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YOUNG, VULNERABLE AND UNATTENDED: WHAT WE KNOW ABOUT ADOLESCENT MATERNAL AND NEWBORN HEALTH AND OPPORTUNITIES FOR LEARNING.

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Contents

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Background

- Each year, 12 million adolescents ages 15-19 give birth in low- and middle-income countries. **(WHO 2023)**
- Adolescents and their newborns have higher risk of morbidity and mortality, and face exacerbated barriers to maternal and newborn health (MNH) services.
- Despite the fact that many pregnancies and deliveries occur among adolescents , MNH efforts are rarely tailored to the needs of adolescents and their newborns.
- The state of evidence for interventions for adolescent pregnancy, delivery, and postnatal care is weak across all aspects of a high-quality health system **(Farnaz, et al. 2023)**
- This document presents the findings of literature and landscape reviews conducted by Save the Children in 2020 and 2022.

Objectives

Literature review (2020)

Objectives:

- To identify MNH outcomes among adolescents and their newborns, and distinctions between adolescents and adult women
- To explore barriers and facilitators to pregnant and parenting adolescents' use of MNH services

Landscape review (2022)

Objectives:

- To identify evidence-informed interventions for pregnant and parenting adolescents in low- and middle-income settings
- To deepen understanding of the needs of adolescents and newborns during pregnancy, labor and delivery and postpartum
- To identify areas for further research and learning

**While the main literature review was completed in 2020 and the landscape review in 2022, the information shared in this presentation has been updated to include more recent publications in 2023.*

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Methodology

Literature and Landscape Review

- Two separate literature reviews conducted in 2020 and 2022.
- Reviewed English language peer-reviewed and grey literature on adolescent maternal and newborn health published from 2008 to 2022
- Additional literature review from more recent publications in 2023
- Identified articles through PubMed, search terms in portals/websites as well as recommendations from Key Informant Interviews

Key Informant Interviews (10): See Annex

- Global experts on MNH and adolescent health
- Donors, international nongovernmental organizations (INGOs), researchers.

FINDINGS

Why turn the spotlight on adolescent MNH?

What we know about MNH outcomes.

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Globally, adolescent pregnancy remains high, and leads to poor outcomes for adolescents and their newborns

Global attention has focused on preventing adolescent pregnancy. Yet millions of adolescent girls give birth every year:

- Nearly one-third of all women in low- and middle-income countries begin childbearing in adolescence (aged 19 and younger). Nearly half of these pregnancies are unintended. (UNFPA, 2022)
- Approximately 12 million girls aged 15–19 years and at least 777, 000 girls under 15 years give birth each year in developing regions. (WHO, 2023)
- Globally in 2021, an estimated 14% of adolescent girls and young women gave birth before age 18. (UNICEF, 2022)
- About 11% of births worldwide are to adolescents aged between 15 and 19 years. (WHO, 2011)

As a result:

- Complications from pregnancy and childbirth are among the leading causes of death for girls aged 15–19 years globally. (WHO, 2023)
- An estimated 15% of all deaths globally in women aged 10–25 years are a result of maternal causes (WHO 2014)

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Despite high rates of adolescent pregnancy, attention to the needs of pregnant and parenting adolescents is growing slowly

- Strategies and interventions related to adolescent pregnancy have focused on pregnancy prevention. **(WHO, 2023)**
- Policy responses have focused on reducing the adolescent birth rate and efforts to support pregnant adolescents have developed more slowly. **(Farnaz, et al. 2023)**
- A standard approach is used in the content and delivery of MNH interventions for adolescents (10-19) and women (20+), regardless of age.
- MNH clinical guidelines rarely make distinctions based on age.
- ***But*** there is growing attention being paid to improving access to and quality of maternal care for pregnant and parenting adolescents. **(WHO, 2023)**
- Achieving universal health care (UHC) and sustainable development goals (SDG) calls for accelerated action for subgroups for whom progress is lagging behind—e.g., adolescents.

Adolescents and their newborns face higher risk of morbidity...

