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Readiness for implementation of preconception care in Uganda; a review on the current policy, health system barriers, opportunities and way forward

Abstract

Background: Uganda like other low-income countries, preconception health has received no attention. Communications in this article are derived from preliminary findings of an ongoing preconception baseline pilot in Luuka-a rural eastern district of Uganda. This is a phased study, including a desk review of literature and a short baseline pilot.

Methods: The review followed the methodology of systematic reviews. Key electronic databases were searched including PUBMED/MEDLINE and google scholar. Also, reports from ministries/academic institution libraries and views from experts were done. English articles published post 2000, covering preconception care, barriers, facilitators and policies were included in the review. Out of 110 shortlisted abstracts, 28 were included. Studies were extracted onto structured formats and analysed using the narrative synthesis approach.

Results: There exist unstructured preconception health and service guidelines in Uganda. Barriers to preconception service integration into the district's health system include; lack of a clear policy, careworn health system and care seeker related factors. Opportunities for preconception service integration include; poor maternal and neonatal health indicators, positive change in health seeking behaviour, existence of a gap in the care continuum, functional VHT system to link the community to services, anticipated roll out of key family care practises by Ministry of Health Uganda, and improved access to radio & mobile phones.

Conclusion: Formulation of clear preconception guidelines, testing health system integration approaches, stakeholders' engagement, awareness creation and strengthening the supply side is recommended as a way forward.

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Background

Preconception care interventions are key in optimizing health and knowledge of potential mothers (and fathers) before conception. The intervention aim is to screen, prevent and manage risk factors associated with maternal, fetal and child health outcomes.[1] Previous studies have shown that preconception care with its attendant benefits can assist women in avoiding high risk factors that slow progress towards reducing maternal and neonatal mortality.[2–4] It is evident that among women in LIC where preconception care is launched, there is improved birth outcome.[1,5–7]

Unfortunately, many women in the reproductive stage in LIC do not receive the benefits of these interventions, either because they lack access to care or because it is not routinely offered to them before pregnancy.[8] The low benefits from preconception care provision raises concerns about the health systems of countries like Uganda, who need to maximise the approach in order to compete favourably in achieving the ambitious SDGs targets of reduce premature mortality by 1/3, maternal mortality ratio to less than 70 per 1000 live births and end preventable death of newborns and children under-five by 2030. Despite efforts to improve survival indicators, neonatal mortality rates have stagnated at 28 death per 1000 live births (2002-2006) to 27 death per 1000 live births (2012-2016),[9,10] yet more than a half of neonatal causes of death in the rural are preventable.

Recommendations from existing efforts encourage countries to choose evidence-based strategies and delivery channels based on local need and feasibility in their settings.[2,8,11,12,13] Similarly, integration within the existing systems and programs, task shifting, and maximizing adolescents' uptake of the services are the fundamentals listed to maximizing uptake of preconception services. However, what may hinder the planning process is the lack of status information in the context of policy and program.[8] In view of the above priorities, local experts in MNCH in the respective countries must be consulted in order to get more specific to the settings.[8,14] Makerere University Centre of Excellence for RMNCAH with support from March of Dimes INC, is implementing a phased study on preconception health and care in Luuka district Eastern Uganda (IRB #536). The aim is to explore the preconception health policy and program context in Uganda and do a feasibility study on integration into the Ugandan districts' maternal and newborn care programs. In this review, we discuss findings from the desk review and key informant interviews on the existing challenges, opportunities of the current policy and program context and provide suggestions for plausible next steps. The aim is to provide guidance in support for integration of preconception care into the existing district health system.

Methods

Review methodology

This was a narrative review and was part of the background research of a larger study; IRB#: 536. The review methodology followed the NHS centre for reviews and dissemination guidelines. Both qualitative and quantitative studies were included in the review.

The outcomes of interest were; existing policies, facilitators and barriers to preconception health care in Uganda. In addition, LICs health system barriers for preconception care incorporated literature from other LICs countries. In this review, no measures or meta-analysis were done.

