MCHN ACTIVITY

Exploring enablers and barriers for first-trimester ANC attendance in public health facilities in Kampala

The USAID MCHN Activity is a five-year program funded by USAID/Uganda to improve maternal, newborn, and child health, and nutrition (MCHN) outcomes in Uganda. It is implemented by a consortium led by FHI 360 that includes EnCompass LLC, Makerere University School of Public Health, Save the Children, and the Uganda Healthcare Federation.

Background

An estimated 343 maternal deaths per 100,000 live births and 19 neonatal deaths per 1,000 live births occur in Uganda annually.[1] Most of these deaths are preventable and many conditions that lead to later complications and deaths can be detected during antenatal care (ANC) visits.

Every pregnant woman should receive interventions that promote maternal health and well-being of the unborn baby during pregnancy. The ANC service platform provides the opportunities to deliver these critical services. The World Health Organization (WHO) recently introduced a new ANC model that recommends eight contacts during pregnancy to ensure a positive pregnancy experience for the pregnant women.[2] This is an increase from the previous model which recommended four visits.

In Uganda, 97% of women receive at least one ANC contact with a skilled provider during pregnancy but only 60% complete at least four ANC visits.[3] During these contacts, women are expected to receive clinical care, health education, and nutrition interventions, and the visits are opportunities for prevention and early detection of pregnancy complications. During ANC, women with underlying morbidities that might affect pregnancy outcomes—such as diabetes, malaria, and HIV—receive testing, treatment, and counseling to support positive outcomes.

In Uganda, fewer than one-third (29%) of women received their first ANC visit during the first trimester. Receiving the first ANC contact within the first trimester (12 weeks of gestation) is vital for early detection, management, and prevention of risks that might occur during the

[1] UNICEF. 2016. Maternal and Newborn Health Disparities Country Profiles: Uganda. https://data.unicef.org/wp-content/uploads/country_profiles/Uganda/country%20profile_UGA.pdf
[2] World Health Organization (WHO). 2016. WHO recommendations on antenatal care for a positive pregnancy experience.
[3] Uganda Bureau of Statistics. 2016. Uganda Demographic and Health Survey.

pregnancy period.[4] During this first visit, the following are among the services that should be provided: registration of pregnancy and pregnancy history; screening for HIV and other diseases; provision of insecticide-treated nets and counseling on their use; administration of daily elemental iron and folic acid (with 30 mg to 60 mg of elemental iron and 400 g [0.4 mg] of folic acid);[5] ultrasound scanning for gestational dating and counseling on when to return for a visit at 13 to 16 weeks to receive the first dose of intermittent preventive treatment of malaria.

First-trimester ANC is also important for timely provision of relevant information and psychosocial support. In addition, it sets the stage for required interventions based on pregnancy history and clinical status of the mother.[6]

USAID's Maternal Child Health and Nutrition (MCHN) Activity has tracked first-trimester ANC attendance in public and private health facilities in Kampala since January 2020. In Kampala, 21% of women registering for ANC do so within the first trimester, below both the national average (29%) and the national target (50%) (project data). However, disaggregated data show some health facilities, such as Kiswa HC III, consistently report higher first-trimester ANC attendance (Table 1). This calls for a detailed facility case study to understand the facilitators and to inform programming for improved ANC service delivery in Kampala and elsewhere in the country.

Table 1. Number and percent of women attending first ANC visit within first trimester

Health care facilities	Oct-Dec 2020			Jan-Mar 2021			Apr-Jun 2021		
	first ANC	first ANC early	% early ANC	first ANC	first ANC early	% early ANC	first ANC	first ANC early	% early ANC
Facilities reporting above national average									
Kisenyi HC IV	3,835	1,161	30%	4,167	1,017	24%	3,954	1,013	26%
Kisugu HC III	1,119	549	49%	1,248	345	28%	1,345	549	41%
Kiswa HC III*	1,218	430	35%	1,384	373	27%	1,306	593	45%
Kitebi HC III	1,866	504	27%	2,330	506	22%	1,745	483	28%
Facilities reporting below national average									
China Uganda Friendship (Naguru) RRH	1,466	154	11%	1,021	216	21%	1,980	279	14%
Kawaala HC III	2,554	607	24%	2,891	589	20%	2,900	503	17%
Kawempe NRH	1,976	60	3%	2,347	159	7%	2,063	108	5%
Komamboga HC III*	1,577	333	21%	1,166	237	20%	1,565	292	19%

NRH=national referral hospital; RRH=regional referral hospital; HC=health center

Orange cells = facilities that consistently report low early ANC; green cells = facilities that report higher early ANC.