Some medical conditions and complications occur more commonly in adolescents

- Adolescent mothers face higher risks of eclampsia, puerperal endometritis, and systemic infections than women aged 20–24 years. **(WHO, 2023)**

Neonates of adolescents are more likely to experience complications

- 40 - 50% more likely to be born preterm.
- More likely to experience severe neonatal conditions. **(WHO, 2023)**

Direct relationship between risk of adverse maternal and neonatal outcomes and age

- Morbidity and mortality increase with decreasing age. **(Tembo et al, 2020)**

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Adolescents and their newborns face higher risk of mortality...

Maternal mortality estimated to be about 28% higher among adolescents (15-19) than among 20-24.

- Trends in maternal mortality with age follow a J-shaped curve, with rates highest among adolescents and older women. **(Blanc et al. 2013)**

The risk of maternal mortality is highest for adolescent girls under 15 years old.

- Complications in pregnancy and childbirth are higher among adolescent girls aged 10–19 (compared to women aged 20–24). **(WHO, 2021)**

In sub-Saharan Africa (SSA), adolescent mothers aged <16, 16-17, and 18-19 experienced a higher neonatal mortality (60%, 40%, and 20%) compared to 20–24-year-old mothers. **(Ramaiya A. et al, 2014)**

- Stillbirths and newborn deaths are 50% higher among infants of adolescent mothers than among infants of women aged 20–29 years. **(WHO, 2014)**

Ethical considerations suggest that efforts to reduce maternal mortality rate (MMR) should also be directed towards those most at risk e.g., adolescents, even though higher risk of maternal mortality is after age 30. (Blanc et al. 2013)

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Why are pregnant and parenting adolescents more vulnerable?

Potential reasons for poorer MNH outcomes among adolescents and their newborns

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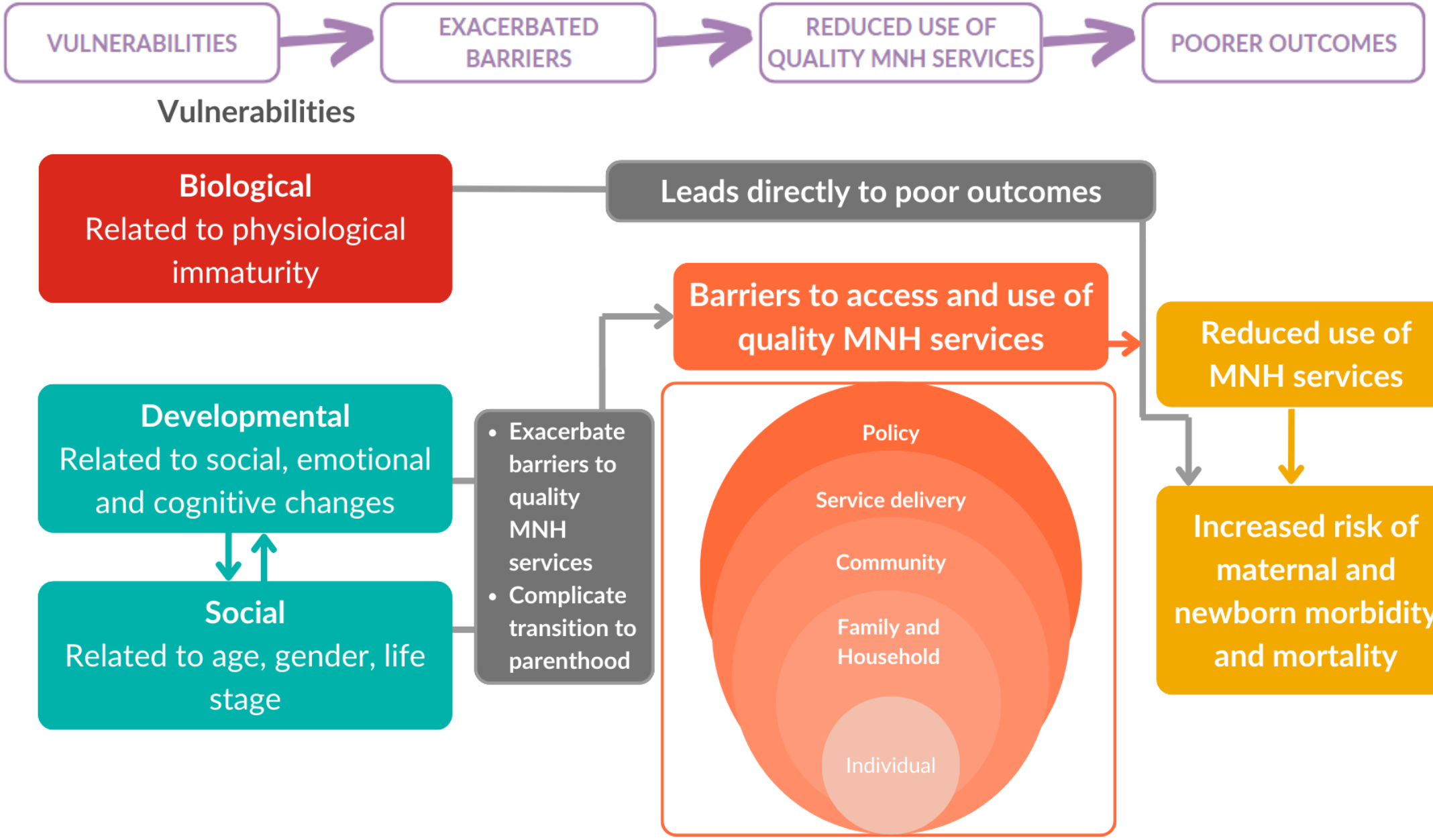
Framework: Pathways to poor MNH outcomes for adolescents and newborns

