Supplementary Material

S1. Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist

No. Item	Guide questions/description	Reported on Page #
Domain 1: Research team and reflexivity		
Personal Characteristics		
1. Inter viewer/facilitator	Which author/s conducted the interview or focus group?	Page 4
2. Credentials	What were the researcher's credentials? E.g. PhD, MD	Page 4
3. Occupation	What was their occupation at the time of the study?	Page 4
4. Gender	Was the researcher male or female?	Page 4, Female
5. Experience and training	What experience or training did the researcher have?	Page 4
Relationship with participants		
6. Relationship established	Was a relationship established prior to study commencement?	Page 4
7. Participant knowledge of the interviewer	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	Page 4
8. Interviewer characteristics	What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	Page 5

Domain 2: study design		
Theoretical framework		
9. Methodological orientation and Theory	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	Page 5
Participant selection		
10. Sampling	How were participants selected? e.g. purposive, convenience, consecutive, snowball	Page 4
11. Method of approach	How were participants approached? e.g. face-to-face, telephone, mail, email	Page 4
12. Sample size	How many participants were in the study?	Page 5
13. Non-participation	How many people refused to participate or dropped out? Reasons?	Page 16
Setting		
14. Setting of data collection	Where was the data collected? e.g. home, clinic, workplace	Page 4
15. Presence of non-participants	Was anyone else present besides the participants and researchers?	Page 4
16. Description of sample	What are the important characteristics of the sample? e.g. demographic data, date	Page 6
Data collection		
17. Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	Supplementary materials
18. Repeat interviews	Were repeat interviews carried out? If yes, how many?	Page 4
19. Audio/visual recording	Did the research use audio or visual recording to collect the data?	Page 5
20. Field notes	Were field notes made during and/or after the inter view or focus group?	Page 5
21. Duration	What was the duration of the inter views or focus group?	Page 4
22. Data saturation	Was data saturation discussed?	Page 5
23. Transcripts returned	Were transcripts returned to participants for comment and/or correction?	Page 5
Domain 3: analysis and findings		
Data analysis		

24. Number of data coders	How many data coders coded the data?	Page 5
25. Description of the coding tree	Did authors provide a description of the coding tree?	Page 5, supplementary material
26. Derivation of themes	Were themes identified in advance or derived from the data?	Page 5
27. Software	What software, if applicable, was used to manage the data?	Page 5
28. Participant checking	Did participants provide feedback on the findings?	Page 5
Reporting		
29. Quotations presented	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	Results
30. Data and findings consistent	Was there consistency between the data presented and the findings?	Results and Discussion
31. Clarity of major themes	Were major themes clearly presented in the findings?	Results: three interrelated themes
32. Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	Results: Subthemes under each major theme

S2: Anticipated recruitment

Target category	Data collection method	Anticipated # of interviews	Anticipated # of participants
Pregnant women attending ANC	Focus group discussions	4 (5 participants)	20
Male partners	Focus group discussions	2 (5 participants)	10
Community leaders (local leaders, religious leaders, VHTs)	Focus group discussions	2 (5 participants)	10
Women who experienced a stillbirth	In-depth interviews	4	4
Women who experienced a positive outcome	In-depth Interviews	4	4
Women who were lost to follow-up	In-depth interviews	4	4
Men who asked their partners to withdraw from the study	In-depth interviews	4	4
Healthcare providers in ANC clinics and iTECH	Semi-structured interviews	21 (Obstetricians-6, Arteriography-3, USCOM-3, Ultrasound-3 Midwives/nurses-4 Field Officers-2	21
Hospital managers	Key informant interviews	4	4
Total			81
Target category	Data collection method	Anticipated # of interviews	Anticipated # of participants
Pregnant women attending ANC	Focus group discussions	4 (5 participants)	20
Male partners accompanying their wives	Focus group discussions	2 (5 participants)	10

