មជ្ឈមណ្ឌលជាតិគាំពារមាតា និងទារក
National Maternal and Child Health Center

ទិវាសល្យសាស្ត្រ សម្ភព និងរោគស្ត្រី លើកទី៤

ប្រធានបទ៖ «រួមគ្នាបង្កើនគុណភាពសេវាព្យាបាល ថែទាំ និងសង្គ្រោះមាតា និងទារក »

SECOND TRIMESTER TERMINATION OF PREGNANCY
A retrospective clinical study in 2025 at NMCHC

002181

Presented by HOR Lat Soriya, M.D

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មជ្ឈមណ្ឌលជាតិគាំពារមាតា និងទារក

CONTENT

OBJECTIVE

- To describe the maternal and clinical characteristics of women undergoing second-trimester TOP
- To identify the primary indications for second-trimester TOP
- To characterize the spectrum of ultrasound-detected fetal anomalies by organ system
- To describe the methods of pregnancy termination and their outcomes
- To evaluate maternal complications associated with second-trimester TOP
- To compare local findings with international data and guidelines

INTRODUCTION

- Second-trimester termination of pregnancy (TOP) remains an essential component of fetal medicine and maternal healthcare.
- Advances in prenatal ultrasonography have increased detection of major fetal anomalies before viability, allowing informed decision-making by families.
- Worldwide, fetal anomalies account for a substantial proportion of second-trimester terminations. However, data from low- and middle-income countries remain limited.
- Cambodia has established legal provisions permitting TOP in 1997 with subsequences Prakas in 2002.

Legal Framework for Second-Trimester Intervention

Adherence to the 1997 Abortion Law

Pillar 1: Fetal Viability

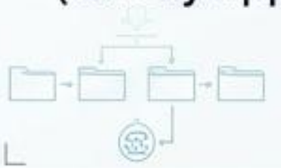
Severe fetal anomaly not compatible with life.

Pillar 2: Maternal Survival

Pregnancy causing maternal life-threatening conditions.

Pillar 3: Legal Exception

Pregnancy caused by rape (strictly approved by authority).



All 200 cases analyzed in this study strictly fall within these defined statutory parameters for pregnancies <26 weeks gestation.

ANALYSIS: 200 CASES | GESTATION: <25 WEEKS | ADHERENCE: 100%

STUDY DESIGN AND RESULTS

STUDY DESIGN AND RESULTS

Retrospective study in 2025 at gynecology-maternity department of NMCHC shows:

- Total pregnant woman admitted: 14571 cases
- Total deliveries: 11622
- Total admission for abortion/miscarriage care: 801 cases.
- Second trimester TOP: 200 cases.

Patient Volume

200 Cases

Total induced abortions (< 26 weeks) managed by the NMCHC Gynecology Dept in 2025.

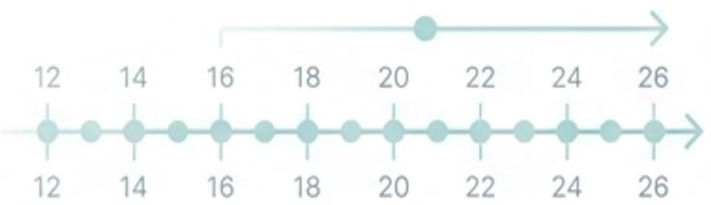
Maternal Profile

29.57 Years

Mean maternal age.