- Drawing from the literature review, we **conceptualized a framework** to understand the pathways that lead to poor MNH outcomes for adolescents and their newborns.
- This framework depicts how adolescents' underlying biological, social, and developmental **vulnerabilities lead directly to poor health outcomes** and/or **exacerbate barriers** to health service seeking.
- We have used a **socio-ecological model to categorize the barriers to care seeking** at the individual, family/household, community, service delivery, and system levels.
- Each component of the framework is explained in further detail on the slides that follow.

Pathways to poor MNH outcomes for adolescents and newborns



Adolescents' unique biological vulnerabilities could explain some of the gaps in coverage, quality, and outcomes

Biological vulnerability
Related to physiological immaturity

Lead directly to poor MNH outcomes

Examples of biological vulnerabilities:

- Growing adolescent competes with growing baby for nutrients in pregnancy. **(Wallace JM. 2019)**
- Immature pelvis increases risk of obstructed labour for adolescents under age 15.
- But older adolescents ages 16-19 are less likely to deliver by caesarean section due to smaller baby size. **(Shahida et al, 2013; Magadi, M., et al 2007)**

Adolescents' unique developmental and social vulnerabilities could explain gaps in coverage, quality, and outcomes

Developmental vulnerability

Related to socio-emotional, cognitive, and identity changes during transition from child to adult

Social vulnerability

Related to age, gender, and life stage

Exacerbate barriers to access and use of quality, responsive MNH services, and complicate transition to parenthood

- Changes in the developing brain compound risk of depression and anxiety. **(Child Mind Institute, 2017)**
- The role of peers in influencing behaviour, coupled with changes in risk perception, influences care-seeking, adoption of positive behaviours, and responsive caregiving. **(Knoll, L.J., et al 2015)**

- Adolescents have limited agency, resources, and decision-making authority, including in decisions around service use. **(Mekonnen et al. 2019 and Banke - Thomas et al. 2017)**
- Unmarried adolescents are more likely to deny the pregnancy and to be undecided about carrying it to term due to stigma surrounding pregnancy outside marriage. (**Erasamus et al. 2020)**

Barriers to use of quality MNH services reflect barriers experienced by all mothers, but are exacerbated by underlying vulnerabilities in adolescents