Community leaders (Local leaders, religious leaders, VHTs)	Focus group discussions	2 (5 participants)	10
Women who experienced a stillbirth	In-depth interviews	4	4
Women who experienced a positive outcome	In-depth Interviews	4	4
Women who were lost to follow-up	In-depth interviews	4	4
Men who asked their partners to withdraw from the study	In-depth interviews	4	4
Healthcare providers in ANC clinics and iTECH	Semi-structured interviews	21 (Obstetricians-6, Arteriography-3, USCOM-3, Ultrasound-3 Midwives/nurses-4 Field Officers-2	21
Hospital managers	Key informant interviews	4	4
Total			81

S3: Data collection tools

MAKERERE UNIVERSITY 1922 - 2022

iTECH Preventing Stillbirths

INTERVIEW GUIDE FOR WOMEN AND MEN

Title of the study: Stillbirth in High Burden Settings: Ample Room for Improvement using Biomarkers and Ultrasound Technologies (iTECH)-Qualitative

Collect information on: Age, parity, occupation, marital status, education

SECTION A: Women who experienced a stillbirth

We are very sorry for your loss, and we appreciate this is a very difficult time for you and your family. This interview is for women who experienced the loss of their baby during pregnancy to understand more about your experience within the healthcare centre.

Experiences with stillbirth

a. Please tell me about your experience learning about the loss of your baby.
b. Did you feel cared for by the healthcare staff when you found out about the loss of your baby?
c. Were you able to share about your loss with others? If so, did you receive support? How did others respond to your loss?
d. What kind of support did you receive from the healthcare center or hospital? From the community? How did you cope after?
e. How can health centre/hospital can support women better who are experiencing stillbirth?
f. How can the hospital improve care in finding pregnancy complications early in pregnancy?

Early antenatal care seeking

a. How far along was your pregnancy at your first antenatal visit? Why in this period?
b. To obtain accurate gestational age (GA) assessment, a woman should have their first antenatal visit by the first 2-3 months of their pregnancy) but quite a number of them come beyond this time. Explain the reasons why women do not seek antenatal care early?
c. Are there any risks that you know if a mother does not seek antenatal care services early?
d. In your opinion, what can be done to encourage women to seek antenatal services early?

Perspectives on medical technologies

a. On the first time ANC visit at 11-14 weeks, you underwent gestational assessment to determine the correct age of the baby. Could you please tell us about your experience? What aspects of this assessment did you like or did not like? What concerns did you have?
b. On one of your visits, were you tested for pressure?
c. If yes, can you please tell us about your experience? What aspects did you like and did not like?

d. If no, the study is proposing to introduce tests to check for blood pressure and stiffness of the blood vessels using a tool that is embedded into the ultrasound machine) that can accurately estimate gestational age. What are your thoughts about this assessment?
e. At delivery, some women can be asked to collect the placenta and cord blood to further investigate the causes of death of the baby within the womb. What are your thoughts? What are your concerns?
f. If the tests are introduced in your local health center, would mothers easily accept them? Why? How can hospitals ensure challenges are addressed and women can easily accept the services?

We value the time you have taken to share your thoughts and experiences with us. Thank you

SECTION B: Women who had a positive pregnancy experience

Experiences with stillbirth

a. Have you ever experienced stillbirth?
b. How would you describe a stillbirth experienced by pregnant women?
c. In your opinion, what are the causes of stillbirth among pregnant women?
d. After experiencing stillbirth, what kind of support do women receive from the hospital? From the community? How do they cope after?
e. Are there ways the hospital can improve care in finding pregnancy complications early in pregnancy?

Early antenatal care seeking

a. How far along was your pregnancy at your first antenatal visit? Why in this period?
b. To obtain accurate gestational age (GA) assessment, a woman should have their first antenatal visit by the first 2-3 months of their pregnancy) but quite a number of them come beyond this time. Explain the reasons why women do not seek antenatal care early?
c. Are there any risks that you know if a mother does not seek antenatal care services early?
d. In your opinion, what can be done to encourage women to seek antenatal services early?