*study facilities

[4] Alemu 2018

[5] WHO. 2016. WHO recommendations on antenatal care for a positive pregnancy experience.

[6] WHO. 2016. WHO recommendations on antenatal care for a positive pregnancy experience.

Study objectives

Makerere University School of Public Health (MakSPH), a consortium member of USAID's MCHN Activity, conducted a qualitative study to assess the enablers and barriers of first-trimester ANC attendance at two selected public health facilities (one good- and one poor-performing facility) in Kampala to document best practices and to inform improved ANC service delivery in Kampala.

Specific objectives

In one high-performing and one poorly performing public health facility in Kampala:

1. Describe the ANC processes
2. Explore the health facility best practices and barriers to first-trimester ANC attendance
3. Explore the client-related enablers and barriers to first-trimester ANC attendance

METHODOLOGY

The study was conducted at two public health facilities: Kiswa and Komamboga HC III, which are two of the facilities in Kampala Capital City (KCC) where USAID's MCHN Activity has prioritized strengthening maternal, newborn, and child health and nutrition services. We held in-depth interviews with purposively selected women attending ANC, in two categories: those who attended in the first trimester and those who did not. Each facility had two midwives on duty at the time of the study visit. We selected the most senior/qualified midwife in each facility for the interview.

RESULTS

We interviewed 30 women: 14 from Kiswa HC III including seven early ANC attendees, and 16 from Komamboga HC III including eight early ANC attendees (Annex 1). We interviewed one health worker from each facility who was involved in providing ANC. The pregnant women's sample was one of convenience, with those available and willing to participate chosen. Among those who agreed to participate, we purposely sampled for different ages.

Women's description of ANC and its benefits

The majority of women interviewed had knowledge about what ANC is and its benefits, both perceived and those they had experienced. Only one respondent did not have any understanding of what ANC involved.

Women understood that ANC includes:

- Health education on behavior during pregnancy including nutrition, hygiene, and advice on danger signs and how to treat them
- Planning for and learning about delivery, including what kind of delivery one may have
- Learning about the condition/health of your baby; looking after the baby in the womb; knowing the baby's position in the womb; avoiding malformations
- Testing for HIV and starting on medication if one is positive
- Getting medicine for malaria, iron, "blood" (avoiding anemia commonly referred to this way in Uganda), and any infections, among other treatments
- Knowing the health status of the mother
- Knowing the age of the pregnancy

Knowledge on the importance of early ANC attendance

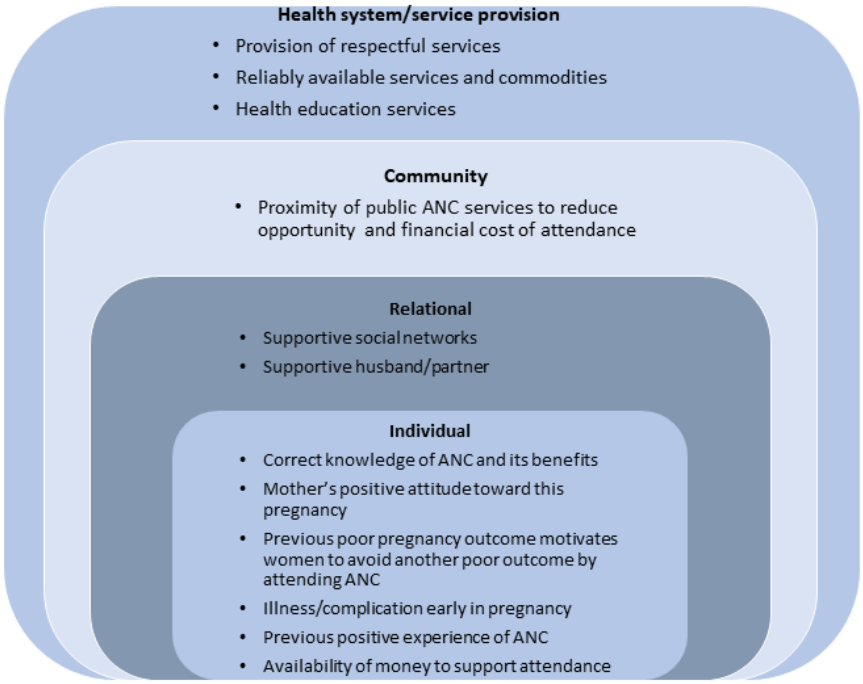
- Saves mothers from losing their pregnancy
- Prevents HIV transmission to the baby
- Avoids negative outcomes later

