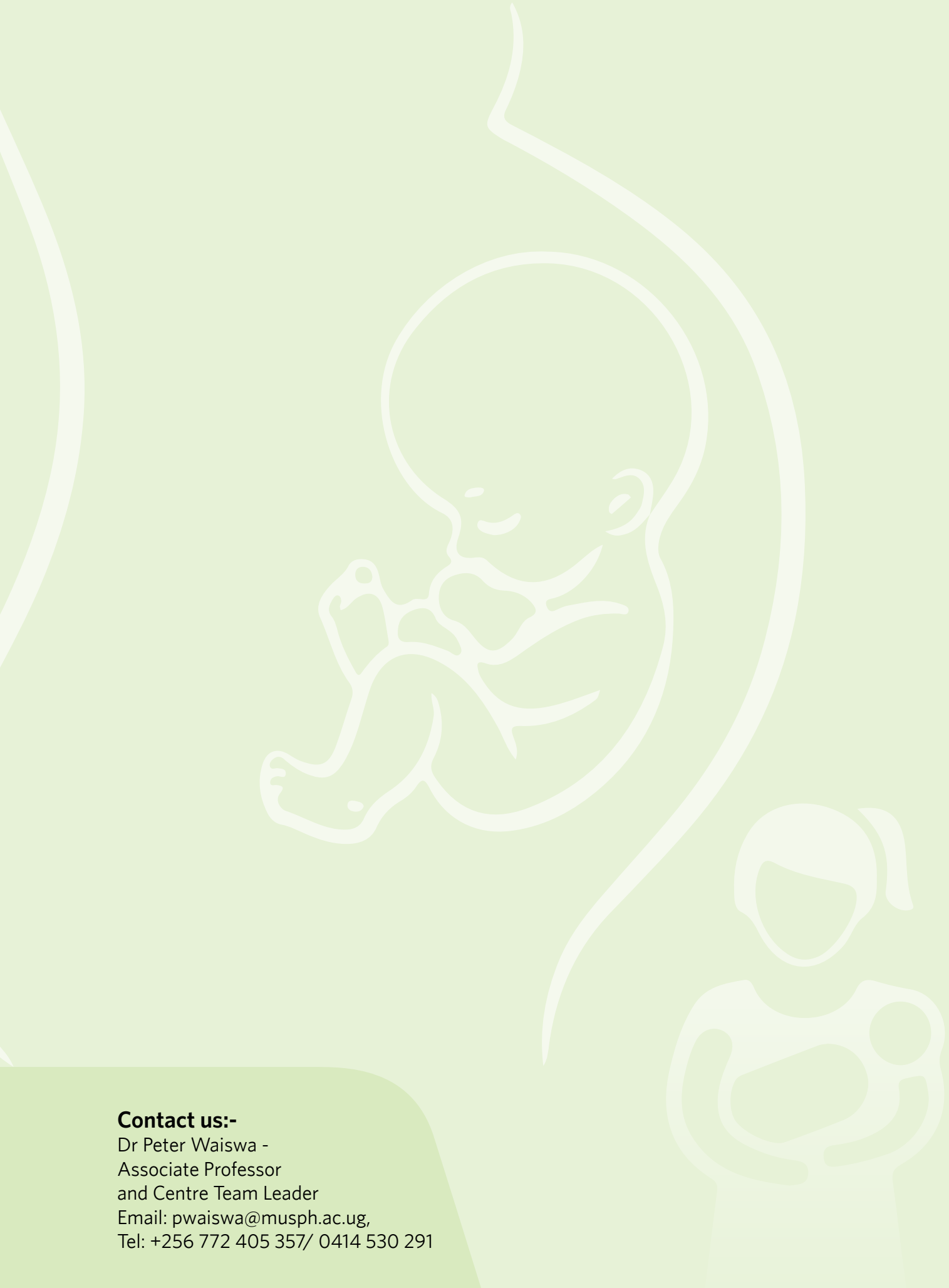
MAKERERE UNIVERSITY CENTRE OF EXCELLENCE
FOR MATERNAL NEWBORN AND CHILD HEALTH

ANNUAL REPORT 2019



Contact us:-
Dr Peter Waiswa -
Associate Professor
and Centre Team Leader
Email: pwaiswa@musph.ac.ug,
Tel: +256 772 405 357/ 0414 530 291

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Message from the Centre Team

We can not ignore the fact that our health facilities are having inadequate equipment to save the lives of our mothers, children and adolescents.

Warm regards to all the centre community!

I am pleased to share that 2019 has been victorious like other years in the centre's history. This year our scope has widened and we now working with the urban poor living in informal settlements and this came with a recognition and win to present at several high-level international conferences on urban health, public health and maternal health. We have several grant awards including support from local partners who we have directly and indirectly influenced to fund MNCH projects and studies. 2019 has been a success at the Centre nonetheless there's a lot of pending issues that need to be addressed. We can not ignore the fact that our health facilities are having inadequate equipment to save the lives of our mothers, children and adolescents. Notwithstanding the private side that has most of the equipment is not so accommodative in terms of cost and skills leaving them in a jeopardy especially among the urban poor. Even with these challenges the centre still stands by her mission and vision on ending preventable maternal deaths in Uganda and beyond. That said, I would like to congratulate the team at the centre for all the big wins throughout the year, their dedication, zeal, determination, grind, and tireless efforts to save more mothers and babies moving forward. We are hoping for a better and victorious 2020 and many years to come as we serve the country and improve the lives of the marginalized. I am very proud to lead such a dynamic and vibrant team.

Dr Peter Waiswa Associate Professor and Centre Team Leader - Makerere University Centre of Excellence for Maternal Newborn and Child Health

About us

The Makerere University Centre of Excellence for Maternal Newborn and Child Health (MNCH) is a one stop centre for MNCH focused research, innovation and capacity building in Uganda and the region. Established in 2013 at the Makerere School of Public Health, we strive to meet the ever-growing demand of increasing access and availability of reliable knowledge and information to stimulate action and service delivery through a collaborative and multidisciplinary approach.