Perspectives on Medical technologies

a. On the first time ANC visit at 11-14 weeks, you underwent gestational assessment to determine the correct age of the baby. Could you please tell us about your experience? What aspects of this assessment did you like or did not like? What concerns did you have?
b. *On one of your visits, were you tested for pressure?*

c. If yes, could you please tell us about your experience and the experience? What aspects did you like? did you have any concerns?
d. *If no,* the study is proposing to introduce tests to check for blood pressure and stiffness of the blood vessels using a tool that is embedded into the ultrasound machine) that can accurately estimate gestational age. What are your thoughts about this assessment?
e. At delivery, some women can be asked to collect the placenta and cord blood to further investigate the causes of death of the baby within the womb. What are your thoughts? What are your concerns?
f. If the tests are introduced in your local health center, would mothers easily accept them? Why? How can hospitals ensure challenges are addressed and women can easily accept the services?
g. Explain what you think could have enabled you to have a positive pregnancy outcome?

Thank you for your time.

SECTION C: Men who asked their partners to withdraw from the study

Experiences with stillbirth

a. Has your partner ever experienced stillbirth?
b. How would you describe a stillbirth experienced by pregnant women?
c. In your opinion, what are the causes of stillbirth among pregnant women?
d. After experiencing stillbirth, what kind of support do women receive from the hospital? From the community? How do they cope after?
e. Are there ways the hospital can improve care in finding pregnancy complications early in pregnancy?

Early antenatal care seeking

a. How far along was your partners' pregnancy at her first antenatal visit? Why in this period?
b. To obtain accurate gestational age (GA) assessment, a woman should have their first antenatal visit by the first 2-3 months of their pregnancy) but quite a number of them come beyond this time. Explain the reasons why women do not seek antenatal care early?
c. Are there any risks that you know if a mother does not seek antenatal care services early?
d. In your opinion, what can be done to encourage women to seek antenatal services early?

Perspectives on Medical technologies

a. On the first time ANC visit at 11-14 weeks, your partner underwent gestational assessment to determine the correct age of the baby. Could you please tell us about your experience? What aspects of this assessment did you like or did not like? What concerns did you have?
b. On one of your visits, was your partner tested for blood pressure?

If yes, could you please tell us about your experience or your partners experience? What aspects did she like and did not like? Did she have any concerns?

c. If no, the study is proposing to introduce tests to check for blood pressure and stiffness of the blood vessels using a tool that is embedded into the ultrasound machine) that can accurately estimate gestational age. What are your thoughts about this assessment?
d. At delivery, some women can be asked to collect the placenta and cord blood to further investigate the causes of death of the baby within the womb. What are your thoughts? What were your concerns?
e. At one point, you requested your partner to withdraw from the study, what concerns did you have at that point? Did you discuss these concerns with your healthcare worker? What were their responses? Do you feel your concerns were addressed? What made you change your mind? Do you currently need more explanations? What happened after discussing with the healthcare worker? did your partner continue to come for antenatal care visits?
f. If the tests are introduced in your local health center, would mothers easily accept them? Why? How can hospitals ensure challenges are addressed and women can easily accept the services?

Thank you for your time.

SECTION D: Women who did not complete the study visits

Experiences with stillbirth

a. Have you ever experienced stillbirth?
b. How would you describe a stillbirth experienced by pregnant women?
c. In your opinion, what are the causes of stillbirth among pregnant women?
d. What kind of support do women receive from the hospital? From the community? How do they cope after?
e. Are there ways the hospital can improve care in finding pregnancy complications early in pregnancy?

Early antenatal care seeking

a. How far along was your partners' pregnancy at her first antenatal visit? Why in this period?
b. To obtain accurate gestational age (GA) assessment, a woman should have their first antenatal visit by the first 2-3 months of their pregnancy) but quite a number of them come beyond this time. Explain the reasons why women do not seek antenatal care early?
c. Are there any risks that you know if a mother does not seek antenatal care services early?
d. In your opinion, what can be done to encourage women to seek antenatal services early?

Perspectives on Medical technologies

a. On the first time ANC visit at 11-14 weeks, you underwent gestational assessment to determine the correct age of the baby. Could you please tell us about your experience? What aspects of this assessment did you like or did not like? What concerns did you have?
b. On one of your visits, were you tested for pressure?

