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# SUSTAINABLE DECENTRALISATION OF OBSTETRIC ULTRASOUND SCREENING TO PRIMARY HEALTH CARE FACILITIES- KENYA EXPERIENCE

Dr Micah Matiang'i & Ms. Priscilla Ngunju



THE COUNTY  
GOVERNMENT  
OF KAJIADO



# Decentralizing obstetric ultrasound screening to Point of Care settings

Dr. Micah Matiang'i and Priscilla Ngunju



## Outline

- Video clip play
- Context & Background
- Intervention approach
- Results
- Challenges & Lessons learnt
- Recommendations



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## Context and background

- Obstetric Ultrasound is essential in ANC care.
- WHO (2016) and MOH recommends one ultrasound scan before 24 weeks of gestation.
- Kenya has < 1000 sonographers in a country with 9,249 health facilities.
- Only 25% of pregnant women (in Kenya) access obstetric ultrasonography screening.
- Midwives can over > 80% of ANC services (UNFPA, 2017)
- ICM expects midwives to be able to detect pregnancy complications



# Approach; Drivers of midwives ultrasound Project /1

## Competitive Advantage

- Service accepted by regulatory body (NCK)
- Standardized content used to train midwives
- Dependent on midwives (are available in PHC)
- Aligned with professional body (SORK)
- Affordable (USD 5 per session/woman)
- Portable/mobile technology
- Entrepreneur driven for the midwives
- Multi-stakeholder involvement
- Available at Point of Care (POCUS)



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## Intervention and approach

- **42 midwives** initially trained successfully on two (2) standardised and blended modules with **10 sonographers** including the mobile and portable technology; the midwives got trained on 950 mothers in total. To **date 67 registered** midwives have been trained
- **2-5** Midwives grouped into Business units (BUS) to create functional teams in 10 health facilities in 2 counties. Each BU under phased mentored by a radiographer
- Professional **sonographers** (TOTs) were inducted into the project and provided mentorship & coaching for three (3) months, then weaned off.
- County governments allowed the midwives to charge Ksh 500 per session; paid to a centralised payroll number. At B/line 32% had recommended Ksh1000/session user fee.
- Midwives' monthly incentive was performance based

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## Lumify technology



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## Obstetrics Ultrasound Screening Project – Roadmap



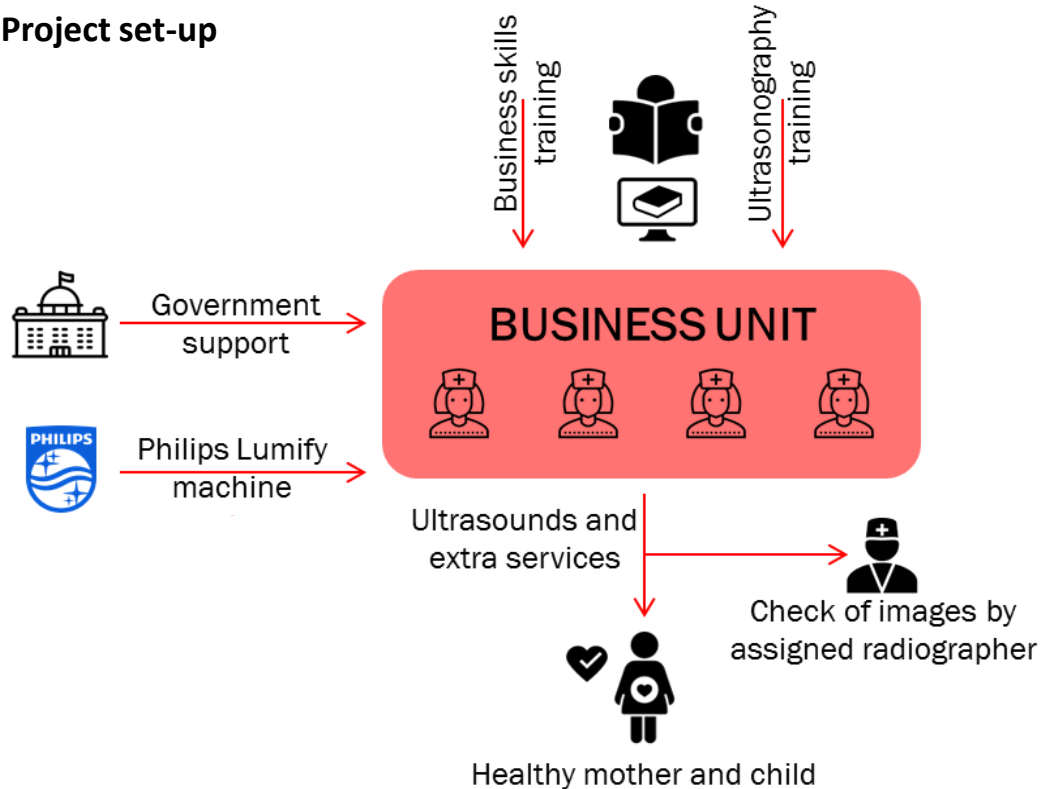
**1250 scanned for \$5  
between Jan-Dec 2020**