Range: 15–47 years | Standard Deviation: 6.88

Clinical Timeline



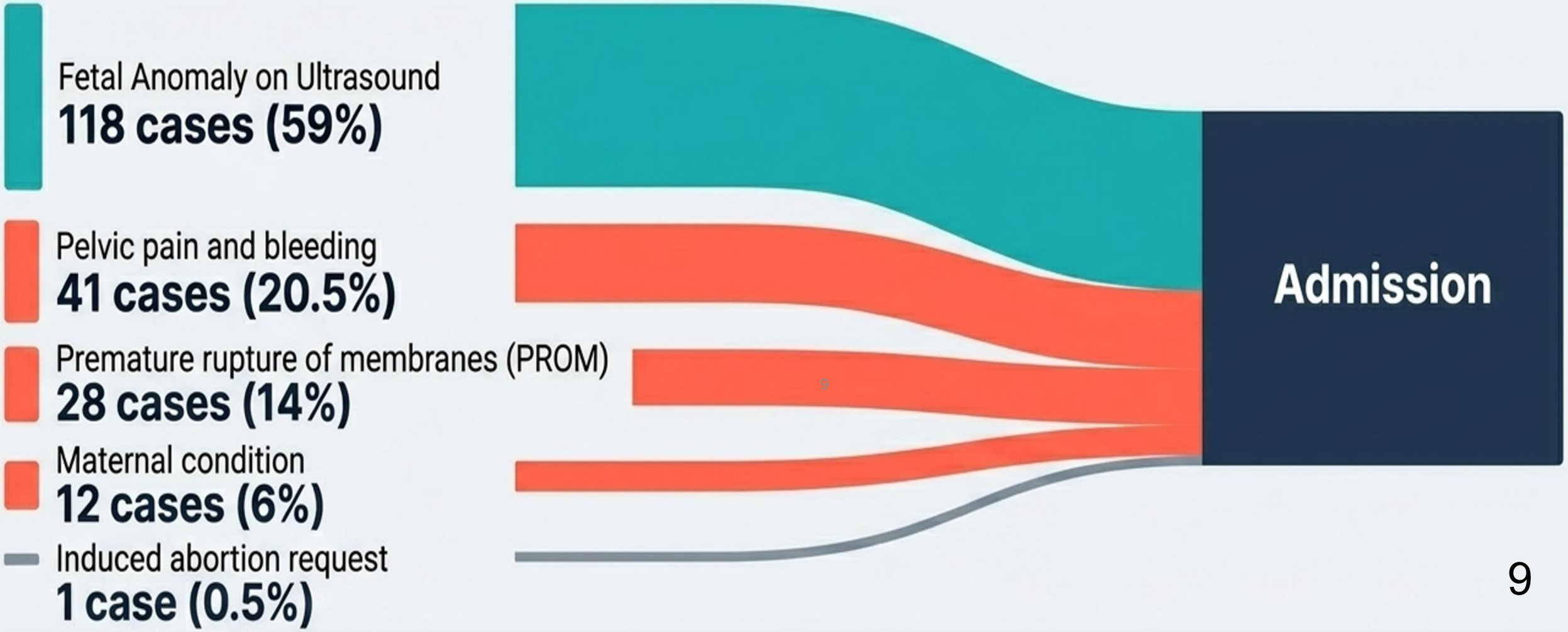
18.45 Weeks

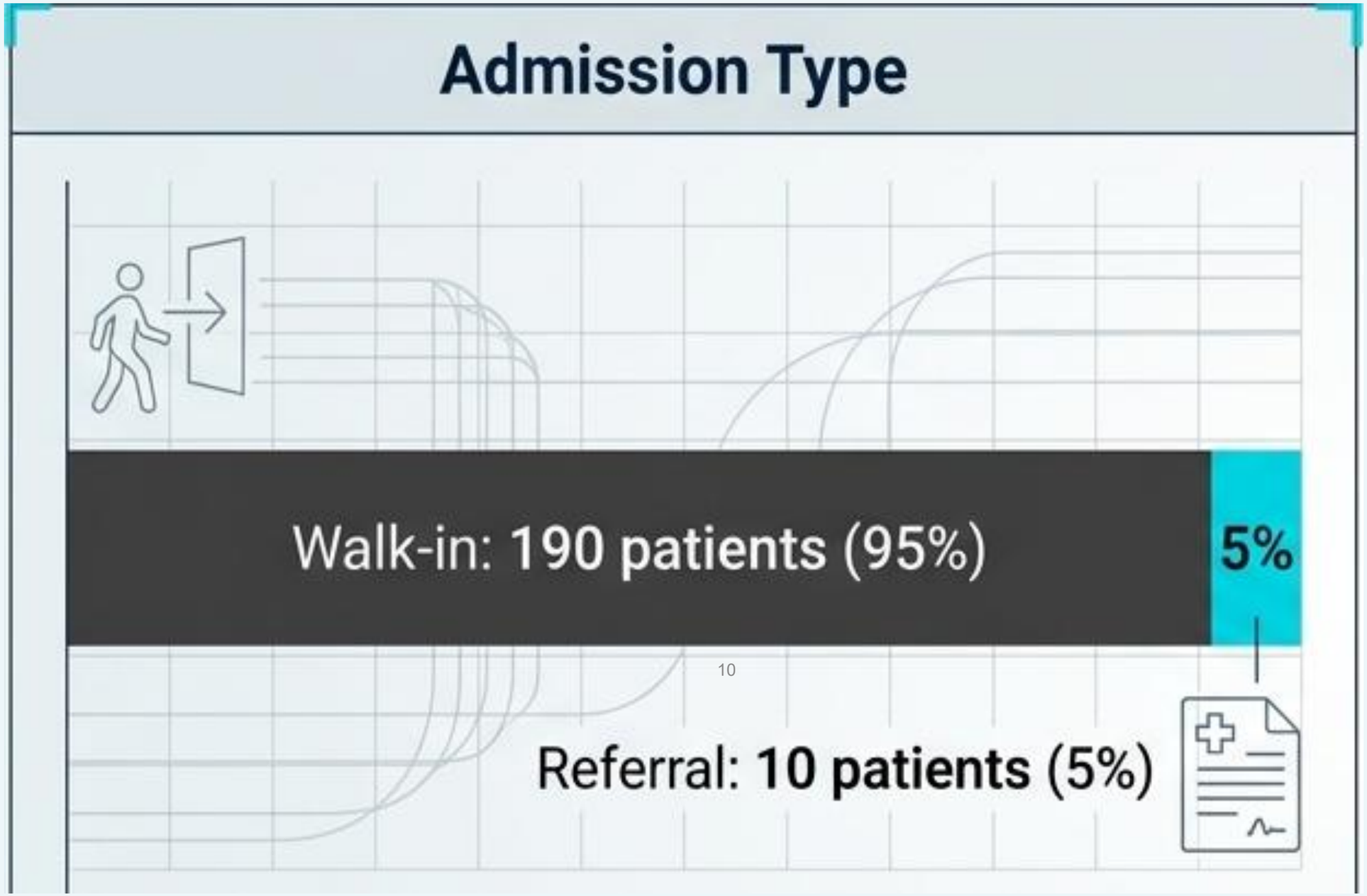
Mean gestational age at intervention.

Range: 12–25 weeks | Standard Deviation: 3.8
Average Length of Stay: 3.35 days (SD: 1.99).

