FIGO XXII • RIO WORLD CONGRESS OF GYNECOLOGY AND OBSTETRICS

Development of Obstetric Ultrasound Service Delivery Assessment Tools in the Context of the Zika Epidemic

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Development of Obstetric Ultrasound Service Delivery Assessment Tools in the Context of the Zika Epidemic

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Learning Objectives

1. Describe the rationale for creating obstetric ultrasound service delivery assessment tools during the Zika virus outbreak.
2. Outline the process used to develop the tools in collaboration with the American Institute of Ultrasound in Medicine, the Society for Maternal and Fetal Medicine, and USAID ASSIST.
3. Discuss the availability of the tools for future use and adaptation.

Background

Washington Post, 2016

Purpose of Assessment

1. Assess capacity of ultrasound providers to detect features of congenital Zika syndrome
2. Assess capacity of ultrasound equipment that providers use in assessment
3. Summarize health system issues related to ultrasound providers and equipment that affect the contribution of ultrasound to the epidemic response
4. Share with global community overall priorities for training in ultrasound in context of Zika virus epidemic

MCSP Ultrasound Assessment Countries

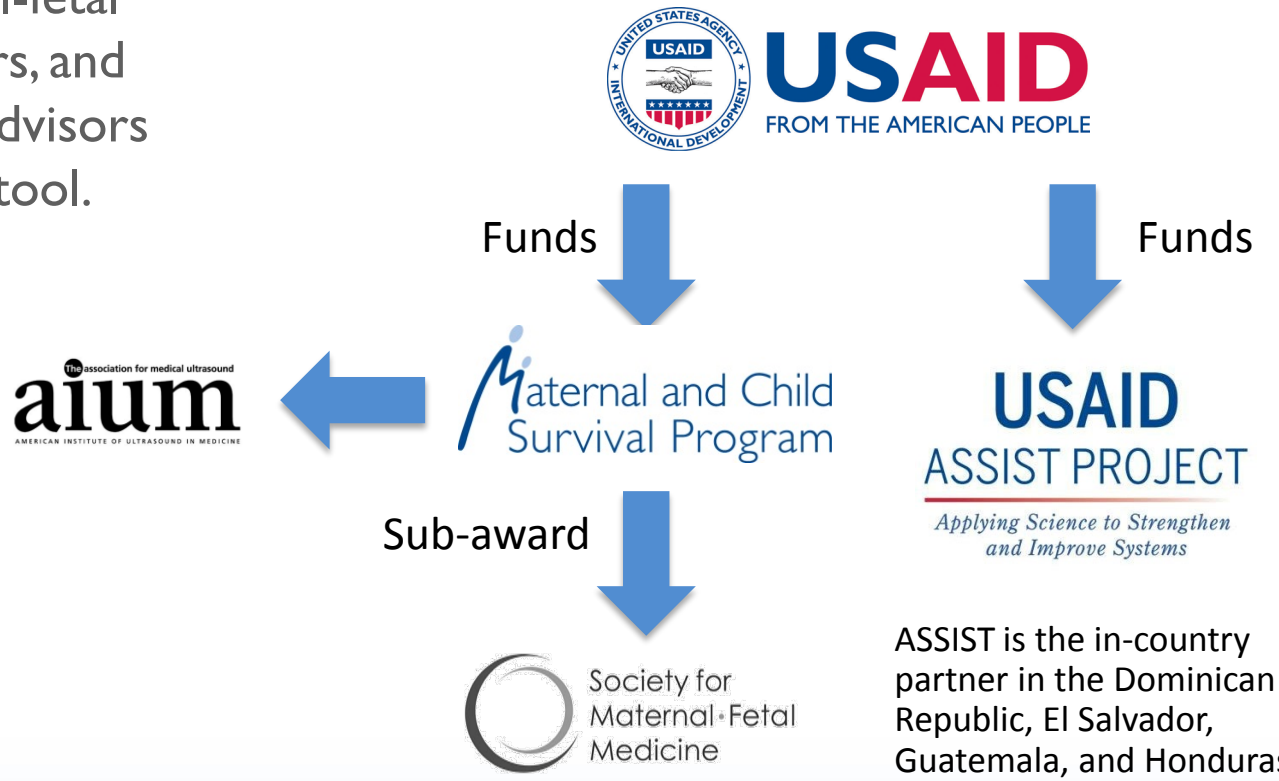
- Dominican Republic
- El Salvador
- Guatemala
- Haiti
- Honduras