There were discrepancies in knowledge of when to begin ANC

Some women who attended ANC early gave contradictory answers on how early one should attend ANC—mentioning times later than the first trimester.

Enablers of early ANC attendance

We categorized enablers and barriers according to the socioecological model[7] that focuses on health promotion. The model states that for health interventions to succeed, a multiplicity of factors are at play, including individual, relational, community, and societal.



Although one facility was performing well consistently with first-trimester ANC and the other was not, the enablers discussed in this section are remarkably similar across respondent groups, with most reasons mentioned by respondents in both facilities.

Individual level factors

Correct knowledge of ANC: Similar to health education from facilities, many women who went for ANC in the first trimester explained that they did so because they were aware about the need to attend ANC early and the benefits therein. This knowledge was gained through different channels, including television, radio, social networks, and health workers.

Mother's attitudes: Positive attitudes toward the pregnancy, for instance being eager to know the health of the baby and mother and ensure positive outcomes; avoid passing on diseases to the baby; find out one's HIV status, all encourage early attendance. Many women also shared that with a first-time pregnancy, they were often highly motivated to go for ANC earlier due to eagerness and anxiety. In two instances, women explained their early ANC attendance was done with the intention of getting the ANC card which is needed when one is going to deliver.

Negative pregnancy experience: Women who fell very sick at the start of the pregnancy ended up attending ANC early to receive treatment and ensure all was okay. Closely related to this was previous bad experience of pregnancy loss or undergoing a cesarean section that made one

[7] McLeroy KR, Bibeau D, Glanz K. 1988. An Ecological Perspective on Health Promotion Programs. Health Educ Q. 15(4):351-77.

more anxious about pregnancy, resulting in early attendance of ANC to avoid repeated loss or operation.

Previous positive benefits of early ANC: In a few cases, women highlighted they were quick to attend ANC because they had previously experienced the benefits of early ANC. One shared that although she was HIV positive, through early attendance she had been able to have HIV-free children. A few others mentioned getting treatment early stabilized the mother's health and/or saved the baby's life

Availability of money: This was among the most mentioned reason for women's early ANC attendance. If one has money for their transport to and from the facility, for meals during the long hours spent there during ANC and for other supplies often required before physical examination—for instance, gloves, mackintosh sheeting, and often for the ultrasound scan—then they are able to come for ANC early enough. Financial stability in turn affects the number of ANC visits women make; ones with more money attend earlier and thus more times.

Relational factors

Supportive social networks: Social networks play instrumental roles in increasing early ANC attendance. Among the most mentioned was having a supportive husband partner who provides money for transport to ANC, encourages the woman to go for ANC, and makes an intentional decision for the woman to attend ANC early, or takes her there, as happened in some cases. Some men were noted to advocate for early attendance and push the sometimes hesitant lady to go early. Additionally, neighbors, friends, and relatives (parents, sisters) were mentioned for various reasons including teaching mothers about ANC and the benefits of early attendance, encouraging them to go early and occasionally providing financial support, e.g., for transport, or actually escorting them to the health facility.

Community factors

Accessible public health facilities: For women living near/with easy access to public health facilities, early attendance was easier because they did not have to walk long distances or spend a lot of money on transport. This factor is closely related to the issue of financial accessibility described above.