Search strategy

Key electronic databases were searched including PUBMED/ MEDLINE and google scholar. We further searched for reports from ministries/academic institution libraries. Much as the focus was on secondary sources of data, we also had discussions with reproductive health experts at ministry of health to obtain an insight on the recommendations/possible strategies towards improving preconception care uptake. All searches were conducted between July – Sept 2019.

Eligibility criteria

The participants for the review included women of reproductive age. Review of studies on health system barriers included Uganda and other developing countries.

Exclusion criteria

Studies done in developed countries, and studies in languages other than English were excluded in this review. We only included studies dated post 2000.

Study selection

A two – stage procedure was used during study selection. Stage one involved screening of abstracts of identified studies for relevance, based on the inclusion criteria. Stage two involved full-text paper reviews for inclusion and relevance. In all stages, the reviews were done by the same researcher, and in case of doubts he/she referred their concerns to other researchers. A decision to include the abstracts or texts was then made based on the team's involvement.

Search outcome

The search results altogether yielded 110 titles. After removal of duplication and irrelevant titles, 85 were identified for first-stage abstract screening. After screening these abstracts, 39 were identified for full-text retrieval. During further screening, 11 texts were irrelevant hence excluded. After the final screening of full text articles, 28 studies were selected for inclusion in the review (Figure 1).