Methods


Republic of Kenya
MINISTRY OF MEDICAL SERVICES/MINISTRY OF PUBLIC HEALTH
FACILITY DAILY REGISTER FOR NUTRITION SERVICES
Service Point: CCC: MCH: Inpatient: Other:
Background Information
Assessments and Diagnosis
Nutrition Intervention
Page Summary Sheet:
Nutrition Diagnosis
ART and OI's
Nutrition Intervention
Outcomes and Referrals
THE GOVER
CONSUMPTIO

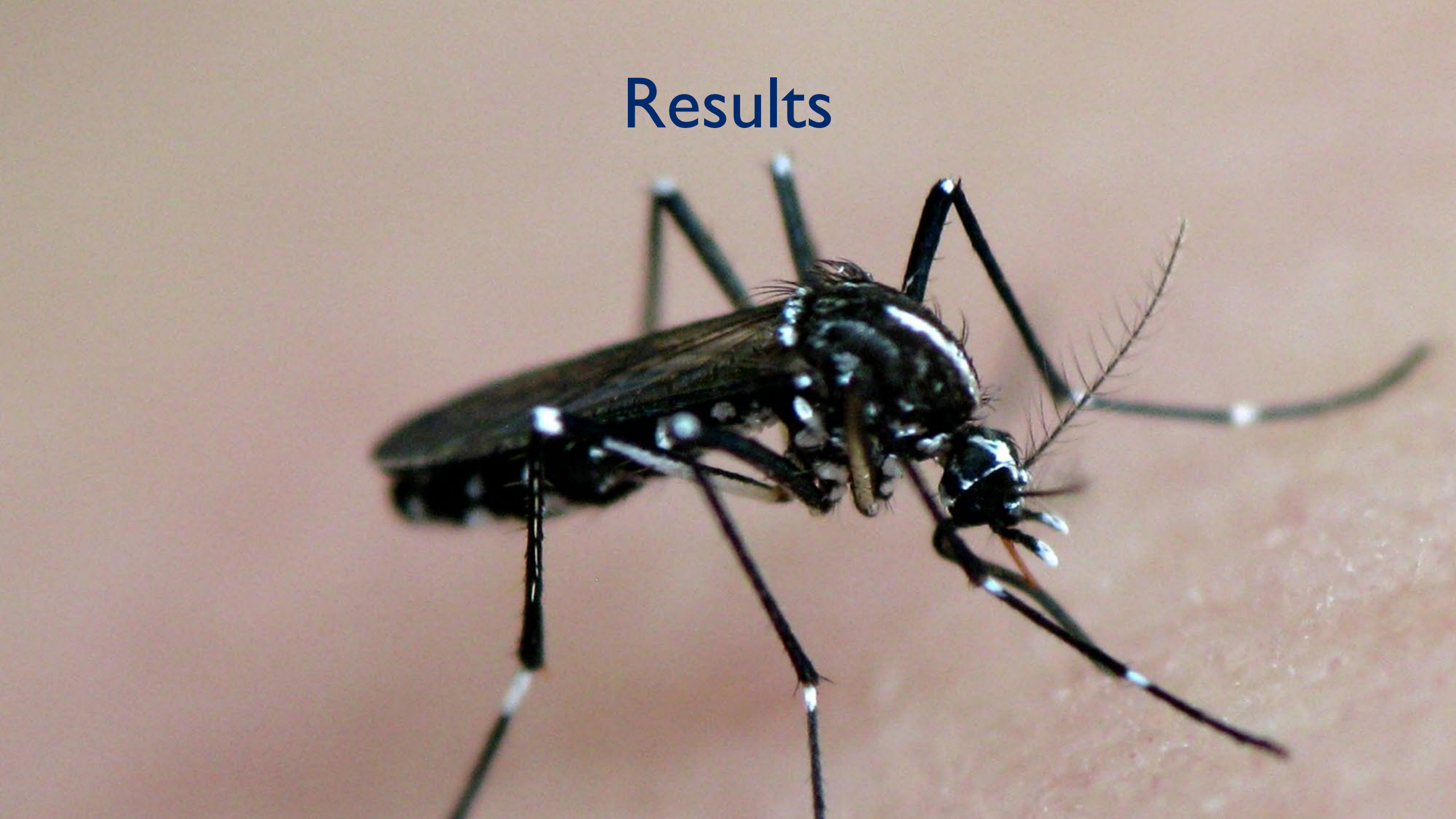
Milestones and Structure of Collaboration

- September 2016
  - A multi-disciplinary group of maternal-fetal medicine specialists, ultrasonographers, and global health technical and program advisors met to develop a mobile assessment tool.
- December 2016
  - The tool was piloted in Haiti.



