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Enhancing consumption of iron and folic acid supplements during pregnancy

In Kenya, two in every five pregnant women are anaemic, primarily due to iron deficiency.¹ Iron-deficient pregnant women are more likely to experience premature labour, post-partum haemorrhage and cardiovascular complications, and face a higher risk of delivering babies with low birthweight. Daily oral iron and folic acid (IFA) supplementation is recommended as part of standard antenatal care (ANC). However, only half of pregnant women attend at least four ANC visits throughout their pregnancy, and fewer than 20 per cent make any visit at all during their first trimester.² To combat this issue, the Ministry of Health instituted the Nutrition Action Plan to reduce maternal anaemia from 36 to 21 per cent between 2018 and 2022.

Achieving this target will require national- and county-level systems that can procure, deliver and promote utilisation of IFA supplements among pregnant women and women of reproductive age. It also requires an understanding of the complex system linking demand and delivery. Implementation science aims to ensure the systematic and real-world use of evidence to improve delivery. This brief summarises the findings of a constrained implementation science approach to the case of IFA supplementation in Kenya. A detailed assessment of bottlenecks in the process of distributing IFA supplements, and a tailored review of existing implementation science research, provide insights into locally appropriate policy options to improve the consumption of IFA supplements during pregnancy.

Implementation of policy recommendations

- Develop a strong behaviour change communication strategy to prepare healthcare professionals to oversee IFA supplementation and communicate its benefits to patients
- Embrace community health strategies and utilise community-based platforms such as mother-to-mother support groups
- Design a strong monitoring and coordination strategy for IFA supplementation interventions, integrated with other health services, to ensure that supplements are stocked, promoted and distributed to women



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An implementation science approach

In order to apply implementation science to improve IFA supplement intake in Kenya, the research team conducted an assessment of bottlenecks in the distribution system, then identified lessons from existing implementation science literature on how to address them. This strategy represented a constrained implementation science approach because in-person activities were curtailed midstream due to the COVID-19 pandemic. However, this case shows the findings that implementation science approaches can yield even under circumstances where on-the-ground access is sharply limited.

The bottleneck assessment aimed to develop an inventory of blockages in the system of distributing IFA supplements and ensuring their usage. Thirty-nine participants

attended the two-day IFA supplementation bottleneck analysis workshop, representing each level of the IFA supplementation delivery system: national, county, sub-county, ward and community.

Based on the identified bottlenecks, the team reviewed published literature to better understand them as well as associated factors, and how both affect consumption and adherence to IFA supplements. The team searched for relevant publications based on the bottleneck assessment in order to identify barriers and enablers that affect consumption of IFA supplements, with the goal of applying lessons to the Kenyan context. In total, the search identified 144 relevant papers, from which the findings and recommendations below are drawn.

Bottlenecks

Five bottlenecks emerged from the two-day workshop:

- Lack of regular information on the number of households with pregnant women
- Late initiation of ANC
- Poor linkages between the ANC programming and household visits for pregnant women by community health volunteers
- A lack of context-specific job aids for community health volunteers regarding their household visits to provide counselling for pregnant women
- Lack of IFA supplement stock

Implementation science findings on bottlenecks

The ways in which each of the five identified bottlenecks influence consumption of and adherence to IFA supplements are not mutually exclusive. The key factors associated with each bottleneck are interrelated, and their mechanisms are interwoven along the impact pathway of IFA supplementation, as illustrated in Figure 1. These factors include the following:

- Beliefs, misconceptions, fears of side effects and lack of knowledge
- Late first ANC visit and low numbers of ANC visits
- Quality of service delivery by healthcare workers and at health facilities
- Maternal education and economic empowerment
- Maternal age, parity and history of anaemia
- Maternal social and family support
- Maternal residence and distance from health facilities
- Forgetfulness of mothers