Service delivery level	• **Long wait times** expose adolescents to ridicule, stigma, and shaming, and disrupts school attendance. **(Bahandari, S. and Joshi, S. 2017)** • **Shame and judgment from providers and from other clients** at health facilities, especially if unmarried. **(Shahabuddin et al. 2015)**
Community level	• **Social norms** leading to **stigma, shame, isolation** (especially for unmarried adolescents. **(Erasamus et al. 2020)** • Limited **social support** to mobilize funds to cover direct and indirect costs of care. **(Banke - Thomas et al. 2017)**
Family and household level	• Lack of knowledge among **influential family members who play a key role in perception of need and care seeking. (Gross et al. 2012)** • **Most decisions made by family leading to limited decision-making power** among adolescent girls. **(Gross et al. 2012)** • **Poor couple communication and limited male participation in MNH. (Igras et al. 2019)** • **Expulsion from home and community** places adolescents further from facilities. **(Birungi et al. 2011)**
Individual level	• Adolescents are likely to **need more time** during provider-client contacts. **(WHO 2004)** • Limited access to **funds. (Mekonnen et al. 2019)** • Less likely to **recognize early signs** of pregnancy, **fear to disclose** pregnancy due to repercussions or **negative emotional response. (Mekonnen et al. 2019, Erasamus et al. 2020)** • **Limited knowledge** of available services or need for services. **(Gross et al. 2012)**

As a result, adolescents have lower coverage of MNH services compared to adult women (with inter- and intra-country variations)…

Less likely to seek antenatal (ANC) services early and complete recommended visits

- Adolescents <20 in Cambodia, Nepal, and Uganda were 1.5-1.6x less likely to start ANC early compared to 20-34y. **(Saad-Haddad et al 2016)**
- Adolescents were 2x more likely to have attended < four visits when compared to adult women in Cameroon. **(Egbe TO, et al; 2015)**

Less likely to deliver at a facility

- In SSA, adolescents (15-19) were 1.4x and 1.9x less likely to deliver at a facility than older women 20-24 and >25, respectively. **(Dunlop et al, 2018)**

Less likely to use postnatal care (PNC) services for themselves and their babies
(A more mixed picture with PNC than other MNH services)

- In Malawi, adolescents (13-15) were **significantly less likely** to use PNC services compared to adolescents (16-17) and (18-19). **(Ngwira and Chao, 2021)**
- In Nepal, 52% of mothers <20 used PNC vs. 46% and 40% ages 20-29 and 30-34. Similar picture with early PNC service use. **(Khanal et al, 2014)**

…and receive lower quality of MNH services compared to adult women

Less likely to receive all the components of MNH care

- Only 28% of pregnant adolescents ≤15 received antenatal corticosteroids (ACS) for preterm labour compared to 39% of 16-19 and 52% of 20-24 years.
  - Similar findings for prophylactic uterotonics. **(Ganchimeng T et al, 2014)**
- Only 49% of 10-19 year-olds received 4 components of ANC compared to 61% (20-24) and 73% (>25y). **(Owalabi O et al, 2017)**

  (Blood pressure, urine sample, and blood sample taken, and received information on pregnancy complications.)

More likely to experience disrespect and abuse during delivery

- Compared to women aged 20-29 and >30, adolescents (15-19) in 4 countries (Ghana, Guinea, Myanmar, and Nigeria) were:
  - 2x likely to experience physical abuse,
  - 3x likely to experience verbal abuse if not educated (2x if educated),
  - 2x likely to experience stigma,
  - 5x likely to experience unconsented vaginal exam if unmarried. **(Bohren M.A. et al, 2019)**
- Adolescent mothers experience a high degree of stigma. **(Alex-Ojei et al., 2023)**

What is needed to improve adolescent MNH?