ASSIST is the in-country partner in the Dominican Republic, El Salvador, Guatemala, and Honduras.

Results



Four Tools Developed

Suite of tools for use separately or together

1. Equipment and environment of care survey
2. Provider capacity interview
3. Service delivery observation survey
4. Practice interview survey

- Available in English, Spanish, and French
- Paper or mobile data collection

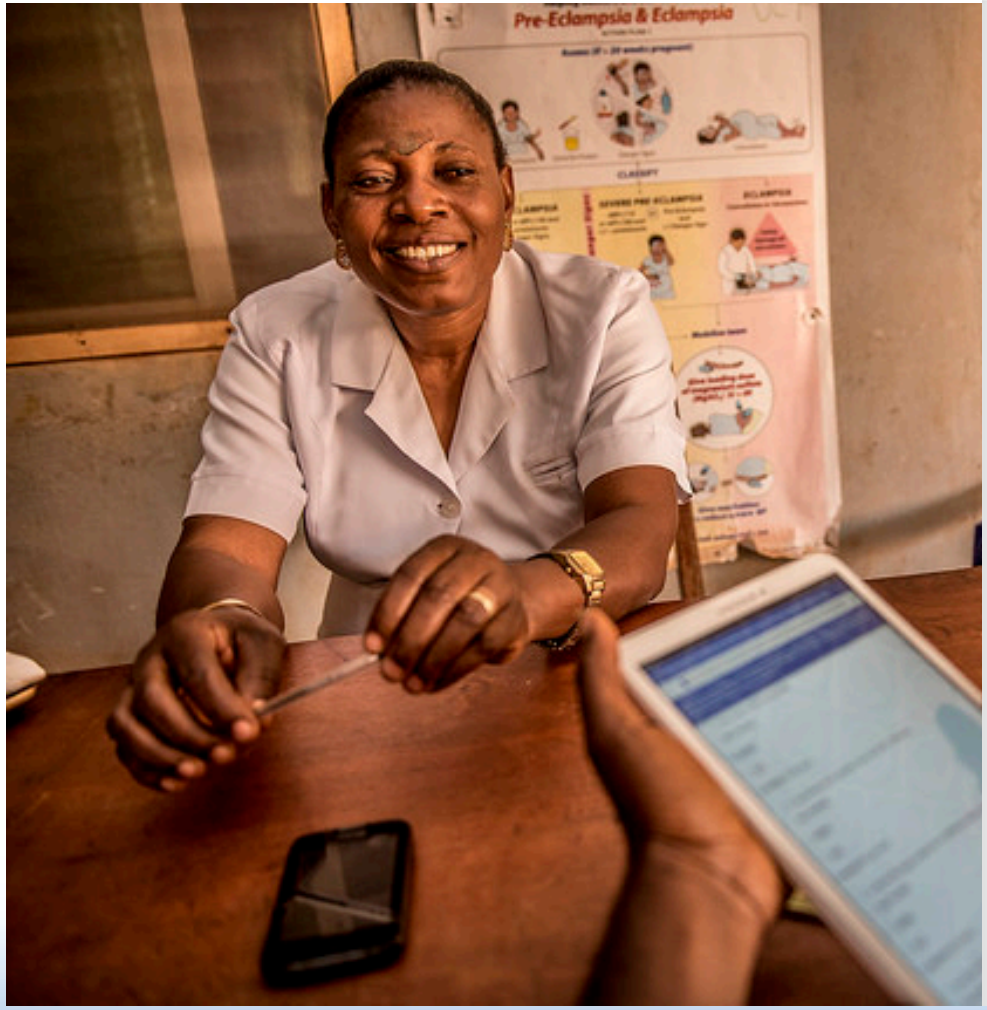
1. Equipment and Environment of Care Survey

I. What image optimization capability is present? (Check all that apply.)
- ☐ Acoustic power
- ☐ Overall gain
- ☐ Time gain compensation (TGC)
- ☐ Depth
- ☐ Zoom
- ☐ Focal zones
- ☐ Mechanical index displayed on image
- ☐ Thermal index displayed on image
- ☐ Optimized obstetric presets
- ☐ N/A

J. What is the overall image quality?
- i. Good
- ii. Average
- iii. Poor
- iv. N/A

K. What imaging modes are available? (Check all that apply.)
- ☐ B-mode
- ☐ M-mode
- ☐ Color Doppler
- ☐ Power Doppler
- ☐ Pulsed-wave (PW) Doppler
- ☐ 3D/4D
- ☐ N/A