If yes, could you please tell us about your experience? What aspects did you like and did not like?

c. If no, he study is proposing to introduce tests to check for blood pressure and stiffness of the blood vessels using a tool that is embedded into the ultrasound machine) that can accurately estimate gestational age. What are your thoughts about this assessment?
d. At delivery, some women can be asked to collect the placenta and cord blood to further investigate the causes of death of the baby within the womb. What are your thoughts? What were your concerns?
e. If the tests are introduced in your local health center, would mothers easily accept them? Why?
f. How can hospitals ensure challenges are addressed and women can easily accept the services?
g. At one point, you were not able to return to the hospital to complete your scheduled visits. What concerns did you have? Did you share these with your healthcare provider? What were their responses? Do you feel your concerns were addressed? Would you enroll again if you got pregnant again?

Thank you for your time.

FOCUS GROUP DISCUSSION GUIDES FOR WOMEN AND MEN

Title of the study: Stillbirth in High Burden Settings: Ample Room for Improvement using Biomarkers and Ultrasound Technologies (iTECH)-Qualitative

Instructions to the facilitator: Introduce the study and establish ground rules. Collect information on age, parity, education, marital status, occupation

SECTION A: Guide for Pregnant Women

Experiences of stillbirth

a. How do people in this community describe a stillbirth?
b. Have you or your family members experienced a stillbirth?
c. In your opinion, what are the causes of stillbirth among pregnant women? What do other community members think are the causes?
d. After experiencing stillbirths, how are women supported by the hospital or community? How do they cope after?
e. Are there ways the hospital can support women better who are experiencing stillbirth?
f. How can the hospital improve care in finding pregnancy complications early in pregnancy?

Early antenatal care seeking

a. At what stage of pregnancy did you have your first antenatal visit? What about the other women?
b. To obtain accurate gestational age (GA) assessment, a woman should have their first antenatal visit by the first 2-3 months of their pregnancy) but quite a number of them come beyond this time. Explain the reasons why women do not seek antenatal care early?
c. Are there any risks that you know if a mother does not seek antenatal care services early?
d. In your opinion, what can be done to encourage women to seek antenatal services early?

Perspectives on Medical technologies

a. On the first time ANC visit at 11-14 weeks, you underwent gestational assessment to determine the correct age of the baby. Could you please tell us about your experience? What aspects of this assessment did you like or did not like? What concerns did you have?
b. were you tested for blood pressure?

If yes, could you please tell us about your experience and the experience? What aspects did you like? did you have any concerns?

c. *If no:* The study is proposing to introduce tests to check for blood pressure and stiffness of the blood vessels using a tool that is embedded into the ultrasound machine) that can accurately estimate gestational age. What are your thoughts about this assessment?
d. At delivery, some women can be asked to collect the placenta and cord blood to further investigate the causes of death of the baby within the womb. What are your thoughts? What are your concerns?
e. If the tests are introduced in your local health center, would mothers easily accept them? Why? How can hospitals ensure challenges are addressed and women can easily accept the services?

Thank you for your time!

SECTION B: Guide for Male Partners

Introduce the study and establish ground rules. Collect information on age, education, marital status, occupation

Experiences of stillbirth

a. How do people in your community describe a stillbirth?
b. Have your partners or family members ever experienced a stillbirth?
c. In your opinion, what are the causes of stillbirth among pregnant women? What do other community members think are the causes?
d. After experiencing stillbirths, how are women supported? from the hospital? From the community? How do they cope after?
e. Are there ways the hospital can support women better who are experiencing stillbirth?
f. How can the hospital improve care in finding pregnancy complications early in pregnancy?

Early antenatal care seeking

a. At what stage of pregnancy do women in your community have their first antenatal visit? What about your partners?
b. To obtain accurate gestational age (GA) assessment, a woman should have their first antenatal visit by the first 2-3 months of their pregnancy) but quite a number of them come beyond this time. Explain the reasons why women do not seek antenatal care early?
c. Are there any risks that you know if a mother does not seek antenatal care services early?
d. In your opinion, what can be done to encourage women to seek antenatal services early?

