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OUR VISION

To become a centre of excellence in conducting multi-disciplinary policy relevant research and research training.

Field Assistant conducting a household interview

OUR MISSION

To promote the wellbeing of the Ugandan population through generation and provision of high quality population based demographic, health and

socio-information to decision makers and researchers.

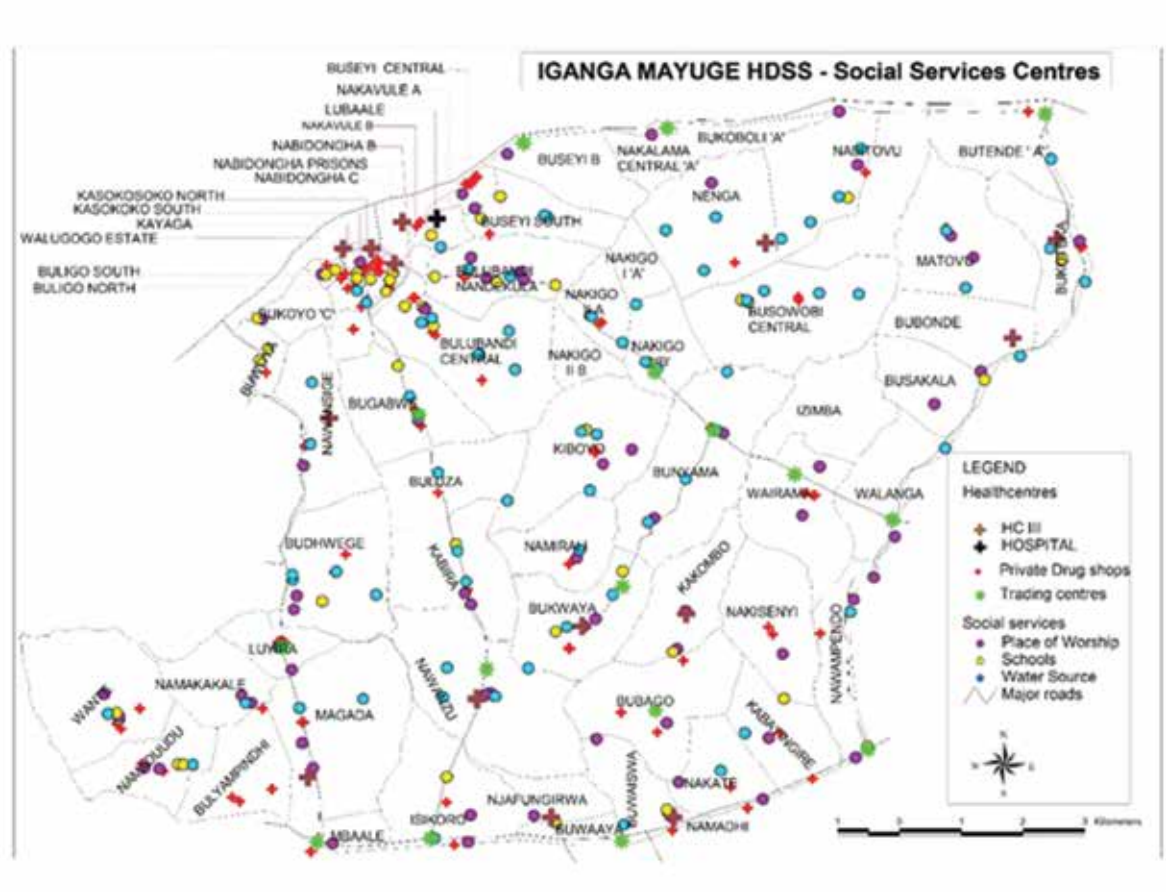
CORE VALUES

- To conduct high quality ethical research and training.
- Integrity.
- Transparency and accountability.
- Confidentiality.
- Sensitivity to community values and needs.
- Timely decision making and action.

STRATEGIC OBJECTIVES

- To strengthen the organizational and staffing structure, as well as improving current procedures and introducing written operating procedures so that the site activities are guided by standardized guidelines.
- To improve data quality generated by the site through a transition from manual to digital field data capture, and improvement of the data management procedure.
- To diversify sources of funding through creation of a research grants management capacity, to enable the site to secure research grants and diversify its sources of funding for core activities, as well as diversification of the range of research activities initiated by the site.
- Improve knowledge translation from research evidence to policy, by continuously engaging policy makers in the site's research activities.

Map showing the catchment area of MUCHAP-IMHDSS and social service centres



MESSAGE FROM THE BOARD CHAIR

I thank the Executive Director and his team for rising to the multiple challenges and expectations placed before them, Board members and the collaborators who have worked hard to channel the energies of our members productively and creatively.

I also particularly thank the support received from our core funders, the Swedish International Development Cooperation Agency (SIDA) for making MUCHAP's-IMHDSS activities a success since its inception. Also, the support from Makerere University, Management Board of MUCHAP, and the host districts of Iganga and Mayuge as well as the community members and the HDSS staff.

MUCHAP's-IMHDSS online channels have made a significant footprint, reaching local and international audiences in different countries.

Many members have played a part in MUCHAP's progress and I hope that each of you will feel some pride in reading this annual report.

Prof. James Tumwine
Board Chair

MESSAGE FROM THE EXECUTIVE DIRECTOR

On behalf of the Management of MUCHAP, I am pleased to share with you highlights of the 2017-2018 annual report of Makerere University Centre for Health and Population Research (MUCHAP) operating the Iganga Mayuge Health and Demographic Surveillance Site (IMHDSS).

It can be seen that MUCHAP's Strategic plan 2018/2022 was finally completed this year (2018). This is a great achievement and it will facilitate streamlining research and organization systems for efficiency purposes. It must also be mentioned that several activities that had been delayed by the absence of the strategic plan can now be implemented. These include filling all relevant positions as per the strategic plan requirements.

Additionally, the update rounds of data collection were achieved because of team work and dedicated Field management team that coordinated the activities.

As regards development of the Open HDS database system, MUCHAP has been

committed to achieving this and is satisfied with the progress so far. The Directorate of ICT at Makerere University has supported MUCHAP all the way. Related to this, MUCHAP has also benefited from the expertise existing at Mbita HDSS in database development and these too are helping MUCHAP incorporate digital satellite based mapping capability to ease identification of homes in the community. Actually, a team from Iganga-Mayuge HDSS visited Mbita HDSS - Kenya in early 2018 to learn more about their systems. The new system will support use of electronic data capture and storage of data. MUCHAP staff were trained on use of these equipment in the field by teams at Johns Hopkins School of Public Health.

The report summarises some of the activities conducted within the same period as we progressed through the third year of our five year strategic plan. Over the years, we have come a long way in building foundational and operational aspects of our society which helped us to achieve significant progress on a number of societal objectives outlined in our strategic plan.

This report was made possible due to the support and advice of different individuals and team members. Special thanks go out to everyone who dedicated their time and contributed to this endeavour.Together, the company will soar to new heights of success.

We thank the community members, followers and partners for their continued trust and engagement with MUCHAP. Also, we want to recognize our Board members and employees for their dedication, commitment, energy and drive to always improve our performance in delivering greater value to our membership.

Dr. Dan Kajungu

Executive Director

MUCHAP by the numbers (end of June 2018)

Outreaches

- Conducted 20 community outreaches organized by health facilities in the catchment area.

Health workers immunising children after sensitising parentsduring immunization and antenatal clinic days

MEDIA

- 172 radio announcements were aired out on local radio stations in Iganga, Mayuge and Jinja. Some radio messages were urging community members to reportany suspected adverse drug reactions or side effects experienced to health workers and the Uganda National Drug Authority using a toll free number 0800 101 999, while other messages helped in mobilizing community members to donate blood during the blood donation drive organized by MUCHAP to save people's lives,appreciating community members for their participation in the blood donation exercise and wishing community members a prosperous new year 2018.
- Conducted one radio live talk show on local radio station in Iganga to inform community members about MUCHAP-IMHDSS activities. For instance the blood donation exercisesuch that they can take part in the exercise to save people's lives in need of blood especially road traffic accident victims, women during delivery and anemic children among others.