Health facility/health system factors

Respectful care: Respondents mentioned the facility having a good reputation in the community as a big influencer of women's early ANC attendance. By word of mouth women were referred to these health facilities where health workers were reputed to provide good and kind care and spoke well to mothers. A facility's positive reputation beyond ANC services can influence women's choices; for example, some women came to Komamboga for ANC because they were handled well during Covid-19 vaccination or during immunization of other children.

Therefore, good service delivery has a ripple effect through word-of-mouth referral between and among women.

Available services and commodities: If women are sure they will find drugs and other services available free of charge, then they are more motivated to go to the facility early enough, according to the women interviewed. Other incentives such as expected receipt of mama kits were mentioned. When assured of quick service delivery, women are more eager to attend ANC. One key service pointed out was the need for a low-cost ultrasound scan.

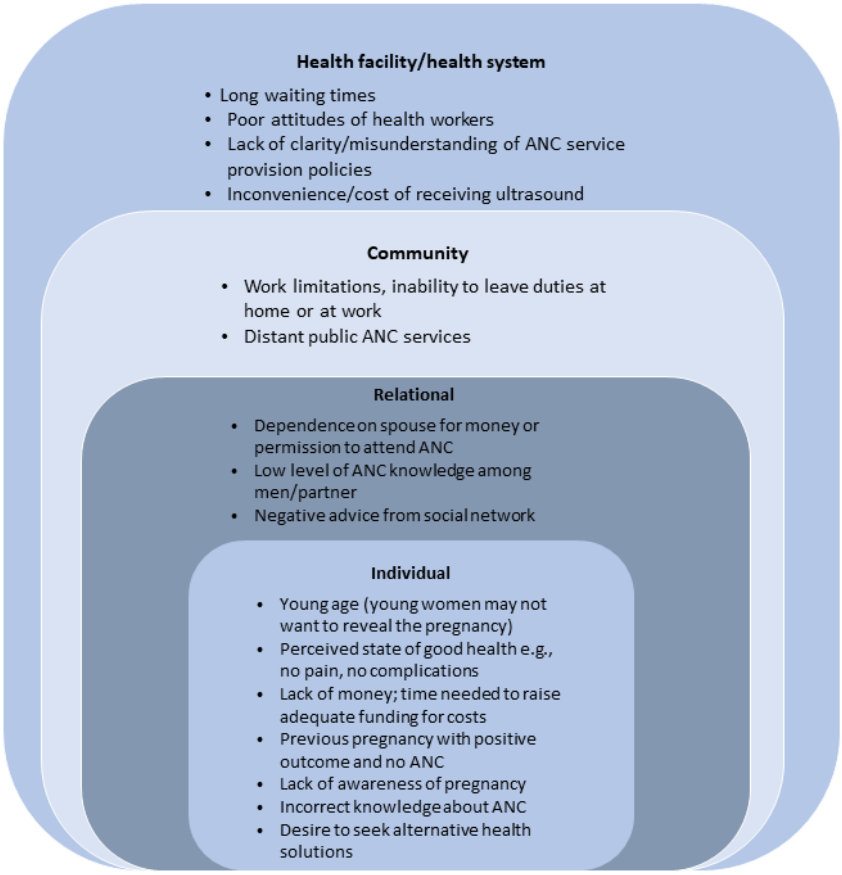
Health education: Respondents indicated that health facility outreaches are a source of information about ANC, particularly those ones including information on importance of early ANC. This prompted them to come within the first trimester or as soon as they knew they were pregnant. One health worker from Komamboga HC mentioned that volunteer health teams (VHTs) mobilized and sensitized the community ahead of the outreach to ensure attendance.

Best practices by health facilities (observed by the researchers)

- Having separate days for new mothers and for re-attendances
- Separate ANC days for young mothers aged 15–24 years
- Joint health education that saves time

Barriers to early ANC attendance

Individual level factors



Woman's age: A few women (of various ages) pointed out that young women tended to hide the pregnancy from their parents due to fear, thus only going for ANC when the parents have found out.

Woman's perceived state of good health: In many cases, women indicated that they, or other women, did not attend ANC early because they were in good health and did not have any pain, complications, or problems with the pregnancy. The underlying belief is that if they are fine then so is the baby. This was partially linked to the avoidance of multiple trips for ANC and the expenditure necessitated.