What we know and what we need to learn

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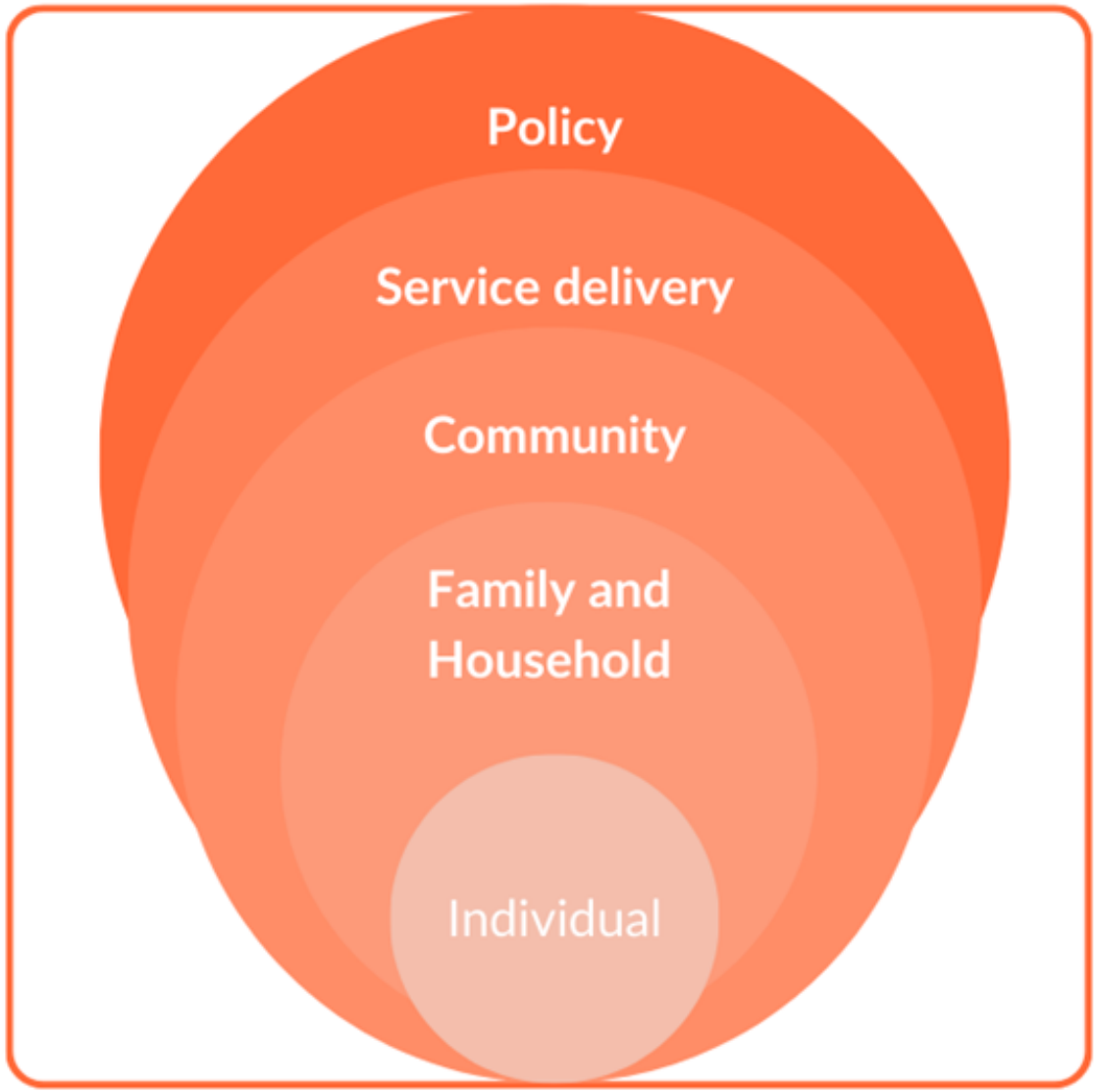
Existing efforts targeting barriers at different levels of the Socio Ecological Model

What we know



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Existing efforts targeting barriers at individual level

Key takeaways:

- **Interventions identified primarily aimed to improve MNH knowledge among adolescents.**
- ***Six studies*** found that community-based interventions (small group meetings in safe spaces, peer education, group education) with adolescents increased **knowledge of danger signs, essential newborn care, and when and how to seek care**.