2. Provider Capacity Interview



1. **What components of ultrasound examination would you provide for a woman referred because of suspected or confirmed Zika virus infection? (DO NOT PROMPT. Within each section, check all that apply.)**
   A. Gestational age

   B. Biometry
      - ☐ Biparietal diameter (BPD)
      - ☐ Head circumference (HC)
      - ☐ Abdominal diameter/circumference (AD/AC)
      - ☐ Femur length (FL)
      - ☐ Estimated fetal weight (EFW)
      - ☐ Cerebellum

   C. Amniotic fluid volume

   D. Placenta
      - ☐ Location
      - ☐ Calcifications

   E. Fetal heart/cardiac evaluation
      - ☐ Four-chamber view (pericardial effusion)

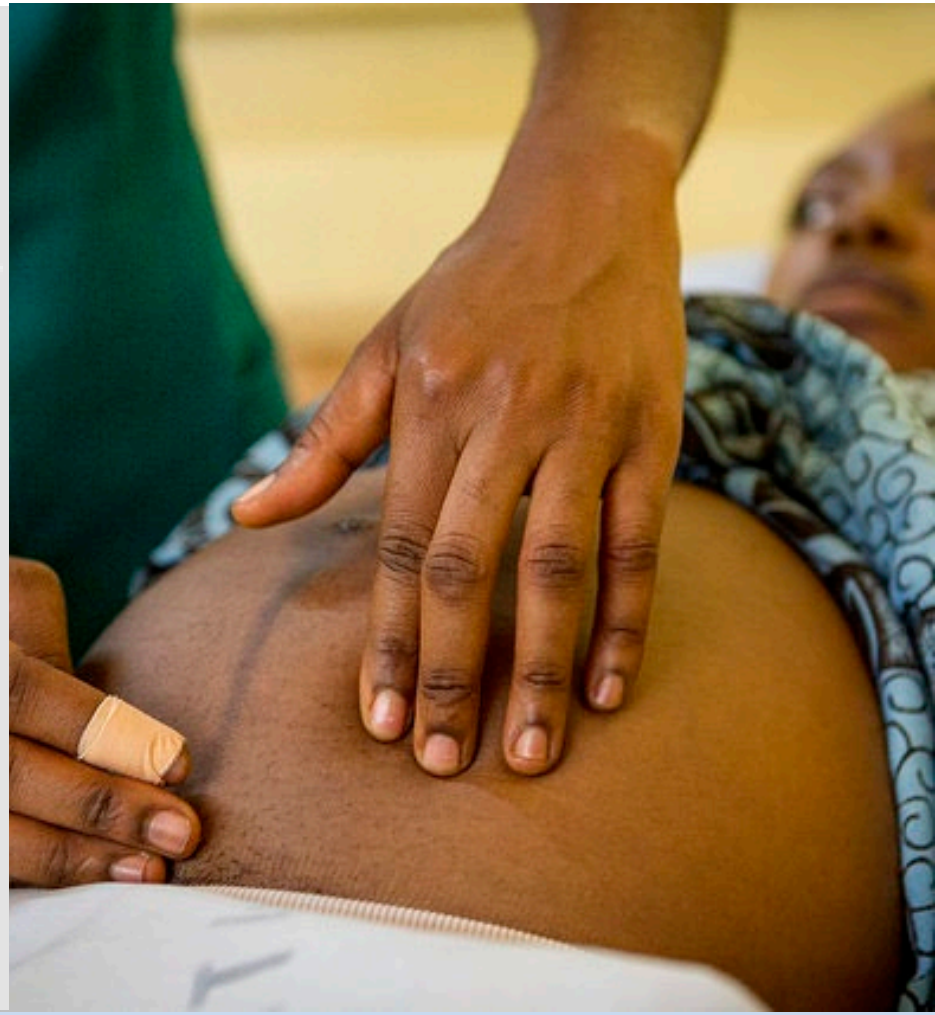
   F. Fetal brain (standard planes/images of the fetal brain) (**OK TO PROMPT** — what planes and which structures or abnormalities?)
      i. What planes would you image?

