



Commentary

Strengthen the Evidence Base to Meet Adolescent Contraceptive Needs

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Adolescents—defined by the World Health Organization as individuals aged 10–19—number over 1.3 billion globally, representing one sixth of the world's population (<https://data.unicef.org/topic/adolescents/overview/>). They are not only the future but also present drivers of global health, equity, and development. Global analyses show substantial improvements in adolescent contraceptive use over the past 30–50 years [1,2]. Contraceptive use has increased among both partnered (in union) and unpartnered (single) adolescents, although gains have been greater among those in union [1,2]. Despite this progress, significant gaps remain. The most recent *Adding It Up* report estimates that approximately 25% of adolescent women aged 15–19 in low- and middle-income countries have an unmet demand for contraception—a new measure defined as being sexually active, not wanting to become pregnant, not using contraception, and intending to use a method in the future [3]. In 2019, adolescents aged 15–19 in low- and middle-income countries experienced an estimated 21 million pregnancies, about half of which were unintended; more than half (55%) of unintended pregnancies ended in abortion, most of which were unsafe [4]. Given these persistent gaps and risks, identifying effective interventions that address adolescents' evolving contraceptive needs throughout adolescence and beyond remains essential.

Adolescence is a dynamic period of physical, cognitive, and psychosocial development [5] during which gender norms, health behaviors, and social roles are established, often with lifelong consequences [6–10]. Recent research, program evaluations, and reviews have substantially advanced understanding of adolescent contraceptive needs [11–14] and identified approaches to improve access, uptake, and sustained use across different phases of adolescence [15,16]. Nevertheless, critical

gaps remain in who is studied, what outcomes are measured, and how research is conducted.

We issue an urgent call to action: to strengthen the depth, inclusivity, and rigor of research and evaluation addressing adolescent contraceptive needs. Drawing on efforts to update the World Health Organization guidelines on preventing early pregnancy and adverse reproductive health outcomes among adolescents [15], and on the development of a global learning agenda for adolescent contraceptive use [11,17], we identify key gaps and offer concrete recommendations to guide future research, evaluation, and investment. These recommendations are intended for program managers, evaluators, researchers, and funders seeking to design inclusive, evidence-based, and responsive interventions that better meet the diverse contraceptive needs of adolescents.

Who is the Focus of Studies?

Many research and evaluation studies focusing on adolescent contraceptive use jointly examine adolescents and youth (ages 15–24 years) without disaggregating the age group 15–19 from 20 to 24, often due to small sample sizes [18–20]. Further, few studies focus specifically on very young adolescents (ages 10–14) [8], though the Global Early Adolescent Study (GEAS) (Global Early Adolescent Study (GEAS)), the Gender and Adolescence: Global Evidence (GAGE) project (Gender and Adolescence: Global Evidence (GAGE) Project), and the Understanding the Lives of Adolescents and Young Adults (UDAYA) project (Understanding the Lives of Adolescents and Young Adults (UDAYA) in Bihar and Uttar Pradesh Project) have begun to address this gap. Additionally, research rarely addresses the contraceptive needs of marginalized groups—such as out-of-school youth, adolescents with disabilities, LGBTQIA+ adolescents, those in humanitarian settings, married adolescents, and adolescents living with HIV—despite their heightened vulnerabilities [21]. Finally, few programs consider the contraceptive needs,

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preferences, and desires of boys and young men either as users themselves or as partners of users [8,21].

Recommendations

- Ensure adequate sample sizes of younger (ages 10–14) and older (ages 15–19) adolescents to support meaningful age-specific analyses. This requires strengthening evaluation teams' capacity to ethically engage very young adolescents and drawing on lessons from the GEAS, GAGE, and UDAYA studies to build ethics review boards' understanding of the benefits of including younger adolescents in contraception research and evaluation.
- Prioritize funding for formative research with marginalized adolescent groups to better understand their distinct contraceptive needs; use these insights to design and rigorously evaluate interventions tailored to those populations.
- Include boys and young men as part of programs and research to address the contraceptive needs, wants, and desires of *all* adolescents.

What is Being Examined?

Many studies on adolescent contraceptive use focus on identifying influencers, barriers, and facilitators of access and use [11]. Barriers operate at multiple levels, including individual, interpersonal, community, and structural levels. Structurally, young people may lack access if service hours are inconvenient, transportation is unavailable, costs are prohibitive, or they fear reprimand by providers or being seen by family or community members [22–26]. Even when young people reach a facility or pharmacy, provider bias—related to age, marital status, or prior childbearing—may limit access to contraceptive methods [27–29]. At the community level, cultural and religious norms surrounding age at marriage, nonmarital sex, fertility, and childbearing may discourage young people from seeking care due to concerns about social visibility or stigma [24,25,30]. Interpersonally, partners, parents, and peers can either facilitate or hinder a young person's willingness and ability to seek contraceptive services [31,32]. At the individual level, knowledge, attitudes, agency, and self-efficacy influence contraceptive decision-making and service-seeking behaviors [30,33,34]. Finally, social media plays an increasingly important role in shaping young people's information about contraceptive methods and access, offering both accurate information and exposure to misinformation and disinformation [35].

Although the evidence on barriers and facilitators of adolescent contraceptive use is extensive, relatively few studies evaluate interventions that effectively address these factors. Moreover, many evaluations emphasize short-term, program-defined outcomes—such as contraceptive or condom use—while overlooking outcomes that may be more salient to adolescents, including staying in school, timing of sexual initiation, and prevention of sexually transmitted infections [16]. Even when broader outcomes are assessed, as in gender-transformative programs, evaluations tend to focus on individual-level change, neglecting shifts in family or community norms that shape adolescents' ability to seek and use contraceptive services [6,10]. In addition, most programs adopt a one-size-fits-all approach that fails to account for adolescents' evolving contraceptive needs across life stages. A life-course approach is therefore critical to address diverse needs and

outcomes, including timing of sexual initiation, contraceptive use at first sex, use for infrequent sex, use for pregnancy spacing, postabortion or postpregnancy use, intentional discontinuation to achieve pregnancy, and use for noncontraceptive purposes [8,36].

