9%) internal factors including fluctuations or uncertainty regarding gender identity reported.

research is needed to optimize the safety and efficacy of interventions offered to transgender adolescents and young adults, including better understanding the reasons for those that experience regret. But this is not unique to the treatment of transgender adolescents or young adults with gender dysphoria and in all of medicine, more research is important for better understanding treatment outcomes and minimizing negative outcomes including regret.

TREATMENTS FOR GENDER-AFFIRMING CARE ARE SIMILAR TO TREATMENTS FOR OTHER PEDIATRIC CONDITIONS

70. Hormone replacement treatment is a cornerstone of the field of Endocrinology. Insulin is used to treat type 1 diabetes, hydrocortisone is used to treat adrenal insufficiency, and estrogen and testosterone are used to treat hypogonadism. There is nothing unique about undergoing hormone treatment to sustain one's health; it is a common practice in many non-transgender patients, including minors, for reasons unrelated to treatment of gender dysphoria. Compared to other hormone treatments that endocrinologists routinely prescribe, estrogen and testosterone have a relatively wide safety profile. For example, insulin, a required medication for treatment of type 1 diabetes, can cause severe hypoglycemia, seizure, and death if given in excess. Similarly, steroid replacement is life sustaining for people with adrenal insufficiency, but higher doses of steroids can cause weight gain, hypertension, diabetes, and osteoporosis.

71. Many people with gender dysphoria have been on hormone therapy for decades and there is no evidence of any negative health outcomes that would outweigh the substantial benefit of the treatment. Likewise, many non-transgender individuals undergo hormone treatment for treatment of hypogonadism most of their lives, and it is well-managed.[10] This includes conditions

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[10] Asscheman, H., et al., *A long-term follow-up study of mortality in transsexuals receiving treatment with cross-sex hormones.* Eur. J. Endocrinol., 2011 Apr. **164**(4): p. 635-42. doi: 10.1530/EJE-10-1038.

such as Turner syndrome, Klinefelter syndrome, premature ovarian failure, and sequelae following cancer treatments.

72. Other common examples in pediatric endocrinology of treatment with hormone therapy for social emotional or gender affirming purposes in cisgender population include use of testosterone to jump start puberty in boys with constitutional delay of growth and puberty to better match peers, and use of estrogen and androgen receptor blockers for girls with polycystic ovarian syndrome (PCOS) to minimize undesired facial and body hair. In puberty, some boys will experience gynecomastia or breast development. The condition is often temporary, but if it does not resolve, can be distressing and cisgender boys will seek treatment to reduce breast tissue.

HARMS OF WITHHOLDING OR TERMINATING TREATMENT FOR TRANSGENDER ADOLESCENTS AND YOUNG ADULTS WITH GENDER DYSPHORIA

73. Without treatment, transgender adolescents and young adults report several-fold higher rates of depression, anxiety, suicidal ideation, suicide attempt, and self-harm without lethal intent, compared to their cisgender counterparts. Transgender youth in unsupportive homes have worse mental health outcomes than those in supportive ones; failure to obtain treatment when medically indicated because of unsupportive caregivers also leads to worse outcomes.[11] In my own clinical practice and in review of available literature, I've observed negative mental health outcomes improve with supportive social structure (family, school), and interdisciplinary treatment from medical and mental health providers.

74. At the current time, synthesis of the best available evidence by medical professional

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[11] Spack N.P, Edwards-Leeper L, Feldmain HA, et al. *Children and adolescents with gender identity disorder referred to a pediatric medical center. Pediatr.*, 2012. **129**(3): p. 418-425; Olson K.R., et al., *Mental health of transgender children who are supported in their identities.* Pediatrics., 2016. **137**: p. 1-8.

organizations including the American Academy of Pediatrics, the American Medical Association and the Endocrine Society favor continuing access to the spectrum of gender affirming care from an interdisciplinary team. The Ohio Children's Hospital Association strongly advocated for Governor DeWine to veto HB68 based on the catastrophic impact on a small but high-risk population of children.[12]

75. In preparation for HB68 legislation enactment, our clinical care has already been adversely impacted. The team has spent dozens of hours in care coordination ensuring that patients have access to visits before April 24, 2024 and/or have referrals to providers in other states. I have already had to compromise the standard of care offered to families that live outside of the State of Ohio as I will not be able to offer ongoing follow up for Kentucky residents, even though many live closer to Cincinnati Children's hospital than some Ohio residents given our location at the border of the two states. For continuous Ohio residents who do not yet meet criteria to initiate GnRH agonist or gender affirming hormone therapy, I am already in the untenable position of offering substandard medicine with substantial geographic barriers to care. For example, in the ordinary course, for my patients who are candidates for pubertal suppression, I would continue to meet with and monitor those patients until they met the criteria to initiate treatment, i.e. demonstrate Tanner 2 puberty development. At that time, I would then counsel the patient and their family about the risks and benefits of treatment and, after the parents consent and the patient assent, begin a course of treatment. Because of HB68, I cannot provide that care to those patients, who will now have to travel out of state to see a clinician for that monitoring and to initiate that treatment. Furthermore, the wording of the legacy clause indicates that established patients that

[12] Lashutka, N., *Media statement regarding Ohio General Assembly passage of Sub. HB 68*, Ohio Gen. Hosp. Assoc. Press Room, 2023 Dec. 15. https://ohiochildrenshospitals.org/press-room/media-statement-regarding-ohio-general-assembly-passage-of-sub-hb-68/.

have started GnRH agonist or gender affirming hormone therapy and are continuous Ohio residents may continue therapy. The conjunction "or" is incredibly problematic as it implies that youth that are on puberty blockers but not yet gender affirming care cannot initiate that next step in treatment with their established care providers in Ohio. Prolonged pubertal blockade beyond the typical age range for the onset of puberty is detrimental to bone health and social, emotional development. The law as written is simply bad medicine and will result in predictable and serious physical and psychological harms to an already vulnerable population.

76. Withholding pubertal suppression and gender affirming hormone therapy from transgender youth when it is medically indicated is extremely harmful. I am already beginning to see the negative impact for families as I explain the legal implications HB68 will have on the care that I will no longer be able to provide for their child. Transgender youth do not understand why adults they have never met are interfering in their ability to access health care, and they feel threatened, unwelcome, and targeted. Families that do not have the financial means to travel to other states are under tremendous stress as the legal landscape is creating additional layers of burden.

77. In summary, denying treatment will not cause an adolescent to stop being transgender, it will only exacerbate distress from lack of access to established treatments. As a medical provider it is devastating and goes against my ethical obligations to my patients to be legally prohibited from offering services that are safe, effective, and beneficial to transgender youth.

Sarah Corathers

SARAH CORATHERS, MD

Signed at:
Franklin
_____,Ohio
County

Sworn to and subscribed before me this 03/22/2024 day of March, 2024

_____
Notary Public

Theresa M Sabo
Commission # 2016-RE-619622
Electronic Notary Public
State of Ohio
My Comm Exp. Nov 28, 2026

Notarial act performed by audio-visual communication

EXHIBIT A

Sarah D. Corathers, MD
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Cincinnati, Ohio 45219
P: 513-636-4744; F: 513-803-1174
Sarah.corathers@cchmc.org

Education

Bachelor of Arts, Barnard College, Columbia University (1992-1996)

Art History Major, graduated with departmental honors

Doctor of Medicine, Wright State University (1998-2002)

Passed Step 1 USMLE June 2000; Passed Step 2 September 2001, Passed Step 3 July 2004

Residency, Internal Medicine and Pediatrics (2002-2006)

University of Cincinnati and Cincinnati Children's Hospital Medical Center (CCHMC)

Fellowship, Adult and Pediatric Endocrinology (2009-2013)

University of Cincinnati and Cincinnati Children's Hospital, Divisions of Endocrinology

Quality Improvement (QI) Training

Cincinnati Children's Hospital: Intermediate Improvement Science Series (August 2010-January 2011); Advanced Improvement Methods (September 2014- May 2015)
Academic Pediatric Association: Advancing Implementation and QI Science (Seminar, 5/2018; 4/2019)

Academic Appointments

Associate Chief of Staff, Ambulatory, Cincinnati Children's (March 2024-)
Clinical Director, Division of Pediatric Endocrinology, Cincinnati Children's (January 2022-)
Associate Professor, Dept of Pediatrics, Division of Endocrinology, Cincinnati Children's (06/2019-)
Assistant Professor, Dept of Pediatrics, Divisions of Endocrinology, Cincinnati Children's (07/2013- 06/2019)
Secondary appointment, James M. Anderson Center for Health System Excellence, (07/2013--)
Director, Quality Scholars Program, Cincinnati Children's (9/2017-3/2024)
Chief Resident, Internal Medicine, University of Cincinnati (07/2006-06/2007)

Licensing and certification

American Board of Pediatrics, Board Certified, 10/2006
American Board of Internal Medicine, Board Certified, 8/2007
Pediatric Endocrinology, Diabetes and Metabolism, Board Certified, 11/2013; MOC in progress
Adult Endocrinology, Diabetes and Metabolism, Board Certified, 10/2013; MOC in progress
State Medical Board of Ohio, License 35.088645, Expiration date 4/1/2025

Awards and Honors

Cincinnati Magazine Top Doctor, 2016--2024
Cincy Magazine, Best Doctor, 2016--2023
Venue Media and LEAD magazine, Comprehensive Healthcare Leadership Award, August 2016
Service Quality Award 2015, Permanente Journal, "Effective Follow up for Depression and or Suicidal Ideation in Adolescents with Diabetes."
Ohio Patient Safety Institute, Best Practice Award, "Depression Screening in the Diabetes Center", 2013
Alpha Omega Alpha Honor Society Member

Updated 2.1.2024

Clinical Service

Clinical Expertise and Activities

Based on dual training in pediatric and adult endocrinology, my interests and experience are in the care of adolescents and adults with endocrine conditions across the lifespan. Areas of clinical concentration include type 1 diabetes, Turner syndrome, transgender health, and successful transition to adult care.

