**INTRODUCTION**

Globally, anemia is a leading cause of morbidity and mortality among women and children. In South Asia, central and west Africa very little progress has reported over the years. The causes of anemia are broadly grouped as nutrition and non-nutritional. Anemia affects 66% of children in Ghana. Iron deficiency resulting from inadequate dietary intake and infections are leading causes of nutritional anemia. According to UNICEF's Conceptual Framework, the causes of malnutrition (anemia) can be categorized as immediate, underlying and basic. To holistically address anemia, sufficient program efforts must address all three levels.

**OBJECTIVE**

Despite existing program efforts in Ghana, incidence of childhood anemia remains high. The objectives of the study were to evaluate the existing childhood anemia prevention and treatment strategies and to assess implementation gaps.

**METHODS**

Study Design and Sampling: In this cross-sectional study, purposive sampling/snowballing techniques were used to identify organizations implementing childhood anemia prevention and treatment programs.

Data Collection: Interviews were conducted in-person and by phone in August, 2018.

- Interview guides were constructed around UNICEF's Conceptual Framework of Malnutrition.
- Program profiles and information on target groups and coverage were elicited using an interview guide.
- Open-ended questions were used to acquire perceived implementation challenges and gaps in services.
- Twenty-five participants (lecturers, program officers, nutritionists and refugee camp managers) from two Universities, four local non-governmental NGOs, six government departments and two international agencies completed interviews.

Data analysis: Interviews were audio-recorded and transcribed by a professional transcriber. Four researchers coded content transcriptions using Dedoose software version 8.1.8. An iterative process

**RESULTS**

**Overview**

Immediate causes of anemia unique to Ghana:
- malaria
- worm infestation
- inadequate dietary quality

All organizations implemented programs addressing ≥1 of the immediate causes.

Many overlapping programs from different organizations addressing inadequate dietary intake in the same district.

- Government-assisted programs and Universities reported national scope; non-governmental and private organizations had regional/district focus.

Underlying causes unique to Ghana:
- inadequate health services
- food insecurity
- environmental hygiene
- inadequate nutrition knowledge

All organizations were implementing programs addressing ≥1 of these underlying causes.

All five of the basic causes of malnutrition listed in UNICEF conceptual framework were reported to indirectly affect anemia prevention and treatment. Although Ghana has a stable economy, the need for policy and financial prioritization is lacking to prioritize nutrition issues that cause anemia.

**Perceived Program Gaps**

- Inadequate health personnel to provide health services
- Trained staff are frequently transferred to new locations interrupting continuity of care.
- Inadequate project funding posed a challenge to program reach.

*I think so far we can’t just point out one gap because the issues, are many and we all know anemia, is a general health situation. I think from what we shared so far, we will say poverty which goes to cause lack of education and lack of services is the key gap.*

USAID-RING Program Officer

**Conclusions and Recommendations**

Compared to the immediate and underlying causes very few projects addressed the reported basic causes namely, inadequate human resources (n=5 projects) and housing/water/toilet facilities (n=3 projects) and poverty/financial resources (n=2 projects). Multiple programs, sometimes with overlapping focus in the same region, were addressing anemia. The main gap observed by the researchers was insufficient communication between project implementers. In the design phase, new projects need to prioritize communication with existing projects to promote efficient use of limited funds and human resources. Projects focused on training new and existing health personnel are urgently needed.

**REFERENCES**


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