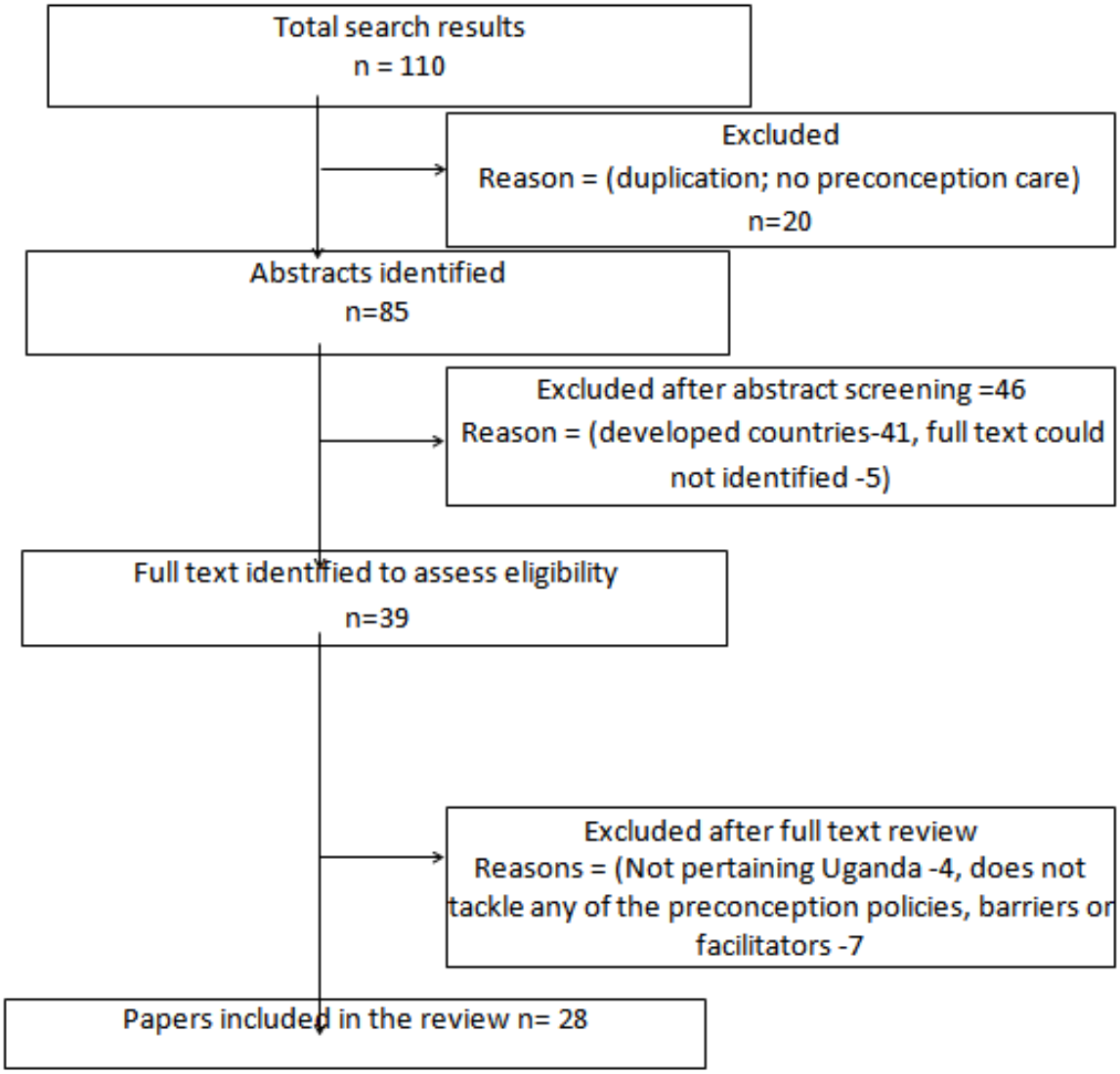

Figure 1 Flow diagram summarizing searches reversion disposition.

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Synthesis of results

Studies were analysed manually using a narrative synthesis approach. Multiple studies were synthesised, and a story was written from the extracted studies (Table 1).

Results

Uganda's policy context on preconception care

In the searched literature, preconception service guidelines have been described in the maternal nutrition, adolescent and, reproductive health policies.[15–18] We note that the national guidelines and service standards for reproductive health and rights (SRHR) for Uganda have evolved since 2001 until of recent to include service provision for; hepatitis B and Rubella vaccines, screening and management of anaemia including deworming, screening and management of medical conditions such as sickle cell diseases, hypertension, diabetes and Rhesus factor, assessing physical abnormalities, routine screening for RH Cancers, regular counselling on readiness for pregnancy & ITNs distribution and use; and information on schedules for TT, genetic & familial diseases, pregnancy & childbirth, infertility, gender & domestic violence and reproductive health cancers (Table 2).[18–20]

Table 1 Keywords used in the searches

Key words	Associated search terms
1. Preconception care	Preconception OR "Preconception care" OR "Prenatal Care" OR "Interconception care (ICC) " OR "Interconception health" OR "Inter-conception Care" OR "Preconception health" OR "Preconception Planning"
2. Location	"Uganda" OR (developing OR less* developed OR under developed OR underdeveloped OR middle income OR low* income OR underserved OR under-served OR deprived OR poor OR lmic or lmics or third world or lami country*)
3. policy reviews	Policies OR policy OR guidelines OR strategies OR standards
4. opportunities	Opportunities OR facilitators OR enablers OR influencers OR recommendation
5. Barriers	Barriers OR deterrents OR challenges

Table 2 Evolution of the preconception care components as per Uganda's national guidelines and service standards for reproductive health and rights[18–20]

2001		2006 supplement		2017 supplement	
Information	Services	Information	services	Information	services
· Proper nutrition practises	· Immunisation with tetanus toxoid	· Genetic and familial diseases	· check for anaemia, sickle cell disease, hypertension, diabetes and physical abnormalities	· Pregnancy and child health	· Immunisation with Hepatitis B and Rubella
· Good hygiene practises	· FP				· screening and management of anaemia including deworming
· responsible motherhood & fatherhood	· Iron & folic acid supplementation			· Infertility	· screening & management of medical conditions such as sickle cell disease, hypertension, diabetes, and Rhesus factor
· contraception and family planning	· screening and management of anaemia			· Gender & domestic violence	·Assessing for physical abnormalities
· STI/HIV and AIDs prevention & control	· Screening and management of STI/HIV &AIDS			· Reproductive health cancers	· Routine screening for RH cancers
· Malaria prevention	·Voluntary counselling for HIV/AIDS				· Regular counselling on readiness for pregnancy
· Life skills					· ITNs distribution and use
· Indications/schedule for tetanus toxoid					