Clinical Director: Oversee the clinical operations and quality improvement portfolio of the Division of Pediatric Endocrinology. Notable accomplishments in the past year include improving access (reduce 3rd next available from mean of 43 days to 24 days, achieve consistent clinic visits for established patients), expand to Mobile Care Clinic, two additional satellite locations, and launch e-visit for diabetes, recognition as top performing ambulatory division for Patient and Family Experience (2023), USNWR Division ranking tied for #1 in the nation (2023).

Diabetes Transition Program Development: Led development of a transition policy and registry to track transition planning and transfers to adult care (2013-2014). In collaboration with Seattle Children's Hospital, developed and implemented a patient reported readiness assessment tool, READDY (2013-2018) that is translated into 5 languages and used internationally (2021--). Increased transition planning from 10% to > 85% for ages 16-18 and > 90% of over age 19 (2018- ongoing). Expanded depression screening and referral for mental health services to people over age 18 (2019), partner with adult receivership programs.

Leadership in Quality Improvement (QI): Engagement with institution-wide Psychosocial Screening task force, the Health Equity Network at Cincinnati Children's (2021-ongoing) and coordinating Division of Endocrinology initiatives with the Type 1 Diabetes Exchange national collaborative (T1Dx-QI). Cincinnati Children's Diabetes Center was one of the first North American centers to join the International Diabetes Registry SWEET (2019). The Division of Endocrinology at Cincinnati Children's Hospital consistently ranks highly in USNWR, most recently 1st in the nation in 2023 and 3rd in 2022.

Clinical improvement activities include: implementation of depression screening and appropriate referral for youth with diabetes (2011- present), increasing timely insulin administration in hospitalized patients with cystic fibrosis related diabetes (2014-2015), decreasing loss to follow of congenital hypothyroid patients (2014-2018), development of diabetes registry with selection of quality metrics and data capture strategies (2015-2016), integration of patient reported outcomes into clinical care (2016- current), development of care gap reports (2017-current). Current work includes expanding uptake of diabetes technology and sharing diabetes device data between visits to address and reduce health equity gaps. Across all ages and public and private insurance coverage, increasing continuous glucose monitor use rates > 80%, while cutting disparity gaps in half (2019- ongoing). Through ConnecT1D project, mean HbA1c for Healthvine Medicaid cohort with T1D improved from 9.4% to 8.8% (2022--).

Research and Scholarly Activities

Research and Scholarly Activities

I am a board-certified pediatric and adult endocrinologist, with advanced training in quality improvement (QI) methods. The intersection of my research and clinical interests includes psychosocial aspects of diabetes management, mechanisms to promote successful transition between adult and pediatric health care systems, and health system-based interventions to improve care delivery and patient outcomes. As Clinical Director, I lead an interdisciplinary QI team at Cincinnati Children's Division of Endocrinology and direct the Quality Scholars Program in the James M. Anderson Center for Health Systems Excellence. Nationally, I serve as a faculty leader for the Type 1 Diabetes Exchange Learning Collaborative (T1DX-QI), a network of 50+ centers throughout the United States. Funded research projects focus on ambulatory safety, diabetes self-management support, use of patient reported outcomes to inform productive clinical interactions, QI initiatives to achieve excellent and equitable outcomes for youth with type 1 diabetes.

Updated 2.1.2024

Grants and Contracts

Current Research Support

Helmsley Charitable Trust, Corathers (PI) 02/1/2022-01/31/2025

ConnecT1D: reinforcing connections between patients, the clinic and community partners to achieve excellent and equitable glycemic and psychosocial outcomes for young people with type 1 diabetes (T1D).

The objective of this 2.6-million-dollar diabetes clinic innovation grant is development of a more efficient, proactive care delivery model for T1D that supports patients and families through access to diabetes technology, more frequent communication between visits, and establishing a unified clinical information system infrastructure for diabetes devices to interface with the electronic medical record.

Role: PI, current year effort 20%

R01DK121295-01, NIH/NIDDK, Modi/Driscoll (co-PIs) 04/01/19- 03/31/24

Diabetes Journey: From Systematic Screening to Intervention

The objective of this study is to use patient reported outcomes (e.g., adherence barriers) to guide the integration of a novel tailored intervention into clinical care to improve adherence, A1C, and HRQOL.

Role: Co-Investigator, current year effort 8%

Unitio /Helmsley Charitable Trust, Corathers/Rioles (co-PIs) 03/2016 – 06/2025

Type 1 Diabetes Exchange Learning Collaborative

The primary aim is to develop a multi-site national quality improvement collaborative for type 1 diabetes with a focus on outcomes amongst adolescent and young adult population.

Role: Co-Investigator, Clinical Faculty leader, current year percent effort 5%

Completed Research Support

R18 HS026644-01, DHHS/AHRQ, Walsh (PI) 09/30/18 - 09/29/23

Ambulatory Pediatric Safety Learning Lab

The specific aims of this longitudinal study are to reduce harm due to medication errors and treatment delay in two conditions (diabetes and autism spectrum disorder) through redesign of the processes for medication dose adjustment of insulin and prompt management of serious illness at home.

Role: Site PI, co-investigator

Place Outcomes Award, Cincinnati Children's Hospital 01/2020-12/2022

AID-T1D (Artificial Intelligence Decision Support in Type 1 Diabetes)

The aim of this research is to determine feasibility and efficacy of using artificial intelligence software to guide glucose pattern review and insulin dose titration at and between clinical encounters.

Role: Primary Investigator

Helmsley Charitable Trust, DiMeglio (PI) 02/2017 - 06/2019

Strategies to Enhance New CGM Use in Early Childhood (SENCE)

The objective of this multi-site study is to compare the efficacy and safety of CGM alone and CGM in combination with a family behavioral intervention with a control group using blood glucose monitoring.

Role: Site PI

R01 DK069486, NIH/NIDDK, Dolan (PI) 07/2017 - 06/2019

Self-Management of Type 1 Diabetes during Adolescence

The aims include 1) examination of the trajectories of glycemic control 2) test a model of modifiable risk on glycemic control 3) identify subgroups and profiles of risk factors and 4) characterize the impact on glycemic control on precursor measures of kidney, eye, and cardiovascular complications.

Role: Co-Investigator

Unitio /Helmsley Charitable Trust, Anhalt (PI) 03/2016 - 06/2018
Type 1 Diabetes Exchange Learning Collaborative
The primary aim is to develop a multi-site national quality improvement collaborative for type 1 diabetes.
Role: Co-Investigator, Faculty leader

Unitio /Helmsley Trust, Margolis/Britto (Co-PIs) 08/2014 - 07/2015
A Collaborative Chronic Care Network for Type-I Diabetes: Design Phase
Role: Co-Investigator

Publications
Peer Review Articles as a listed author

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2. Huber, A., Jacobson E., **Corathers, S.**, and Tomer, Y. Joint susceptibility to autoimmune diabetes and thyroiditis: from epidemiological observations to gene function. Endocr Rev. 2008; Oct 29(6):697-725. PMID 18776148
3. Hillman JB, **Corathers SD**, Wilson SE. Pediatricians and screening for obesity with body mass index: does level of training matter? Public Health Rep. 2009; Jul-Aug; 124(4):561-7 PMID 19618793
4. **Corathers S.**, Falciglia, M. The role of hyperglycemia in acute illness: supporting evidence and its limitations, Nutrition 2010; Sept 22. PMID 20869205
5. Lotstein, D, Seid, M, Klingensmith, G, Case, D, Lawrence, J, Pihoker, C, Dabelea, D, Mayer-Davis, E, Gilliam, L, **Corathers, S**, Imperatore, G, Dolan, L, Anderson, A, Bell, R, Waitzfelder, B for the SEARCH for Diabetes in Youth Study Group. Transition from Childhood to Adult Care for Youth with Type 1 Diabetes in Adolescence. Pediatrics, 2013 Apr;131 (4): e1062-70. PMID 23530167
6. **Corathers, S.**, Peavie, S, Salehi, M. Complications of Diabetes Therapy. Endocrinol Metab Clin North Am, 2013. 42(4): p. 947-70. PMID 24286957
7. **Corathers, S**, Kichler, J, Jones, N, Houchen, A, Jolly, M, Morwessel, N, Dolan, L, Hood, K. Improving Depression Screening for Adolescents with Diabetes. Pediatrics, 2013. 132(5) PMID 24127480
8. Powell, P., **Corathers, S.**, Raymond, J., Streisand, R. New Approaches to Providing Individualized Diabetes Care in the 21st Century. Curr Diabetes Rev. 2015 Apr 21. PMID 25901504
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11. Beal, S., Riddle, I., Kichler, J., Duncan, A., Houchen, A., Casnellie, L., Woodward, J., **Corathers, S.** Transition readiness across different clinic populations: The influence of chronic condition and individual characteristics. Acad Pediatr. 2016 Sept-Oct; 16(7):660-7. PMID: 27345693
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13. Garvey KC, Foster NC, Agarwal S, DiMeglio LA, Anderson BJ, **Corathers SD**, Desimone ME, Libman IM, Lyons SK, Peters AL, Raymond JK, Laffel LM. Health care transition preparation and experiences in a US national sample of young adults with type 1 diabetes. Diabetes Care December 2016. PMID: 2800779
14. **Corathers, S.**, Kichler, J, Mara, C. Psychosocial Patient-Reported Outcomes in Pediatric and Adolescent Diabetes: A Review and Case Example. Curr Diab Rep. 2017. PMID: 28508255