Perspectives on Medical technologies

a. On the first time ANC visit at 11-12 weeks, women undergo gestational assessment to determine the correct age of the baby. Could you please tell us about your experience or the experience of your partners? What aspects of this assessment did your partners like or dislike? Any concerns?
b. On one of the visits was your partner tested for blood pressure? If yes, could you please tell us about your partners' experience? What aspects did she like and did not like? Did she have any concerns?
c. If no: The study is proposing to introduce tests to check for blood pressure and stiffness of the blood vessels using a tool that is embedded into the ultrasound machine) that can accurately estimate gestational age. What are your thoughts about this assessment?
d. At delivery, some women can be asked to collect the placenta and cord blood to further investigate the causes of death of the baby within the womb. What are your thoughts about this test? Any concerns?
e. If the tests are introduced in your local health center, would mothers easily accept them? Why?
f. How can hospitals ensure challenges are addressed and women can easily accept the services?

Thank you for your time

SECTION C: Guide for Community Leaders

Introduce the study and establish ground rules. Collect information on age, education, marital status, occupation

Experiences of stillbirth

a. How do people in this community describe a stillbirth?
b. What do you think causes stillbirth? What do others community members say?
c. After experiencing stillbirths, how are women supported? from the hospital? From the community? How do they cope after?
d. Are there ways the hospital can support women better who are experiencing stillbirth?
e. How can the hospital improve care in finding pregnancy complications early in pregnancy?
f. What can be done to prevent women in your community from experiencing stillbirth?

Early antenatal care seeking

a. At what stage of pregnancy do women in your community have their first antenatal visit?
b. To obtain accurate gestational age (GA) assessment, a woman should have their first antenatal visit by the first 2-3 months of their pregnancy) but quite a number of them come beyond this time. Explain the reasons why women do not seek antenatal care early?
c. Are there any risks that you know if a mother does not seek antenatal care services early?
d. In your opinion, what can be done to encourage women to seek antenatal services early?

Perspectives on Medical technologies

a. On the first time ANC visit at 11-14 weeks, women undergo gestational assessment to determine the correct age of the baby. Could you please tell me your thoughts on this kind of assessment? What would be your fears/concerns?
b. The study is proposing to introduce tests to check for blood pressure and stiffness of the blood vessels using a tool that is embedded into the ultrasound machine) that can accurately estimate gestational age. What are your thoughts about this assessment?
c. At delivery, some women can be asked to collect the placenta and cord blood to further investigate the causes of death of the baby within the womb. What are your thoughts about this test? Any concerns?
d. If the tests are introduced in your local health center, would mothers easily accept them? Why?
e. How can hospitals ensure challenges are addressed and women can easily accept the services?

Thank you for your time!

MAKERERE UNIVERSITY
SCHOOL OF MEDICINE
APPROVED AMENDMENT
Valid Until
01 MAR 2025
RESEARCH & ETHICS COMMITTEE
P.O. BOX 7072,KAMPALA

INTERVIEW GUIDE FOR HEALTHCARE PROVIDERS AND HOSPITAL MANAGERS

Title of the study: Stillbirth in High Burden Settings: Ample Room for Improvement using Biomarkers and Ultrasound Technologies (iTECH)-Qualitative

Collect information on age, gender, marital status, role in iTECH project, professional cadre, years of experience in (years)

SECTION A: Guide for Healthcare providers

Experiences with stillbirth

a) What is your experience with stillbirth in this hospital?
b) How does the hospital support women and families that experience stillbirth to help them cope with the related complications?
c) In your opinion, what can be done to prevent women from experiencing stillbirth?
d) At what gestational age do women start to attend ANC in Uganda? Explain the reasons why women do not seek antenatal care early (by the first 2-3 months of their pregnancy)? What can we do to encourage women to seek ANC early?