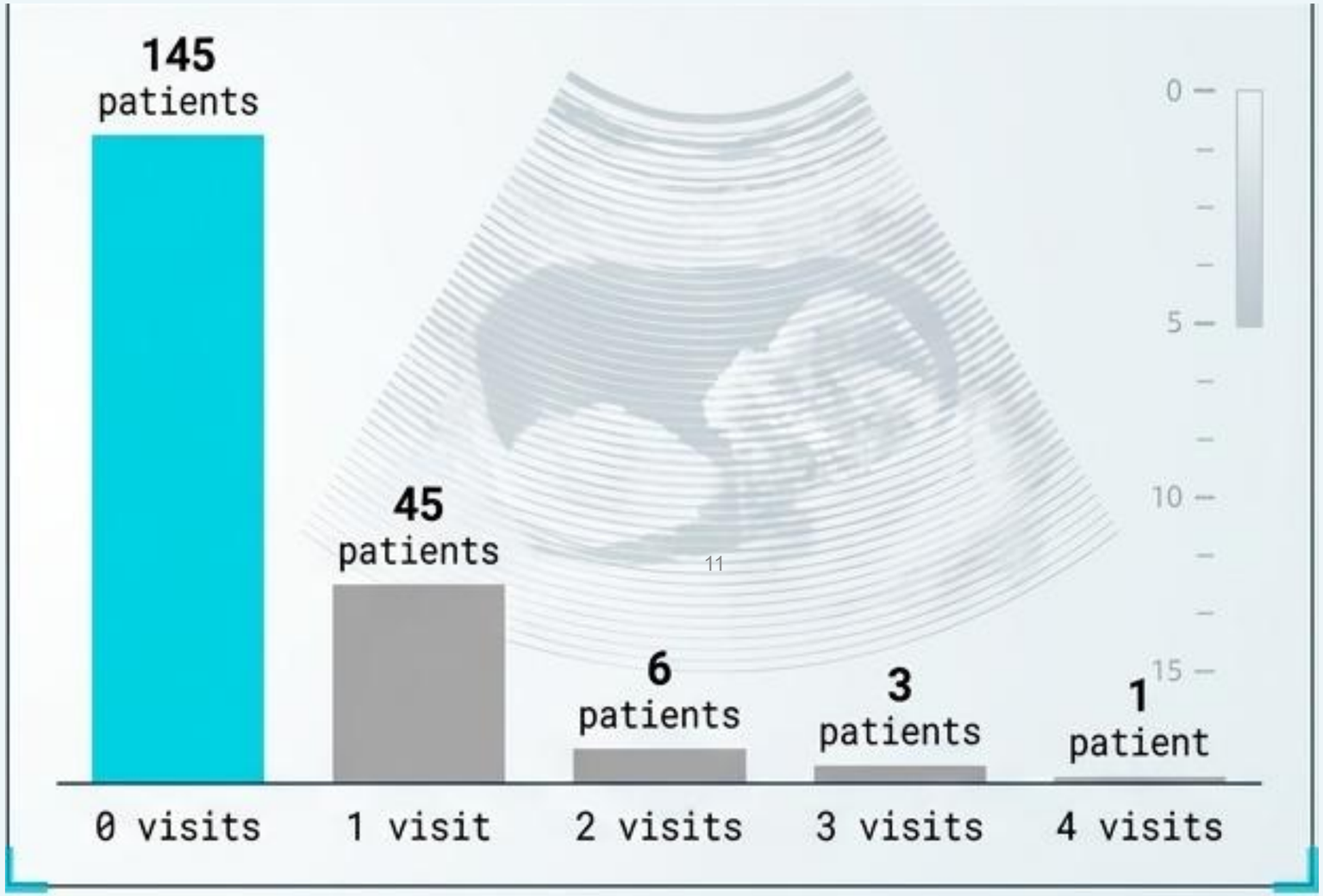
8

Admission Pathways:
Triggers for Hospital Presentation




Admission Type
Walk-in: 190 patients (95%)
5%
10
Referral: 10 patients (5%)