Recommendations

- Shift research and evaluation efforts toward testing interventions that address known barriers and facilitators of adolescent contraceptive access and use, rather than continuing primarily descriptive studies to identify barriers and facilitators.
- Engage adolescents from diverse backgrounds in defining meaningful outcomes that reflect their lived experiences and contraceptive needs.
- Adopt multilevel and multisector (e.g., health, education, social welfare, employment and agriculture) intervention designs and conduct evaluations that measure effects across individual, relational, family, community, and societal levels and assess the contribution of each component.
- Apply a life-course lens to programs and evaluations, measuring outcomes aligned with adolescents' evolving contraceptive needs across developmental stages.

How are Studies Conducted?

Few evaluations of adolescent contraceptive use interventions employ rigorous designs (e.g., experimental, quasi-experimental, and/or longitudinal), assess whether changes are sustained over time, or examine longer-term shifts in norms and behaviors related to sexual behaviors, contraceptive method choices, method continuation, and unintended pregnancy [21,37,38]. Weak study designs result in evidence being “downgraded” in evidence reviews such as for the World Health Organization Guidelines around Adolescent Contraceptive Use [15]. Further, there are only a small number of longitudinal research and evaluation studies examining adolescents' contraceptive intentions and subsequent behaviors (e.g., GEAS, GAGE, and UDAYA) and limited longitudinal examination of marginalized adolescents' contraceptive needs and experiences (GAGE); this makes it difficult to trace how programs affect adolescents differentially over the adolescent years.

Recommendations

- Use rigorous evaluation designs, including experimental or quasi-experimental methods, where feasible, to assess adolescent contraceptive interventions.
- Strengthen observational evaluations of adolescent contraceptive interventions by incorporating generic or synthetic control groups using routine or secondary data sources such as the Demographic and Health Survey, Multiple Indicator Cluster Survey, or Performance Monitoring for Action Survey.
- Collect longitudinal data to examine pathways of change and program impacts on adolescents, including marginalized groups, over time.
- Prioritize funding for evaluations that capture longer-term and evolving outcomes, beyond short-term changes in knowledge, attitudes, and contraceptive adoption.

Why are Studies Conducted?

The field is increasingly conducting evaluation studies to identify effective approaches for meeting the contraceptive needs of diverse adolescents, including those in marginalized settings [16,20,21,37,38]. However, many evaluations stop short of explaining how and why programs succeed or fail and often omit data on costs and cost-effectiveness—information essential for decisions about sustainability and scale-up [21,37–39]. Too often, evaluations are treated as endpoints rather than as foundations for identifying core, replicable components; assessing feasibility beyond pilot contexts; and determining whether programs can be sustained without continued external funding. Short funding cycles and pressure to move quickly to new research questions reinforce this pattern. As a result, evidence from evaluations is insufficiently leveraged to inform the development and expansion of scalable, sustainable adolescent contraceptive programs.

Recommendations

- Conduct pragmatic implementation research and process evaluations to examine how interventions are delivered in real-world settings, identify determinants of implementation success (e.g., feasibility, fidelity, adaptation), and inform replication, sustainability, and scale-up.
- Systematically collect cost and resource-use data to enable cost and cost-effectiveness analyses that support decision-making for program sustainability and scale-up.
- Design evaluations with scale and sustainability in mind by embedding stakeholder engagement, policy relevance, and planning for evidence use into program and evaluation timelines to ensure findings inform replication and broader adoption.

Conclusion

Every adolescent deserves the opportunity to thrive—physically, emotionally, and socially—and meeting their evolving contraceptive needs is a matter of public health, rights, equity, and justice. This commitment is under strain as recent funding cuts to global public health, including adolescent sexual and reproductive health programs, heighten the urgency of understanding both the short- and long-term impacts of adolescent contraceptive programming. In this constrained environment, we can no longer afford programs or evaluations that fail to generate clear, actionable evidence on what works, for whom, under what conditions, and at what cost. Now more than ever, we must invest in inclusive, life-course-informed, and methodologically rigorous research and evaluation that informs decisions about effectiveness, durability, sustainability, and scale, and that helps prevent hard-won gains from being eroded without a clear understanding of what is lost or how best to mitigate harm.

This call to action builds on—but also advances beyond—prior adolescent contraception learning agendas, which have often identified broad and ambitious sets of research questions without prioritization, methodological rigor, or a clear focus on the populations most likely to be left behind. Too often, such agendas emphasize what we want to know without specifying how evidence should be generated, which approaches warrant the strongest designs, or how findings can inform real-world decision-making. In contrast, we argue for a more focused and

strategic evidence agenda—one that prioritizes strong methods, targeted populations, and evaluations explicitly designed to inform replication, sustainability, and scale-up in resource-constrained settings.

To do this well, we must center the voices of the most marginalized adolescents, strengthen accountability for evidence use, and commit to building a more coherent and actionable knowledge base. In an era of shrinking resources, the question is not simply whether adolescent contraceptive programs work, but which interventions deliver the greatest and most equitable impact over time. Bold, evidence-driven action—grounded in rigorous evaluation and guided by the goal of sustainable and scalable solutions—is essential to meeting the contraceptive needs of *all* adolescents, now and in the future.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

During the preparation of this work, the authors used Microsoft Copilot to strengthen the writing and arguments. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the published article.

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