Perspectives on medical technologies to improve stillbirth prediction and prevention

a) Ideal time for first ANC contact would have been 11-14 weeks, to allow for accurate gestational age (GA) assessment. However, as you are aware, most women come after this window making accurate GA assessment very challenging. What methods are you currently using for GA assessment in your practice?
b) *For those not using the AI system:* iTECH is proposing to introduce an Artificial intelligence tool (embedded into the ultrasound machine) that can accurately estimate GA irrespective of when a woman comes for their first ANC contact. What are your thoughts about this innovation? How do you think this AI tool will help clinicians and health workers improve their practice?
c) *For those using the AI systems:* Could you please tell us about your experience? What aspects of this assessment are working well and why? What aspects aren't working well and why?

d) As part of the iTECH project, women are assessed for peripheral and central blood pressure, and various maternal cardiovascular function parameters in a 2-5-minute non-invasive procedure using new devices such as Ultrasonic Cardiac Output Monitor (USCOM), and Arteriography. This replaces a more complicated procedure (Cardiac Echo) to determine functional parameters of a woman's cardiovascular system. What is your opinion about this type of assessment?
e) As part of iTECH, women are assessed for cardiovascular risk such as the blood volume reaching the placenta, contractility/strength of the mothers' heart, resistance in the maternal blood vessels, among others which could tell us something about the risk to the fetus (baby in the womb not having optimal development environment).
f) iTECH is also considering introducing a cost effective point of care laboratory diagnostic kits for maternal blood or urine biomarkers. What are your views on this innovation?
g) At delivery, the placenta and cord blood is collected from some women to further investigate the causes of death of the baby within the womb. What are your thoughts? What were your concerns?
h) In your opinion, which other tests would be useful for pregnant women that are currently not available in your hospital?
i) In your opinion, how can the use of new promising medical technologies be integrated into routine clinical practice? What will be the potential challenges? What would be the potential successes?
j) In your opinion, how would integration of novel technologies affected routine ANC that is being provided at this hospital?
k) What would be the benefit of integrating the medical technologies into routine care?
l) What recommendations would you have to make sure this innovation is brought to clinical practice (Translation of research findings into local practice guidelines and policies)?

Interpretation of Doppler ultrasound results

a) Tell me about the training that you received about the use of Doppler ultrasound scan. Do you feel this training was sufficient to enable you interprete and use the results to manage patients?
b) Please tell me some of the Doppler ultrasound measurements you are using in your clinical practice to manage patients?
c) Take me though the process of interpreting Doppler ultrasound scan results. Which aspects are easy for you to interpret? Where do you see gaps or find difficulties? E.g calculation of the Doppler z-scores or percentiles? What reference chats do you use?
d) Are there local standards to guide interpretation of the results? If no, what are you currently using? If yes, in what form, and how are they accessed?

e) What system of quality assurance is in place to ensure quality assessments and interpretation of the results?
f) Once complications are detected on Doppler ultrasound, how do you inform the mother? What steps do you take to support the mother? E.g referral, operation, request for more tests? What informs the decision about the next steps? how long does this process take?
g) Once referred, is there a mechanism for follow up by the referring hospital? And what is the frequency of follow-up and management of those women with abnormal results?

Thank you for your time

SECTION B: Guide for Hospital Managers

Age _____Gender_____Job title/position held_____

Education level_____Years in current position/district_____

Institution represented_____

a. What does your role involve?
b. How would you describe the issue of stillbirths in this hospital?
c. How prepared is the hospital to respond to the problems of stillbirth?
d. Describe the technologies that are currently being used to detect complications in pregnant mothers visiting your hospitals
e. What do you know about iTECH project?
f. iTECH project is introducing some novel tolls to improve prediction and prevention of stillbirth in the study sites and Uganda. Describe the potential benefits of using these novel technologies with examples. Any challenges so far?
g. One aspect of the study is the use of Doppler ultrasound examination. Tell me about the process of results interpretation to inform next course of action. What are the challenges (Training, completeness, interpretation, management guidelines)? How do you go about these in the course of implementation?
h. If these technologies are scaled up, what are the potential barriers and challenges?
i. Describe what it will take to integrate the available medical technologies for pregnant women into routine antenatal care? What will it take to ensure these tests are more available and acceptable to women?
j. From your perspective, what role do these novel technologies play in addressing some of these health challenges?