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15. Matlock, K., Yayah Jones, N., **Corathers, S.**, Kichler, J. Clinical and psychosocial factors associated with suicidal ideation in adolescents with type 1 diabetes mellitus. J Adolesc Health 2017 Oct; 61(4):4710477 PMID: 28732716
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22. Varni, JW, Delamater AM, Hood KK, Raymond JK, Chang NT, Driscoll KA, Wong JC, Yi-Frazier JP, Grishman EK, Faith MA, **Corathers SD**, Kichler JC, Miller JL, Doskey EM, Heffer RW, Wilson DP., PedsQL 3.2 Diabetes Module for Children, Adolescents, and Young Adults: Reliability and Validity in Type 1 Diabetes. Diabetes Care, 2018 June. PMID: 30061317
23. Pihoker, C., Forsander, G., Fanthun, B., Virmani, A., **Corathers, S.**, Benitez-Aguirre, P., Fu, J., Maahs, D. The delivery of ambulatory diabetes care to children and adolescents with diabetes. Pediatric Diabetes, 2018 August. PMID: 30144259
24. Conard, L.A.E., **Corathers, SD** & Trotman, G. Caring for Transgender and Gender Non-Conforming Youth. Curr Pediatr Rep (2018) 6: 139. https://doi.org/10.1007/s40124-018-0173-8
25. **Corathers, S.**, Mara CA., Chundi PK., Kichler JC. Depression and Suicide Screening in Adolescents with Type 1 Diabetes: 5-Years of Implementation and Outcomes. J Am Acad Child Adolesc Psychiatry. 2019 Feb 22 PMID: 30802493
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33. **Corathers, SD**, DeSalvo, DJ., Therapeutic Inertia in Pediatric Diabetes: Challenges and Strategies to Overcome Acceptance of the Status Quo. Diabetes Spectr. 2020 Feb;33(1):22-30. PMID:32116450
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Peer Review Articles as a member of a collaboration or study group

1. Dubose SN et al, **collaborating contributor of the Type 1 Diabetes Exchange Clinic Network** (recruited research subjects), Obesity in Youth with Type 1 Diabetes in Germany, Austria and the United States. J Pediatr. 2015 Sep; 167(3):627-32 PMID: 26164381
2. Fair C et al, **collaborating contributor of the International and Interdisciplinary Heath Care Transition Research Consortium** (developed research plan, served as member of writing group). International and Interdisciplinary Identification of Health Care Transition Outcomes. JAMA Pediatr. 2016 Mar; 170(3):205-11. PMID: 26619178
3. Craig et al, **collaborating contributor of the Type 1 Diabetes Exchange** (recruited research subjects), Prevalence of Celiac Disease in 52,721 Youth with Type 1 Diabetes: International Comparison across Three Continents. Diabetes Care. 2017 Aug; 40(8):1034-1040. PMID 28546222
4. Gravholt et al, **collaborating author of International Turner Syndrome Consensus Group**, (reviewed literature, participated in international consensus meeting, member of writing group for transition and adult care sections), Clinical Practice Guidelines for the care of girls and women with Turner Syndrome: proceedings from the 2016 Cincinnati International Turner Syndrome Meeting. European Journal of Endocrinology 2017 Sep;177(3) PMID 28705803
5. Miller KM, et al. **collaborating contributor of the Type 1 Diabetes Exchange** (recruited research subjects), Longitudinal Changes in Continuous Glucose Monitoring Use Among Individuals with Type 1 Diabetes: International Comparison in the German and Austrian DPV and U.S. T1D Exchange Registries. Diabetes Care. 2019 Oct. PMID: 31672703

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6. Mizokami-Stout KR, et al. **Collaborating contributor of the Type 1 Diabetes Exchange** (recruited research subjects) Contemporary Prevalence of Diabetic Neuropathy in Type 1 Diabetes: Findings from the T1D Exchange. Diabetes Care. 2020 Apr;43(4):806-812. Epub 2020 Feb 6. Diabetes Care. 2020. PMID: 32029635
7. A Randomized Clinical Trial Assessing Continuous Glucose Monitoring (CGM) Use with Standardized Education with or without a Family Behavioral Intervention Compared with Fingerstick Blood Glucose Monitoring in Very Young Children with Type 1 Diabetes. **Collaborating author and contributor to Strategies to Enhance New CGM Use in Early Childhood (SENCE) Study Group.** Diabetes Care 2021 Feb; 44(2):464-472. PMID: 33334807
8. The COVID-19 Pandemic Affects Seasonality, With Increasing Cases of New-Onset Type 1 Diabetes in Children, From the Worldwide SWEET Registry. **Collaborating contributor of the SWEET study group.** Diabetes Care.2022 Sept. PMID 36166593
9. Twelve-month psychosocial outcomes of continuous glucose monitoring with behavioral support in parents of young children with type 1 diabetes. **Collaborating contributor to Strategies to Enhance New CGM Use in Early Childhood (SENCE) Study Group.** Diabet Med. 2023 Aug;40(8). PMID: 37083018.
10. Demographic, Clinical, Management, and Outcome Characteristics of 8,004 Young Children with Type 1 Diabetes. **Collaborating contributor of the Type 1 Diabetes Exchange.** Diabetes Care. 2024 Feb. PMID: 38305782.

Book chapters and other publications (non-peer reviewed)

1. **Corathers, S.** Collaboration is Key to Developing Effective Hormonal Treatment Paradigms for Transgender Youth. (Letter to Editor) J Adolesc Health. 2018 Apr; 62 (4):361-362 PMID: 29571433
2. **Corathers, S.**, Gerstle, M., Casnellie, L., Pater, C., Trotman, G. Transitioning from Pediatric to Adult Care in Endocrinology: A Clinical Handbook, chapter, Transition Considerations for Turner Syndrome. Springer Publishing. April 2019.
3. Backeljauw P, **Corathers S**. Chapter: The Turner Syndrome Resource Center – an interdisciplinary approach to the Care of Girls and Women with Turner Syndrome. Book, Turner Syndrome Pathophysiology, Diagnosis, and Treatment. Patricia Fechner, Editor. Springer Publishing. March, 2020

Quality review of Publications

1. Lotstein, D, Seid, M, Klingensmith, G, Case, D, Lawrence, J, Pihoker, C, Dabelea, D, Mayer-Davis, E, Gilliam, L, **Corathers, S**, Imperatore, G, Dolan, L, Anderson, A, Bell, R, Waitzfelder, B for the SEARCH for Diabetes in Youth Study Group. Transition from Childhood to Adult Care for Youth with Type 1 Diabetes in Adolescence. Pediatrics, 2013 Apr;131(4):e1062-70. PMID 23530167
   * Contributing author to manuscript that describes transition outcomes for a cohort in the SEARCH for diabetes in youth study. Primary findings include increased odds of poor glycemic control among participants who transition to adult care compared to those who remain in pediatric care, highlighting need for supports when moving to adult care. Total citations 219: 2023 (25); 2022 (23); 2021 (24); 2020 (21); 2019 (20); 2018 (24); < 2019 (105).

2. **Corathers, S.**, Kichler, J, Jones, N, Houchen, A, Jolly, M, Morwessel, N, Dolan, L, Hood, K. Improving Depression Screening for Adolescents with Diabetes. Pediatrics, 2013. 132(5): p. e1395-402. PMID 24127480
   * This manuscript describes a feasible, reliable implementation of routine depression screening for adolescents with a chronic condition. I was the author on the paper, and subsequently led similar efforts across the T1Dx-QI collaborative. Total citations 97: 2023 (10); 2022 (6); 2021 (19); 2020 (14); 2019 (13); < 2019 (34).

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3. **Corathers, S.**, Schoettker, P., Clements, M., List, B., Mullen, D., Ohmer, A., Shah, A., Lee, J. Health System-Based Interventions to Improve Care in Pediatric and Adolescent Type 1 Diabetes. Curr Diab Rep (2015) September 15:91. PMID 26374568

   This manuscript describes a system-based approach to improving outcomes for type 1 diabetes and integrates work accomplished during a year-long design project funded by the Type 1 Diabetes Exchange to create a learning health system for diabetes. I was the lead author of the paper, and workgroup lead from the QI/Patient Reported Outcomes group. Total citations 15: 2023 (2); 2022 (2); 2021 (4); 2020 (3); 2018 (3); 2017 (1).