Staff from MUCHAP-IMHDSS, Uganda Red Cross and DHO-Iganga, Dr. Muwanguzi David (2nd right) in a radio talk show in Iganga town, December 2017

- 3 articles were aired out on radio and television stations such as blood donation drive, dissemination and consultative dialogue with religious leaders, the role of village health teamsat community level in relation to the organization's work, research finding on diabetes and highlights on food security in Iganga and Mayuge districts.
- 3 articles were published in newspapers - Daily Monitor, New Vision and Bukkede about some of the research findings at the center like monitoring interventions and health indicators at household level "Insecticides Treated Net Coverage and utilization within Iganga Mayuge HDSS two years after Universal Distribution of Long Lasting Insecticide Nets (LLIN)".
- MUCHAP also uses Social Media platforms such as facebook and twitter to provide updates to its various stakeholders. Over 30 articles have been posted on twitter.

STAFF

- 30 full time staff employed by MUCHAP and over 35 temporary field staff.

BOARD MEMBERS

- MUCHAP Board has 14 members with representation from Makerere University, Uganda Bureau of Statistics (UBOS), Ministry of Health, Iganga District Local Government, Karolinska Institutet, Mbarara University of Science and Technology and Private sector. The position for representative of the development partners is currently vacant to be filled soon.

Some MUCHAP Board members at the strategic planning meeting in Kampala

SOMERESEARCH STUDIES

- Some of the research studies being implemented in 2017/2018 at the centre are; reporting of suspected adverse drug reaction, Every Newborn Action Plan (ENAP), Mobile Phone Surveys for Non-Communicable Diseases (NCD) Risk Factors in Uganda (MoP-NCD) andthe Piloting of Electronic Health Facility Patient Registration System.

DISSEMINATION MEETINGS

- One dissemination and consultative dialogue workshop with religious leaders was held in Iganga where MUCHAP shared some of the research findings with Sheikhs, Pastors and Reverends.

MUCHAP Executive Director making a presentation to religious leaders in the dissemination dialogue, November 2017

- One dissemination and feedback meeting at district level was held at Iganga District council hall about theresearch findings on monitoring interventions and health indicators at household level.***"Insecticides treated net coverage and utilization within Iganga Mayuge HDSS, two years after Universal Distribution of Long Lasting Insecticide Nets (LLINs)".***

MUCHAP ED making a presentation to sub-county and district leadership, April 2017

- 21 community dialogues encouraging community members to report any drug side effects were conducted in March 2017 during the health clinic days in both private-not-for-profit and public health facilities. Reached a total of 658 people (139 males and 519 females).

Community members at the dialogue about reporting of adverse drug reactions during health clinic days.

- Over 6,000 mobile phone text messages were sent to community members as one of the feedback communication channels. For instance; encouraging parents and caretakers to take children under five years for immunization against killer diseases to a nearby health facility, thanking community members for continued cooperation and participation in the organization's activities.
- 20 focus group discussions (FGD) were conducted for instance; Six FGDs were about getting community perception on reporting of ADRs.
- MUCHAP also conducted community awareness and mobilization campaigns through mobile health drives. This involved use of a mobile vehicle with public address system airing health messages on different pertinent issues. the Newborn Action Plan (ENAP) research study sampled women aged 15-49 years from the HDSS surveillance area, data collectors for both the survey and HDSS routine rounds participated in training to understand barriers and enablers to reporting of pregnancy and pregnancy outcomes. This would improve community perception of the importance of birth weight & gestational age for child health.

Women focus group discussion in progress, May 2018

TRAINING

- Received 21 under graduate students from Makerere University pursuing Bachelors in Population Studies, Quantitative Economics and Statistics for internship training.

Internship students developing a work plan

- Trained 30 Field Assistants for Every Newborn Action Plan (ENAP)-INDEPTH survey.
- Trained 30 Field Assistants for MUCHAP-IMHDSS update round data collection.

Training session of Field Assistants during the 20th round update data collection

- Trained 36 Field Assistants for Non-Communicable Diseases (NCD) risk factors survey including 6 study nurses.

Dr. Dustin Gibson from John Hopkins University training Field Assistants for NCD risk factors survey, October 2017

- Conducted 12 feedback and update meetings for VHTs about reporting of pregnancy and its outcomes. Altogether, MUCHAP-Iganga Mayuge HDSS has a team of 120 VHTs.

Feedback and update meeting for village health teams, March 2018

- One scout refresher training. These are community key informants that reports births and deaths from their area of residence and they are 65 in number.

PUBLICATIONS

- Produced newsletters highlighting key activities at the Centre.
- Distributed over 2,000 community leaflets that encourages reporting of suspected ADRs and ways of preventing hypertension and diabetes at households during the routine update data collection by Field Assistants.

- Distributed 70 adverse drug reaction monitoring forms to private and public health facilities within and outside the HDSS surveillance area to monitor and record any suspected drug side effect reported by community members.
- Over 500 posters showing steps to assess ADR by health workers and posters about community awareness of ADR symptoms that encourages reporting of ADR were distributed to private and public health facilities.

CORPORATE SOCIAL RESPONSIBILITY

- Procured some equipment to Busowobi heath facility situated in the MUCHAP catchment area. This included two solar panels and inverters, digital Blood Pressure machines, renovated the facility laboratory by cementing the floor, bought a sink and a small hand washing can.
- Collected 230 units of blood from the blood donation drive organized by MUCHAP in collaboration with DHO's offices of Iganga and Mayuge districts and the Uganda Blood Transfusion Services to save people's lives.

MUCHAP Site Operations Coordinator handing over solar panels and inverters donated to Busowobi Health Facility, March 2017

Community members in Luyira trading centre donating blood at the exercise organized by MUCHAP, December 2017

CONFERENCES

Below are some of the conferences attended by MUCHAP-IMHDSS within Uganda and abroad.

No	Title of the workshop	Participants	Month/Year	Venue
1	Manuscript Publishing Workshop organized by African Health Sciences & Academic publisher Elsevier.	Dr. Dan Kajungu, Edward Galiwango, Donald Ndyomugyenyi, Waibi Musa, Kakaire Charles, Natukwatsa Davis, Tusubira Valerie &TryphenaNareeba	July 2017	Mulago Guest House, Kampala
2	Dissemination and consultative dialogue with religious leaders organized by MUCHAP	Dr. Dan Kajungu, Galiwango Edward, Judith Kaija, Bashir Madambo&Waibi Musa	November 2017	Iganga
3	Team Building Retreat organized by MUCHAP-IMHDSS	All MUCHAP staff	January 2018	Iganga
4	40th Annual National Pharmacovigilance Centre's Meeting organized by Uganda National Drug Authority	Dr. Dan Kajungu	November 2017	Speke Resort Hotel Munyonyo, Kampala
5	MUCHAP dissemination at Ministry of Health	Dr. Dan Kajungu		Kampala
6	SIDA-Makerere Research Collaboration Annual Review Meeting (ARM)	Dr. Dan Kajungu& Mr. Galiwango Edward	October 2017 & April 2018	Makerere University, Kampala
7	Different HDSS Analysis and Writing Workshop	NareebaTryphena& Edward Galiwango	May 2018	Nairobi, Kenya
8	Data Management Workshop	Natukwatsa Davis	May 2018	Dubai
9	Uganda National Health Research Symposium organized by UNHRO	Dr. Dan Kajungu& Mr. Gyezaho Collins	March 2018	Hotel Africana, Kampala
10	Dissemination of MUCHAP data at Mbiita HDSS during MUCHAP Visit at the site	Dr. Dan Kajungu, Edward Galiwango, Ghezaho Collins, Musa Waibi & Wabakamu James	April 2018	Mbiita HDSS - Kenya
11	Grants writing Workshop organized by Success Africa	Mr. Galiwango Edward, Ndyomugyenyi Donald, NareebaTryphena, Kakaire Charles, Tusubira Valerie, Waibi Musa &Natukwatsa Davis	April 2018	Makerere University, Kampala
12	Health Systems Performance Assessment	Dr. Dan Kajungu	June 2018	JHU
13	East African Injury Symposium: Translating Trauma & Injury Prevention Knowledge into practice	Dr. Dan Kajungu	March 2018	Sheraton Hotel, Kampala
14	Grants Writing Workshop organized by Makerere University Walter Reed Project (MUWRP)	Natukwatsa Davis &Ndyomugyenyi Donald	March 2018	MUWRP, Kampala

