Incorporating menstrual health into routine pediatric primary care

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Introduction

The onset of menstruation is an impactful developmental milestone for youth. Menarche marks the start of reproductive potential, and although frequently laden with stigma, serves as a social cue for transitioning further into adolescence. The first period is often confusing and can trigger shame and embarrassment. There are also significant potential negative physical and social outcomes for inadequately prepared youth, including an inability to recognize abnormal periods, such as heavy bleeding or intense pain, that disrupt daily activities of living and impact morbidity.[1] Timely anticipatory guidance (AG) can empower patients to advocate for their health throughout life, and pediatric primary care plays a critical role in improving population-level menstrual health.

In 2006, the American College of Gynecologists and Obstetricians (ACOG) issued a committee opinion recommending the menstrual cycle be a vital sign, which was endorsed and reaffirmed in 2020 by the American Academy of Pediatrics (AAP).[2] Included are pediatric primary care recommendations encompassing incorporation of AG for youth and parents; questions about the menstrual cycle at preventative visits; identification of abnormal menstrual patterns; and improved training for clinicians.

Currently, the United States pediatric practice is guided by *Bright Futures* which provides evidence-based guidance for health supervision visits. Yet, the menstrual cycle as a vital sign is not currently listed within the *Bright Futures* periodicity schedule, which contains height, weight, Body Mass Index, and blood pressure.[3] For ten to eleven-year-old well child visits (WCV), *Bright Futures* incorporates periods within three pieces of AG and one question about menarche; WCV for eleven to fourteen year-olds include questions about menarche and possible associated problems. Both sections lack specific examples providers can use for menstruation AG.

Menstrual health is a fundamental pillar of preventative care

Failure to recognize disorders of menstruation may lead to significant delays of care for anatomic and genetic anomalies, disorders of nutrition and endocrine, and bleeding dyscrasias.[4] Clinical discussions about menstrual cycles enable early diagnosis and treatment of menstrual conditions that may present in early adolescence. Quality education is also essential for youth who require or request contraception and those with conditions impacting future fertility.

Appropriate and timely AG results in reduced anxiety, shame and fear, a positive self-image, and improved menstrual attitudes.[5] Potential negative outcomes for those with early menarche who are unsupported and inadequately informed include increased likelihood of early sexual initiation, school dropout, and depression.[5]

Importantly, disparities in encounters related to menstrual health may exist based on insurance and race, including inadequate clinical documentation of menstrual history.[6] Additional research is needed to capture the extent of such inequities and their implications for population health outcomes.

Evidence suggests insufficient pediatric engagement on menstrual health

A recent national survey of AAP members found that 25–33% reported either not routinely providing AG, not asking about the last menstrual period (LMP), or not discussing menstruation at all.[7] Male pediatricians were less likely to provide AG, ask about menses patterns, and had overall lower knowledge of the menstrual cycle.[7] A review of electronic medical records (EMR) from New Jersey adolescents aged 12–21 found less than five percent and ten percent of family physicians and pediatricians, respectively, obtained a history inclusive of menarche, LMP, length of cycle, and presence of associated symptoms.[8]

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Box 1.
Illustrative clinical examples.

- 15 year old presented to the emergency department after fainting at school and falling down the stairs, leading to a rib fracture. She was found to have anemia (Hemoglobin 5.2) and upon further review, began menstruating 2 years prior. She reported changing her pads at least 12 times per day during menses, and said that no doctor had ever asked her about it, even though she had multiple visits with her PCP.
- 13 year old with detention and note sent home about spending too much in the bathroom at school. In a conversation with her PCP, found to have three years of worsening menstrual cramps, diarrhea, and headaches, that made it impossible to attend class.
- 23 year-old female was diagnosed with Turner's syndrome while she was undergoing work-up for primary amenorrhea. She had had routine pediatric care and her parents were primary Spanish-language speakers. There were missed opportunities for height and estrogen intervention with subsequent effects on bone health, social, and psychological well-being.

Barriers to incorporation of menstrual health into pediatric primary care

In the clinical encounter, providers are given limited time with each patient and have an exhaustive list of topics to cover. They are rightfully trained to be focused on immediate concerns, and menstruation may not be the most urgent issue. Families may not recognize abnormal symptoms, and clinicians may be less comfortable inquiring about them if they suspect a young person's embarrassment.[9] Patients may also hesitate to bring up their periods for fear clinicians will learn about potential pregnancies, terminations, or losses of pregnancy.