Financial: Among the most common barriers shared by participants was lack of money to go for ANC. This included money for transport, for refreshments (since one often spends many hours at the health care facility), for materials and supplies required before the woman can be examined (e.g., gloves, mackintosh for the bed, books for ANC records), and money for tests and the scan. Therefore, women go late to ANC because they are trying to first save enough money. Some women are struggling financially because they have been abandoned by the child's father, are not working, working part time, or earning little income. For similar reasons, most women choose to come for ANC fewer times so that one spends less money; therefore, women prefer to start their visits late because multiple visits are costly.

Previous pregnancy experiences: Where women already had other children, or in cases where they had successfully gone through previous pregnancies without early attendance of ANC, some reported being confident about the pregnancy and not worried about late attendance of ANC. One respondent attributed this to knowledge of danger signs among mothers who already have children, thus indicating no need to seek ANC early unless there is danger.

Lack of awareness that one was pregnant: In a few instances, women were not aware that they were pregnant until after the first trimester, including some who were using family planning. This was confirmed by one health worker. One mother mentioned that five months is when one could be sure they were pregnant and thus start attending ANC.

Incorrect/lack of knowledge of ANC: Many women were not sure when ANC should start. Some assumed that in the early stages of pregnancy one does not require ANC attendance. One respondent explained people did not see the value in early ANC attendance, possibly indicating a gap in knowledge.

All women were asked what they knew as the appropriate time to attend ANC. However, we noted a contradiction between knowledge and behavior, where some of the women who attended ANC late responded that ANC should be embarked on immediately upon finding out they were pregnant. Furthermore, one health worker noted that women thought they must only attend ANC in one facility, particularly the one where they wanted to deliver. Therefore, for instance, if a woman travelled to another district, she often waited to resume ANC until she returned to the one she had been attending in Kampala.

Seeking alternative health solutions: Although many women reported using herbs to provide them with energy during pregnancy and for an easier birth process, they did not indicate that was a barrier to their early ANC entry. Only one woman mentioned that herbs stopped early attendance of ANC.

Relational factors

Spousal dependence: Often, the woman must wait for the husband or father of the baby to give her the money to go for ANC, constraining her in terms of when she starts ANC even if she wanted to come early. Women explained that sometimes their partners said they did not have the money. A few women mentioned that decision-making around when and where to start ANC was led by the spouse/partner, so they could not attend ANC until the man said it was okay.

Spousal/partner knowledge/value of ANC: Through our respondents, we identified a gap in the knowledge of some men about the importance and value of ANC, including in the earlier stages of pregnancy. For instance, one woman explained that men sometimes refused ANC attendance because they did not see what was going to be checked until the pregnancy was visible. This was corroborated by one health worker.

Negative advice from social networks: Women reported at times being deterred from ANC by information received from other women, for instance, their neighbors, friends, and in-laws. This information included discouragement about the long queues at the health facilities, advice to delay going for ANC until about six months of pregnancy, and not to go if they were without pain. Sometimes those dissuading first-time mothers from ANC were themselves mothers. These other mothers said that as they had more deliveries they would be less fearful and thus not need to go early for ANC, or that they had given birth many times without attending ANC.

Community factors

Work limitations: Many women were busy with work ranging from employment to their own domestic work at home. For those who were employed, it was noted that sometimes bosses deny women permission to attend ANC, and if they leave they could be fired from their jobs, causing delays in attendance. Some others have businesses that they cannot easily leave, more so since ANC waiting time is often expected to be long.

Distant public health facilities: Women who lived far from public health facilities found it difficult to embark on ANC early. This was partially linked to the need to have transport money, or to economize by limiting ANC visits or to walk as an alternative mode of transport. The private health facilities that conduct deliveries charge money for ANC visits and so some women must travel further to reach free facilities.

Transport to the health facility for ANC

We inquired of each respondent the amount of money they had spent to come for ANC. On average, most spent between 1,000–3,000 Uganda shillings on a one-way trip. Two mentioned amounts of 6,000 Uganda shillings and above. The most common mode of transport used was *boda boda* (commercial motor bikes), while a few walked or used taxis; one woman was dropped at the health facility by her husband.