We are a multidisciplinary team and work in partnership with a multitude of stakeholders at both community and health facility to implement lifesaving interventions for mothers, newborns and children.

We are engaged in MNCH research and innovation, capacity building for MNCH, as well as knowledge management and translation in order to impact daily practice and policy.

To build champions for MNCH through health innovation, capacity building, evidence generation and influencing policy.

A Uganda and region where high quality evidence drives policy and practice for MNCH

EARLY CHILDHOOD NUTRITION AND DEVELOPMENT (ECDN) PROJECT DISSEMINATION

The main objective of the ECDN Project was to Develop scalable programme to promote early childhood nutrition and development (ECND) in rural Uganda

The main objective of the ECDN Project was to Develop scalable programme to promote early childhood nutrition and development (ECND) in rural Uganda: The ECDN Project disseminated its results on 10th July at Metropole Hotel in Kampala to share findings from the formative research conducted in Luuka district in eastern Uganda. Among attendees included representatives from the Ministries of Health, Gender, labour and Social Development, Education; Luuka Local government; Child Health Development Centre; Independent ECND consultants; UNICEF; representatives from Busoga Kingdom and various media houses.

Early childhood nutrition and development (ECND) disseminated its results on 10th July at Metropole Hotel in Kampala

More than 70% of parents were engaged in early learning play activities with their child at home.

The key notes from the dissemination were;

- ✓ ECND is multi-sectorial involving 3 ministries: Ministry of Gender, Labour and Social Development (MoGLSD), Ministry of Education and Sports (MoES) and Ministry of Health.
- ✓ Uganda has a National Integrated Early Childhood Development Policy (NIECD) developed by the MoGLSD which also hosts the ECND secretariat.
- ✓ There is strong political will to support ECND at all levels but weak translation of policy into district and community level activities.
- ✓ More than 70% of parents were engaged in early learning play activities with their child at home. Homemade /locally made toys are more often used.
- ✓ 70% of carers reported that they don't have any children's books

for their child

- ✓ Many parents believe that 'good feeding' or 'balanced diet, providing 'good care' and 'good health care' are main factor for child development
- ✓ A community led approach would likely be most feasible in this setting. This could be through Village Health Teams (VHTs/CHWs) who are already in place as trusted and respected members of the community, with close links to families and their young children.
- ✓ There is growing interest and funding for ECND.
- ✓ There is paucity of data for ECND; lack of tools for measurement and also not enough knowledge on how to measure
- ✓ ECND is a complex area that needs to be unpacked and then an appropriate package designed. There is need for more research in this area. We should also leverage on the best traditional practices. However, we must be cognizant of the challenges of urbanisation.

The key note speaker from (Commissioner) at the Ministry of Health noted that the first ECDN first care package were developed in 1996 but not implemented. That there is lack of data, tools and knowledge on how to measure the problem.

The Commisioner called on the team to take a holistic approach in developing intervention and do more research in this area with help from Civil Society Organisation and the academia driving this agenda. There is we need to study the different ECND models: home based vs Community/institution based and apply the appropriate ones where necessary. She called for multi-sectoral collaboration and engagement for ECND. She encouraged integration of ECND into other interventions and policies e.g during Savings groups. She further called for an increase in funding especially domestic funding for ECND activities.

MENTORSHIP ON BIG DATA ANALYSIS - UGANDA DEMOGRAPHIC HEALTH SURVEY (UDHS)

The centre continues to build research and analysis capacity among upcoming researchers through mentorship and peer-to-peer sessions. The Centre received a senior researcher and analyst, Professor LenkaBenova from University of Antwerp-Belgium to mentor and build "Big-data" analysis capacities among different staff and outside researchers. Participants included PhD students, Masters Students from MUSPH and Busitema University, as well as statisticians and Monitoring & Evaluation officers from other projects working on maternal and newborn Research. The training took Two (2) days, involving presentations, hands-on and group work.

Results from this training was Concepts papers for publication and Two concepts for Masters (academic) purposes refined. Skills in Navigating DHS data, selection of right data for analysis, data transfers and analytical techniques were gained.

Participants take a hands-on training

The following were Topics of Concept papers

- ✓ Changes in Under-5 mortality pathways in Uganda (looking at neonatal and child mortality)
- ✓ Changes in Under-5 mortality drivers in Uganda (1995-2016)
- ✓ Trends and social differentials in perinatal survival in Uganda 2000–2016: results from four demographic health surveys
- ✓ Trends and predictors of maternal Service Utilization among Adolescent Mothers in Uganda
- ✓ Comparison of initiation of exclusive breast feeding and duration among adolescents and older women
- ✓ Different working groups are working on these themes to have the manuscripts out.

Prof Lenka on the Left takes a group Photo with participants

INTRODUCTION OF MS AMY YOUNG

Being a one-stop centre for MNH research, the centre has attracted international students in maternal and newborn. This year we had opportunity to host Ms Amy Young a Medical student from University of Michigan Medical School. Ms Young is engaged in a one-year long research work based in Kampala. The Centre collaborates her research activities and receive mentorship from senior staff at the Centre on behalf of MUSPH and her home Institution. At end of her work she will produce a publication co-authored with the Centre.

PRETERM BIRTH INITIATIVE

The PTBi study held a writing workshop to discussed papers to be written at Entebbe. Drafts were reviewed and include different categories ranging from Process paper, Primary outcome papers, Quality improvement, Safe child Birth Checklist and small babies paper. During implementation, the study conducted mentorship trainings fortnightly, over 50 health workers in Busoga region received mentorship training in maternal and newborn care with focused on pre-maturity. The study has finalized it findings and is awaiting Regional and National dissemination and presentation of results at various conferences. Some of the disseminations were done at the six study facilities, and at the world prematurity day celebrations that took place in Busia.

COMMONETH PROJECT

For many people and in many communities especially in rural areas, the time of pregnancy and child birth is filled with anxiety due to the risk it poses to the health and survival of the pregnant mother and her unborn child...

The main goal of the project is to reduce maternal and neonatal mortality in Luuka district through increasing ANC attendance to more than four visits...