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## Project set-up





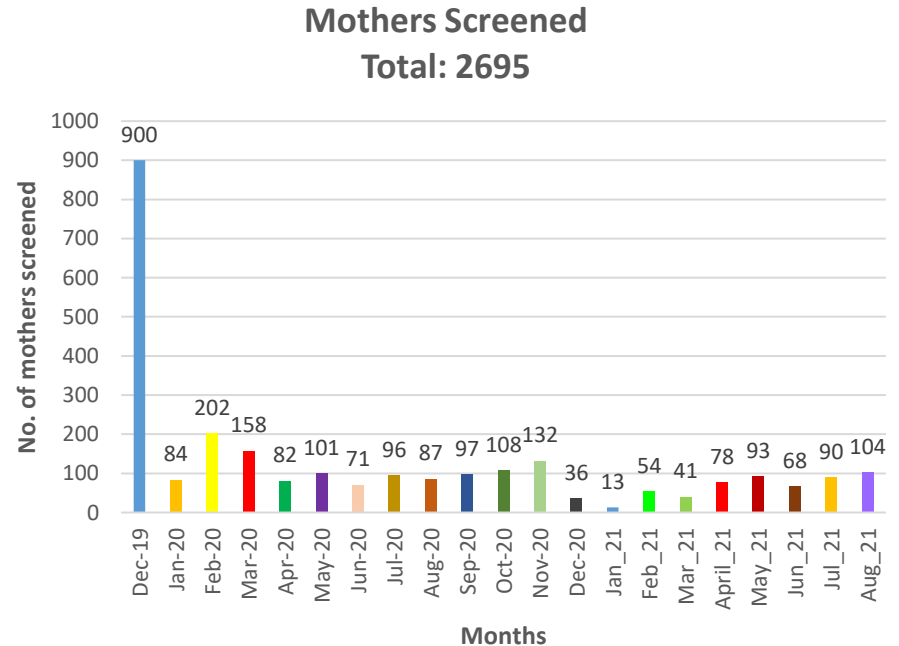
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## Results/1

- To date the midwives have screened 2695 ANC clients who have also paid the user fee.
- 18 women had their complications identified early and referred
- Women's uptake of the obstetric ultrasound services increased to 50% within the pilot sites from < 10% at the baseline period (Operational research findings).
- Distance of accessing the essential service reduced to 3-5 km for 45% of the mothers in the pilot sites.
- Within the first 9 months, 21% of the ANC clients in pilot sites received routine u/sound screening within 24 weeks gestation in the pilot sites.