ACHIEVED RESULTS OF MUCHAP-IGANGA MAYUGE HDSS

The results are presented basing on the specific objectives as below;

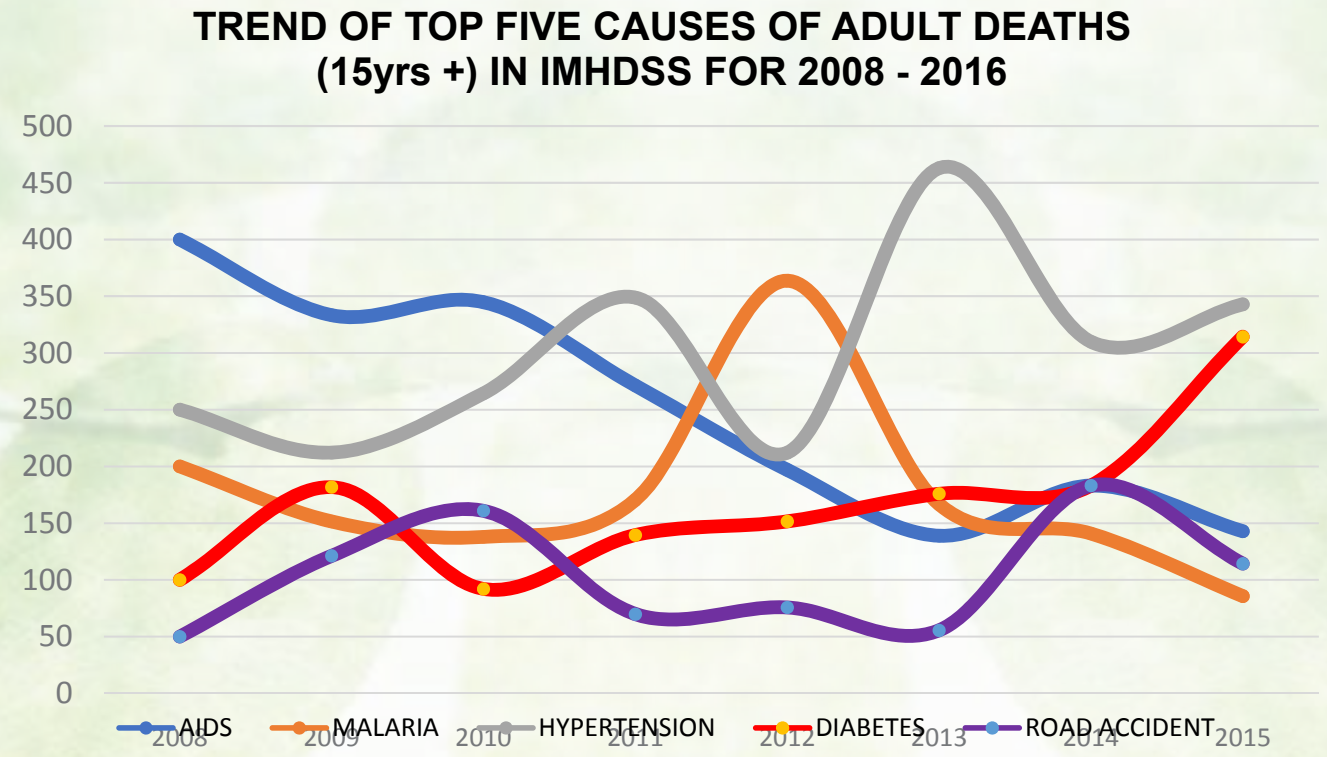
1. Improve the organizational structure and operating procedures of MUCHAP.

i. MUCHAP-IMHDSS has sustained generation of quality data. During the reporting period 2, 200 live births and 717 deaths were registered. Data on household socio-economic status and infant immunization, family planning use, and financial inclusion was also collected. Analysis of most of this data is ongoing. It's important to mention that data generated by MUCHAP-IMHDSS at a sub-national population is found to reflect a comparable picture with population estimates for Uganda used by the World Bank. Below are some of the selected indicators;

	2008		2010		2012		2014		2016	
Indicator measured	World Bank (National Est, million)	IMHDSS	World Bank (National Est, million)	IMHDSS	World Bank (National Est, million)	IMHDSS	World Bank (National Est, million)	IMHDSS	World Bank (National Est, million)	IMHDSS
Total Population	`31.6	78,407	31.6	82,093	36.3	87,731	38.8	90,237	41.4	97,613
Proportion of Population 15-64 years (%)	48.1%		48.4%	46.1%	48.8%	47.2%	49.3%	49.1%	49.8%	50.8%
Crude Death rate/1000 persons	10.9	12	10.1	13.3	9.5	9.8	9	7.2	8.7	7.5
Crude Birth Rate per 1000 persons	46.1	28.4	45.2	28.7	44.1	26.9	43.1	22.1	42.1	27.1
Neo-mortality per 1000 live births	26	33.7	24.9	49.2	23.9	41.1	22.6	39.1	21.4	35.5
IMR per 1000 live births	58.9	74.7	52.7	84.3	46.5	67.3	41	54.7	37.7	44.7
<5yrs mortality per 1000 live births	92.6	109.7	81	114.8	70.2	90.2	60.1	78.3	53	56.2

It can be seen that IMHDSS estimates for most of the indicators are within comparable range with that of World Bank and also reflect a similar trend over the years between 2008 and 2016. Generally, there is a declining trend in mortality in all age groups. More data comparisons shall be done when analysis is completed soon.

ii. The center has started to develop health profiles for different population categories to inform health interventions. For example, analysis of data on causes of death among adults showed declining trend of HIV/AIDS and malaria related deaths but a gradual and steady increase in non-communicable diseases such as diabetes and hypertension as shown below. Similar outputs are to be produced for different sub-populations.



The above findings imply that Ugandans are now faced with a double burden of communicable and non-communicable diseases. Unfortunately, only one in three people at risk of diabetes or hypertension is aware of his/her health problem to be able to initiate control measures early enough.

iii. HDSS data has also shown that coverage of infant full vaccination in both Iganga and Mayuge districts is still low (43%). Surprisingly, reports from the district health offices indicate over 80% vaccination coverage for most vaccines. MUCHAP results may partly explain why the two districts are among areas with re-current measles and polio outbreaks annually. In order to make a contribution towards improving vaccination coverage, MUCHAP started to participate in mobilization work of communities by encouraging parents and caretakers to take children for vaccination and to participate in community based immunization outreach activities working closely with health facilities in the HDSS area. During these activities, MUCHAP collects immunization data as well as child anthropometrics mainly for growth monitoring purposes.

MUCHAP staff and Students weighing a baby at the immunization outreach center held at Kabira Village - 2018

iv. Prior to start of data collection for any round/ cycle, all staff attends refresher training to equip them with new skills and also get introduced to add-on-new studies for a particular round. The field staff and those that are to participate in add-on studies were trained in use of electronic systems in data capture which included use of Tablets in data collection (for example; retrieving a record, editing, saving and downloading, use of GPS system among others. The training also involved quality improvement issues based on field supervisor reports.

v. During the data update round, a total of 21,924 households were visited and updated. Also, 2,461 births including miscarriages and abortions were reported by community scouts. Village Health Teams (VHTs) too, reported 2,397 births/ pregnancy outcomes. This data is useful in determining the most appropriate system to register these events and will also inform the cost-benefit analysis of each method to be done later.

vi. In addition to this, baseline data for selected indicators for monitoring performance of some sustainable development Goals (SDGs) was also collected. It was noted that MUCHAP was better positioned to monitor performance of SDGs since majority of indicators for some goals can be assessed at community level. The center through a consultative process developed a data collection tools that were uploaded onto the tablet for data collection. The tool focused on goals;

- End poverty in all its forms.
- End hunger, achieve food security and improved nutrition.
- Ensure healthy lives and promote well-being for all at all ages.
- Ensure inclusive and quality education for all and promote lifelong learning.
- Ensure access to water and sanitation for all.
- Ensure access to affordable, reliable, sustainable and modern energy for all.

vii. Preliminary results from the SDG baseline survey indicate that only 7% of the adult populations are covered by any form of social Protection and only 2.3% have documented or recognized tenure of the land. In addition, about 27% of the adult populations have access to banking services (including mobile banking). It is noted that financial inclusion had improved with introduction of mobile money services; however, more taxes on mobile money service utilization may affect earlier gains in coverage. It was also found that household level poverty is still high. If we choose household bicycle ownership as one of the proxy poverty indicator, it was found that about 49% of households own at least a bicycle while 11% of households that own a bicycle also own a motorcycle/ boda-boda. As regards sanitation, majority of households (87%) do not have hand washing facilities at their latrines. This is a risk factor for transmission of diarrheal diseases.