Similarly, provision of services and information related to nutrition for instance intake of foods rich in iron, folic acid, iodine, calcium and supplementation with essential micronutrients have been described in detail.[15] These include; Folic acid supplementation in addition to adequate intake of foods rich in folic acid, counsel on appropriate diet to underweight women, educating and counselling mothers and family members regarding all forms of myths, taboos, or local practices that affect the nutritional status of women before, during, and after pregnancy. The guidelines stipulate that Information provided should encourage; intake of foods rich in iron, folate, vitamin A, and iodine. Intake of a variety of foods that includes protein, energy, vitamin, and mineral rich foods. Clean and safe drinking water, personal and environmental hygiene.

Barriers and facilitators to preconception service integration into the district health care system

Several studies have shown that awareness and provision of knowledge about preconception risks is a strong back borne to utilization and attendance to care.[21,22] We noted that a wide spectrum of maternal and newborn care services are offered to women in Uganda's health care (ANC, safe delivery, comprehensive emergency obstetric care, essential newborn & postnatal care services, community-based RMNCAH services including nutrition, prevention and treatment of common childhood diseases and provision of adolescent health services), with a gap in the critical period of preconception.[1,23] Similar to other low-income settings, majority of mothers lack knowledge

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about the consequences of pregnancy and the importance of interventions which ride towards prevention, control and management of risks prior to conception. Similarly, health personnel have limited knowledge and understanding of the importance of preconception care.[21,22]

A snap shot on quality improvement as per the Uganda's health system indicates a functional leadership structure with quality of care committees established in the District Health Management Team (DHMT), plans, strategies of quality of care.[18] The following Bottlenecks are highlighted in the investment case report for 2016 as barriers to maternal child and adolescent health service delivery; a weak district and facility management, inadequate health facility staffing, mis-match in skills acquisition, lack of system incentives and support framework, degraded basic infrastructure, shortage in supplies and equipment for RMNCH, poor planning and prioritization, poor dissemination, and poor use of data.[11] On the demand side, lack of awareness, poor health care seeking is likely to impact on service utilisation.[11] For instance, studies done in northern Uganda indicated very low uptake of folic/ iron supplements and of which were taken by mother late in pregnancy (after the first trimester).[26] Besides, only 1% of pregnant women in the last five years received and took the ideal minimum number of Iron-Folic acid tablets despite 31% of pregnant women in Uganda being anemic.[24–27]

Opportunities for preconception service integration into the districts health care system

In the literature, we noted poor health indicators for both newborns and the mothers in Uganda. For instance, Uganda has the highest preterm birth rates of 13.6 per 1000 live babies and population growth rates at 3.2%. Despite efforts to improve survival indicators, neonatal mortality rates have stagnated at 28 death per 1000 live births (2002-2006) to 27 death per 1000 live births (2012-2016).[28] The fertility rate stands at 5.4, while contraceptive use among all married women (age-15-49) is still low at 34.8% and 43% of all pregnancies are unintended. Birth defects prevalence stands at 1.1% (11 per 1,000 live births). In addition, Uganda has one of the highest rates of adolescent pregnancy in sub-Saharan Africa,[28] with almost 28% of maternal deaths in Uganda attributed to young girls 15-24 years and 60% of premature deaths among adults associated with behaviour or conditions that began or occurred during adolescence.[11]

There has been a noticeable 22% increase in health facility and skilled birth attendance. This is evidenced by the increase in the proportion of pregnant women who receive a minimum of four antenatal visits over the last decades, at 60% in 2016 and 47.2% in 1995, against the HSDP target of 65% by 2020.[11] Moreover, opportunities were noted during the experts consultation at ministry of health; (i) we anticipate role out of the key family care practises for improving the wellbeing of children, adolescents and women of reproductive age, (ii) Village Heath Team (VHTs) system is undergoing a transformation process into Community Health Extension Workers (CHEWs) with a fundamental role in linking communities to health facility services.[18] The aim of such changes is to reach out to a larger segment of the population who lack access to health facilities.