4. **Corathers, S.** ichler, J., Fino, N. Lang, W. Lawrence, J., Raymond, J., Yi-Fra ier, J., Dabelea, D. MD, PhD, Liese, A. Saydah, S., Seid, M., Dolan, L. High health satisfaction among emerging adults with diabetes: factors predicting resilience. Health Psychology. October 2016. PMID: 27736152

   Manuscript reframes the study of emerging adults with diabetes from one of pre-determined risk factors and morbidity to instead evaluate features associated with positive health outcomes. A novel health resilience model is used to identify modifiable factors associated with higher satisfaction of health care and overall health amongst a cohort of emerging adults participating in the SEARCH for diabetes in youth study. I conceived of the research plan and led the writing group. Total citations 15: 2023 (3); 2022 (3); 2020 (5) 2019 (1); 2018 (3).

5. Gravholt et al, **collaborating author of International Turner Syndrome Consensus Group**, Clinical Practice Guidelines for the care of girls and women with Turner Syndrome: proceedings from the 2016 Cincinnati International Turner Syndrome Meeting. European Journal of Endocrinology 2017 Sep;177(3) PMID 28705803

   This guideline represents an updated international consensus for diagnosis and treatment of Turner syndrome. I reviewed literature, participated in international consensus meeting that was hosted in Cincinnati, Ohio and served as a member of writing groups for transition and adult care sections. Total citation: 705: 2023 (128); 2022 (122); 2021 (143); 2020 (127); 2019 (124); 2019 (58).

6. **Corathers, S.,** ichler, J, Mara, C. Psychosocial Patient-Reported Outcomes in Pediatric and Adolescent Diabetes: A Review and Case Example. Current Diabetes Rep.2017 Jul;17(7):45 PMID: 28508255

   This manuscript provides a framework for selection and integration of patient reported outcomes (PRO) into routine diabetes care to promote meaningful clinical interactions in real time. I led the conception and writing of the paper and I and my co-authors have been invited to speak nationally on this topic. Total citations: 18; 2023 (3); 2022 (3); 2021 (1); 2020 (4); 2019 (5); 2018 (2)

7. Pihoker, C., Forsander, G., Fantahun, B., Virmani, A., **Corathers, S.**, Benite -Aguirre, P., Fu, J. Maahs, D. ISPAD Clinical Practice Consensus Guidelines 2018: The delivery of ambulatory diabetes care to children and adolescents with diabetes. Pediatric Diabetes. Vol 19, Oct 2018. PMID: 30144259

   This guideline provides international standards of care for youth with diabetes based upon evidence and consensus of the International Society for Pediatric and Adolescent Diabetes. I was also involved in the updated guidelines published in 2022. Total citations: 69; 2023 (7); 2022 (16); 2021 (18); 2020 (19); 2019 (8); 2019 (1).

Abstracts

1. Hillman, J.B., **Corathers, S.D.** Wilson, S.E. The Impact of Provider Level of Training on Screening and Treatment of Pediatric Overweight. Pediatric Academy Society Annual Meeting, Poster Session, May 2007, Boston, MA.
2. **Corathers, S.** Lucky, A. Komlos, M, Tamai, J., Tamura, D., Khan, S., Digiovanna, J., Kraemer, K., Stenger, P. Increased bone mineral density provides clue to elusive diagnosis of trichothiodystrophy. Pediatric Endocrine Society/Pediatric Academic Society, Poster Session, April 2011, Denver, CO.
3. **Corathers, S.**, Salehi, M. Virilization and hypertension resolved after oophorectomy: case report of ovarian Leydig cell tumor. Endocrine Society, Poster Session, June 2011, Boston, MA.
4. **Corathers, S.**, Yayah Jones, NH. Crawford, P., Houchen, A., Morwessel, N., Dolan, L., Hood, K. Outpatient screening for depression: Feasibility and outcomes in adolescents with type 1 diabetes. American Diabetes Association, Moderated Poster Session, June 2012, Philadelphia, PA.
5. Kudel, I., Kichler, J., Hood, K., **Corathers, S.** Psychometric analysis of the Children's Depression Inventory short form in adolescents with type 1 diabetes. Society for Behavioral Medicine, Poster Session, March 2013, San Francisco, CA.
6. **Corathers, S.** Kichler, J., Beavers, D., Dabelea, D., Lawrence, JM., Liese, A., Raymond, J., Saydah, S., Seid, M., Yi-Frazier, J., Dolan, L. for the SEARCH for Diabetes in Youth Study Group. Improving Health Outcomes in Emerging Adults with Diabetes. American Diabetes Association, Poster Session, June 2013, Chicago, IL.
7. **Corathers, S.**, Houchen, A., Cafasso, M., D'Alessio, D., Hennard, C., Horewitz, D., Klein, D., Dolan, L. Bridging the Gap in Transition from Pediatric to Adult Health Care for Adolescents and Young Adults (AYA): A Diabetes Pilot Program. Fifth Annual Health Care Transition Research Consortium, Poster Session, October 2013, Baylor University, Houston, Tx.
8. **Corathers, S.**, Beal, S., Kichler, J., Houchen, A. Readiness for transition to adult care in adolescents and young adults (AYA): a comparison of youth with and without type 1 diabetes (T1D). International Society for Pediatric and Adolescent Diabetes, Moderated Poster Session, September 2014, Toronto, Canada.
9. **Corathers, S.**, Beal, S., Yi-Frazier, J., Kichler, J., Houchen, A., Pihoker, C. Confirmatory factor analysis of a novel transition to adult care readiness assessment tool for adolescents and young adults (AYA) with type 1 diabetes (T1D). International Society for Pediatric and Adolescent Diabetes, Moderated Poster Session, September 2014, Toronto, Canada.
10. Fair,C., Javalkar, K., Betz, C., Okumura, M., Wood, D., LeComte, J., Jan, S., Maslow, G., Bozik, K., Porter, J., **Corathers, S.**, Tolleson-Rinehart, S., Shah, P., Woodward, J., Ferris, T., Ferris, R., Ferris, M. on behalf of the HCTRC. Health Care Transition Outcomes: A Delphi Stage 3 Survey. Sixth Annual Health Care Transition Research Consortium, Poster Session, October 2014, Baylor University, Houston, Tx.
11. Beal, S. J., Riddle, I., Kichler, J., Duncan, A., Houchen, A., Casnellie, L., **Corathers, S.** Transition Readiness among Teens – Differences by Chronic Condition. Sixth Annual Healthcare Transitions Research Consortium, Poster Session, October 2014, Baylor College of Medicine, Houston, TX.
12. Matlock, K., Yayah Jones, N., Kichler, J., **Corathers, S.** Clinical and Psychosocial Factors Associated with Suicidal Ideation in Adolescents with Type 1 Diabetes Mellitus. Pediatric Academic Society, Poster Session, April 2015, San Diego, CA.
13. Smego, A., Lawson, S., Courter, J., Warden, D., **Corathers, S.** Decreasing the Time to Insulin Administration for Hospitalized Patients with Cystic Fibrosis-Related Diabetes. Pediatric Academic Society, Poster Session, April 2015, San Diego, CA.
14. **Corathers, S.**, Beal, S., Kichler, J., Casnellie, L., Backeljauw, P. Personal health knowledge and preparation for transition to adult care in adolescents with Turner Syndrome (TS). Pediatric Academic Society, Poster Session, April 2015, San Diego, CA.