A data collector interviewing a respondent during the household visits

Only 47% of children complete scheduled immunization by age of 1 year which is far below the desired National target. It was further found that majority of the population (77%) do not read any material each week in search of information. But about 80% do listen to radio for information. This finding confirms other researchers who reported poor reading culture in Uganda. The survey also found high water coverage in the population with over 85% of the population able to access either piped water provided by government, water from protected springs, or bore-holes. This is one of the Millennium Development Goals (MDGs) that was successfully attained in Uganda.

viii. During the reporting period, MUCHAP registered 697 deaths through use of the village based reporters (scouts). Verbal autopsy interviews were conducted and cause of deaths (COD) was determined using physician coders. As indicated in our previous reports, verbal autopsies are essential where substantial number of deaths occur outside formal health facilities as the case in Uganda. In Iganga and Mayuge districts, about 76% of adult deaths occur either at home or onway to health facilities. MUCHAP is therefore working collaboratively with the districts of Iganga and Mayuge to make them improve burden of disease estimates generated from formal health facilities by supplementing such knowledge with VA data. MUCHAP has gradually started to collect VA data using Tablet phones and is currently testing cause of death determination using electronic/ computerized approach called "Inter VA version 4". In our next report, a comparison between physician coders and electronic system shall be done. MUCHAP uses internationally recognized tools approved by the World Health Organizations (WHO) as well as INDEPTH Network member HDSS sites.

ix. Activities of MUCHAP Board have been well supported and during the reporting period, the Board held about 4 Full Board meetings as well as committee meetings. During these meetings, several important decisions pertaining to the development of MUCHAP were considered. During the year, the board ensured development of the first MUCHAP 5 Year Strategic Plan which was completed in March 2018. Other important decisions included securing ownership of MUCHAP 1.8 hectares of land that was purchased in Iganga in 2008/2009. MUCHAP plans to conduct fundraising activities to mobilize funds to establish a permanent and spacious office building to support its research activities. Currently, MUCHAP rents three buildings for office space in Iganga and rental fees have been increasing over the years.

x. The Board also approved that MUCHAP should invest some of its reserve funds in ventures that will enable growth of the fund to support future MUCHAP development plans.

xi. MUCHAP management has also developed different guidelines / Standard Operating Procedures (SOPs) for its different activities. The procurement manual was developed as one step towards strengthening the organization's procurement committee. Other guidelines developed are human resource manual, financial management manual, guidelines for staff training, routine health & demographic data collection, filing and archiving documents, verbal autopsy interviews among others. These will be presented to the Board for approval.

xii. MUCHAP also recruited a Finance Manager to boost its financial management capacity. The new staff is qualified with Chartered Public Accountants (CPA) and has several years of experience in public service financial management. MUCHAP has also procured and installed Quick Books financial management software to improve its financial management performance.

xiii. The center has this year continued to host undergraduate students mainly from Makerere University for internship training. Over the years, MUCHAP has received excellent reports from students' supervisors appreciating the training package offered to students. In 2017, MUCHAP hosted under-graduate students from Makerere and Kyambogo universities.

Students from School of Statistics, Makerere University at the IMHDSS- 2018

Students engaged in one of the practical sessions at IMHDSS - 2018

Students from School of Statistics, Makerere University at the IMHDSS- 2018

Students engaged in one of the practical sessions at IMHDSS - 2018

xiv. Graduate students were also supported by MUCHAP. Six students pursuing Master's Degree in Global Public Health (GPH) from New York University had their internship training in Iganga in 2007 and 5 more students from same university were hosted in 2018.

New York University Students with their Supervisor Prof. Chris Dickey (3rd Right)-2018

The students have successfully completed their course and graduated in June 2018. MUCHAP is working with the University of New York to publish work that has been undertaken by the students. Two manuscripts were submitted for publication and the team is attending to comments from reviewers.

xv. There are two other PhD students from the department of International Health at the Johns Hopkins School of Public Health that are part of the study that uses electronic systems to monitor NCDs in the Iganga-Mayuge HDSS. MUCHAP has worked closely with Dr. Roy Mayega (Sida supported PhD graduate) to strengthen NCD surveillance in Iganga and Mayuge districts. Dr. Mayega is part of the MUCHAP team collaborating with JHSPH on NCD study. NCDs are increasingly responsible for majority of adult deaths not only in Iganga-Mayuge but also in Uganda as a whole.

xvi. There are other students pursuing PhD programs at IMHDSS; Dr. Namazzi Gertrude (Makerere University), Mr. Joseph Akuze and Ms. Doris Kwesiga (London School of Hygiene & Tropical Medicine), and Ms. Helen Ndagije and Mr. Levi Mugenyi (Hasselt University - Belgium).

xvii. The center has this year supported training of staff to improve their skills in various fields. Two members from data management section attended a Statistical data analysis workshop organized by Makerere University College of Health Sciences. Also, 7 staff were trained in project proposal writing and awarded certificates of completion. The skills have enabled staff to play more active roles in scientific writing and writing proposals to attract grants.

xviii. The center has maintained an updated assets register/inventory as required by Makerere University and Sida. Phones that were donated by JHSPH and ENAP study were added to the asset inventory.

xix. MUCHAP has also continued to support implementation of other studies as other HDSS sites. The studies are;

1. Cerebral Palsy in Uganda; Functional mobility, postural control and assistive technology -Ms. Carin Andrews Hillerdal (PhD student), currently in Sweden to attend other classes.

2. The challenge of equitable perinatal mental health coverage through local health systems in rural Uganda: Phase 1 - A qualitative study exploring multi-stakeholder perceptions towards perinatal mental health and related healthcare systems in rural Uganda. Ms. Nandini Sakar Priya (Belgium) disseminated her results in August 2018.

Ms. Nandini (left) disseminating her research findings on patient centered care and mental health care to Iganga and Mayuge health team