ANTENATAL CARE VISITS AT NMCHC PRIOR TO ADMISSION

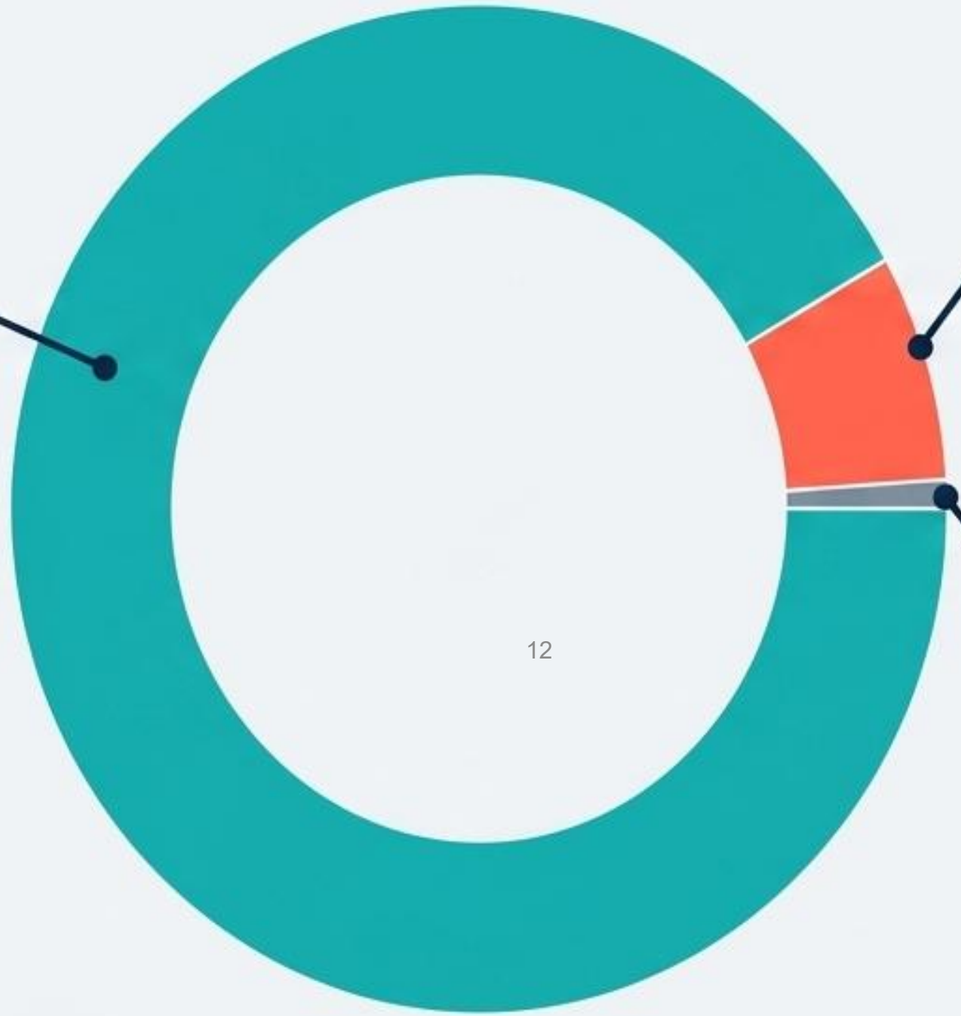


The Clinical Imperative: Primary Indications for Intervention

Fetal Anomaly

185 Cases (92.5%)

The overwhelming majority of second-trimester terminations are driven by severe anatomical or systemic fetal defects detected on ultrasound.



Maternal Condition

14 Cases (7%)

Life-saving interventions for severe maternal health deteriorations.

Other

1 Case (0.5%)

Result of rape.

12

Maternal Indications: Life-Saving Interventions

Detailing the 14 cases (7%) driven by acute maternal health deterioration.

Severe Pre-eclampsia

12 Cases

By far the dominant maternal factor, forcing intervention to prevent catastrophic eclamptic escalation.

Systemic & Hemorrhagic Risks

Systemic lupus erythematosus (SLE): **1 Case**

13

Placenta previa with heavy bleeding: **1 Case**

Sonographic Pathology: Cranial & Central Nervous System

Breakdown of the 185 anomalies detected by prenatal ultrasound

Major Neural Tube & Brain:

Anencephaly (24), Holoprosencephaly (15), Acrania (2), Exencephaly (3), Encephalocele (1), Meningocele occipital (3).

Structural/Fluid:

Cystic hygroma (13 – 3 with hydrops fetalis), Corpus collosum agenesia (3), Dandy-Walker syndrome (2), Choroid plexus cyst (1).

Markers:

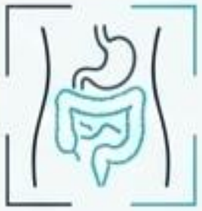
Hyper nuchal translucency (7).

Face:

Cleft lip/palate & absence of nasal bone (2), Absence of nasal bone (1).

14

Sonographic Pathology: Multisystem Anomalies



Digestive & Abdominal Wall

Omphalocele: 6 (1 with vertebral anomaly)
Laparoschisis: 5
Umbilical hernia: 1
Hyperechoic bowel & fetal hydrops: 1

Skeletal & Limbs

Nanism thanatophore: 2
Achondroplasia: 1
Phocomelia (absence of right lower limb): 1
Bilateral pied bots: 1
Sexual ambiguity with hyperechoic bowel: 1

Urinary & Respiratory

Renal multicystic dysplasia: 2
Renal dysplasia: 1
Megavesica: 1
Posterior Urethral valve: 1 (with Hyper nuchal translucency)
Severe pulmonary hypoplasia: 1

Cardiac & Multiple Anomalies

Cardiac specific anomalies: 6
Hydrops fetalis: 8
Prune belly syndrome: 2
Anencephaly and acardia: 1
Ascites: 1