S4: Illustrative quotes

Codes	Description of codes	Examples of illustrative quotes
Acceptability of novel technology: focuses on how stakeholders felt about the technology after it was implemented and reflects perceived clinical value, trust in technological outputs, and alignment with clinical decision-making.		
Perceived clinical benefit	Perceptions that technologies improve detection, reassurance, and stillbirth prevention.	*"I feel like if you have a tool that can accurately tell the gestation age at any time, it will really, really change the way things are done." -IDI, Sonographer, Lira* *"Sonography is one of the technologies that we want to use to be able to prevent stillbirths." -IDI, Sonographer 1, Kawempe* *"I think it's worthy, the world where we're going everything is getting into artificial intelligence as it adds value to the technology that we have…we have checked other parameters in artificial intelligence and it is doing good. So it is a worthwhile."* -IDI, Sonographer 1, Kawempe
Perceived reliability and limitations	Text describing perceived reliability, technological strength, and recognised limitations of novel diagnostic tools	*"For some windows you clearly get almost the same gestational age…but for 30 [weeks] and above it doesn't normally give you the exact [age]"* - IDI, Sonographer 1, Hoima *"And by the way we have the best machines I did not tell you but these machines are only here in the pearl of Africa. They are very high quality machines. That's also a contributor on our good results."* **-**IDI Sonographer 1, Kawempe

Integration into Routine Clinical Practice: the text related to stakeholder's reflection on how novel antenatal technologies function within everyday clinical practice		
Patient-centred procedures and communication	Text describing communication practices and patient engagement strategies used during technological assessments to support understanding and reassurance.	*"Yes, actually we share the screens with the mothers. You know you have to have that screen in the position when you are working. One for you back and one for clear view of what you are doing…because some people are actually anxious...It is exciting for the mother to see their baby. And for some it's for re-assurance…the mothers are able to see the basic structures and they appreciate it."* -IDI, Sonographer 2, Hoima
Result interpretation and translation for clinical utility	Text referring to how healthcare providers interpret technological outputs, negotiate meaning across professional roles, and translate findings into actionable clinical decisions within routine antenatal care.	*"In case we know how to interpret and tell them, it would be good but you see the results come in a format where you can't really interpret them…It is easier to do BP and tell a mother you know what, your pressure is high because now you know the values and how to interpret them. Here (USCOM) we still don't know which one is normal…We still don't know how to interpret the results."* -IDI, Midwife, Hoima **"***Sometimes because of the obstetrician is not a trained sonographer. Sometimes interpretations might be different so they have to come again and discuss and even consult some other person outside for them to get and reach conclusion and make a decision about a mother*." -KII, Obstetrician, Mbale

Health System Adoptions: feedback on barriers encountered during use of novel technologies that may affect long term adoption into routine antenatal care.		
Infrastructure and sustainability	Participant's perceptions of benefits and challenges as a result of scaling up novel technologies to lower health facilities.	*"If the services are brought closer to the villages. The mothers will easily access these services because we have talked about transport, some mothers who fail to come to the hospital because lack of transport."* -Ref 2 FGD, Pregnant woman, Hoima "*We will need more machines so that we can attend to all those participants*." -IDI Field officer, Lira *"Man power, like at least they would lack staff, that gap. If we could bridge up this gap of staffing it would be better in the management."* -IDI, Midwife, Hoima
Standardisation, validation and accountability	Text describing the need for protocols, validation, training standards, and governance mechanisms to support safe and consistent use of novel technologies.	"…by the way there are no clear guidelines when it comes to things like fetal growth restriction, abnormal dopplers we don't have any other guidelines on that. That's why we find people practice differently." -KII, Obstetrician, Lira *"And from my experience first and foremost we do not have protocols, guidelines for use of antenatal care... Even when there is a few written from the ministry of health but there is no consensus…we have noticed that we are missing a lot of factors that can be used to predict stillbirth."* -IDI, Sonographer 2, Kawempe

Capacity building and governance	Text describing the need for workforce development, technical training, and government engagement to enable sustainable and system-wide implementation.	*"Our obstetricians are not given adequate training in ultrasound… It's a massive gap in terms of knowledge, in terms of skill, in terms of practice."*-IDI, Sonographer 2, Kawempe *"We are always training. Even right now, we have the coordinator in place check on what we are doing, to see whether we are deviating from what we are supposed to be doing, to see whether there is anywhere we need help. So that's part of the quality assurance and quality control things we have in place."* - IDI, Sonographer, Lira