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## Engaging stakeholders to identify and address implementation bottlenecks in iron-folic acid supplementation programmes in East Central Uganda

USAID'S regional health integration to enhance services in east central Uganda activity (USAID RHITES-EC)

Through the USAID RHITES-EC project, University Research Co. LLC partnered with the International Initiative for Impact Evaluation and the Society for Implementation Science in Nutrition to use an implementation science approach to study and improve iron-folic acid supplementation (IFAS) programmes for pregnant women in Iganga and Buyende districts in East Central Uganda.

An implementation science approach was applied to identify bottlenecks in IFAS delivery and to determine whether and how a quality improvement approach improved IFAS delivery in healthcare facilities. Findings will inform IFAS programming and contribute to creating a robust implementation science platform in Uganda to improve implementation of other interventions.

### Context of the problem

In Uganda, 32 per cent of pregnant women, adolescent girls and women of reproductive age have anaemia, mainly due to iron deficiency, malaria and helminth infestation. In East Central Uganda, the figure is 41 per cent.<sup>1</sup> IFAS is recommended to improve health and pregnancy outcomes. According to the Uganda National Anaemia Policy (2002)<sup>2</sup> and the Uganda Anaemia Control and Prevention Strategy (2017–2022),<sup>3</sup> pregnant women are expected to take IFAS for 90 days or more to prevent anaemia and associated complications, such as low birth weight, preterm birth and sepsis.<sup>4</sup> Antenatal care (ANC) visits are the only contact point for women to receive iron-folic acid (IFA) supplements. Despite 97 per cent of pregnant women making at least one ANC visit, very few take IFA supplements for the recommended period. In East Central Uganda, only approximately 12 per cent of pregnant women comply with this recommendation.<sup>1</sup>

## Using an implementation science approach to address implementation bottlenecks

Implementation science is based on the principle that much is already known about implementation, and much of this knowledge has been packaged into tools, frameworks and guidelines. There is, however, a major gap in the use of this knowledge. The Implementation Science Initiative

seeks to address this gap, supporting Iganga and Buyende districts in the East Central Uganda subregion to strengthen IFAS through:

- Engaging diverse stakeholders to identify barriers (bottlenecks) to IFAS implementation
- Addressing barriers through technical assistance, mentoring and knowledge brokering
- Conducting practical implementation research to investigate and address critical barriers

### Implementation science initiative

#### Stakeholder engagement at district and national levels

Addressing anaemia at national and district levels requires a multisectoral approach. In collaboration with the Ministry of Health, a core team of stakeholders was created to provide strategic and technical guidance to the initiative. The team comprised representatives of line ministries (Health, Local Government), the Office of the Prime Minister, bilateral agencies, and implementing partners, as well as academia (Makerere University School of Public Health) and met regularly in support of the initiative and to share experiences addressing the challenges faced at various levels.

#### Comprehensive bottleneck assessment

The bottleneck assessment exercise, conducted in October 2018, involved mapping district and healthcare facility service delivery systems and processes to assess IFAS implementation. A structured participatory process using the *Program Assessment Guide*<sup>5</sup> was used to elicit and systematise

knowledge and experiences to strengthen the design and delivery of IFAS. The objectives were to:

- Foster partnership among core team members and establish a foundation to anchor learning
- Explore the status of the health system's IFAS supply and service provision and identify bottlenecks
- Generate research ideas to be further developed to carry out implementation research studies

Participants included key stakeholders in the IFAS service delivery system including line ministries, the National Medical Stores, the Office of the Prime Minister, implementing partners and academia. Service delivery and supply chain systems were discussed in depth, identifying strengths, weaknesses and barriers, as well as the people, roles and responsibilities at each level in the system. Implementation bottlenecks in the systems were identified and prioritised, with the top three as follows:

- Uncoordinated health education for IFAS at service delivery points (*service delivery system*)
- Recurrent stock-out of IFA supplements (*supply chain system*)
- Low male involvement in supporting women to seek ANC services (*user system*)

These were validated by the Iganga and Buyende district health teams and facility staff. The Anaemia Implementation Science Initiative team focused on the first two bottlenecks and developed an inventory tool for routine documentation of possible solutions and actions taken to address identified bottlenecks.