Examples of interventions identified:

- Community-based meetings and setting up of adolescent mother support groups with trained facilitators (***piloted in Malawi, Kachingwe et al., 2021 and Ethiopia, Born on Time, 2021).***
- Small group curriculum-based sessions for adolescent girls and young women supported by trained local mentors ***(piloted in Nepal, Save the Children, 2020).***
- Peer-to-peer education for adolescent mothers facilitated by nurses ***(piloted in Zimbabwe, Tinago et al., 2021).***

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Existing efforts targeting barriers at individual level: nulligravida adolescents

While not the main focus of our review, we also identified interventions **targeting nulligravida adolescents** to improve knowledge of pregnancy signs **before pregnancy**

Examples of interventions identified:

- Community education sessions with non-pregnant adolescents coupling information on menstrual health and early signs of pregnancy ***(piloted in Mozambique, Ghana and Kenya, Zandamela et al., 2021, Be Girl, 2019).***
- Small curriculum-based group sessions with nulliparous adolescent girls including information on danger signs and when and how pregnant adolescents should seek care ***(piloted in Nepal, Save the Children, 2020).***

Existing efforts targeting barriers at community, family and household levels

Key takeaways:

- Interventions identified primarily aimed to improve psychological and social well being of unmarried teen age mothers.
- One study found that engaging parents and community leaders created a supportive community environment for adolescent mothers.
- We found **no evaluated interventions** aiming to improve community social and gender norms that stigmatize pregnant and parenting adolescents.

Examples of interventions identified:

- ***Participatory planning***, modelling and mobilization of social networks contributed to creating the supportive community environment for adolescent mothers ***(piloted in Uganda, Leerlooijer, J.N., 2013).***
- ***Counselling for parents*** increased care for the unmarried teenage mothers and her child; and promoted reconciliation between adolescent mothers and their parents ***(piloted in Uganda, Leerlooijer, J.N., 2013).***

Existing efforts targeting barriers at health service delivery level (1)

Key takeaways:

- Eleven studies with interventions aimed to **improve access to and use of quality MNH care for pregnant and parenting adolescents**.
- The main outcomes targeted emphasized **respectful care, increased number of ANC visits, and increased facility delivery**.
- The studies reported increased ANC attendance, self-esteem and autonomy; and improved health practices among pregnant and parenting adolescents after implementing interventions.

Existing efforts targeting barriers at health service delivery level (2)

Efforts to improve quality and responsiveness of facility-level MNH care:

- Health provider training and monitoring for nonjudgmental and respectful care; (***piloted in Madagascar, Sewpaul et al., 2021***).
- Small group counseling sessions for pregnant adolescents at health facility level, including group ANC and service provision; (***piloted in Iran, Mexico, and Uganda, Rezale et al., 2021, Mendoza et al., 2018, Akunzirwe et al., 2022***).

Efforts to improve access to facility-based MNH care:

- Provision of maternity waiting home, especially for adolescents from rural areas; (***piloted in Zambia, Lori et al., 2021***).
- Arranging convenient hours, such as after school, with a back entrance to maintain privacy; (***piloted in Nigeria, Moyer, 2022***).

Existing efforts targeting barriers at health service delivery level (3)

Efforts to improve quality and responsiveness of community level MNH care:

- Community health worker home visits for adolescent mothers; **(*piloted in Bangladesh, India, El Salvador, and South Africa, Rahman et al., 2022; Dyalchand et al., 2020*).**
- Nurse home visiting programs for pregnant adolescents; **(*piloted in Brazil* Fatori et al., 2021; Alarcao et al., 2021).**

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Existing efforts at the system or policy level

Key takeaways:

- We did not identify interventions at the system or policy levels.

Notable gaps:

- Adolescents are *not specifically addressed in the global MNH guidelines, standard operating procedures (SOPs), and quality standards* we reviewed nor in the country-level guidelines and standards (noting we did not review every country).
- Most countries *do not disaggregate MNH data by age in their health management information system (HMIS)*, limiting our understanding of adolescent MNH service seeking at scale.

Potential areas for future research and learning, drawn from literature and landscape review

What we don’t know

We have gaps in our understanding of some vulnerabilities, how they lead to poorer outcomes, and the implications for intervention

How do biological vulnerabilities lead to poor outcomes, and what are the service delivery implications?