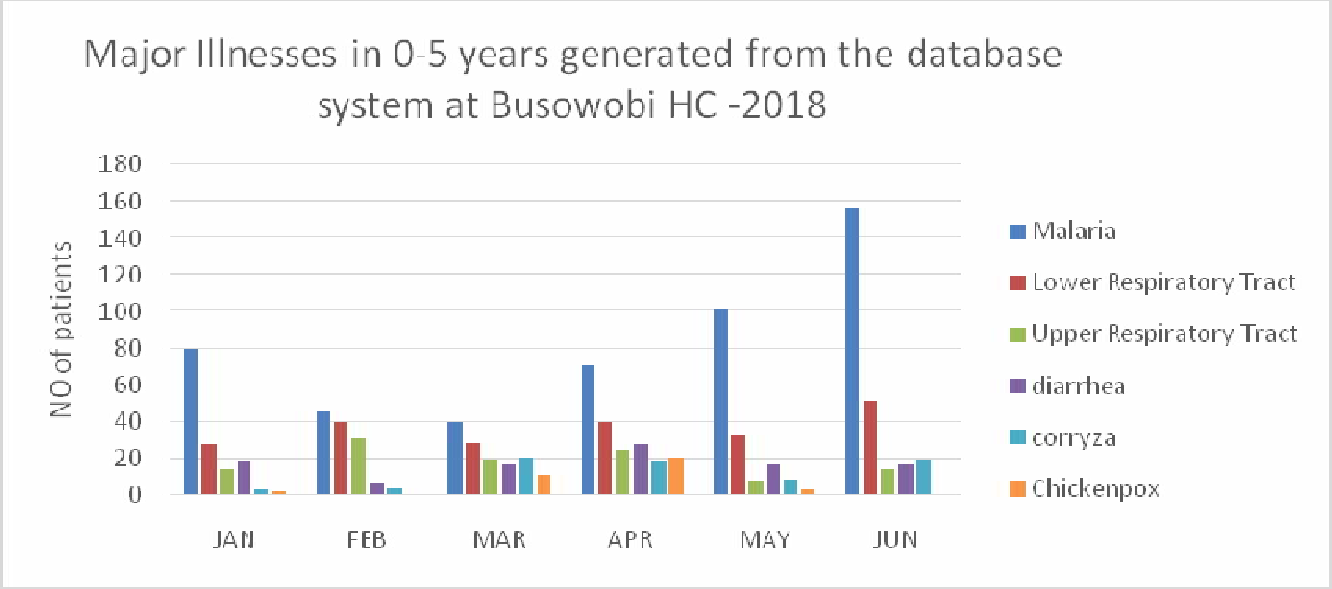
3. The Every Newborn Action Plan (ENAP) project commenced and is meant to improve pregnancy and pregnancy outcome surveillance.
4. PhD studies for Ms. Helen Ndagije, on reporting of adverse drug events and reactions. Currently, she is working on publishing one of the manuscripts.

2: Improve data quality

i. The introduction of electronic data capture for add-on or stand-alone studies in the IMHDSS has revolutionized field operations. The center is also in transition to introduce an electronic data management system (such as Open HDS) and the center is finalizing with updating HDSS boundaries and features to be uploaded on the system. It is anticipated that it will be piloted in the next data collection round. The new system will utilize satellite grids to locate homes and this information will be automatically captured on the tablet. Use of this technology will reduce missing locations and possibility of falsifying data. Mbita HDSS in Kenya is supporting Iganga-Mayuge HDSS in this project.

ii. MUCHAP has continued to ready itself for use of tablets in routine data collection by enabling its staff get more familiar with use of the system. The HDSS IT Officer was able to develop the SDG study tool and was able to upload it on the tablets for fieldwork. The survey went on smoothly.

iii. In order to improve on IMHDSS morbidity surveillance data, the center has developed a health information management system (electronic medical records) at Busowobi Health center III located within the HDSS to pilot the usability and feasibility of the e-patient information system in a rural un-electricity served areas. The center analyzed data generated in the last 10 months and shared it with the District Health department as well as the Health workers at Busowobi HC. It was a very exciting moment by the health workers to see the results and easiness of generating reports from the system. Few data entry related challenges were identified and it was recommended that bi-weekly data quality reviews be conducted supported by the HDSS data manager and a senior clinician at Busowobi HC.



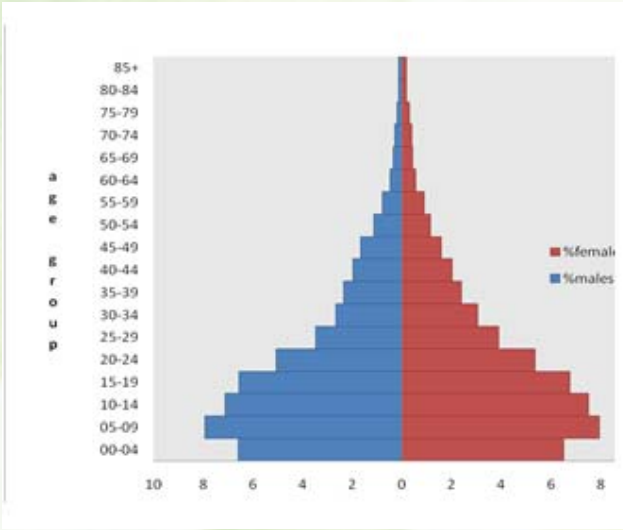
iv). The graph shows that between January and May, there was an outbreak of chicken pox in the suburbs of Busowobi HC and this was brought to the attention of the district health office by the HDSS. Children under five years continue to be affected by malaria, respiratory tract infections and diarrhea. It was also found that most children especially those with severe malaria were anemic. In the graph, malaria and anemia were combined. Unfortunately, the health facility often experiences stock-outs for anti-malarial drugs which prompt referrals to Iganga hospital.

v). In this grain, we do recognize that MUCHAP's mandate is to carry out research, but it was found prudent to go beyond research and contribute towards health interventions or do something to save life. In December 2017, MUCHAP spearheaded a blood donation exercise that attracted political leadership, civil society, health workers, and citizens of Iganga and Mayuge districts. Blood worth saving over 900 children lives was collected and MUCHAP was appreciated. Below, staff of MUCHAP donating blood.

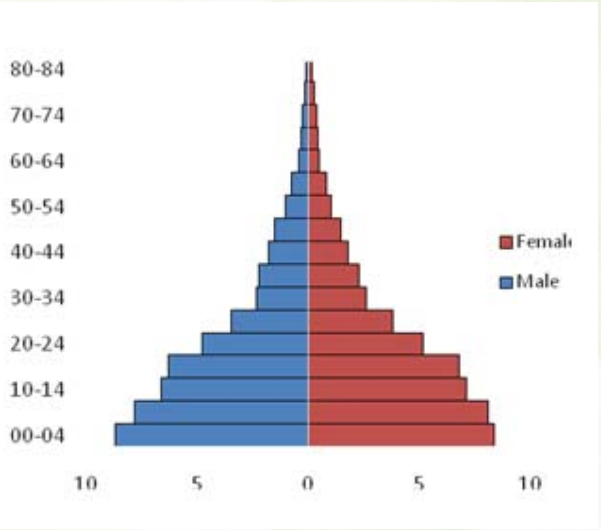
Besides malaria, data from verbal autopsies indicate that pneumonia and prematurity are major causes of death in children under five years and neonates respectively.

vi. MUCHAP has for the last two years focused on improvement of its data quality. In 2016 for example, MUCHAP's registration and counts of children aged below 5 years has been falling below expected numbers and this was affecting the population structure. The Iganga-Mayuge population structure was expected to be similar to that of Uganda's population. A review of the surveillance system was done and VHTs were introduced to help improve capturing of pregnancies and pregnancy outcomes. A birth history census was also conducted. In addition, the center reviewed its data quality processes from data collection training, data collection, supervision, data entry and data analysis. As a result, gaps were identified and corrected, and a revised HDSS population structure has been achieved as shown below;

Population Pyramid 2016 (Before)



Population Pyramid 2016 (After)



vii). Another strategy that aimed to improve data quality was to reduce the size of the data collection team by half. Previous in 2016, data update rounds were conducted by a team of over 65 field assistants. This number was reduced last year. MUCHAP management is evaluating overall impact of this strategy on data quality. However, there has been notable reduction in number of non-responses at household level.