The Role of Amniotic Fluid Complications

Annexes and Environmental Factors

Secondary Annex Factors

- Restricted fetal growth with absence of diastole umbilical artery: 1 case
- High-risk on maternal serum screening: 1 case

52 cases of Anamnios
(Absence of amniotic fluid)

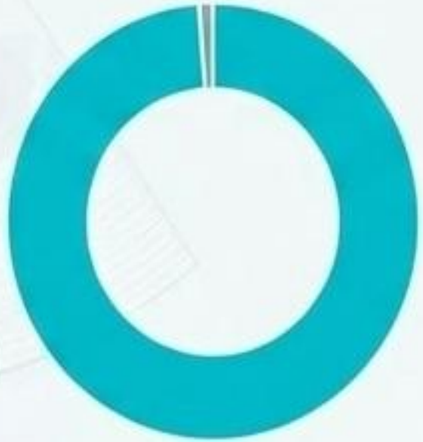
- Premature Rupture of Membranes (PROM): 28 cases
- Threatened Miscarriage: 20 cases
- Primitive/Unspecified: 4 cases

MANAGEMENT

N = 200
Evacuations

Evacuation by
Medical Abortion

199 Cases (99.5%)



Hysterotomy
1 Case (0.5%)

Clinical Context : 21-week gestation requiring surgical intervention due to compounding severe pre-eclampsia, low-lying placenta (type 4), and anamnios.

COMPLICATION

99.5%

NO COMPLICATIONS

199 / 200 cases

0.5%

MAJOR BLEEDING

1 case — low-lying placenta, transfused 3 units pRBC

0%

INFECTION

0 / 200 cases

DISCUSSION

DISCUSSION

Author	Year	Maternal age	Gestational age	Previous parity
NMCHC Cambodia	2025	29.57	18.45 <18w: 45.4% >18w: 54.6%	68.5%
Edling et al. Sweden	2010-2017	33	<18w: 57.8% >18w :42.2%	63%

Edling A, Lindström L, Bergman E. Second trimester induced abortions due to fetal anomalies—a population-based study of diagnoses, examinations and clinical management. *Acta Obstet Gynecol Scand*. 2021;100(12):2202–2208.

DISCUSSION

Indications for fetal anomalies

Author	Year	Chromosomal	CNS	Cardiac	Digestive
NMCHC Cambodia	2025	-	52.6	4.5	9.8
Edling et al. Sweden	2010-2017	56.2%	11.8%	6.5%	5.4%

Guidance

NHS Fetal Anomaly Screening Programme (FASP): programme overview

Target population

Screening for Down's syndrome is offered to all eligible pregnant women, and takes place between 10^{+0} and 20^{+0} weeks of pregnancy.

Screening for Edwards' syndrome and Patau's syndrome is offered to all eligible pregnant women and takes place between 10^{+0} and 14^{+1} weeks of pregnancy.

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Screening for 11 physical conditions as part of the 20-week scan is offered to all pregnant women and takes place between 18^{+0} and 20^{+6} weeks of pregnancy. Scans can be completed up to 23^{+0} weeks of pregnancy.

DISCUSSION

Ultrasound Obstet Gynecol 2022; **59**: 840–856
Published online in Wiley Online Library (wileyonlinelibrary.com). **DOI:** 10.1002/uog.24888

isuog.org

GUIDELINES

ISUOG Practice Guidelines (updated): performance of the routine mid-trimester fetal ultrasound scan

When should the mid-trimester fetal ultrasound scan be performed?

Recommendation

- A routine mid-trimester ultrasound scan can be performed between about 18 and 24 weeks of gestation, depending on technical considerations and local legislation (**GOOD PRACTICE POINT**).