Solutions tested included:

- Health education plan development or revisions; standardised messaging materials for use during group and/or individual counselling; and restructuring of health education sessions
- Recommendations and advocacy during the annual procurement planning meeting in Buyende to increase budgetary allocations for IFAS at health facilities; and routine IFAS stock monitoring, requisition, and inter-district and facility redistribution

Service delivery system

Supply chain system

Use of quality improvement approach and implementation science approach to improve IFAS

User system

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## Undertaking implementation research studies

University Research Co. LLC, together with researchers from Makerere University School of Public Health, conducted mixed methods implementation research to investigate delivery of a quality improvement intervention focused on the two priority bottlenecks and how it affected IFAS uptake. A process evaluation was included to further understand exposure and experiences of participants.

## Findings

### *Health education*

Busia and Buyende districts were associated with an increase in pregnant women's receipt of health education. Qualitative interviews with providers found that health education sessions had improved due to increased knowledge and skills for health education delivery.

### *Supply chain and procurement*

Health workers in ANC departments reported that they requisitioned more tablets from the stores after the qualitative interview intervention. Cases of pregnant women missing IFAS were less common after this intervention.

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We now give them 30 tablets for a month. Those days we could get only 5 tins from the store, that is 5,000 tablets, so we couldn't give all the 30 to each mother. That would be the end and we start writing [prescriptions] for them to go and buy [for themselves]. But now since we are well stocked, that one [writing prescriptions] we have stopped.

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## Lessons and recommendations

### Health education

Knowledge gaps among health workers about IFAS and anaemia remain a challenge in the delivery of health education.

A detailed IFAS theme with key topics and related messages should be added to the National Maternal Health guidelines and those focusing on anaemia control and prevention among pregnant women.

Quality improvement interventions should focus on health education sessions tailored by gestational period of pregnancy. ANC clinics are a critical source of information for pregnant women.

A key challenge remaining is the lack of clear guidance on documentation and monitoring systems for health education at facilities and service delivery points (e.g. reporting tools and indicators on health education as part of routine health management information systems).

Ensuring availability of demonstration materials and standardised ANC health education guidelines would improve the ANC experience for both pregnant women and health workers.

At the health facility level, department-level reporting (e.g. maternal and child health, including ANC) needs to be encouraged and possibly included as part of routine monitoring tools. In addition, insights into the delivery of health education and counselling, and the difference between these two services, must be explicitly provided in national guidance documents, with consideration for emerging situations such as COVID-19.

### Supply chain and procurement

Initial engagement of key stakeholders, such as midwives and health facility in-charges, facilitates understanding of bottlenecks, their impact and the need for advocacy to increase budget allocation for IFAS at the health facility level.

Investments should be made to continue mentoring ANC personnel so that they correctly complete requisition forms and maintain accurate records.

Although some health facilities made efforts to requisition additional stock from nearby health facilities, their efforts were limited by the lack of means to transport supplies, especially from distant and hard-to-reach facilities.

Involving the district inventory management officer is critical to support inter-facility redistribution, especially for health facilities located in hard-to-reach areas.

Continued collaboration will be critical to sustain interventions such as redistribution of IFAS across facilities and districts, especially by leveraging existing transportation means and opportunities.

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## Endnotes

<sup>1</sup> Uganda Bureau of Statistics (UBOS) and ICF International Inc., 2007. Uganda Demographic and Health Survey 2016. Kampala, Uganda and Calverton, MD: ICF International Inc. Available at: <<https://www.dhsprogram.com/pubs/pdf/FR333/FR333.pdf>>

<sup>2</sup> Uganda Ministry of Health, 2002. National Anemia Policy. Kampala, Uganda: Government of Uganda.

<sup>3</sup> Uganda Anemia Control and Prevention strategy (2017–2022) – strategy 1.3, intervention 1.3.1.

<sup>4</sup> World Health Organization (WHO), 2012. Guideline: Daily iron and folic acid supplementation in pregnant women. Geneva: WHO.

<sup>5</sup> Pelletier, D, Corsi, A, Hoey, L, Houston, R and Faillace, S, 2010. Program Assessment Guide, A2Z Project. Washington, DC: AED.



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