- What are the potential **physiological dangers** among adolescents that lead to difficult labour and delivery?
- What **service delivery interventions** are needed to improve maternal health outcomes for adolescents (beyond interventions already proven to work for adults)?
- What additional support do adolescent mothers need to care for **small and sick newborns**?

How do social and developmental vulnerabilities exacerbate barriers, and how can vulnerabilities be mitigated?

- Which **social and developmental vulnerabilities matter most**? How does this differ by context?
- How does i**dentification of adolescents early in pregnancy** impact use of ANC in the first trimester, delivery by skilled birth attendants, and postnatal care?
- How does MNH **counselling need to be tailored in response to adolescents' vulnerabilities**?

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We have gaps in our understanding of how barriers can be feasibly addressed at scale, without creating parallel platforms

What are feasible, and scalable approaches that:

Service delivery level	• **Improve health worker** interactions for **non-judgmental care?** • Apply a systems approach to **make existing MNH services responsive to the needs and preferences** of pregnant and parenting adolescents? • Encourage provision of the **full package of MNH care** for adolescents? • **Tailor MNH counseling and services** to account for vulnerabilities?
Family, community, and household level	• **Engage families and community structures** to support pregnant and parenting adolescents and create links with facilities? • Shift **social and gender norms to improve decision-making** power for pregnant and parenting adolescents? • **Engage male partners** of pregnant and parenting adolescents in the context of **legal implications** of adolescent pregnancy • **Foster** support for adolescents with **diverse male partners** (and adolescents without male partners)?
Individual level	• **Improve** adolescents' ability to **self-identify pregnancy early?** • **Empower adolescents to** access timely care (facility and community)? • Improve **mental health support** for pregnant and parenting adolescents?

Conclusions and way forward

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Conclusions and way forward

What we know:

- Prevalence of adolescent pregnancy remains unacceptably high. **Efforts to prevent adolescent pregnancy are urgently needed**, alongside **attention to the needs of pregnant and parenting adolescents**.
- In many low- and middle-income settings, pregnant and parenting adolescents and their babies are more vulnerable to poor outcomes than adult mothers.
- Disparities may stem from underlying **vulnerabilities**, which likely exacerbate **barriers** to access to and use of quality, responsive MNH services.
- Few existing interventions specifically target MNH for adolescents, but some existing approaches from family planning/reproductive health (FP/RH), gender, and MNH fields can be adapted.
- More interventions exist at the community and facility level rather than at the level of systems or policies.
- Evidence on how existing interventions impact MNH outcomes is limited.

What we still need to know:

Investments are needed to advance understanding of:

- ✓ The factors leading to poorer MNH outcomes for adolescents and their babies
- ✓ Feasible, scalable MNH interventions that can address barriers without creating parallel, unsustainable platforms

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Areas to consider for future work

More investments needed to generate evidence on feasible and scalable approaches for pregnant and parenting adolescents, and to catalyze action among country and multilateral stakeholders.

We recommend investments in:

1. Gathering and analyzing data to deepen understanding of **adolescents' biological and social vulnerabilities and MNH care pathways, and vulnerabilities of their newborns**.
2. Build on existing evidence to **address barriers and support adolescents** with the transition to parenthood.
3. Developing and testing **innovations to improve coverage and quality of MNH care** for pregnant and parenting adolescents and their newborns.
4. **Catalyzing greater attention** to pregnant and parenting adolescents and their newborns.
5. **Adapting and testing innovations** to foster social norms that support pregnant and parenting adolescents and their newborns.

The following slides provide further detail.

Recommendation 1: Deepen understanding of adolescents' biological and social vulnerabilities and MNH care pathways

To improve quality and coverage of care for adolescent mothers, data are needed to deepen understanding of adolescent vulnerabilities and care-seeking patterns.

1. Gather and analyze data on **care seeking patterns** among pregnant and parenting adolescents and their newborns, including timing and patterns of care seeking for small and sick newborns, across different contexts, and across the continuum of care.
2. Invest in research to advance understanding of the implications of known **biological vulnerabilities** on care needed for pregnant and parenting adolescents and their newborns (e.g., nutritional deficits among adolescents that contribute to poor outcomes including postpartum hemorrhage).
3. Generate data for advocacy and decision-making through **modeling the potential of different interventions** to contribute to improved MNH outcomes for adolescents and their newborns, and the potential of improved MNH outcomes among adolescents to **advance progress towards national and global MNH goals**.