15. Alexander, C., Ellsworth, S., Melvin, P., Kichler, J., **Corathers, S.**, Yayah Jones, N., Houchen, A., Jolly, M. Effective Screening and Follow up for Depression and Suicidal Ideation in Adolescents with Diabetes Mellitus. The 27th Annual National Forum on Quality Improvement in Healthcare, Poster Session, December 2015, Orlando, FL
16. Garvey, K., Foster, N., Laffel, L., DiMeglio, L., Agarwal, S., Desimone, M., Libman, I., Lyons, S., Peters, A, Anderson, B., **Corathers, S.**, Miller, K., Beck, R. Health Care Transition Preparation and Experience in a US National Sample of Young Adults with Type 1 Diabetes. International Diabetes Federation, Poster Session, December 2015, Vancouver, CA
17. Conard, L., **Corathers, S.**, Lawlis, S. & Restle, H. Improving Standardization of Care in Trans* Clinic. WPATH Symposium, Poster Session, June 2016, Amsterdam, Netherlands.
18. Ikomi, C, Alexander, C, Mallon, D, Dykes, D, Anderson, V, Davis, B, Jolly M, Gahl, J, Ellsworth, S, **Corathers, S**, Crimmins, N. Improving Screening for Celiac Disease in Patients with New-Onset Type 1 Diabetes. International Society for Pediatric and Adolescent Diabetes, Poster Session, October 2016, Valencia, Spain.
19. **Corathers, SD**, Kichler, JC, Mara, C. Implementation of patient reported outcomes (PROs) through quality improvement methods to enhance patient care. International Society for Pediatric and Adolescent Diabetes, Moderated Poster Session, October 2016, Valenica, Spain.
20. Remiker, A., Chuang, J, **Corathers, S**, Rutter, M, Ho, Brian, Rutter, M, Gelfand, M, Trout, A, Geller, J. Differentiated thyroid cancer outcomes in the pediatric/adolescent population: a longitudinal review from a single center. ASPHO, Poster Session, April 2017, Montreal, Quebec.
21. Malik, F, Stafford, J, Klingensmith, G, Dabelea, D, Lawrence, J, Mayer-Davis, E, Sayday, S, **Corathers, S**, Reboussin, B, Pihoker, C. Receipt of Recommended Clinical Tests for Youth and Young Adults with Type 1 Diabetes: Associations with Glycemic Control and Satisfaction with Care. American Diabetes Association, Poster Session, June 2017, San Diego, California.
22. Boyle, C, Foster, N, Scheer, K, Anhalt, H, Shah, A, Lee, J, **Corathers, S**. Funnel Plots for Statistical Quality Control in a Large, Multi-Site Registry. Society of Clinical Trials, Poster Session, May 2017. Liverpool, UK.
23. Krishnamurthy, M, Blunden, C, **Corathers, S**, Sheanon, N. Diazoxide-responsive Hyperinsulinism in an Infant with Sotos Syndrome. Pediatric Endocrinology Society, Poster Session, April 2017, Orlando, Florida.
24. Warning, A, Rohan, J, McGrady M, Pendley, Delamater J, **Corathers, S**., Drotar, D., Dolan, L. Changes in Depressive Symptoms over Time Differ between Males and Females with Type 1 Diabetes. Society of Pediatric Psychology, Poster Session, April 2017, Portland, OR.
25. Mallon, D., Crimmins, N., Ikomi, C., **Corathers, S**., Dykes, D., Gahl, J., Jolly, M. Improving Celiac Screening for Children with Type 1 Diabetes and Lessons from False Positive Serology. National American Society for Pediatric Gastroenterology, Hepatology, and Nutrition, Poster Session, November 2017, Las Vegas, NV.
26. Wood, J, Boyle, C, Quinn, M, Wong, J, Haller, M, Nelson, B, Shatz, D, Tamborlane, W, Fox, L, Prahalad, P, **Corathers, S**, Maahs, D, Alonso, T, DeSalvo, D, Wadwa, P, DiMeglio, L. Impact of Target HbA1c Change in Pediatric Participants in the T1D Exchange Clinic Registry. American Diabetes Association, Poster Session, June 2018, Orlando, FL.
27. Majidi, S, Jolly, M, Alonso, G, Buckingham, D, Cabrera, A, Clements, M, Garrity, A, Gibbs, K, Click, B, ong, K, Kamboj, M, Lambert, K, Lee J, Nadkarni, P, McDonough, R, Ohmer, A, Rioles, N, Stanek, K, Thomas, S, Weinstock R, **Corathers S**. Incorporating Depression Screening into Diabetes Clinics across the T1DX Learning Collaborative. American Diabetes Association, Poster Session, June 2018, Orlando, FL.
28. Shah, A., **Corathers, S.**, Alonso, G, Buckingham, D, Cabrera, A, Clements, M, DeSalvo D, Kamboj, M, Lambert K, Mehta, S, Ohmer, A, Rioles, N, Sonabend, R, Lee, J. Establishment of the Type 1 Diabetes Exchange QI Learning Collaborative (T1DX-LC). American Diabetes Association, Poster Session, June 2018, Orlando, FL.

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29. Agarwal, S. Hirshfeld, E., Garrity, A., Shah, A., **Corathers, S.**, Weinstock, R., Lambert, K., Bobik, C., Cabrera, A., Rioles, N., Lee, J. Comparison of adult and pediatric resources for type 1 diabetes among T1D exchange centers. American Diabetes Association, Poster Session, June 2018, Orlando, FL.
30. Trief, P., Foster, N., Chaytor, N., Hilliard, M., Kittelsrud, J, Jaser, S., Majidi, S., **Corathers, S.**, Bzdick, S., Adkins, D., Weinstock, R. Longitudinal Changes in Depression and Glycemia in Adults with Type 1 Diabetes. American Diabetes Association, Poster Session, June 2018, Orlando, FL.
31. Kichler, J., Monaghan, M., **Corathers, S.**, Hilliard, M. Protective Factors in Emerging Adulthood: Reliability and Validity of a New Measure of Diabetes Strengths and Resilience. Society of Pediatric Psychology Annual Conference, New Orleans, April 2019.
32. Mara, C., Kichler, J., **Corathers, S.**, Chundi, P., Daeschner, M., Mulvaney, S. Psychometric Evaluation of the Barriers to Diabetes Adherence Scale. Society of Pediatric Psychology Annual Conference, New Orleans, April 2019.
33. Hilliard, Monaghan, **Corathers**, Kichler, Protective Factors in Emerging Adulthood: Reliability and Validity of a New Measure of Diabetes Strengths and Resilience, Society of Pediatric Psychology Annual Conference, New Orleans, 2019
34. Lipstein, E. **Corathers, S.** I couldn't see a downside: Adolescent and Parent Decision-making about gender-affirming hormone therapy. Pediatric Academic Society, Baltimore, April 2019
35. Kamoun, C., Khoury, J., Crimmins, N., **Corathers, S.** Opportunities for Enhanced Type 1 Diabetes Transition Preparation. Pediatric Academic Society, Baltimore, April 2019.
36. Quinn, M., Bailey, R., Foster, N., Simmons, J., Eyth, E., Rodriguez, H., **Corathers, S.**, Levy, C., Sheanon, N., Wasserman, R., Seiple, D., Sparling, D., Adkins, D., Albanese, A., DeSalvo, D. Diabetes Management Supplies in Youth with Type 1 Diabetes: Don't Leave Home Without Them! American Diabetes Association, San Francisco, June 2019
37. Cabrera, A., Alonso, G., **Corathers, S.**, Lee, J., Prahalad, P., Rioles, N. Assessing Data Availability and Benchmarking Performance of Quality Measures for the T1D Exchange Improvement Collaborative, American Diabetes Association, San Francisco, June 2019
38. Sutherland, M, Lohmna, M, Reboussin, B, Flory, K, Brown, M, **Corathers, S**, Bellatorre, A, Lawrence, J, Yi-Frazier, J, Pihoker, C., Liese, A. Depressive Symptom Trajectories among Youth and Young Adults with Type 1 Diabetes. American Diabetes Association, San Francisco, June 2019.
39. Alonso, T, Thomas, S, Garey C, Buckingham, DA, Cabrera AB, Clements MA, **Corathers S**, DeSalvo DJ, Garrity A, Lee JM, McDonough R, Mostajabi F, Kamboj MK. Outpatient Diabetes Encounter Visit Frequency in the T1D Exchange Quality Improvement Collaborative (T1Dx-QI). American Diabetes Association, San Francisco, June 2019.
40. Yao, M. Alexandrou, E., Arora, S., Biery, M., Jones, R., Nasomyont, N., Petrovic, E., Seltz, S., Sylvester, A., Chundi, P., Mostajabi, F., Redel, J., **Corathers, S.** Outpatient Quality of Life Screening: Feasibility and outcomes in parents of children 2-7 with T1D. International Society of Adolescent and Pediatric Diabetes (ISPAD), Boston, November 2019.
41. Noor, N., Rioles, N., **Corathers, S.**, Majid, S., McDonough, R., Polsky, S., Greenfield, M., Obrynba, K., Ebekozien, O., DeSalvo, D. Patient Demographics and clinical outcomes among type 1 diabetes patients using continuous glucose monitors: real world evidence from a large US Collaborative. American Diabetes Association (ADA), Virtual meeting, June 2020.
42. McDonough, R., Thomas, S., Rioles, N., Ebekozien, O., **Corathers, S.**, Jolly, M, Lee, J., Garrity, A., Prahalad, P., Kamboj, M., Buckingham, D., Alonso, T. Reducing lost-to-follow rates in the T1D Exchange Quality Improvement Collaborative (T1DX-QI). American Diabetes Association (ADA), Virtual meeting, June 2020.
43. Ebekozien, O., Rioles, N., DeSalvo D., Gallagher, K., Lee, J.M, McDonough, R., Obrynba, K., Prahalad, P., Thomas, S., Weinstock, R.S., **Corathers, S.** Improving Continuous Glucose Monitoring (CGM) Use across Ten National Centers: Results from the T1D Exchange Quality Improvement Collaborative (T1DX-QI). American Diabetes Association (ADA), Virtual meeting, June 2020.