Maternal and new-born health is important at family, community and national levels because of the effect it has on the health of women, immediate survival of the new-born and the well-being of the whole family. The time of pregnancy and childbirth should be a time of excitement for the family. However, for many people and in many communities especially in rural areas, this time is filled with anxiety due to the risk it poses to the health and survival of the pregnant mother and her unborn child. Inspired by the need to reduce maternal and neonatal mortality in Uganda, Makerere University School of Public Health (MakSPH), with funding from Comic Relief under the Community Fund, is implementing a two-year project examining the effect of community-facility linked interventions on maternal and new-born outcomes in Luuka district, Eastern Uganda. The main goal of the project is to reduce maternal and neonatal mortality in Luuka district through increasing ANC

A health worker at a maternal facility

9 *Health facilities participated in the implementation of this project...*

attendance to more than four visits, increased number of mothers who attend ANC during the first trimester, taking the baby to heath facility when they present with symptoms and improved knowledge and practice during cord care, bathing and recognition of danger signs by mothers and care takers.

As part of project, nine health facilities participated in the implementation of this project consisting of key health stakeholders like mothers, fathers, caretakers, VHT members and the Luuka district administration (the CAO, LCIV chairperson, DHO, Secretary for Health, DHT members) and RHITES-EC.

Effectiveness

By the end of the project, 83.2% (8283/9956) of the pregnant mothers were reached...

By the end of the project, 83.2% (8283/9956) of the pregnant mothers were reached, the project also achieved over 30% of the new-born reached (6494/4779). 86.7 % (52/60) of the health workers were reached every quarter during the support supervision and 100% (200/200) of quarterly stakeholder engagement meetings. At end line, there was an increase of 73.8% of mothers testing for syphilis, an increase of 36.2% of mothers whose blood pressure was taken, and an increase of 56% of preterm and low birth weight babies who received KMC.

Efficiency

The project was efficiently run both levels (Finance, Management & Implementation)

The project was efficiently run both at project management, financial management and field implementation levels. Project management was led by dedicated personnel with clear reporting lines and structures. The principal investigator oversaw the entire management of the project and had the technical support of the whole management committee comprising of Project coordinator, Field coordinator, Finance & Administration Manager and Monitoring & Evaluation Manager.

Outcomes and Impact

A significant increase of 32.4% in the number of mothers who reported to apply nothing on the new-born cord... 17.9% increase in number of mothers reported to have delivered from a Health facility

There was a significant increase of 32.4% in the number of mothers who reported to apply nothing on the new-born cord, there was also an increase of 17.9% in the number of mothers who reported to have delivered from a health facility and an increase of 77.3% of mother who reported having been attended to by nurse/midwife during delivery. Overall, study participants, district leaders and other implementing partners mentioned that the project was very instrumental in promoting preventive and clinical care leading to positive impact on maternal and neonatal mortality in Luuka. A review of records revealed that 61% of the mothers with preterm and low birth weight babies born at the health facilities received KMC compared to 5% at baseline. Almost all, 99.7% of the mothers had knowledge of at least 2 danger signs of new-borns compared to 19.4% at baseline.

COMONETH Project signed Memoranda of Understanding (MoU) with health facilities and the local governments of Luuka district to ensure continued management of the project...

Sustainability of the Project

Efforts are being made to ensure sustainability of the project in **five broad ways:** During the design of the project, consultations were made with the district, health department and health facility leadership. Stakeholders meetings were held to ensure that the purpose of the project and the target audience are known by all the parties involved. COMONETH Project signed Memoranda of Understanding (MoU) with health facilities and the local governments of Luuka district to ensure continued management of the project, active involvement and participation of beneficiaries especially mothers, health workers and VHTs in project implementation. VHTs were trained on sensitizing mothers, in addition to training existing health workers who will continue providing services when the project winds up.

The project was also able to engage other partners like MoH and other actors in the district such as the USAID RHITES-EC and Marie Stopes World Bank projects which helped strengthen implementation and they will continue implementing the project activities. Stakeholder meetings were organised with different actors and agreed to synergize the efforts towards improved maternal and new-born outcomes. The district actually acquired an ambulance that has strengthened referral services.

Challenges and Recommendations

- *Weak leadership*
- *Insadquate staffing in the District*
- *Limited supply of medical commodities and supplies such as blood.*
- *Lack of transport means by VHTs*
- *Lack of frequent video shows in most of the villages,*

Though COMONETH Project was able to achieve its targets by over 30% (6494/4779) newborns reached and 83% (8283/9956) of the pregnant women reached, during project implementation, there were challenges that affected the outcome of the project. Consideration of these challenges will improve future programming.

These include:

1) **Weak district leadership.** Most office bearers at the district operated in acting capacity including the District Health Officer (for six years). This led to slow implementation of activities because of lack of proper coordination at the district. However, the district finally got a substantive DHO, which will improve management.
2) **Inadequate staffing in the district.** Some health facilities are below 50% staffing capacity and lack critically important staff such as midwives. *"The ICU staffing is poor because the midwife is the one supposed to feed patients and help mothers deliver at the same time, which becomes too much for one person,"* one respondent commented. It is recommended that the district recruits more health workers.
3) **Limited supply of medical commodities and supplies such as blood.** The district has one refrigerator that is used to store

blood for transfusion at health facilities, which is not enough. Every unit needs a refrigerator of its own.

4) **Lack of transport means by VHTs** to carry out registration, mobilization of mothers and health education
5) **Lack of frequent video shows in most of the villages,** which otherwise were good in health education especially for men.

Project Implication/Way-forward

Since Makerere School of Public Health (MakSPH) has demonstrated its capacity in managing tight scheduled projects. This provides an important opportunity for Comic Relief project to partner with other agencies in addressing issues of promoting preventive and clinical care leading to positive impact on maternal and neonatal mortality in rural Uganda. It was evident that nine health facilities in Luuka where the project was implemented, had a working baby scale, vaccination cards, fetal scope, blood pressure machine, antennal cards, blank pantographs, among others. We also witnessed strong partnership between the health facilities, the community, VHTs, district leadership, IPs and the project.