Recommendation 2: Build on existing evidence to address barriers and support adolescents with the transition to parenthood

Pregnant and parenting adolescents face exacerbated barriers to MNH services and may experience additional challenges with the transition to parenthood. To address these barriers, we can build on existing interventions and evidence, including adolescent girls' empowerment work and social norms shifting efforts, rather than starting from scratch.

1. Adapt and expand approaches to shift social and gender norms to **foster empathy for pregnant and parenting adolescents and support for MNH care seeking among their families and communities**. Efforts to improve girls' decision-making power and access to financial resources are needed to improve MNH service access.
2. **Improve knowledge** of MNH danger signs, the importance of timely care-seeking, newborn care, and when and how to seek MNH services among adolescents and their family members, including among nulliparous adolescents.
3. Build **social support systems** for pregnant and parenting adolescents, such as through facilitated groups.
4. **Integrate MNH content** in existing ASRH guidelines, tools, and sessions with nulligravid adolescents to foster early individual recognition of pregnancy and care seeking when adolescents become pregnant.

Recommendation 3: Develop and test innovations to improve coverage and quality of MNH care for adolescents and their newborns

Deepen insights into how MNH service content and delivery can be optimized to respond to the needs of pregnant and parenting adolescents and their newborns, **without creating parallel care pathways for adolescents**.

Investments in learning are needed to inform:

1. Supporting adolescents with **recognition of the early signs of pregnancy**, and addressing barriers to disclosure and timely care-seeking.
2. Improved **counseling** that is non-judgmental, and accounts for the needs and vulnerabilities of adolescents and their newborns across the MNH continuum, to ensure a positive care experience and encourage continuity of care.
3. Tailoring of MNH **clinical guidelines and quality standards** to respond to the vulnerabilities of adolescents and their newborns (informed by Recommendation 1).
4. Strategies to meet the unique needs of adolescent mothers of **small and sick newborns**, and their families at the facility and community levels, including timely identification of problems and care seeking for small and sick newborns.
5. Tailoring of interventions targeting mothers **who deliver at home** to account for the needs and vulnerabilities of adolescents.

Recommendation 4: Catalyze attention to pregnant and parenting adolescents and their newborns

Catalyze greater attention to the needs of pregnant and parenting adolescents at the country and global levels through the following strategies.

1. Ensure that the needs and perspectives of pregnant and parenting adolescents are specifically included in **broader MNH investments**, and that adolescents are included in development and testing of innovations.
2. **Elevate the voices of the country stakeholders** who understand the reality of adolescent pregnancy and parenthood in their context, including frontline health workers, national decision-makers, and representatives of professional associations.
3. **Advocate for adolescent MNH inclusion** in global guidelines (e.g., WHO), reports, and data visualizations.
4. **Catalyze multi-donor partnerships** to increase attention to and resources for adolescent MNH within global and bilateral MNH investments and global funding mechanisms.
5. **Partner with country governments** to improve the **availability of age-disaggregated MNH data** in HMIS, and use of these data to inform decision-making.

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Annex: List of people interviewed

Organization	Name
Bill & Melinda Gates Foundation	Laura Hahn
WHO	Chandra-Mouli Venkatraman
UNICEF	Lola Walker
PEPFAR	Michelle Chevalier Michelle Zavila
Equimundo	Giovanna Lauro
Born on Time	Dominique LaRochelle Amanuel Gidebo
University of Michigan Medical School	Cheryl Moyer
University of Ghana, School of Public Health	Helen Habib

Additional resources

- Collection of resources on adolescent MNH
- Specific resources:
  - Do Adolescents Need Tailored MNH Strategies?
  - Why Should MNH Services be More Responsive to the Needs of Adolescents and their Newborns During Pregnancy, Birth and the Postpartum Period?
  - How Should We Adapt Existing MNH Services to be More Responsive to the Needs of Adolescents and Their Newborns?

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