44. Improving Diabetes Care Through Population Health Studies: Insights from the largest U.S Population Based T1D Cohort. ISPAD virtual conference, October 2020.
45. Patient demographics and clinical outcomes among type 1 diabetes (T1D) patients using Continuous Glucose Monitors (CGMs): real world evidence from a large U.S. collaborative. ISPAD virtual conference, October 2020.
46. Multi-site quality improvement project: Improving Continuous Glucose Monitor (CGM) uptake across ten U.S Centers. ISPAD virtual conference, October 2020.
47. Deconstructing Diabetes Strengths: Factor Analysis of the Diabetes Strengths and Resilience Measure for Young Adults (DSTAR-YA). Carreon, S., Iturralde, E., Monaghan, M., Kichler, J., Raymond, J., **Corathers, S.**, Hilliard, M. Virtual Society of Pediatric Psychology Annual Conference, April 2021.
48. Bone Marrow Adipose Tissue Assessment in Transgender Youth Undergoing Pubertal Suppression: A Pilot Study. Nasomyont, N., Meisman, A., Ecklund, K., Vajapeyam, S., Cecil, K., Tkach, J., Altaye, M., **Corathers, S.** Conard, L., Kalkwarf, H., Dolan, L, Gordon, C. Pediatric Endocrine Society virtual meeting April 2021.
49. Challenges to Telemedicine Transition During Covid-19; Insights From 21 Us Diabetes and Endocrinology Clinics, oral presentation at 14th International Conference on Advanced Technologies & Treatments for Diabetes (ATTD 2021) virtual conference June 2-5, 2021.
50. Transition of Care in Type 1 diabetes and Association with Student and Employment Status. Majidi, S., Roberts, A., Suerken, C., Reboussin, B., Malik, F., Marcovina, S., **Corathers, S.**, Reynolds, K., Imperatore, G, Wadwa, P., Pihoker, C. American Diabetes Association Virtual Scientific Sessions, June 25-29, 2021.
51. Insulin Pump Use and Glycemic Control Among Patients With Type 1 Diabetes: Trends From The T1Dx-QI Cohort. Noor N, McDonough R, Carlson E, Mekhoubad A, Hsieh S, Demeterco-Berggren C, Majidi S, Desimone M, De-Tutu S, Obrynba K, Ebekozien O, **Corathers S**. Poster at American Diabetes Association Virtual Scientific Sessions; June 25-29, 2021.
52. HbA1c trends in the T1D Exchange Quality Improvement Collaborative (T1DX-QI) 2017-2020. Ebekozien O, Noor N, Jones NH-Y, Alonso GT, Desimone M, Izquierdo R, **Corathers S**, DeSalvo DJ, Gandhi K, Odugbesan O, Prahalad P, Clements M. Poster at American Diabetes Association Virtual Scientific Sessions; June 25-29, 2021.
53. Six Habits: Quality Metrics to Support Glycemic Outcomes in Type 1 Diabetes. Lee, J., Garrity, A., Hirschfeld, E., Thomas, I., Rioles, N., Ebekozien, O., **Corathers, S.** Poster at American Diabetes Association Virtual Scientific Sessions: June 25-29, 2021.
54. Lavik, A.R, Jones, N.H.Y, Rompicherla, S, Greenfield, M, Chen, J, Polsky, S, Alonso G. T, **Corathers, S**, Blackman, S, Gallagher, M. P, Demetero-Berggren, C, Garrity, A, Ebekozien, O. Diabetic ketoacidosis rates rose among patients with type 1 diabetes during U.S. COVID-19 peaks with highest burden on non-Hispanic Blacks. ePoster at the 47th ISPAD 2021 virtual Annual Conference.
55. Muthuvel, G., Brady, P., Daraiseh, N., Khoury, J., Tellez, S., **Corathers, S.**, Using Artificial Intelligence Decision Support to Enhance Care for Type 1 Diabetes, ePoster at the 47th ISPAD 2021 virtual Annual Conference.
56. H. Nelson, S.D. Corathers, P.W. Brady, E. Kirkendall, R.M. Ruddy, T.B. Wetterneck, K.E. Walsh. Ambulatory Patient Safety Learning Lab: Failure modes and effects analysis for management of type 1 diabetes during illness, ePoster at the 47th ISPAD 2021 virtual Annual Conference.
57. Tellez, S., Brady, P., Daraiseh, N., Khoury, J., Muthuvel, G., **Corathers, S.**, Evaluation of an Enhanced Care Intervention Using an Artificial Intelligence-Guided Decision Tool in Children and Emerging Adults with Type 1 Diabetes. Accepted for ePoster at Advanced Technologies and Treatments for Diabetes annual conference, Barcelona, Spain, April 27-30, 2022.
58. **Corathers, S.** et al. Implementation of Psychosocial Screening in Diabetes Centers. American Diabetes Association, New Orleans, June 2022.

59. Noor, N, Ebekozien, O, Vendrame, F, Jacobsen, L, Weinstock, R, Gallagher, M.P, **Corathers, S**, Accacha, S, Prahalad, P, Rapaport, R. Continuous glucose monitor derived Glycemic Outcomes Among Real-Time CGM vs. Flash CGM users in a Multi-Center EMR Database for People with T1D. ATTD, Berlin, Germany, February, 2023.
60. Williford, D. N., McGrail, M., Flynn, E., Buschhaus, S., Winning, A., Beckmann, E., Burstein, E., Yayah Jones, N-H., **Corathers, S.**, Crosby, L. E., & Modi, A. C. *Toward a deeper understanding of social capital: A family-centered approach to measurement development.* Abstract accepted for presentation at the Society of Pediatric Psychology Annual Conference, Chicago, IL. April, 2023.
61. Samantha Roberge, MD; Sarah **Corathers**, MD; Rula Kanj, MD; Nat Nasomyont, MD. 10-Year Retrospective Chart Review of Ordering Practices of Laboratory and Imaging Surveillance for Gender Diverse Youth During Pubertal Suppression Therapy, Abstract accepted for Pediatric Endocrine Society, San Diego, California, May 2023.
62. Malik, F, Cases, J, Hillard, M, Lyons, S, Jacobsen, L, Roberts, A, Mucci, A, Agarwal, S, Demeterco-Berggren, C, Alonso, T, Ebekozien, O, **Corathers, S.** Health Care Transition Practices in the T1D Exchange Quality Improvement Collaborative. Poster Presentation at the 83rd ADA Scientific Sessions, San Diego, California, June 2023.
63. Murray, A., Hottor, S., Bimpeh, Y., Ojilong, J., Sun, Q., **Corathers, S.**, Yayah-Jones, N. Reduction of Diabetes-Related Hypoglycemia in Children and Adolescents with Type 1 Diabetes in Ghana. ISPAD, Rotterdam, The Netherlands, October 2023.
64. Roberge, S., **Corathers, S.**, Roberge, T., Nasomyont, N., "Determinants of Bone Mass Accrual in Transgender and Gender Diverse Youth undergoing Pubertal Suppression Therapy." Submitted to USPATH, Westminster, Colorado, November 2023.
65. Yayah-Jones, N., Grant, A., **Corathers, S.**, Smith, L., Kelly, J., Riley, A., Williford, D., Fazio, C., Kaplan, K., Howell, A. EDICT: Equity in Diabetes Care and Transformation. T1Dx-QI National Meeting, NYC, NY, November 2023.
66. **Corathers, S.**, Desai, R., Deisinger, A., Jones, R., Kaplan, K., Jolly, M., Grant, A., Kichler, J. Sustained QI implementation of a Transition Preparation Program for Adolescents and Emerging Adults with Type 1 Diabetes. T1Dx-QI National Meeting, NYC, NY, November 2023.
67. **Corathers, S.**, Yayah Jones, N., Smith, L., Brady, P., Grant, A., Howell, A. Tellez, S., Muthuvel, G., Kelly, J., Noh, Y., Riley, A., Town, M. ConnecT1D: Reinforcing connections between patients, clinic, and community partners. T1Dx-QI National Meeting, NYC, NY, November 2023.

Teaching and Mentoring

Teaching

1. Direct clinical teaching of teaching medical students, residents, fellows on the endocrine inpatient service at Cincinnati Children's Hospital Medical Center 4 weeks/year as well as precepting of endocrine fellows and residents in outpatient clinics on a weekly basis.
2. Academic courses, lectures, grand rounds, professor rounds, participation in firms:
    a. CCHMC, Intermediate Improvement Science Series, Creating a Portfolio: Integrating Improvement into the Daily Work of Pediatric Endocrinology, February 2023.
    b. CCHMC, Department of Pediatrics Grand Rounds, Innovations and Achievements from Recent Place Outcomes Research Awards, (June 2022)
    c. CCHMC, Division of Endocrinology Grand Rounds, Living with Change, Care Delivery for transgender and Gender Expansive Youth, (Feb 2021)
    d. CCHMC, NRSA Fellowship, Integrating Improvement Methods into Clinical Care and Research, (May 2020)
    e. University of Cincinnati, Diabetes Day Symposium, Childhood into Adolescence with Diabetes, (Nov 2019)

f. CCHMC, Division of Psychology, Adherence Center Grand Rounds, Division of Behavioral Medicine and Clinical Psychology, Loss to Follow-Up: An Indicator of Health Care Delivery Adherence? (July 2019)
g. CCHMC, Division of Endocrinology Fellowship Core Curriculum: Hyperglycemic Hyperosmolar Syndrome (July 2013-2023); Hypocalcemia nuts and bolts (July 2013-2016)
h. University of Cincinnati, CCHMC combined endocrinology grand rounds: Glycemic Targets for Individuals and Patient Health (September 2017); Transition Preparation (October 2015); Transition to Transfer: (November 2015)
i. University of Cincinnati, College of Medicine Intersession Careers in Quality Improvement Panel (Feb 2018)
j. University of Cincinnati, Child and Adolescent Development, Undergraduate Psychology Course. Type 1 diabetes: Psychosocial considerations for children, adolescents, emerging adults and their families (November 2015)
k. Endocrine nurse lecture series: Thyroid cancer (September 2014); Routine screening and prevention of diabetes co-morbidities (January 2011)
l. Mini-Medical College, University of Cincinnati, "Type 1 diabetes across the lifespan" (October 2014)
m. Internal Medicine Residency Ambulatory long block curriculum, University of Cincinnati (June 2016, June 2015, June 2014)
n. Department of Pediatrics Residency noon conference (Cis Puberty and Trans Puberty Blocking September 2017, Hypocalcemia nuts and bolts June 2014)
o. Ohio Patient Safety Institute Best Practice Webinar (September 2014)
p. Division of Infectious Diseases University of Cincinnati Grand Rounds: Management of hormone therapy for transgender adults (July 2012)