COUNTDOWN 2030

The Countdown to 2030 country collaboration in Uganda includes Makerere University, the Uganda ministry of health, the London School of Hygiene and Tropical Medicine, the Centre for Global Child Health at the Hospital for Sick Children, and the Institute for Global Health at the University of Manitoba. It aims to strengthen the analysis and synthesis of health data to inform national and local reviews of progress and performance in the context of the national health plans and Global Financing Facility (GFF) investment case for reproductive, maternal, newborn, child and adolescent health and nutrition.

Coutesy picture: https://www.countdown2030.org/country-collaborations/uganda-countdown-country-collaboration

Monitoring the national plan and investment case for women's, children's and adolescents' health

> *The Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCAH) Sharpened Plan for Uganda (2016/17-2019/20) encapsulates the GFF Investment Case for Uganda.*

The Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCAH) Sharpened Plan for Uganda (2016/17-2019/20) encapsulates the GFF Investment Case for Uganda. The Sharpened Plan focuses on addressing major health system bottlenecks to scale up high impact interventions at all levels of the health system. The plan focuses on five strategic shifts and emphasizes evidence-based high impact solutions, increasing access for high burden populations and geographical focusing/sequencing. The Sharpened Plan has been implemented by all the key stakeholders at the national, district and community levels for the last four years. In 2020, an endline review of the Sharpened Plan will be conducted by the Countdown collaboration team.

Outputs, Products, Programs

The Uganda country collaboration will:

- ✓ Prepare an endline review report of the GFF investment case for the Ministry of Health and development partners by December 2020. It will include an assessment of progress in the indicators of the investment case, as well as identify gaps in the implementation and data. The analysis and synthesis will include all relevant data sources, will be conducted in close collaboration with the Ministry of Health and may involve further data collection and analyses on priority topics if additional funding becomes available.

Prepare an endline review report...

Support the annual health performance reviews...

Complete at least three analytical papers and reports on critical topics...

Organize at least one analysis workshop...

Prepare communication materials...

- ✓ Support the annual health performance reviews with in-depth analyses of priority topics in 2020, 2021, and 2022. The Ministry of Health conducts annual reviews which are discussed in national and district meetings in October-November. The work will include the inputs for district-level health statistical profiles.
- ✓ Complete at least three analytical papers and reports on critical topics, at least two of which can be submitted to peer-reviewed journals. The critical topics will be generated by the overall analytical work and consultation with the health ministry, GFF, development partners and Countdown partners. These topics may include district-level analysis of facility and other data, assessment of the performance of specific initiatives such as results based funding, quality of care such as linking facility and household surveys, adolescent health, maternal and perinatal mortality in hospitals, equity and others.
- ✓ Organize at least one analysis workshop for academics, government officials, civil society to share and discuss methods and findings. While the national reviews are the main outlet for the products, these workshops will focus on engaging technical staff to discuss the data gaps, analysis methods and results. If desirable, there can be a training component.
- ✓ Prepare communication materials in relation to the analysis results as relevant, including statistical profiles, policy briefs, presentations, media briefs and others.

Related Publications

10 countdown2030 publications...

1) Endline review of the Investment Case for Reproductive, Maternal, Newborn, Child and Adolescent Health Sharpened Plan in Uganda. https://www.countdown2030.org/publications/endline-review-of-the-investment-case-for-reproductive-maternal-newborn-child-and-adolescent-health-sharpened-plan-in-uganda

2) Intimate partner violence in 46 low-income and middle-income countries: an appraisal of the most vulnerable groups of women using national health surveys. https://www.countdown2030.org/publications/ntimate-partner-violence-in-46-low-income-and-middle-income-countries-an-appraisal-of-the-most-vulnerable-groups-of-women-using-national-health-surveys

3) Countdown to 2015: changes in official development assistance to reproductive, maternal, newborn, and child health, and assessment of progress between 2003 and 2012. https://www.countdown2030.org/publications/countdown-to-2015-changes-in-official-development-assistance-to-reproductive-maternal-newborn-and-child-health-and-assessment-of-progress-between-2003-and-2012

4) How to use relevant data for maximal benefit with minimal risk: digital health data governance to protect vulnerable populations in low income and middle-income countries. https://www.countdown2030.org/publications/how-to-use-relevant-data-for-maximal-benefit-with-minimal-risk-digital-health-data-governance-to-protect-vulnerable-populations-in-low-income-and--middle-income-countries

5) Trends and inequalities in the nutritional status of adolescent girls and adult women in sub-Saharan Africa since 2000: a cross-sectional series study. https://www.countdown2030.org/publications/trends-and-inequalities-in-the-nutritional-status-of-adolescent-girls-and-adult-women-in-sub-saharan-africa-since-2000-a-cross-sectional-series-study

6) Patterns and determinants of antenatal care utilization: analysis of national survey data in seven countdown countries. https://www.countdown2030.org/publications/patterns-and-determinants-of-antenatal-care-utilization-analysis-of-national-survey-data-in-seven-countdown-countries