Health facility/health system factors

Long waiting time: Women are discouraged by the long queues and slow service provision at the public health facilities. When they expect to spend hours waiting to complete ANC, they postpone the visit due to this fear and dread. This is worsened by the general feelings of sickness or weakness during pregnancy that make one less inclined to sit for long periods waiting for services. It was pointed out by both women and health workers that first-time attendees underwent more processes and therefore spent an even longer time than re-attendances. While it was pointed out that many mothers were at these health facilities, there were notably very few health workers dedicated to ANC, for instance having only two midwives attending to as many as 80 clients per day. Further, the women complained that health workers started work as late as 10 a.m., yet clients sometimes arrived at 7 a.m. or before. Having the same health workers attending to both new and old clients was seen as further increasing the waiting time.

Poor attitudes of health workers: Among the facility barriers frequently mentioned by women was the fear of rude health workers who reportedly shouted at or abused them or were quarrelsome. However, the bulk of women when asked about the service provision in the health facilities expressed satisfaction with ANC care received.

Lack of clarity/misunderstanding of ANC service provision policies: One woman went early to Kawempe NRH but she was sent away because she was not among the people who should attend ANC at Kawempe NRH (young mothers, possible cesarean clients, and those with

conditions like hypertension). However, she was not aware of this policy, and having used her transport money to get to Kawempe NRH, she had to wait another three months before going for ANC at Komamboga Health Center. Another woman mentioned that many women delayed starting ANC because they did not have men to attend ANC with them, which they incorrectly believed was a requirement.

Inconvenience and high cost of ultrasound scan: Many women reported the high cost of ultrasound scans. For instance, at Komamboga HC women are sent to private clinics for scans which cost between 20,000 and 30,000 Uganda shillings. Women felt that was high and majority suggested 10,000 Uganda shillings as reasonable. Further, they preferred for the service to be provided at the public facility where they received ANC. The facility bought an ultrasound machine using results-based financing (RBF) funds but had not been able to get sustainable funding to pay for the sonographer and necessary supplies.

Recommendations to increase early ANC attendance

	Stakeholder to intervene				
Recommendation	Health facility	USAID's MCHN Activity	Other USAID IPs	KCCA	MOH
Reorganization of ANC services to reduce wait times and thus time away from home/work, cost of refreshments, etc.					
• Extended hours - evening and weekends (short term)	√		√	√	√
• Increased staffing of health facilities that serve urban populations (long term)				√	√
• Mobile vans conducting ANC in communities to reduce numbers at the facilities, reduce access challenges, and reduce costs on the woman's side		√			
• Separate queues/staffing for first-time ANC attendees vs. re-visits	√				
Strengthened health education messaging and awareness creation					
• Health facilities to leverage available service points beyond maternity to conduct ANC or provide information, e.g., at the outpatient department. Information should be for women and men, and include family planning counseling.	√	√			
• Awareness creation at community level, including men and other key social groups. This can be done using multiple modes of outreach—mobile vans, door-to-door campaigns, churches, and markets.		√	√		
• Expanded reach of community outreaches and increased emphasis within them of benefits of early ANC attendance	√			√	
• Village health teams to reinforce messages on early ANC attendance			√		
Provision of respectful care					

Strengthened interpersonal communication skills, counseling skills of providers	√				
Provider use of local languages to pass on ANC information creatively, e.g., through recorded messages and posters	√	√	√		
Management of commodities					
• Mentoring and supporting health facilities with commodity management, for example, requisitions, priority management, prioritization and how to work with available resources		√			
Community interventions specifically targeting teenage/adolescent girls					
• Health facilities having young people's counselors to provide improved psychosocial support services		√	√	√	√
• Work with peer mothers to extend services in the community purposefully for adolescents		√	√		
• Health workers should have clear information on where to refer adolescents for various required services, for instance linkage to income-generating projects ○ Create a list of such organizations within and around Kampala in different divisions with clear contact information and post this in health facilities	√	√			

Conclusion

Early attendance of ANC is influenced by multiple factors on both the health facility and clients' side. Client factors also further play out at individual, relational, and community levels. More so, while some factors are underlying, they are further modified by other 'barriers'. Therefore, multidimensional approaches are required.