3: To diversify the source of funding for the site

i. Having a strong financial management system involves use of computerized systems, competent personnel and efficient processes. These constitute expected standards and can increase confidence of development partners in the organization. MUCHAP therefore has invested this year in QuickBooks financial management software to improve its financial management standards and has also recruited an experienced Finance Manager to boost the finance department. Migration of financial records from Excel to QuickBooks is ongoing for this financial year.

ii. MUCHAP has also sustained its collaboration with partners such as the National Drug Authority (NDA), Ministry of Health, Uganda Bureau of Statistics, Johns Hopkins University, Karolinska Institute, host districts of Iganga and Mayuge, New York University, London School of Hygiene & Tropical Medicine, among others. MUCHAP charges over-head fees from studies as well as from use of existing HDSS data. These funds contribute towards MUCHAP/ IMHDSS internally generated fund.

iii. The center has also sustained the collaboration with the INDEPTH Network Maternal & Newborn working Group that provided a grant of $75,000 to improve pregnancy and pregnancy outcome surveillance between period July 2016 and June 2017. In 2017/2018, INDEPTH and IMHDSS have implemented pregnancy history and birth history surveys with

technical support from London School of Hygiene & Tropical Medicine. This study has started looking for areas/gaps to be basis for new proposals for grant support.

iv. Through "Over-head" fees on new studies and data access by researchers, MUCHAP has raised shillings 45,924,168= (about $12,581) from PhD student and other research. These funds were raised as below;

MUCHAP revenue generated for financial year 1st July 2017 to 30th June 2018

Donor/Funding Agency	Project	Grant	Overheads
National Drug Authority	CDS	29,200,000	2,920,000
London School of Tropical Medicine/INDEPTH	ENAP	70,703,603	7,070,360
London School of Tropical Medicine/INDEPTH	ENAP	70,875,350	7,087,535
London School of Tropical Medicine/INDEPTH	ENAP	64,077,795	6,407,780
Alere International	HIV-Combo	134,774,480	13,477,448
Johns Hopkins School of Public Health/Mak SPH	Injury Study	17,673,450	1,767,345
Johns Hopkins School of Public Health/Mak SPH	Injury Study	53,964,000	5,396,400
Johns Hopkins School of Public Health/Mak SPH	Injury Study	17,973,000	1,797,300
Total		**459,241,678**	**45,924,168**

These generated funds are deposited on MUCHAP research bank account.

v. MUCHAP has continued to collaborate with researchers in Sweden. Currently, MUCHAP together with Rakai Health Sciences Programme and Prof. Anna Mia Akstrom of Karolinska Institutet are in final stages to establish a Non-Communicable Diseases surveillance center that will utilize HDSS platform. This project has budgeted for overhead and activity implementation costs for MUCHAP.

vi. Another proposal that was collaboratively submitted for funding to conduct a prevalence study on groin hernias in children and females as well as assessment of unmet need for hernia surgery in the same group within the IMHDSS was approved for funding by the government of Uganda. This study has been approved by the institutional Ethics Review Board at the Makerere University School of Public Health and is ready for implementation. The PI is Sister Mary Ajiko, a senior surgeon at Soroti District Hospital - the PhD student on this study.

4: Improve knowledge translation, from research evidence to policy

i. The center has this year combined efforts to improve data quality and at same time focus on research dissemination. Availing data to researchers has been one of the strongest achievements of MUCHAP. The center welcomes internal and external collaborations and agrees with the principle of data sharing without compromising the rights and privacy of participants. MUCHAP has shared data for cross site data analysis under INDEPTH network and is currently working with HDSS sites in Uganda to jointly analyze Uganda data. There is a formal data sharing process guided by data sharing standard operating procedures.

ii. Using a multi-disciplinary approach. MUCHAP constituted a team of scientists from different schools and colleges in Makerere University to analyze data and write manuscripts on different topics. The team has representation from social sciences, school of public health, school of statistics and population studies as well as MUCHAP. The manuscripts being written are;

a. Pregnancy and parenthood among adolescents in Iganga-Mayuge HDSS- Lead: Edward Galiwango

b. Trends in non-communicable disease mortality among adults in rural Eastern Uganda- 2010-2016. Lead person : Davis Natukwatsa

c. Determinants of the Under-five survival in eastern Uganda. Lead: Tryphena Nareeba

d. Factors associated with home delivery in Iganga-Mayuge HDSS. Lead: Valerie Tusubira

e. Timeliness of infant immunization in Iganga and Mayuge districts: Case of IMHDSS. Lead: Agnes Nyabigambo

f. Utilization of ANC and delivery care services in Eastern Uganda. The case of the Iganga-Mayuge HDSS. Lead: Dr. Fiston Muneza

iii. Under decentralized governance in Uganda, sub-counties are crucial in planning and service delivery. MUCHAP therefore held a dissemination and dialogue workshop with sub-county leaders from Iganga and Mayuge districts. During the meeting, MUCHAP presented the priority disease burden in the different sub-counties, opportunities in working in collaboration with MUCHAP in births and deaths registration and certification, and how MUCHAP can support these leaders with data for planning. The sub-county chiefs revealed that they lack skills in data interpretation and are constrained in data generation. They requested MUCHAP to organize data generation, analysis and interpretation training for local leaders to be able to use HDSS data. They appreciated MUCHAP's commitment to provision of quality data and for improving leadership capacity of local leaders.

iv. MUCHAP has also had opportunity to share its results at the Ministry of Health. The Executive Director Dr. Dan Kajungu attended and represented the center.

v. Measurement of related to this, the MUCHAP Board representative from the Ministry of Health Dr. Jesca Nsungwa shared with MUCHAP the government of Uganda's key health priority areas and advised that MUCHAP should be strategic and generate data on Nutrition since government was lacking community based data. MUCHAP has now developed a draft Nutrition surveillance tool. MUCHAP has discussed its interest in conducting child nutrition research with a team of researchers from University of Copenhagen-Denmark. They expressed interest and advised that we should include the child's middle upper arm circumference (MUAC) on top of height and weights and other data. More discussions with the team will be made. The team was led by Dr. Ezekiel Mupere, the Head of Pediatrics Department in the School of Medicine at the College of Health Sciences, Makerere University.

Dr. Hannah Pesh (2nd left), Dr. BenedikteGrevon (3st Right), Prof. HenrikEriis (1st Right), Dr. Ezekiel Mupere (4th Right) at MUCHAP-IMHDSS- 2018

vi. MUCHAP was also motivated by this knowledge to initiate generation of growth monitoring data on infants during health facility outreach activities. This data will provide some insight in understanding infant nutrition status in different areas of the HDSS.

vii. During this period, MUCHAP has also disseminated its work in Iganga and Mayuge through various media. The center has used radio talk shows, local journalists, radio messages, meetings with communities and leaders, mobile van awareness drives, community outreach platform, and also used phones platform to send SMS messages on different issues.

viii. Besides, MUCHAP has produced different printed research materials for dissemination purposes. Annual Report, newsletter, center profile, research brief, labeled file folders and labeled pens are some of the products that were produced.

ix. In addition to this, MUCHAP has strengthened its online research awareness and dissemination platform. The center has a vibrant website (www.muchap.org), has active use of social media platforms such as face book, twitter (@Mak_CHAP) and blogs. Many of MUCHAP's international audience follow MUCHAP's work through online platforms.

x. MUCHAP has also disseminated its work in both local and international meetings and conferences as summarized in the Appendix.

Recommendations to improve the achieved results

- Improve monitoring of activity progress to ensure timely completion.
- The effect of increasing prices this year were not anticipated and this increased cost of doing work.
- Strengthen further the financial management systems.
- Continue to develop more SOPs for better implementation of organisation activities.
- Development of staff skills in scientific writing.
- Complete electronic data base system with Satellite enabled GPS mapping system.
- Improve HDSS capacity and tools in monitoring the SDGs indicators.
- Will continue attracting collaborators through sharing of our data outputs and publishing it.
- Continue to present the findings from MUCHAP-IMHDSS to Makerere University Colleges, Population council, Uganda Bureau of statistics and Ministry of Health.
- Write more grant proposals to attract funds for sustainability.

Mortality in Iganga Mayuge HDSS as of 2016

The table below shows the age specific mortality rate by sex. The crude death rate was 5.9 per 1000 population. Infant mortality rate was 54.5 per 1,000 live births. Child mortality rate was 48.5 per 1,000 children aged 1-4 years.

Age-specific death rate per 1,000 population by sex, IMHDSS, 2016						
	No. of deaths			Death rate		
Age(years)	Male	Female	Both	Male	Female	Both
<1	60	50	110	59.9	54.3	57.2
01-04	54	44	98	10.9	8.9	9.9
05-09	17	13	30	2.4	1.8	2.1
10-14	7	5	12	1.1	0.7	0.9
15-19	8	8	16	1.4	1.3	1.3
20-24	8	7	15	1.7	1.4	1.6
25-29	7	6	13	2.2	1.7	2.0
30-34	9	9	18	3.8	3.3	3.5
35-39	13	8	21	6.1	3.7	4.9
40-44	8	9	17	4.5	5.0	4.7
45-49	9	8	17	6.0	5.7	5.8
50-54	9	8	17	8.9	7.8	8.3
55-59	12	8	20	16.5	10.1	13.2
60-64	6	10	16	13.5	20.7	17.3
65-69	5	9	14	15.8	22.9	19.7
70-74	11	11	22	42.8	31.2	36.1
75-79	13	9	22	76.9	33.2	50.0
80-84	9	7	16	67.2	43.2	54.1
85+	18	22	40	156.5	152.8	154.4
Total	**283**	**251**	**534**	**6.4**	**5.5**	**5.9**

Causes of death

Verbal autopsy data on signs, symptoms and circumstances leading to death, and medical history of the deceased were collected during continuous household visits from an informed household member. A total of 534 deaths were registered in 2016. However verbal autopsies were carried out on 203 deaths and coding was done by physicians using the International Classification of Disease (ICD) version 10 to ascertain causes of death.