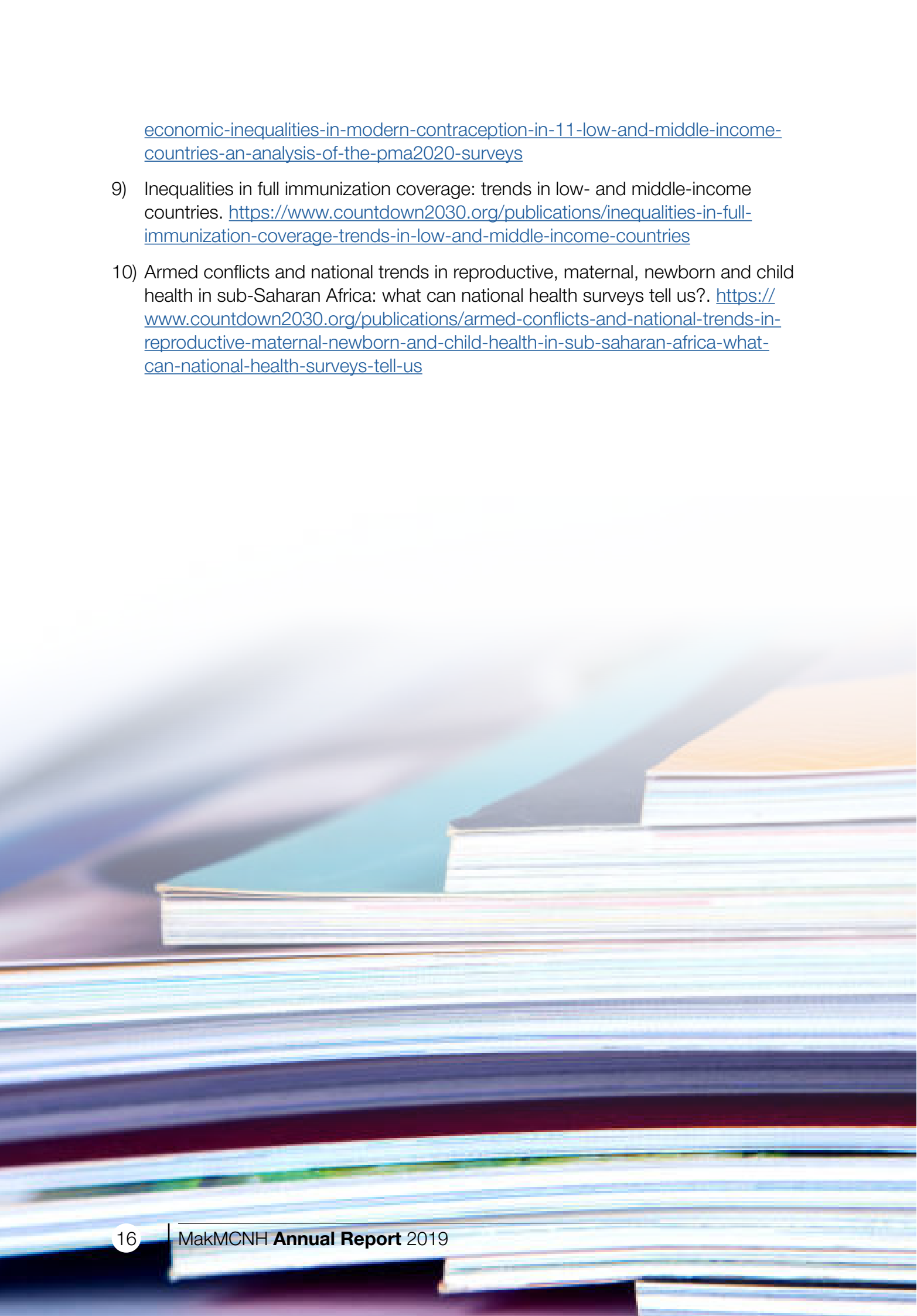
7) Socioeconomic inequalities in the prevalence of underweight, overweight, and obesity among women aged 20-49 in low- and middle-income countries. https://www.countdown2030.org/publications/socioeconomic-inequalities-in-the-prevalence-of-underweight-overweight-and-obesity-among-women-aged-20-49-in-low-and-middle-income-countries

8) Socio-demographic and economic inequalities in modern contraception in 11 low- and middle-income countries: an analysis of the PMA2020 surveys. https://www.countdown2030.org/publications/socio-demographic-and-

economic-inequalities-in-modern-contraception-in-11-low-and-middle-income-countries-an-analysis-of-the-pma2020-surveys

9) Inequalities in full immunization coverage: trends in low- and middle-income countries. https://www.countdown2030.org/publications/inequalities-in-full-immunization-coverage-trends-in-low-and-middle-income-countries

10) Armed conflicts and national trends in reproductive, maternal, newborn and child health in sub-Saharan Africa: what can national health surveys tell us?. https://www.countdown2030.org/publications/armed-conflicts-and-national-trends-in-reproductive-maternal-newborn-and-child-health-in-sub-saharan-africa-what-can-national-health-surveys-tell-us



An Algorithm to Predict Newborn Complications in the First 28 days of Life in Eastern Uganda (N-COP Study)

Globally, newborn complications account for approximately 28% of neonatal deaths. Complications following preterm birth are a major cause of morbidity and mortality. Preemies are between 6 and 26 times more likely to die during the first four weeks of life than term newborns. Management of complications during the neonatal period has improved through training of health workers, setting up intensive care units, and increased availability of critical supplies for management of sick newborns. However, an understanding of when these complications occur is lacking. Mathematical and statistical algorithms can be used to predict the risk of development of complication and adverse outcomes among preemies and can be used to drive proactive measures to anticipate, prevent, prepare management and improve survival in the short and long run.

Objective

This study aimed to develop algorithms to predict newborn complications along with estimating outcomes within the first 28 days of life.

Methods

Using a prospective cohort study design, neonates were followed up to the neonatal period at Jinja regional referral hospital and Iganga general hospital. Mothers were consented after delivery and we enrolled their neonates (terms and preterms) between January-August 2019. We assessed prematurity using Last normal menstrual period (LNMP) and or using obstetric ultrasound in the first trimester if available. Confirmation of the gestational age was done using the neuromuscular maturity score (Ballard score). Algorithms to predict newborn complications among preemies were developed using negative binomial, and machine learning and data mining techniques (Logistic regression, Naïve Bayes and Decision trees). Survival analysis techniques were used to establish the time to complications and to mortality during the neonatal period.

Results

Majority neonates' (term and preterm) mothers were young (aged times likely to have neonatal complications at birth. After adjusting for other attributes: Children with chest in drawing were 30 times more likely to develop a complication at birth compared to their counterparts without chest in drawing.