Annex 1: ANC service delivery in the study facilities

	Kiswa	**Komamboga**
Schedule	• ANC for 5 days, Monday–Friday: 9:00 am-5:00 p.m. • Average time: 4 hours for first timers; 10–20 minutes for others	• Mondays and Wednesday: new mothers • Thursday and Tuesday: reattendances (process not yet perfect but trying to stick to schedule) • Friday: young mothers 24 years and below • ANC starts at 8 a.m. or by 9 a.m. up to 5 p.m. or 6 p.m., sometimes 7 p.m.
Services	• Health education on dieting, danger signs, etc. • Booking—check for history, e.g., parity, bio data, pregnancy history, etc. • Examination—palpating, establishing GA, edema, anemia; measure vitals BP, HT, WT; nutrition assessment • See them monthly/give return dates according to examination results. • Give calcium/folic acid—1st trimester • Give ferrous, sulphate calcium to 2nd trimester and antibiotics in case of any infection • Investigations—e.g., blood group, blood count (refer to Naguru if found anemic), urinalysis, hepatitis B. Vaccinate if negative; if positive give medication but test husband as well • For previous scars and high blood pressure refer them to Naguru.	Joint health education for the re-attendances, take the vitals (weight, pressure, and palpation), treatment • All are registered in the antenatal book • Give them drugs if available and they buy the expensive ones First-time attendees, after health education: • Book them in; assess high-risk mothers • Do pre-test counseling, HCT forms are filled, then the HIV testing is done • Should do also the HB, malaria tests, but those kits are not there • Conduct physical exam • Refer those at risk and manage others who are not • Put in the antenatal register and then discharged
Number of health workers	2 for ANC section	3 midwives

Annex 2: Sociodemographics of women clients interviewed

No.	Age	Parity	Gravidity	Education	Occupation/ Employment	Marital status	Residence	Complex pregnancy history	ANC attendance	Facility
1	27	1	2	Primary 6	Business-hotel	Married	Luzira	None	Early	Kiswa HC III
2	25	0	1	Senior 4	Tailoring	Married	Bugolobi	None		
3	21	1	2	Senior 1	Business	Married	Nakawa	None		
4	20	1	2	Senior 2	Housewife	Married	Bugolobi	None		
5	19	3	4	Senior 2	None	Married	Kitintale	Premature birth		
6	30	2	3	Senior 4	Housewife	Married	Banda	None		
7	26	1	2	Senior 6	None	Separated	Bugolobi	Caesarean		
8	26	0	1	Senior 6	Business	Married	Mutungo	None	Late	
9	24	0	1	Senior 4	Security guard	Married	Bugolobi	None		
10	27	2	3	Senior 2	Housewife	Married	Nakawa	None		
11	22	2	3	Primary 4	Housewife	Married	Mutungo	Caesarean		
12	24	1	2	University	None	Married	Nakawa	None		
13	21	1	2	Senior 1	Housewife	Married	Bugolobi	Caesarean		
14	35	3	4	Senior 3	Hotel attendant	Married	Mutungo	Miscarriage		
15	22	0	2	Senior 4	Salon staff	Married	Kawempe Tula	Miscarriage	Early	Komamboga
16	22	0	1		None	Married	Komamboga	None		
17	20	0	2	Primary 7	None	Not married	Kanyanya	Miscarriage		
18	20	0	1	Doing diploma	Extension worker	Not married	Hostel nearby	None		
19	29	2	4	Senior 3	None	Married	Kanyanya	Neonatal death		
20	23	0	1	Senior 1	Business	Married	Kanyanya	None		
21	20	0	1	Senior 3	None	Married	Kirokole	None		
22	36	2	3		Nurse			None		
23		2	3	Primary	None	Married	Kalerwe	None	Late	
24	33	2	3	S.4 + teaching certification	Teacher	Married	Namere	None		
25	23	0	1	Senior 4	None	Married	Mpererwe	None		
26	19	1	3	Senior 2	None	Not married	Komamboga	Miscarriage		
27	23	1	2	Primary 7	Business	Not married	Kawempe	None		
28	20	0	1	Primary 5	None	Married	Kirokole	None		
29	23		2	Primary 7	Restaurant staff	Not married	Kanyanya	Bad body aches		
30	22		3	Senior 3	None		Kizingiza			

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