3. Participation in patient and family educational activities
   a. Speaker, Friends for Life Conference, Getting the Most out of your Automated Insulin Delivery System, College Park, MD, October 2022.
   b. Speaker, PFLAG, Living with Change, Endocrinology Care for Transgender and Gender Expansive Youth and Adults, December 2021
   c. Speaker, Children with Diabetes National Conference, Friends for Life, "Transition from Pediatric to Adult Care", July 2018
   d. Planning committee member and speaker at JDRF community outreach summits (Nov 2019, Nov 2017, Nov 2016, Nov 2015, March 2015, March 2013)
   e. Speaker at Turner Syndrome community outreach events (May 2017, May 2015, May 2014, May 2012)
   f. Speaker and event coordinator, Building Bridges for a Successful Future with Diabetes, family outreach program (February 2014)
4. Listing of teaching materials developed:
   a. Pediatric Endocrine Society Webinar Series for Fellows on Quality Improvement (3/2021)
   b. American Board of Pediatrics Roadmap project website video resources, Talking About Emotional Health (09/2020). The full set of videos and associated guides are on the Roadmap webpage at: https://www.abp.org/foundation/roadmap
      Direct link to my video on talking to teens with diabetes about depression: https://fast.wistia.net/embed/channel/til9iwsorj?wchannelid=til9iwsorj&wvideoid=3bl9agh8ur
   c. Virtual lecture for pediatric residents on Endocrinology rotation, "Thyrotoxicosis and Hyperthyroidism in Adolescents" (4/2020)
   d. Content review and editing of American Board of Pediatrics Roadmap materials for maintenance of certification module, Emotional Health and Resilience for Patients and Families with Chronic Pediatric Conditions, (12/2019)

e. "Demystifying MOC Part 4, Quality Improvement for Endocrinologists" National Webinar for Pediatric Endocrine Society (11/2019)
f. Type 1 Diabetes Exchange Depression Screening Change Package (2018) Depression Screening on 2019 : Nov Learning Session | Trello
g. Depression Screening on 2019 : Nov Learning Session | Trello
h. "Future with Diabetes" transition materials for patients (2014-2015)
i. "Diabetes and Alcohol" resource materials (2016)
j. Diabetes transition readiness assessment curriculum development for diabetes team (2015-2018)
k. "Talking T1D" electronic book resource for adolescents and young adults developed in with graduate students at University of Cincinnati professional writing course, published on JDRF website, http://jdrf.org/swo/2016/01/15/talking-t1d-ebook/ (01/2016)

5. Evidence of teaching excellence: Fellow ratings of teaching performance in an anonymous survey in four categories (support/latitude of management; accurate information/fosters problem solving skills; encourages self-learning/provides mentoring; treats with respect/provides feedback) using a seven-point scale (range 1-7, maximum =7). Scores for the last 8 years were:

2014: 6.55 (Division mean = 6.43, median = 6.45, range = 6.98-5.880)
2015: 6.56 (Division mean = 6.49, Median = 6.47; range = 6.96-5.89)
2016: 6.61 (Division mean = 6.46, Median = 6.46; range = 6.96-5.34)
2017: 6.67 (Division mean = 6.35, median = 6.38, range = 6.83-5.78)
2019: 6.61 (Division mean = 6.66, median = 6.64, range = 6.93 – 6.41)
2020: 6.68 (Division mean = 6.72, median = 6.75, range = 7.00 - 6.55)
2021: 6.79 (Division mean = 6.73, median = 6.77, range = 6.98 - 6.50)
2022: 6.77 (Need to obtain Division mean, median, range data)

Mentoring

Fellows and Students

As Director of the Quality Scholars Program, I participate in the scholarly oversight committee of each scholar.

Within the Division of Endocrinology, past mentees:

1. Dr. Alison Smego, (clinical and research mentor, 2014-2017). Dr. Smego was recognized for excellence during poster sessions of the Pediatric Academic and Pediatric Endocrine Society meeting and published her QI project, "Decreasing the Time to Insulin Administration for Hospitalized Patients with Cystic Fibrosis Related Diabetes" in journal Hospital Pediatrics 2018.
2. Dr. Kristal Matlock, (clinical and research mentor, 2015-2018). Dr. Matlock presented nationally and published, "Clinical and psychosocial factors associated with suicidal ideation in adolescents with type 1 diabetes mellitus" in the Journal of Adolescent Health in 2017. In addition, Dr. Matlock completed formal QI coursework and presented an oral presentation at national Endocrine Society meeting and subsequently published, "Untreated Congenital Hypothyroidism Due to Loss to Follow-Up: Developing Preventative Strategies through Quality Improvement", in the Journal of Pediatric Endocrinology and Metabolism in 2018.
3. Dr. Alissa Roberts, visiting Endocrinology Fellow from Seattle Children's for clinical transition medicine elective (March 2017)
4. Riley Brock, Undergraduate Student in SURF program (Summer 2017), completed project on shared decision- making regarding use of diabetes related technology amongst adolescents.
5. Dr. Jacob Redel, (clinical mentor, 2016-2018). Dr. Redel led a QI Prevnar/Pneumovax immunization initiative for patients with diabetes. As chief fellow, Dr. Redel coached a team composed of first year fellows led by Dr. Michael Yao to reliably address parental worry in parents of young children

with diabetes and detailed a method for applying QI training in sub-specialty fellowship setting published in Medical Education in 2019.

6. Dr. Eirene Alexandrou, Endocrinology Fellow (clinical mentor, 2017-2020). Dr. Alexandrou completed a QI project on screening for anxiety symptoms among girls and women with Turner Syndrome published in Hormone Research Paediatrics in 2022.
7. Dr. Nat Nasomyont, (clinical and research mentor, 2017--2020). Dr. Nasomyont completed a prospective pilot study of bone health outcomes amongst youth with gender dysphoria treated with puberty blockers.
8. Dr. Priscilla Rodas, Endocrinology Fellow (clinical mentor, 2019-2022). Dr. Rodas completed a QI project on uploading diabetes devices prior to and between clinic visits.
9. Dr. Andrew Lavik, (research mentor, 2019-2022), was a RISE award recipient as a pediatric resident, for project, "Utilization of a condition-specific registry to improve patient-reported and health-related outcomes in children with type 1 diabetes." During fellowship, Dr. Lavik completed research with T1Dx-QI about DKA concurrent with COVID-19 with results published in JCEM 2022.
10. Dr. Samantha Roberge, (research mentor, 2022--). Dr. Roberge is working on developing a curriculum for transgender health and a research project evaluated bone health outcomes among youth that receive GnRH agonist treatment. Dr. Roberge has an abstract accepted for Pediatric Endocrine Society in 2023.
11. Dr. Hailee Delsart, (research mentor, 2022--). Dr. Delsart is a member of the Pediatric Ambulatory Safety Learning Lab AHRQ sponsored research project. Dr. Delsart is leading work developing and conducting simulation scenarios for diabetes sick day management. She is a co-author on a publication in Pediatric Quality and Safety on "Safer Type 1 Diabetes Care at Home".

Division of Endocrinology faculty peer mentorship:

1. Dr. Sarah Lawson (QI mentorship, collaborator). I coached Dr. Lawson during an improvement methodology course (I2S2, 2015-2016) that built upon work of Dr. Smego to reduce time to insulin administration, resulted in redesign of insulin ordering process to increase timeliness and safety across the institution. Dr. Lawson has gone on to fundamentally restructure care delivery for new onset diabetes from an inpatient to a Day Hospital model (2016-2017) and develop protocols for timely insulin ordering and administration throughout the institution.
2. Dr. Nancy Crimmins (QI mentorship, collaborator). I assisted Dr. Crimmins and Dr. Daniel Mallon to develop a clinical algorithm for screening of Celiac Disease amongst new onset and established diabetes patients (2015-2017). This work has been presented at national and international meetings and helps support innovative inter-disciplinary clinical care for dual diagnosis patients.
3. Dr. Halley Wasserman (mentorship). I meet with Dr. Wasserman monthly to discuss current research and clinical projects, and coach on professional and career development.
4. Dr. Nana Hawa-Yayah Jones (QI mentorship, collaborator). I coached Dr. Jones during an improvement methodology course (RCIC with Dr. Matlock, 2014-2015) that led to a reliable process to prevent loss to follow up for children with congenital hypothyroidism, which is a model for other conditions within the division of endocrinology. I am a collaborator with Dr. Jones in partnership with community health to identify interventions for population of youth at high risk of diabetes complications (2017-ongoing). Through the Health Equity Network, and ConnecT1D, Dr. Jones has led implementation of screening for social determinants of health in diabetes clinic, and further systematically identifying, and addressing health equity gaps for youth with diabetes.