Next steps

We plan to continue analyses for the N-COP study data and write manuscripts, which we will submit to peer-reviewed journals. The areas of interest that we plan to write about include but not limited to; A manuscript describing the risk algothrims to newborn complications during the neonatal period; A manuscript on the incidence and survival newborn complications; A manuscript on survival during the neonatal period. We will also share this dataset with masters of statistics and masters of public health students who express interest in utilizing our dataset for completion of their master's program. We plan to interest them in using our datasets through making presentation during their seminar series during the next academic year 2020/21

MANeSCALE Study

MANeSCALE study; conducted in six hospitals (Jinja RRH, Bugiri, Buluba, Kamuli Mission, Kamuli general and Iganga) and 6 high volume Health Centre IVs in the region (Busesa, Bumanya, Budondo, Kigandalo, Namwendwa and Buyinja)

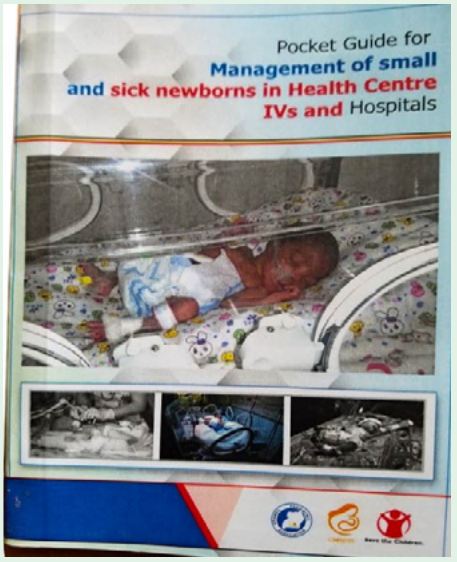
This study funded by the ELMA philanthropists and social initiative is currently in its third and last year of implementation. It is conducted in six hospitals (Jinja RRH, Bugiri, Buluba, Kamuli Mission, Kamuli general and Iganga) and 6 high volume Health Centre IVs in the region (Busesa, Bumanya, Budondo, Kigandalo, Namwendwa and Buyinja). The achievements of 2019 include:

- ✓ In all the study facilities, with support, reorganization was done to create space for NICUs with resuscitation and KMC corners as well as isolation space for babies with sepsis.All these 12 NICUs were remodelled, given a facelift and equipped with key newborn care equipment as well as essential drugs and supplies. Key to note that these 6 HCIVs with newborn care units are the only ones of their kind in Uganda. All NICUs countrywide are at hospital level.

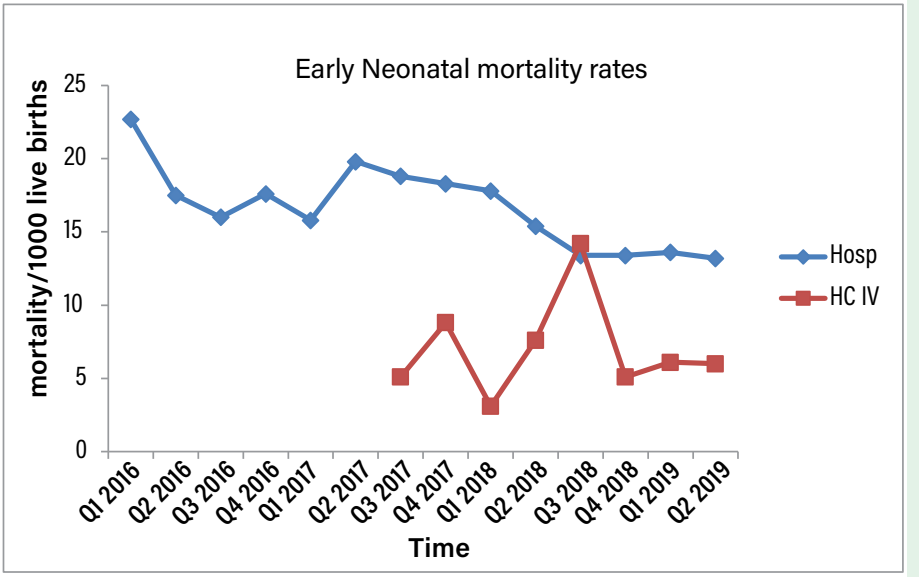
A baby being cared for in Busesa HC IV newborn care unit

With support from the Uganda Paediatric Association (UPA), we developed guidelines for manging small and sick newborns.

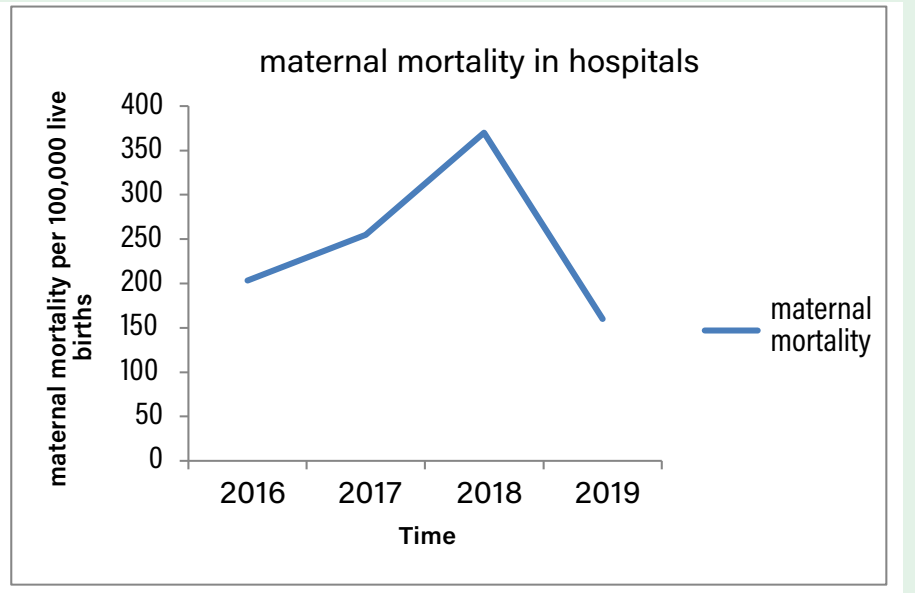
- ✓ With support from the Uganda Paediatric Association (UPA), we developed guidelines for manging small and sick newborns. These guidelines were launched by the Ministry of health at the UPA conference held in July 2019.These guidelines will therefore be an added boost in the confidence of health workers when caring for these newborns.