While use of cell phones and other information technology is known as a good media for increasing demand and promoting the provision of preconception care services.[26] There is an anticipated broad range of impact using such channels in the provision of preconception care interventions in the context of Uganda, as 64.6% and 53.1% rural households have access to radio and mobile phones respectively.[10]

Recommendations towards improving preconception care in Uganda

In the review, we noted that the current situation demands stakeholder's engagements for a plan of action to integrate the existing preconception care packages into the districts' health system using the best package and delivery channel.[8,14] Consisted with the review findings, consultations from experts suggests possible avenues to achieve integration; (i) to prioritize preconception care during districts' level planning and service delivery; (ii) awareness creation and strengthening the health system supply side. This will involve sensitizing the community to create awareness; (iii) strengthen the capacity of health workers in provision of preconception care and equipping health facilities with supplies to offer the service at the facility and during outreach programs. Thus, exploration of impactful preconception care delivery packages, integrated into the health system setting of Uganda need to be carried out, in combination with changes in the policy.

Discussion

Uganda lacks a policy on preconception care. However, there exists unstructured preconception guidelines embedded in other policies. Although national guidelines have been transformed since 2001 to include preconception service guidelines, there still remains a gap on a detailed description of the guidelines and standards in delivery of the recommended services. In addition, a snap short on Uganda's continuum of care shows a lack in continuity of care between postanal and conception of the next pregnancy. This may be strongly implicated to the absence of guidelines for integration of preconception service to fill the existing gap in the care continuum.

While we note that level of awareness on preconception care among both users and service provider is key to utilisation, many women in the reproductive stage do not receive the benefits of these interventions, either because they lack access to care or because it is not routinely offered to them before pregnancy.[8] We note that in Uganda despite the provision of maternal and newborn care services in Uganda's health care continuum, the critical period of preconception remains neglected with no intervention extended to the interconception period.[1,23] This creates a barrier to provision of maternal and newborn services in totality.

The gaps indicated in the maternal, newborn and adolescent health indicators, suggests a great opportunity for integration in support of the existing health care interventions. This is a good indicator for change in health seeking behaviour that may promote access to preconception care services among women in the interconception period. The government of Uganda is promoting universal access to Antenatal care and postnatal services which ends as early as 6 months post-delivery. This creates a gap in the cycle of the care continuum between the period: from 6 months until the mother gets another conception. Mothers who seek care in this period end up with no special provision and access to services or rather treated as outpatients. Integration of preconception services into the continuum, will contribute to continuity of care for interventions provided at ANC like folic/iron supplementation earlier before conception with a greater effect[8,23] in optimizing the health of potential mothers (and fathers) and to prevent harmful exposures to the developing foetus.

Conclusion

Uganda has a set of preconception care interventions highlighted in the nutrition and reproductive health policy implementation

guidelines. However, there is need for improvement to stipulate clear guiding principles in form a policy. Similarly, given the high coverage of programs such as immunization, essential components (screening and treatment of high-risk conditions and provision of supplements; folic acid, iron, and zinc) preconception services can be integrated to reach the beneficiaries.

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Author's contributions

IN, AN, AK carried out the literature review and drafted the manuscript. PW, IN, SW, KM participated in the conception and design of the study. IN revised and finalized the manuscript. All authors read and approved the final manuscript.

Conflicts of interest

Author declares that there is no conflict of interest.

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