

IMPACT OF A MULTIDISCIPLINARY FETAL MEDICINE TEAM ON PRENATAL DIAGNOSIS AND PERINATAL DECISION-MAKING IN A LOW-RESOURCE SETTING

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Objective:

To evaluate the impact of a multidisciplinary fetal medicine team (MDT) on ultrasound-based prenatal diagnosis, counselling, and perinatal decision-making in a low-resource setting.

Methods:

This was a prospective observational study that included all pregnancies with fetal complications that were discussed at a newly formed fetal medicine MDT at a tertiary center in Ghana between January and December 2025. The MDT comprised Maternal-Fetal Medicine, Neonatology, Pediatric Surgery, and Neurosurgery. The prenatal ultrasound findings, MDT recommendations, and postnatal outcomes were analyzed.

Results:

Forty-four pregnancies were evaluated, including genitourinary (39%), gastrointestinal (14%), central nervous system (9%), and multisystem (20%) fetal anomalies, as well as fetal growth restriction (9%) and complicated twin gestation (7%). The cases were referred to the MDT at a median gestational age of 30+5 weeks (28+0 – 34+4). The main diagnostic modality was a detailed prenatal ultrasound, as invasive genetic testing was limited by cost, and fetal MRI by availability. MDT discussions enhanced diagnostic confidence and guided decisions, including planned mode and timing of delivery (89%), change in antenatal surveillance (39%), postnatal surgical planning (34%), and palliative care counselling (32%). Prenatal diagnosis enabled early neonatology involvement, avoidance of non-beneficial procedures, and informed parental decision-making. Of 36 live births, 47% survived to discharge. MDT collaboration allowed for prompt postnatal imaging, surgical intervention, and survival in non-lethal conditions. Postnatal findings were generally consistent with prenatal diagnoses.

Table 1. Summary of multidisciplinary fetal medicine cases, MDT recommendations, and postnatal outcomes

Variable	n (%) or median (range)
Total fetal cases reviewed by MDT	44
Median maternal age	30 (27-37)
Median gestational age at diagnosis	30+5W (28+0W – 34+4W)
Primary fetal indication for referral	
Structural anomaly	42 (95)
Complicated multiple pregnancy	3 (7)
Fetal growth restriction	4 (9)
Organ system involved	
Central nervous system	4 (9)
Genitourinary system	17 (39)
Gastrointestinal system	6 (14)
Cardiovascular system	2 (5)
Respiratory system	2 (5)
Skeletal system	2 (5)
Multisystem	9 (20)
Multidisciplinary team involved	
Maternal Fetal Medicine	44 (100)
Neonatology	44 (100)
Pediatric Surgery	31 (70)
Neurosurgery	8 (18)
Orthopedic Surgery	2 (5)
MDT recommendations	
Change in antenatal surveillance	17 (39)
Planned mode and timing of delivery	39 (89)
Postnatal surgical planning	15 (34)
Palliative care counselling	14 (32)
Parental decisions	
Continuation of pregnancy	34 (77)
Termination of pregnancy	3 (7)
Immediate delivery	7 (16)
Median gestational age at delivery	37+0W (32+0W – 38+4W)
Mode of delivery	
Vaginal delivery	24 (55)
Cesarean delivery	17 (39)
Delivery outcomes	
Live birth	36 (82)
Stillbirth/ IUFD	5 (11)
Neonatal outcomes	
NICU admission	20 (45)
Surgical intervention	6 (14)
Survival to discharge	17 (39)
Loss to follow up	0