- ✓ We have established a regional network of facilities (hospitals and health centre IVs) with improved service delivery for MNH, better referral and communication, and emergence of MNH champions.
- ✓ We engaged leaders (both political and health facility) and used emerging champions to drive the maternal and newborn agenda within the region. This led to formation of a WhatsApp group where all the health leaders and health workers within the region, some members from the ministry of health and also members from research groups within the region are involved. This has provided a platform for quick communication and problem solving.
- ✓ At hospital level, between Q1 2016 and Q2 2019, we reduced neonatal mortality by 41.8%.Neonatal mortality reduced by 57.7% from Q3 2018 to Q2 2019.



- ✓ The trends for maternal mortality have been fluctuating since 2016 despite the interventions such as mentorship and coaching in facilities. In Q1 2019, we started seeing a downward trend (reduction) in mortality in hospitals.



Challenges

Despite all the successes, we also faced some challenges during implementation. These included:

1) General health system challenges such as inadequate human resource, limited supply of drugs and supplies. This negatively impacts on the quality of services provided.
2) Internal staff rotation of nurses already trained and mentored to other departments other than maternity and paediatric departments. For some facilities, this was mitigated this by holding discussions with facility in-charges concerning halting internal transfers of staff from maternity and newborn care units.
3) Slow uptake of some activities especially in the lower level facilities e.g. MPDR,

Lessons learned

Based on our findings, these are the lessons:

1) It is feasible to functionalize newborn care units in health centre IVs and hospitals. However, this requires space, equipment and supplies as well as resources (human, time etc).
2) There is need to recruit additional staff to work specifically in the NICUs. These include neonatologists and neonatal nurses.
3) All health workers in the NICUs must undergo training in advanced newborn care so as to enhance their skills in management of small and sick newborns.
4) Leadership engagement is very critical for uptake of interventions e.g QI, MPDR, establishment of newborn units. The leaders to be engaged not only include those at facility level but also those at district level. The support of political district leaders such as the Chief Administrative Officer (CAO) is also very crucial.
5) There is need to intervene across the board/spectrum of the health system. Addressing one challenge for example provision of equipment may not result in the required benefits minus looking at human resource and skills.
6) It is usually more advisable to start small and then scale up interventions. This gives time to learn how to do things and also to pick up best practices. This is the model that we are currently used for some of the intervention strategies e.g testing infection prevention measures for newborn care units in hospitals, MPDR, etc
7) Taking a regional approach to care which includes all hospitals and busy health centres is a rapid and lower cost approach to scale up maternal and newborn care. It also improves access, quality and referral, thus reducing unnecessary mortality. However, these results require sustained efforts of working with and supporting the individual facilities but also joint leadership meetings.

Study Implications

This study generates information on how to design and implement a regionalized care package to improve quality of maternal and newborn care and referral systems within existing health services successfully. It also provides lessons on how to successfully institutionalize newborn care units at hospitals and lower level facilities. This could serve as a model for replication in similar resource constrained settings.

Call to Action

1) The Ministry of Health should start training specialised newborn cadres such as neonatologists and neonatal nurses in preparation for rolling out NICUs countrywide. Once trained, these should accordingly be deployed in hospitals and health centres where newborn sick babies are managed.
2) The MakSPH Centre for Maternal, Newborn and Child Health together with the Uganda Paediatric Association developed the Uganda guidelines for management of small and sick newborns. These guidelines were launched and should be disseminated for use countrywide by Ministry of Health.
3) There is need to address the wide spread practice of rotation of nurses and midwifes in health facilities and hospitals as it affects patient care. Future health systems should promote specialisation for some areas of health care such as newborn care.

Advocacy and awareness campaigns

a) The 60-year celebrations of excellence in paediatrics and child health patient care, training, research and innovations

The Makerere University Centre of Excellence for maternal and Newborn health took part in celebrating this day with exhibiting some of the innovations from past and ongoing research projects. The celebrations were spearheaded by the department of paediatric at Makerere university.

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The objective of this event was to;

- Create awareness of unique/specialized and available care services for children <24 months – neonates and infants.
- Create awareness and public good of the notable research, innovations, programs, and training that has/impacts on the lives of children, policy and programs
- Connect with local population, public and private institutions, government and its stakeholders

The cerebrations started with a medical camps organized at Mulago Football Field on 17th October targeting Children<24 months of age and their mothers or caretakers. Activities included treatment of various illnesses including respiratory, Cancer and Blood diseases, gastro-intestinal problems and Health education activities like Breast feeding, Immunization, family planning among others as listed in appendix1.

Key Messages from main guests speakers

The Commissioner of Community Health

Ministry of health has established a Unit to look after the Newborn health Issues....

Applauded the presence of the different partnerships on the peadiatric day like the Department of Obstetrics, Public health, Midwives and Nurses and emphasized that this is a good partnership given the roll all these departments play in saving newborns especially in reducing the still births that are normally not counted in some facilities

Ministry of health has established a Unit to look after the Newborn health Issues and the National steering committee and thanked the champions who are not in the ministry but have put a face on newborn health services, reviewed, participated and formulated policy methods. Special mentioning went to Dr Mukasa, Dr peter Waiswa, Dr Sabrina Kitata, Dr, Nakibuuka, Phillipa Musoke, Namarala, Nankunda, Namiiro and kiguli among others

Minister of Health

...challenged researchers to train not only neonatologists but also neonatal and pediatric nurses to fill National hospitals if we are to reduce neonatal mortality.

Thanked organizers for choosing her to be part of the cerebrations. Congratulated the leadership of the College of health sciences and leadership at the department of Pediatrics. Observed that there is a lot of new specialties and so is demand for these services. The vision of government is to have a specialized hill of Mulago with your participation. She challenges researchers to train not only neonatologists but also neonatal and pediatric nurses to fill National hospitals if we are to reduce neonatal mortality. Thanked the graduates on completing and graduating from a 4 years' training in Oncology fellowship programme. The minister Emphasized that Uganda has a high fertility rate as demonstrated in social-media at kawempe hospital 90-120 babies born a day. Also that 1.5 Million children born every year are too many. There is need to improve services, emphasize plan for healthier families so that families can invest in their children. We cannot separate improving services from planning for wealthier families. The national Insurance policy scheme is needed and must be mandatory for all Ugandans and all must pay. This is when people will appreciate the services.

