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ORAL ABSTRACTS

901.HEALTH SERVICES AND QUALITY IMPROVEMENT - NON-MALIGNANT CONDITIONS

An Approach to Hemequity: Identifying the Barriers and Enablers of Iron Deficiency Reduction Strategies in Low-to-Middle-Income Countries

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Background
Approximately half a billion women of reproductive age worldwide are anemic, and iron deficiency is the most common cause. Iron deficiency anemia (IDA) is cyclical and compounding with intergenerational transfer of poor iron status, where antenatal and perinatal IDA predisposes to IDA in infancy. While IDA is correctable, it remains under-addressed globally and particularly in low-to-middle-income countries (LMICs), with 85% of cases occurring in LMICs of Africa and Asia. IDA is associated with significant morbidity and mortality. In fact, pre-existing anemia and lack of access to blood components and products are the main drivers of maternal deaths in LMICs. Despite abundant evidence that iron supplementation is an effective and life-saving intervention, there is little understanding of how to deliver it effectively in LMICs and its diverse health systems.
Objective
The primary objective of this study is to identify the enablers and barriers to effective implementation of IDA reduction strategies in LMICs in the published literature to date.
Methods
A scoping review was conducted using a comprehensive search of MEDLINE, Embase, Scopus, and grey literature from inception to March 2023. Two reviewers independently screened and performed data extraction. We included studies examining iron supplementation and its implementation amongst women of reproductive age who reside in LMICs, as defined by the World Bank. Behavioral, clinical, patient-oriented and process outcomes were also included. We were guided by the intersectionality-enhanced versions of the Theoretical Domains Framework and Consolidated Framework for Implementation Research in our data synthesis to understand the factors influencing health behaviors.
Results
Of the 9959 articles screened, 50 studies - primarily randomized control trials (6/50), cohort (19/50), cross-sectional (15/50) and other qualitative study designs (5/50) - were included. 50% of the studies were implemented in Africa, 42% in Asia, 6% in South America and 2% in the Middle East. Barriers and enablers of IDA reduction strategies are summarized in Figure 1.
Barriers: Contextual barriers included the gross underestimation and deprioritization of IDA risk in women of reproductive age; gender norms and disparities with women's health ranking as the last priority in family dynamics; and intergenerational influences from mothers-in-law who are unfamiliar with iron supplements. Interestingly, the concept of "pill stigma" emerged as a salient theme where women were fearful that taking iron supplements could be mistaken for taking antiretrovirals, suggesting additive stigma from the HIV/AIDS epidemic. Poverty at the individual, government and stakeholder levels also led to supply chain barriers, further exacerbated by conflict, war and natural disasters undermining food security and community initiatives. Forgetfulness was cited as the most common barrier to individual iron supplement uptake.
Enablers: Enablers at the individual level included knowledge of anemia and iron supplements, partner support, early access to care, high socioeconomic status, and maternal literacy. Successful interventions utilized existing infrastructures, such as schools and antenatal clinics, to facilitate delivery of supplements and community initiatives. Moreover, education initiatives that included women and their greater communities increased IDA knowledge and empowered women in community decision

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making. Community mobilization and the degree of community ownership also determined success and sustainability of IDA reduction strategies. Finally, adherence partners, already part of the woman's social network, helped address social and cultural constraints tailored to her individual context.

Conclusion

We identified numerous barriers and enablers of IDA reduction strategies at different levels of the socio-ecological model and its interaction with individual-level factors. IDA is not only a medical problem, but one that is rooted in the sociocultural and political context. Both contextual and individual factors contribute to overt and subclinical manifestations of IDA, leading to further iron debt and gender inequity in LMICs. Future interventions must recognize the resilience of LMIC communities and acknowledge the importance of knowledge translation and exchange rooted in local context with community ownership and empowerment.

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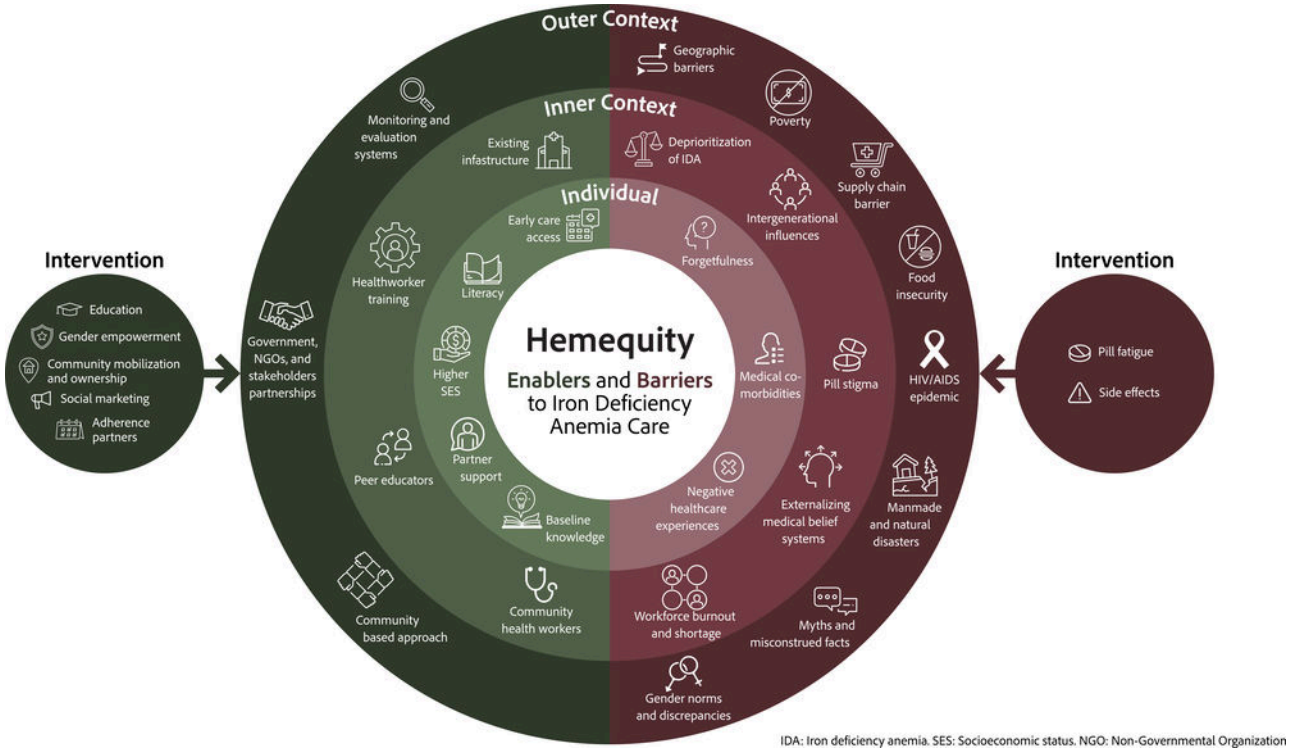

Figure 1

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