- Functioning of community-based platforms

- Stock-outs and management of supplies

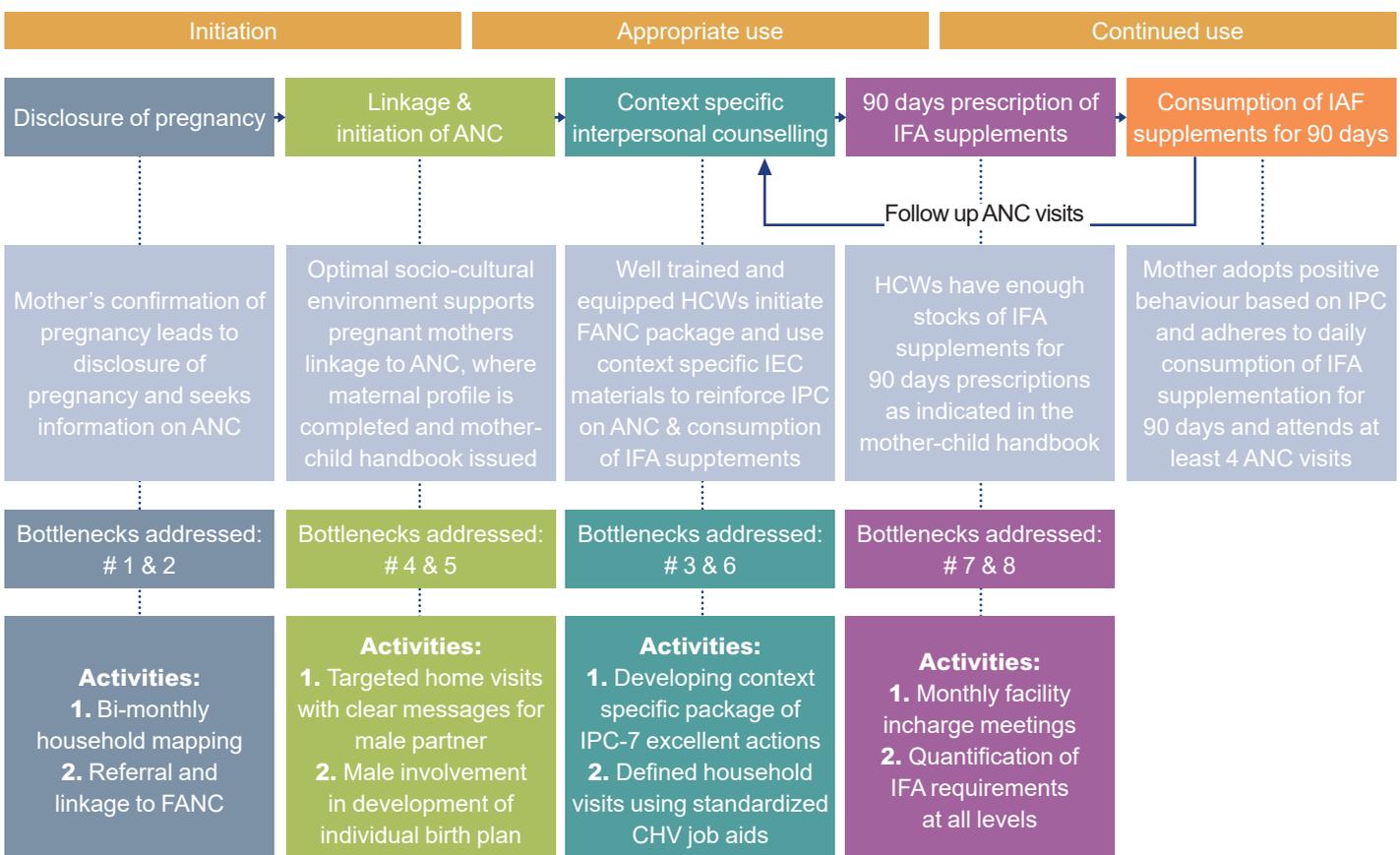
People's beliefs, misconceptions, fears of side effects and lack of knowledge affect the use of IFA supplements along the entire programme impact pathway. At the initiation stage, these factors deter mothers from disclosing their pregnancies and from initiating early ANC visits. Lack of knowledge and fear of side effects among mothers negatively affect use of the supplements. However, appropriate counselling of mothers by knowledgeable and skilled health service providers can improve maternal knowledge on the benefits of IFA supplements and management of their side effects, thereby improving the extent of their use.

The quality of health service delivery, including distribution of IFA supplements, is influenced by the knowledge and skills of healthcare workers in addition to the availability

of job aids and supplies. High-quality service delivery attracts mothers and improves early initiation of ANC. If healthcare workers lack essential knowledge or skills, do not have sufficient job aids, or are overworked, their ability to appropriately promote the use of IFA supplements may be limited.

The more knowledge women have about maternal healthcare services, the more likely they are to use them. Greater knowledge in the wider community enhances maternal social and family support, which encourages mothers to disclose their pregnancy status as soon as they know it while promoting early initiation of ANC. Social and family support conveys social acceptance of pregnancies and provides comfort, which can lead to early disclosures of pregnancies and the use of maternal health services. This support can also help to address the barriers of maternal age, especially for teenage and elderly mothers, parity and the problem of mothers forgetting to take their supplements.

Figure 1: Program impact pathway illustrating consumption of IFA supplements by pregnant women and activities to address bottlenecks.



Implementation policy recommendations for IFA supplementation in Kenya

Develop a strong behaviour change communication strategy

A strong behaviour change communication strategy can convey key messages and actions for various players who influence uptake of IFA supplements, including healthcare workers and commodity managers who stock supplements. Healthcare providers should be ready to deliver services and key messages to pregnant women, women of reproductive age, male partners, other family members and community members, also informing community opinion and that of administrative leaders. Also, building the capacity of commodity managers to monitor and manage stocks can ensure a seamless supply of IFA supplements.

Healthcare workers should be ready to integrate IFA supplementation with other components of ANC. When implemented well, a behaviour change communication strategy will

increase knowledge and awareness of IFA supplements, leading to their proper use.

Embrace community health strategies and utilise community-based platforms

Community-based platforms provide an avenue for pregnant mothers to receive group and personalised services, including counselling, health education and supplies. Community-based platforms include and involve other members of the community, providing a platform to discuss health issues affecting the area and giving them an opportunity to develop solutions.

ANC services and IFA supplementation could be integrated within community platforms such as those associated with the Baby Friendly Community Initiative (e.g. mother-to-mother-support groups) and the Community Integrated Management of Childhood

Illnesses. This integration could also serve mothers residing far from health facilities offering ANC services.

Design a strong monitoring and coordination strategy for IFA supplementation interventions integrated with other health services

Close monitoring and coordination of IFA supplementation provides information about the number of pregnant women at a health facility, the amount of required IFA supplements and their availability, and measures for restocking. In large integrated programmes, some interventions face the risk of lack of ownership, and monitoring and coordination is not considered important. Therefore, a deliberately strong monitoring and coordination strategy for IFA supplementation should be designed to effectively identify gaps and needs for improved services.

Endnotes

¹ 2011 figures from Kenya's National Bureau of Statistics. Available at: <<http://statistics.knbs.or.ke/nada/index.php/catalog/72/study-description>>.

² 2014 figures from Kenya's National Bureau of Statistics. Available at: <<https://www.dhsprogram.com/pubs/pdf/FR308/FR308.pdf>>.



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