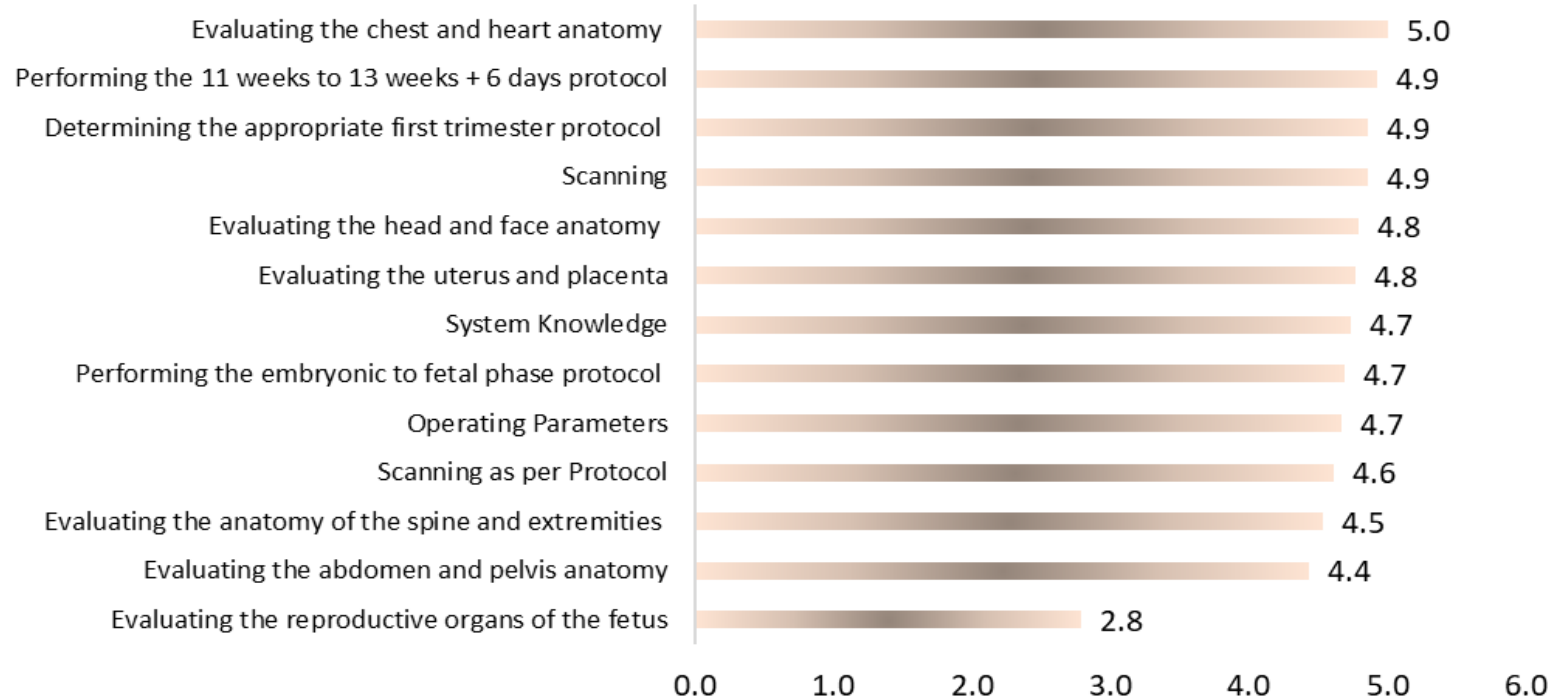


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## Radiographers (TOTs) Rating of Midwives' skills (5= Excellent)



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## Lessons learnt/1

- Midwives are able to learn the essential ultrasound screening skills.
- Mothers are willing to pay for this essential service.
- Community sensitisation (CHVs) is a critical driver of the uptake of obstetric ultrasound screening.
- Training, mentorship & coaching are critical drivers in decentralisation of ultrasound screening.
- Sustainability of the service is dependent on uptake of the service by local governments and NHIF
- Midwives' competencies increases with time

## Lessons learnt/2

- Women's education level, pregnancy gestation and distance to the point of care were the critical determinants of undertaking obstetric ultrasound screening service.
- Mothers paid for the service mostly to confirm the pregnancy gestation, fetal position and fetal sex.
- Midwives' ultrasound skills were satisfactory & referral of mothers wasn't dependent on the convectional facility tiers chain.
- Public owned Business Units (BUs) had higher flow of clients than privately owned BUs.
- Comparative rating of skills (Between sonographers and midwives' self rating), had statistically significant difference in 3 out of 12 critical parameters the midwives were taught to assess.

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## Is it scalable ?

- A subject of economies of scale & leveraging on partnerships.
- Incentivising of frontline workers is key
- Sharing of costs with local or national govt is key
- If integrated with NHIF or its equivalent then facilities are reimbursed
- Depending on user-fee charged and economies of scale, initial investment costs are recoverable.
- If learnings from partners are used to inform replication

## Economic sustainability – subject to many variables



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## Challenges experienced

- Covid-19 pandemic reduced ANC attendance
- Redeployment of midwives we have trained to other departments & facilities by county governments
- Low Male involvement in provision of ANC services
- Demotivated Community Health Volunteers (CHVs), yet they are meant to increase demand for services
- Slow progress in development of policy framework at national level (MOH) to regulate task sharing in obstetric ultrasound screening services
- Low purchasing power in PHC levels
- Dependency on out of pocket (OOP) health financing

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## Recommendations

- 1 There is need to improve women's knowledge on the benefits of ultrasound screening to improve utilization of obstetric scan
- 2 Sustainable business models in decentralized obstetric ultrasound screening can be feasible especially if implemented in a wider scope of health facilities with high client flow
- 3 There is dire need for a policy framework to regulate the scope of task sharing in entrenching of decentralized provision of obstetric u/sound screening services
- 4 National and county governments need to invest in portable technology for women's universal access to Obstetric U/S screening services

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## Acknowledgement

- Philips Foundation
- Philips
- Amref Netherlands
- Amref Health Africa
- NCK and SORK
- County governments
- Midwives professional bodies
- Women who trusted the intervention

## Publication for further reading

Matiang'i, M. , Joosse, K. , Ngunju, P. , Kiilu, C. , Harkx, R. , Hangelbroek, M. and Omogi, J. (2021) Barriers and Enablers That Influence Utilization of Ultrasound Screening Services among Antenatal Women in Kajiado and Kisii Counties Kenya. *Open Journal of Clinical Diagnostics*, **11**, 1-17. doi: [10.4236/ojcd.2021.111001](https://doi.org/10.4236/ojcd.2021.111001).

# Thank you!

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