Systemic barriers also create challenges. Although law mandates use of EMR, systems have perceived limits related to the inclusion of menstrual cycle questions and cues for AG. Variability in descriptions may impact diagnosis and treatment. For example, the term "regular" can be used to describe cycle length, time between cycles, absence of associated symptoms, or something else altogether. Furthermore, variability in persons responsible for inquiring and recording LMP exists.[6] Appropriately designed EMR can aid clinicians in identifying, inquiring, and documenting comprehensive menstrual histories (Refer to Box 1).

Recommendations for improved menstrual health integration into pediatric primary care

The following points highlight straightforward, easy-to-implement actions that might start to improve access to menstrual health and improve quality of life for those who menstruate. We propose that:

- *Bright Futures* should review their current guidance to assess if updates are warranted.
- Pediatricians can inform their own institution's inclusion of EMR templates for menstrual health (Table 1).
- Training programs should review their societies' guidelines to value menses as an important vital sign.
- Clinical systems can utilize technology to improve menstrual history efficiency by adding menses questions to established pre-screening questionnaires, similar to digital mental health pre-screening.
- Overall, adequately trained clinicians can utilize optimized EMR to implement comprehensive menstrual histories as recommended by the ACOG/AAP.

In conclusion, incorporating menstrual questions as a vital element of delivery care will advance the health of those who menstruate.

Contributors
Dr. Marni Sommer and Dr. Samuel Master conceptualized, drafted the initial manuscript, and critically reviewed and revised the manuscript. Dr. Linda Fan, Dr. Samantha Hill, Dr. Chinwe Efuribe, and Dr. David Bell provided extensive edits to the manuscript. All authors approved the final manuscript as submitted and agree to be accountable for all aspects of the work.

Declaration of interests
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Questions to review	Possible medical concerns
Menarche (age of 1st period): ***	Primary amenorrhea, immature HPO axis
Last Menstrual Period: ***	Secondary amenorrhea, pregnancy, bleeding disorder
Occurs every ***–*** days, lasting for about *** days	Anemia, hormonal changes
Products per day (which product–tampon/pad/menstrual cup; reason for changing): ***/day	Dysmenorrhea, endometriosis, chronic illness
Impact on life (dysmenorrhea/missed school/work/clots): ***	Information about cycle and discharge, chest tenderness

Mnemonic to remember: M: Menarche, E: Every *** days, N: Number of days of bleeding: ***, S: Supplies/products and how many per day, E: Effect on Life, S: Start of LMP.

Table 1: **Recommended guide for EMR phrases and clinical mnemonic.**

References

1 Greif EB, Ulman KJ. The psychological impact of menarche on early adolescent females: a review of the literature. *Child Dev*. 1982;53(6):1413–1430.

2 ACOG Committee Opinion No. 651: Menstruation in girls and adolescents: using the menstrual cycle as a vital sign. *Obstet Gynecol*. 2015;126(6):e143–e146. https://doi.org/10.1097/AOG.0000000000001215.

3 Hagan JF, Shaw JS, Duncan PM. *Bright futures: guidelines for health supervision of infants, children, and adolescents*. 4th ed. Elk Grove Village, IL: Bright Futures/American Academy of Pediatrics; 2017:868. Available from: https://www.aap.org/en/practice-management/bright-futures/bright-futures-materials-and-tools/bright-futures-guidelines-and-pocket-gude/. Accessed October 7, 2023.

4 Deligeoroglou E, Creatsas G. Menstrual disorders [cited 2023 Oct 7]. In: Sultan C, ed. Endocrine Development. S. Karger AG; 2012:160–170. Available from: https://www.karger.com/Article/FullText/331697. Accessed October 7, 2023.

5 Herbert AC, Ramirez AM, Lee G, et al. Puberty experiences of low-income girls in the United States: a systematic review of qualitative literature from 2000 to 2014. *J Adolesc Health*. 2017;60(4):363–379.

6 Brown MD, Rausch J, Berlan ED. Provider adherence to preventative health care guidelines in adolescent girls presenting for well visit. *Clin Pediatr (Phila)*. 2019;58(3):295–301. https://doi.org/10.1177/0009922818813571.

7 Singer MR, Sood N, Rapoport E, Gim H, Adesman A, Milanaik R. Pediatricians' knowledge, attitudes and practices surrounding menstruation and feminine products. *Int J Adolesc Med Health*. 2020;34(3). https://doi.org/10.1515/ijamh-2019-0179.

8 McShane M, Perucho J, Olsakowski M, Gaughan JP, Brown RT, Feldman-Winter L. Menstrual history-taking at annual well visits for adolescent girls. *J Pediatr Adolesc Gynecol*. 2018;31(6):566–570. https://doi.org/10.1016/j.jpag.2018.07.012.

9 O'Flynn N, Britten N. Diagnosing menstrual disorders: a qualitative study of the approach of primary care professionals. *Br J Gen Pract*. 2004;54(502):353–358.