Contents lists available at ScienceDirect

Contraception

journal homepage: www.elsevier.com/locate/contraception

DISCUSSION

Society of Family Planning Clinical Recommendation: Medication abortion between 14 0/7 and 27 6/7 weeks of gestation★,☆,☆☆
Jointly developed with the Society for Maternal-Fetal Medicine

Blake Zwerling [a,*], Alison Edelman [b], Anwar Jackson [c], Anne Burke [a], with the assistance of Malavika Prabhu [d]

- We recommend mifepristone 200 mg orally (where available) 24 to 48 hours before misoprostol, followed by misoprostol 400 mcg every 3 hours vaginally, sublingually, or buccally for medication abortion between 14 0/7 and 23 6/7 weeks of gestation (GRADE 1A).
- When mifepristone 200 mg orally is not available 24 to 48 hours prior to the first misoprostol dose, we recommend administering mifepristone and vaginal misoprostol simultaneously (GRADE 1B).
- If mifepristone is unavailable, we recommend misoprostol 400 mcg vaginally, sublingually, or buccally every 3 hours for medication abortion between 14 6/7 and 23 6/7 weeks of gestation. A loading dose is not recommended, as it does not hasten abortion times or improve outcomes (GRADE 1B).

[Diagnostic Test Accuracy Review]

Diagnostic accuracy of ultrasound screening for fetal structural abnormalities during the first and second trimester of pregnancy in low-risk and unselected populations

Main results

Eighty-seven studies covering 7,057,859 fetuses (including 25,202 with structural anomalies) were included. No study was deemed low risk across all QUADAS-2 domains. Main methodological concerns included risk of bias in the reference standard domain and risk of partial verification. Applicability concerns were common in studies evaluating first-trimester scans and two-stage screening in terms of patient selection due to frequent recruitment from single tertiary centres without exclusion of referrals.

We reported ultrasound accuracy for fetal structural anomalies overall, by severity, affected organ system and for 46 specific anomalies. Detection rates varied widely across categories, with the highest estimates of sensitivity for thoracic and abdominal wall anomalies and the lowest for gastrointestinal anomalies across all tests.

The summary sensitivity of a first-trimester scan was 37.5% for detection of structural anomalies overall (95% confidence interval (CI) 31.1 to 44.3; low-certainty evidence) and 91.3% for lethal anomalies (95% CI 83.9 to 95.5; moderate-certainty evidence), with an overall specificity of 99.9% (95% CI 99.9 to 100; low-certainty evidence).

Two-stage screening had a combined sensitivity of 83.8% (95% CI 74.7 to 90.1; low-certainty evidence), while single-stage screening had a sensitivity of 50.5% (95% CI 38.5 to 62.4; very low-certainty evidence).

DISCUSSION

Society for Maternal-Fetal Medicine
High-risk pregnancy experts

SMFM Consult Series

smfm.org

Society for Maternal-Fetal Medicine Consult Series #71: Management of previable and periviable preterm prelabor rupture of membranes

Society for Maternal-Fetal Medicine (SMFM); Ashley N. Battarbee, MD, MSCR; Sarah S. Osmundson, MD, MS; Allison M. McCarthy, PhD; and Judette M. Louis, MD, MPH; SMFM Publications Committee

Summary of recommendations

#	Recommendation	Grade
1	We recommend that pregnant patients with previable and periviable PPROM receive individualized counseling about the maternal and fetal risks and benefits of both abortion care and expectant management to guide an informed decision. All patients with previable and periviable PPROM should be offered abortion care. Expectant management can also be offered in the absence of contraindications.	1C
2	We recommend antibiotics for pregnant individuals who choose expectant management after PPROM at ≥24 weeks of gestation.	1B

LIMITATIONS

- Single-center, retrospective design, which restricts generalizability.
- Absence of first-trimester screening data.
- Longer-term outcomes were not available (postmortem or genetic confirmation).

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CONCLUSION

- 92.5% of second-trimester terminations were for fetal anomalies.
- CNS anomalies were the leading fetal indication.
- Medical abortion was highly effective (99.5%).
- Serious complications were rare, with no documented infection.
- Strengthening first-trimester screening, fetal medicine services, genetic diagnosis, and referral systems may improve prenatal detection and counseling throughout Cambodia.

RECOMMENDATION

- Preconceptual consultation can improve detection risk factors and application of preventive measures.
- Strengthening first-trimester screening by ultrasound to detect severe and early anomalies and pre-eclampsia prediction.
- Develop fetal medicine services (amniocentesis, genetic diagnosis).
- Referral systems may improve prenatal detection and counseling throughout Cambodia.
- Training in prenatal diagnosis according to ISUOG standards.
- Establishment of a national congenital anomaly registry.

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Thank You