3. Service Delivery Observation Survey

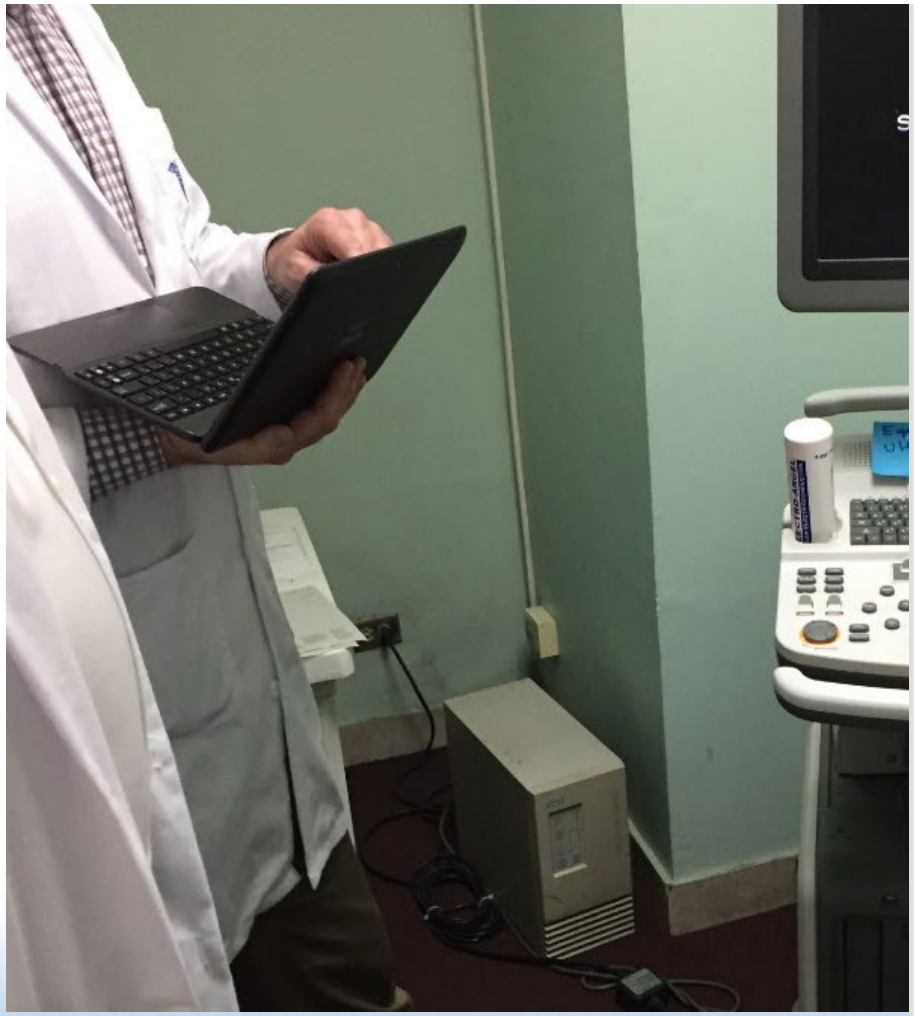
Observation 1 (may be repeated with relevant permissions)

Note: Encourage the provider to talk through the examination, during or after the scan, to facilitate assessment.

1. **Was this a limited or specialized obstetric ultrasound (i.e., was it restricted to a very specific indication or procedure)?**
   A. No
   B. Yes (Check all that apply.)
      - ☐ Verify fetal heart activity
      - ☐ Verify fetal presentation
      - ☐ Suspected anomaly
      - ☐ Fetal Doppler ultrasound
      - ☐ Biophysical profile
      - ☐ Amniotic fluid (without other components of biophysical profile)
      - ☐ Fetal echocardiogram
      - ☐ Biometric measurements
      - ☐ Amniocentesis
      - ☐ Other (specify): _____
2. **Was gestational age assessed?**
   A. No
   B. Yes (specify weeks and days) [Text field]



4. Practice Interview Survey



1. **In general, what type of obstetric ultrasound does this practice provide?**
   A. Basic obstetric ultrasound
   B. Referral-level obstetric ultrasound
   C. A and B

2. **Does this ultrasound practice receive financial support from the Ministry of Health or Social Welfare?**
   A. No
   B. Yes
      i. Completely funded by government
      ii. Partially funded by government

3. **How many providers perform obstetric ultrasound at this facility? [Number field]**

4. **How many providers interpret obstetric ultrasound at this facility? [Number field]**

5. **Are clients charged for obstetric ultrasound at this facility?**
   A. No
   B. Yes
      i. How much? [Text field, for description of sliding scale or special context]

Conclusion

Discussion

Strengths:

- Collaboration of technical and program content experts
- Field tested in five countries (three languages)
- Four tools available for use and adaptation

Limitations:

- Tools provide instruction for formal analysis of findings
- Service delivery observation challenges/biases

Key Messages

1. Collaboration among cross-sector technical experts is critical for tool development.
2. Some countries are making strides in raising up ultrasound as a subspecialty while building pre-service and in-service capacity.
3. Despite limited resources and equipment, most facilities visited can provide basic obstetric ultrasounds.

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