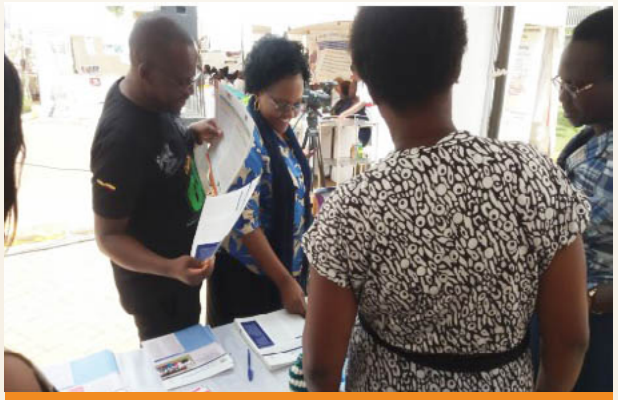
Exhibition day photo Gallery

One of center members being recognised

Centre exhibition stall

The minister of Health Dr. Jane Ruth Aceng (3rd from right) inspects Centre exhibition

Researchers and academicians inspect Centre exhibition



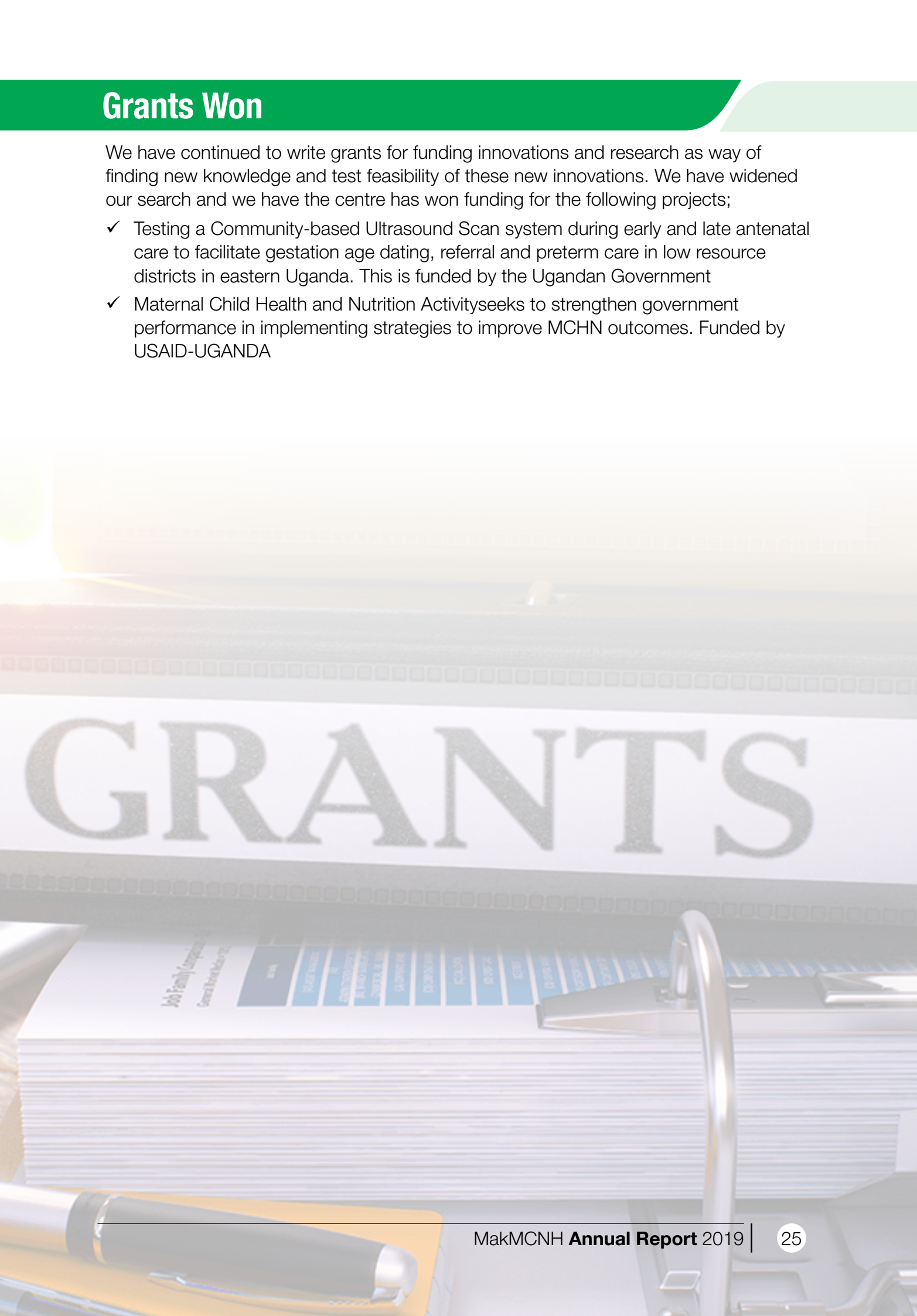
Comissioner Community Health inspects centre exhibition

PRONTO Training - Demonstration

Grants Won

We have continued to write grants for funding innovations and research as way of finding new knowledge and test feasibility of these new innovations. We have widened our search and we have the centre has won funding for the following projects;

- ✓ Testing a Community-based Ultrasound Scan system during early and late antenatal care to facilitate gestation age dating, referral and preterm care in low resource districts in eastern Uganda. This is funded by the Ugandan Government
- ✓ Maternal Child Health and Nutrition Activityseeks to strengthen government performance in implementing strategies to improve MCHN outcomes. Funded by USAID-UGANDA



MAKERERE UNIVERSITY CENTRE OF EXCELLENCE FOR MATERNAL NEWBORN AND CHILD HEALTH

Website: mnh.musph.ac.ug
Email: mnh@musph.ac.ug

@MakMNCHCentre @MNHR_Centre Maternal Newborn Child Health Media