Broad pattern of cause of death

Communicable diseases were the leading cause of death (58%). This was followed by non-communicable diseases (33%), external causes (4%), and direct maternal conditions (2%) whereas 3% was undetermined. For communicable diseases, the proportion of deaths was higher in males than females while for non-communicable diseases, deaths were more prevalent amongst the females.

Communicable diseases were the leading cause of death across all age groups whereas non-communicable diseases were most prevalent amongst adults and elderly people as per the table below.

Communicable diseases are the leading cause of death among children (0-14years) and adults (15-49 years). There is a decreasing trend in the cause of death as people grow older.

Distribution of causes of death according to age groups, IMHDSS, 2016			
Cause group	**Children (<15yrs) (%)**	**Adults (15-49yrs) (%)**	**Elderly (50+yrs) (%)**
Communicable diseases	83	42	31
Direct maternal causes	0	3.3	0
Non communicable diseases	13	35	66
External causes	2	13	3
Undetermined	2	6.5	0
Total	**100**	**100**	**100**

The risk of dying due to non-communicable diseases increase with age.

Malaria, hypertension, birth injury and or asphyxia, diabetes, pre-maturity and or low birth weight, anemia, AIDS and acute abdominal conditions are the leading causes of death for all ages. AIDS, hypertension and malaria affected females more than males while anemia affected males more than females. The table below presents the distribution of causes of death amongst males and females.

Distribution of causes of death among males and females, IMHDSS, 2016			
Cause of death	**Female (n=86)**	**Male (n=117)**	**Both (n=203)**
AIDS	5.8	2.6	3.9
Acute abdominal conditions	4.7	1.7	3.0
All other peri-natal causes	0.0	6.0	3.4
All other specified acute abdominal conditions	2.3	1.7	2.0
All other specified Diarrhoeal diseases	0.0	0.9	0.5
All other specified neoplasms	2.3	1.7	2.0
All other specified non-communicable diseases	1.2	0.9	1.0
All other specified symptoms, signs	0.0	0.9	0.5
Anaemia	2.3	5.1	3.9
Ante or postpartum hemorrhage	1.2	0.0	0.5
Birth injury and or asphyxia	4.7	6.0	5.4
Burns	0.0	0.9	0.5
Carcinomas	1.2	3.4	2.5
Central nervous system disorders	0.0	0.9	0.5
Congenital abnormalities	0.0	0.9	0.5
Diabetes	5.8	3.4	4.4
Diarrhoeal diseases	2.3	0.9	1.5
Epilepsy	0.0	0.9	0.5
Falls	0.0	0.9	0.5
Homicidal injuries	0.0	0.9	0.5
Hypertension	14.0	4.3	8.4
Ischaemic heart disease	0.0	0.9	0.5
Malaria	24.4	19.7	21.7

Malnutrition	0.0	1.7	1.0
Measles	0.0	0.9	0.5
Meningitis	0.0	0.9	0.5
Other specified unintentional injuries	1.2	0.9	1.0
Pneumonia	1.2	2.6	2.0
Prematurity and or low birth weight	5.8	3.4	4.4
Pulmonary tuberculosis	1.2	0.9	1.0
Renal disorders	0.0	0.9	0.5
Road traffic accident	1.2	1.7	1.5
Specified renal disorders	1.2	1.7	1.5
Still birth	8.1	11.1	9.9
Tetanus	0.0	3.4	2.0
Undetermined	2.3	1.7	2.0
Unspecified Acute Respiratory Infections	1.2	0.9	1.0
Unspecified Acute febrile illness	1.2	0.9	1.0
Unspecified cardiovascular disorders	2.3	0.9	1.5
Unspecified liver disease	0.0	0.9	0.5
Unspecified non-communicable causes	1.2	0.0	0.5
Total	**100.0**	**100.0**	**100.0**

Fertility

The crude birth rate in 2016 was 22.4 per 1,000 population. The birth rate was highest amongst women aged 20 - 34 years.

Age-specific fertility rate per 1,000 women aged 15-49 years, IMHDSS, 2016

Age(Years)	No. of Females	No. of births			Birth rate
		Female	Male	Both	
15-19	6080	128	143	271	44.6
20-24	4831	252	313	565	117.0
25-29	3505	220	285	505	144.1
30-34	2753	180	214	394	143.1
35-39	2152	88	104	192	89.2
40-44	1811	38	38	76	42.0
45-49	1411	3	10	13	9.2
Total	**22543**	**909**	**1107**	**2016**	**89.4**

Pregnancy outcomes

Of the pregnancies registered in 2016, 0.2% of 2,064 were terminated prematurely, 1.4% were terminated spontaneously and 1.6% resulted in stillbirths.

Pregnancy outcome, IMHDSS, 2016		
Pregnancy outcomes	**Number.**	**Percentage (%)**
Abortion	5	0.2
Live birth	1,998	96.8
Miscarriage	28	1.4
Still birth	33	1.6
Total number of pregnancies	**2,064**	**100**

Migration

In 2016, the rate of in-migration was slightly higher at 89.2 per 1,000 population than that of out migration at 57.8 per 1,000 population.

Reasons for migration

The table below presents reasons for migration by sex. Individuals mainly moved inside and outside the Demographic Surveillance Area (DSA) due to family related reasons especially marriage. Generally, in and out migration was more in females than males. In-migrants moved mainly because of family related reasons (77.9%), followed by job related (8.2%) and education- related reasons (7.5%). Out–migrants moved mainly due to family related (72%) and job-related (15.9%) reasons. Migration reasons were similar for both in and out migrants.

Reasons for migration, IMHDSS, 2016						
	In-migration			**Out-migration**		
	Female	**Male**	**Both**	**Female**	**Male**	**Both**
Family related	85.3	68.4	77.9	80.1	61.0	72.0
Security related	0.1	0.5	0.3	0.5	0.5	0.5
Housing related	1.6	6.2	3.6	2.5	8.6	5.1
Job related	4.3	13.2	8.2	10.7	23.1	15.9
Cost related	0.8	2.8	1.7	0.6	1.4	0.9
Education related	7.1	8.0	7.5	4.4	3.8	4.2
Other	0.9	0.8	0.8	1.2	1.5	1.3
Total percentage	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Total no. of migrants	**4456**	**3513**	**7969**	**3013**	**2193**	**5206**

Other Health and Social Demographic Indicators

Indicator(Absolute numbers)	2010	2011	2012	2013	2014	2015	2016
Mid-point Crude population	71127	75375	78965	82336	84466	85996	90153
Total Live Births	2311	2360	2312	2076	1779	1734	2020
Total deaths (all ages)	464	504	485	484	357	342	534
Adult population(60+)	2817	2885	2928	2983	3021	3106	3188
Gender(females)	36362	38355	40177	42018	43321	43860	45983
Under-fives	11738	12399	12707	13016	12708	11896	11825
Adolescents(10-19)	20234	21326	22297	23064	23868	24213	25195
Females(15-49)	16062	17228	18271	19405	20420	21091	22543
Peri urban	26111	28514	30385	32598	33999	34525	36784
Rural	45025	46491	48085	49561	50881	51471	53369
CALCULATED RATES/1000	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
CBR	32.5	31.3	29.3	25.2	21.1	20.2	22.4
CDR	6.5	6.7	6.1	5.9	4.2	4.0	5.9
In migration rate	102.3	94.0	85.8	46.7	21.3	67.7	89.2
Out migration rate	84.9	75.8	69.3	34.9	18.4	51.4	57.8
Net migration rate	17.4	18.1	16.5	11.8	2.8	16.3	31.3
Early neonatal MR(death in week1 of birth)	17.7	28.8	29.8	28.9	19.1	19.0	33.2
Neonatal MR	19.9	34.3	32.9	36.1	21.9	21.9	37.6
Infant MR	41.5	56.8	62.7	58.3	38.8	43.8	54.5
Child MR	42.0	39.8	38.5	40.9	30.9	43.3	48.5
Under-five MR	83.5	96.6	101.2	99.2	65.8	90.0	103.0
Adult MR	46.9	46.4	40.3	45.6	36.7	42.8	40.8
Post neonatal deaths (29 days to <1year)	21.6	22.5	29.8	22.2	12.9	21.9	21.3

The crude birth rates and the crude death rates were lower in the latest years consequently we have high mortality rates among neonates, infants, children (1-4years) and under-fives in 2016. In the same year, both in and out migration rates also increased from 67.7 to 89.2 and also 51.4 to 57.8 respectively.