Service and Leadership

Service:

Professional Organization Memberships

- American Diabetes Association, Member

- Pediatric Endocrine Society, Member and Quality Improvement Committee Member
- International Society of Pediatric and Adolescent Diabetes, Member
- Endocrine Society, Member
- American Academy of Pediatrics, Member, Former Chair of Resident Section

Local Committee Involvement:

- Place Outcomes Grant Reviews (2017, 2021)
- Standard care algorithm pilot, type 1 diabetes and celiac disease (November 2015--2017)
- Member, CCHMC and University of Cincinnati transition to adult care teams (2013--2017)
- Project lead, Improving transition between pediatric and adult diabetes care (2013--)
- Project lead, Improving depression screening for diabetes patients (2011--2016)
- Patient Reported Outcomes Institutional Governance Committee for CCHMC (2018--)
- COVID-19 matrix for annual review (2020)
- Institutional Ambulatory Access Steering Committee (2022-2023)
- Institutional Psychosocial Screening and Response Taskforce (2022--)
- Institutional Adult Care Taskforce (2023--)
- Institutional Digital Care Transformation Taskforce (2023--)

National/International Distinguished Activities:

- Speaker, Pediatric Endocrine Society, Workshop, How to Start and Sustain QI, San Diego, California, May 2023.
- Speaker, International Society for Pediatric and Adolescent Diabetes (ISPAD), ConnecT1D: reinforcing connections between patients, clinic, and community to achieve excellent and equitable outcomes. Rotterdam, The Netherlands, October 2023.
- Speaker, ISPAD, Transition Workshop, Secrets of Successful Transition: Readiness and Receivership, Rotterdam, The Netherlands, October 2023.
- International Turner Syndrome Guidelines Committee, Aarhus, Denmark, June 2023.
- National Webinar sponsored by USNWR Making a Difference for Kids with Type 1 Diabetes: Advances and Challenges, March 2023.
- Guest Speaker (virtual due to Covid-19) BDC Endocrinology Grand Rounds, Applying Lessons from Community Pediatrics in Pursuit of Equity in Type 1 Diabetes, April 2022.
- Guest Speaker (virtual due to Covid-19), Diabetes, Research and Training Center (DRTC) Seminar Vanderbilt University, Patient Reported Outcomes: Using Clinic Based Screening and Intervention to Inform Diabetes Care, Feb 2021
- Speaker, European Society Pediatric Endocrinology, Condition Specific Tools for Transition Care: Lessons from Turner Syndrome Models, September 2018, Athens, Greece
- Type 1 Diabetes Exchange Learning Collaborative national meeting organizer and presenter, May 2018, Cincinnati, Ohio
- Speaker, Pediatric Endocrine Society, "Quality Improvement in Endocrinology", May 2018, Toronto, Canada
- Speaker, NIDDK/ADA workshop, "Patient Reported Outcomes that Matter to Providers", Nov 2017, Bethesda, Maryland
- Visiting Professor, "Integrating Improvement into Daily work of Pediatric Endocrinology" University of Michigan, September 2017, Ann Arbor, Michigan
- Speaker, American Diabetes Association, "Patient Reported Outcomes- Using Clinic Based Screening and Intervention to Inform Diabetes Care", June 2017
- Speaker, American Diabetes Association, "Getting to Goal in Pediatric Type 1 Diabetes" June 2016

- Speaker, American Diabetes Association, "Design and Validation of Diabetes Transition Preparation Readiness Skills Measure" June 2016
- Speaker, Health Care Transition Research Consortium, "One Year Outcomes of Planned Transition of Pediatric to Adult Diabetes Care". Houston, TX. September 2015
- Speaker, Society of Adolescent Health and Medicine, "Transitioning Trans patients". Los Angeles, California, March 2015
- International Turner Syndrome Consensus Guideline Delegate, July 2016

Data Safety and Monitoring Board Participation

- 4T Study of remote patient monitoring in dose changes for newly diagnosed children with T1D
- Reduce Study is a national clinical trial for young adults that aims to reduce diabetes distress.

Manuscripts Reviewed:

- JAMA Network Open 2022 (1)
- Diabetes Spectrum 2015 (1) 2016 (1)
- Pediatrics 2014 (1) 2015 (1) 2016 (1) 2017 (2)
- Journal of Health Psychology 2014 (1)
- Lancet Journal of Diabetes and Endocrinology 2014 (2)
- Journal of Diabetes Science and Technology 2016 (1)
- Pediatric Diabetes 2016 (2) 2017 (2) 2019 (1) 2020 (5) 2021 (2) 2022 (2)
- Diabetes Care 2018 (1) 2022 (2)
- The Permanente Journal 2017 (1)
- Journal of Adolescent Health 2017 (1) 2018 (1)
- Endocrine Practice 2017 (1)
- Diabetic Medicine 2020 (2) 2023 (1)
- Journal of American Medical Informatics 2020 (1)
- Diabetes Research and Clinical Practice 2020 (1)
- Journal of Clinical Endocrinology and Metabolism 2020 (1)
- Canadian Journal of Diabetes 2020 (1) 2021 (1)
- Diabetes Technology and Therapeutics 2022 (1)

Participation in department recruitment activities:

- Participated in recruitment of endocrinology fellows and faculty candidates annually.
- Participated in interviews for faculty members in divisions of adolescent medicine, behavioral medicine and clinical psychology, hematology and oncology, emergency medicine, gastroenterology, critical care.

Participation in local activities that benefit the institution:

- Speaker, IHI Open House, Integrating Improvement into Academic Medicine (May 2017)
- Speaker, Chronic Care Webinar with Jennifer Lail and Donna Claes, (May 2017)
- Speaker at the Ohio Valley Chapter, Society of Adolescent Health, "Cases in Transgender Care; Inter-disciplinary panel discussion", (November 2017)
- Speaker at Southwest Ohio Professional Transgender Conference, Endocrine Care for Transgender Adults (November 2015)

Community activities:

- Board member of SW Ohio JDRF chapter (July 2014-2020)
- Team Captain, American Diabetes Association, Step Out to Stop Diabetes Walk (2010-2013)
- Volunteer, Children's International Summer Village, Peace Education Program (2022--)

Updated 2.1.2024

Leadership:

Local:

1. Clinical Director, Division of Pediatric Endocrinology (2021--)
2. Director, Quality Scholars Program (2017--2024)
3. Director, Diabetes Transition Program (2013-2023)
4. Co-President, WIMS, (Women in Medicine and Science) with Dr. Jennifer O'Toole (2020-2023)
5. Physician lead, USNWR Endocrinology division reporting team (2014--)
6. Physician lead, condition outcome improvement team, type 1 diabetes (March 2014-2019)
7. Completed CORE leadership training program- Class VI (2017-2018)

National:

8. Diabetes Expert Panel for the National Committee for Quality Assurance (NCQA) (2020--)
9. Faculty lead, Type 1 Diabetes Exchange, Learning Network Quality Improvement Initiative (2015--)
10. Advisory board member, Type 1 Diabetes Outcome Program, JDRF national initiative (2016-2017)
11. Clinical advisory board member, College Diabetes Network (2015-2019)
12. Advisory board member, Turner Syndrome Network, clinical centers of excellence (2017-2020)
13. Pediatric Endocrine Society, MOC-QI Committee Member (2018-2024)

International:

1. Data Publications and Presentation Committee (DPPC) board member, SWEET international diabetes network (4/2021--)

EXHIBIT B

Bibliography

1. Carswell, J.M., X. Lopez, and S.M. Rosenthal, The Evolution of Adolescent Gender-Affirming Care: An Historical Perspective. Horm Res Paediatr, 2022. 95(6): p. 649-656.
2. Chen, D., et al., Psychosocial Functioning in Transgender Youth after 2 Years of Hormones. N Engl J Med, 2023. 388(3): p. 240-250.
3. de Vries, A.L., et al., Young adult psychological outcome after puberty suppression and gender reassignment. Pediatrics, 2014. 134(4): p. 696-704.
4. Gaudino, R., et al., Current clinical management of constitutional delay of growth and puberty. Ital J Pediatr, 2022. 48(1): p. 45.
5. Gravholt, C.H., et al., Clinical practice guidelines for the care of girls and women with Turner syndrome: proceedings from the 2016 Cincinnati International Turner Syndrome Meeting. Eur J Endocrinol, 2017. 177(3): p. G1-G70.
6. Hembree, W.C., et al., Endocrine Treatment of Gender-Dysphoric/Gender-Incongruent Persons: An Endocrine Society Clinical Practice Guideline. Endocr Pract, 2017. 23(12): p. 1437.
7. Olson, K.R., et al., Mental Health of Transgender Children Who Are Supported in Their Identities. Pediatrics, 2016. 137(3): p. e20153223.
8. Popovic, J., et al., Gonadotropin-releasing hormone analog therapies for children with central precocious puberty in the United States. Front Pediatr, 2022. 10: p. 968485.
9. Spack, N.P., et al., Children and adolescents with gender identity disorder referred to a pediatric medical center. Pediatrics, 2012. 129(3): p. 418-25.
10. Turban, J.L., et al., Factors Leading to "Detransition" Among Transgender and Gender Diverse People in the United States: A Mixed-Methods Analysis. LGBT Health, 2021. 8(4): p. 273-280.
11. Wiepjes, C.M., et al., The Amsterdam Cohort of Gender Dysphoria Study (1972-2015): Trends in Prevalence, Treatment, and Regrets. J Sex Med, 2018. 15(4): p. 582-590.