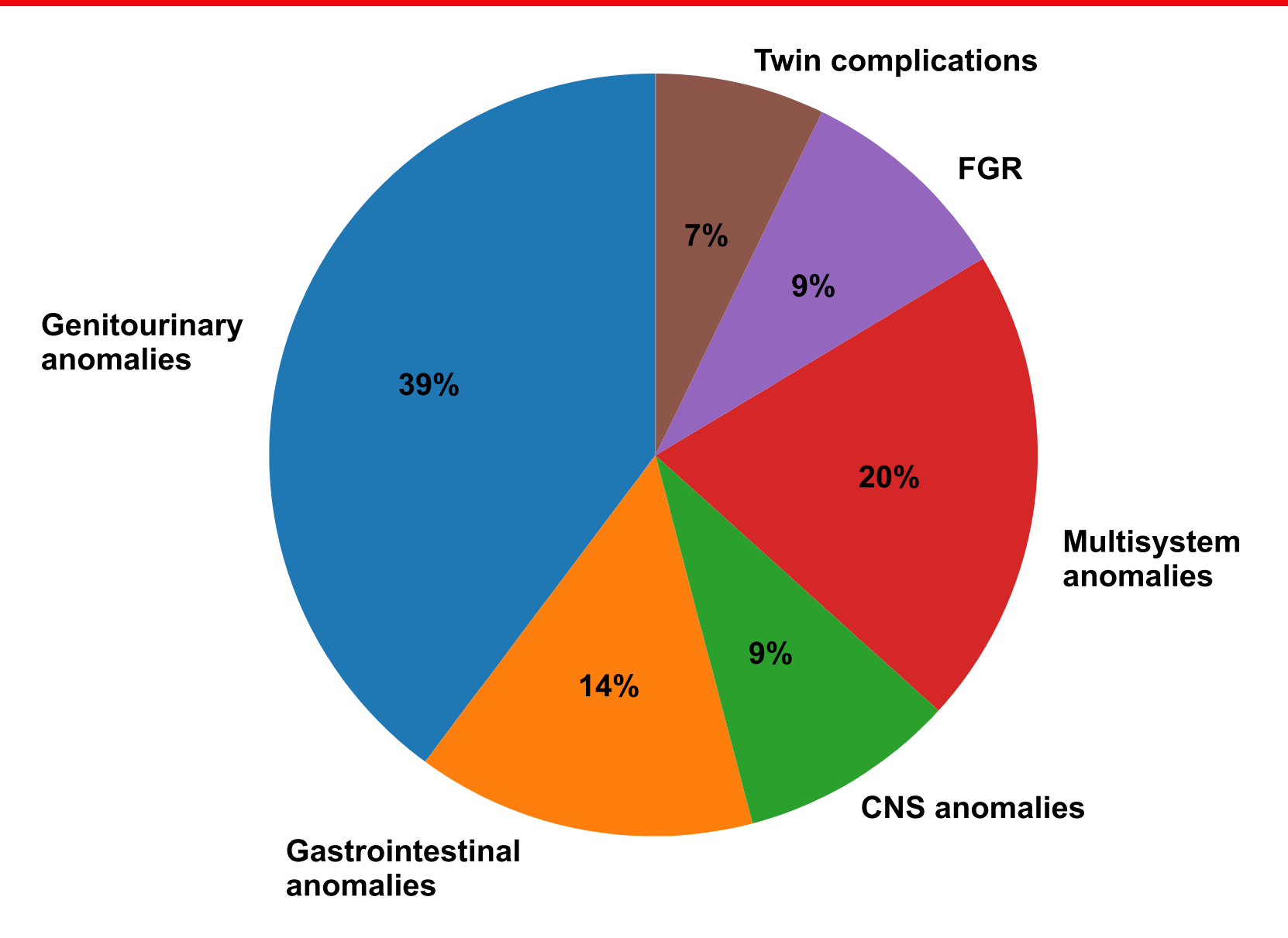


Fig. 1: Distribution of fetal cases

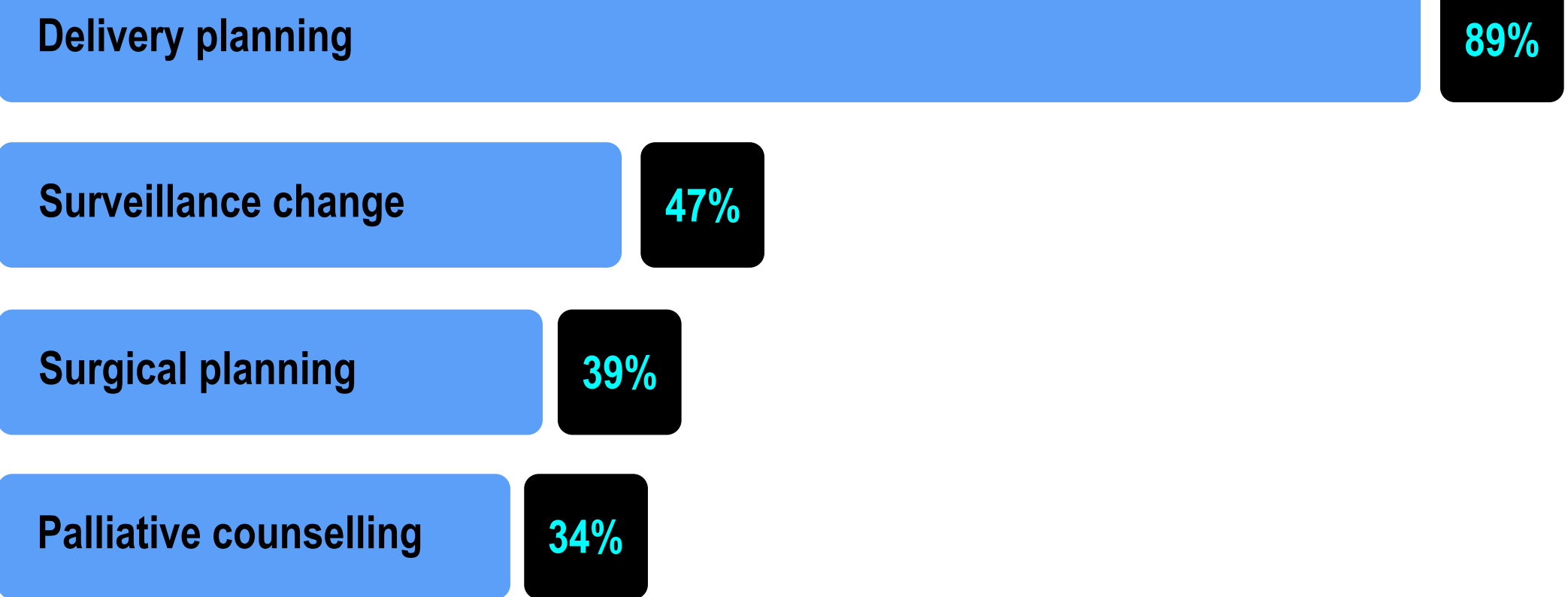


Fig. 2: Key MDT decisions

Conclusion:

In resource-limited settings, the benefits of fetal medicine MDT go beyond survival rates. MDT-driven ultrasound diagnosis enhances care coordination, ethical counselling, and perinatal readiness even in the absence of advanced fetal therapy. This concept is practical, scalable, and pertinent to the practice of fetal medicine globally.