MUCHAP Leadership

MUCHAP Board Members

Prof. James Tumwine
Chair of the Board.
He is a Professor of Pediatric and Child Health at Makerere University College of Health Sciences.

Prof. Edward Kirumira:
Principal, College of Humanities and Social Sciences, Makerere University and Professor of Sociology in the Department of Sociology at Makerere University-Kampala.

Mr. Goddy Muhanguzi Muhumuza
Ag. Director, Makerere University Directorate of Legal Affairs.

Prof. Charles Ibingira
Principal, Makerere University College of Health Sciences and a Professor of anatomy.

Prof. Buyinza Mukadasi
Director of Research and Graduate Training, Makerere University and a Professor of Forestry Resource Economics.

Assoc. Prof. Rhoda Wanyenze
Dean School of Public Health, Makerere University.

Assoc. Prof. Ernest Okello Ogwang
First Deputy Vice Chancellor, Makerere University in charge of academic affairs.

Mr. Joseph Maira Mukasa
Then Chief Administrative Officer (CAO), Iganga District Local Government.

Dr. Jesca Nsungwa-Sabiiti
Senior Pediatrician and Commissioner Child Health Department, Ministry of Health.

Mr. James Muwonge
Head of surveys at Uganda Bureau of Statistics (UBOS).

Dr. Mohammadi Lubega
Second Deputy Prime Minister, Busoga Kingdom

Prof. Celestino Obua
Vice Chancellor, Mbarara University of Science and Technology (MUST)

MUCHAP staff

Name of staff	Designation
Administration	
Dr. Dan Kajungu	Executive Director/Centre Leader
Edward Galiwango	Site Operations Coordinator
Nanyonga Lillian	Administrator
Kagulire Fred	Finance Manager
Kibuuka Michael	Accountant
Field	
Judith Kaija Nanyonga	Field Manager
Ndyomugyenyi Donald	Quality Control Assistant
Musa Waibi	Verbal Autopsy (VA) Supervisor
Teefe Shafique	VA Field Assistant
Ochomo Dan	VA Field Assistant
Kirunda Hakim	Migration Tracking Field Assistant
Kakaire Charles	Pregnancy Monitoring Assistant
Bashir Madambo	Communications Officer
Data	
Tusubira Valerie	Data Manager
Tryphena Nareeba	Data Management Assistant
Natukwatsa Davis	Data Management Assistant
Gyezaho Collins	Information Technology (IT) Officer
Taitika Shamusi	Data Entry Supervisor
Mwase Rahim	Data Entry Clerk
Nabukeera Carol	Data Entry Clerk
Nasiyo Emily Keddi	Data Entry Clerk
Basirika Asher	Data Entry Clerk
Mbalango Ausi	Data Entry Clerk
Malinzi Najib	Filing Clerk
Support staff	
Wabakamu James	Driver
Kakulu Gilva	Driver
Babirye Fatuma	Office Assistant
Lwabaga Gulamuseni	Security Guard
Ofwono Peter	Security Guard
Sunday Isma	Security Guard

Some of the MUCHAP-IMHDSS full time staff

Site Leaders of Iganga-Mayuge HDSS since its inception

No	Name	Year
1	Prof. George William Pariyo	2004-2010
2	Prof. Elizeus Rutebemberwa	2010-2013
3	Prof. David Guwatudde	2013-2014
4	Prof. Fred Wabwire-Mangen	2015-2016
5	Dr. Dan Kajungu	2016 to date

Past and Present funders of MUCHAP - IMHDSS

- Swedish International Development Cooperation Agency -Swedish Embassy Uganda (core)
- Swedish Research Council (project)
- National Drug Authority (project)
- ERASMUS/ITM Antwerp Belgium (project)
- European Union (project)
- Rockefeller Foundation (project)
- Save the Children Fund - USA (project)
- The Welcome Trust Joint Research Grant to INDEPTH sites (project)
- TDR/WHO (project)
- African Malaria Network - AMANET (project)
- AERAS TB Foundation - USA/EDCTP (project)
- INDEPTH Network (project)
- Canadian Grand Challenge (project)

Visitors to MUCHAP-IMHDSS (June 2017-July 2018)

Name	Institution
Lubowa Gyaviira	Makerere University DRGT
Lwanga Charles	Makerere University DRGT
Frank Delpizzo	Bill and Melinda Gates Foundation
Tumusime Lawrence	Mak-SIDA
Twinamatsiko Andrew	Mak-SIDA
Peter Kirya	Mak-SIDA
Joseph Akuze	MakSPH
Doris Kwesiga	MakSPH
Everlyn Waweru	ITM, Belgium
Gonza K. Paul	MildMay Uganda
Enock Wekiya	MildMay Uganda
Namitala Eve	MildMay Uganda
Benjamin Muziru	MildMay Uganda
Henry Nsubuga	Makerere University
Dr. Peter Turyakira	Makerere University CoBAMS
Justin Gibson	John Hopkins University
David Mukanga	Bill and Melinda Gates Foundation
Sindula Ganapath	Bill and Melinda Gates Foundation
Simon Kasasa	MakSPH
Nukhba Zia	John Hopkins University
Ameba Mehmood	John Hopkins University
Dr. Tweheyo Raymond	MakSPH
Amongin Martha	Jim Roberts and Associates-CPA
Mugagga Berna	Jim Roberts and Associates-CPA
Kayana Jean-Phillipe	New York University
Antony J. Donedic	New York University

Shalom Igwe	New York University
Ashley Alero Umukoro	New York University
MUCHAP Board Members	Makerere University, Mbarara University of Science & Technology (MUST), UBOS, Iganga District Local Government among others.
Beatrice Amuge	Makerere University
Assoc. Prof. Rwenyonyi	MakSPH
Charles Ssemugabo	MakSPH
Lwot Stella	MakSPH
Helena Kolling	Embassy of Sweden
Aggrey Mushabe	Embassy of Sweden
Adaeze Wosu	John Hopkins University
Ankita Meghani	John Hopkins University
Dr. Ezekiel Mupere	Makerere University
Hannah Pesh	University of Copenhagen-Denmark
Dr. Hannifah Nambuya	Jinja Regional Referral Hospital
Henrik Eriis	University of Copenhagen-Denmark
Benedikte Grevon	University of Copenhagen-Denmark
Sanyu Namata	Kampala
Dowson Kalemba	Kampala
Grace Nuwamanyi	Kampala
Dr. Banga Margaret	Makerere University
PhD researchers	CARTA program

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Partners of MUCHAP- Iganga Mayuge HDSS

Embassy of Sweden
Kampala

THE REPUBLIC OF UGANDA
Ministry of Health

INDEPTH Network
Better Health Information for Better Health Policy

UBOS

unicef

Karolinska Institutet

Safe Drugs Save Lives

LUND UNIVERSITY

JOHNS HOPKINS BLOOMBERG SCHOOL of PUBLIC HEALTH

Save the Children

NYU COLLEGE OF GLOBAL PUBLIC HEALTH

World Health Organization

Field research site location

Iganga town next to Iganga District Health Building Department,Saza Road-Iganga Municipality, Iganga District

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