



Outcome of 350 Multiple Pregnancies (711 babies): a single tertiary centre experience



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Objective

Multiple pregnancy is associated with a higher risk of adverse maternal and perinatal outcomes. The aim of this study was to assess the management and outcome of multiple pregnancy at a tertiary referral center in the West Midlands, United Kingdom.

Design

We conducted a retrospective single center observational study over 3 years, between 1st January 2021 and 31st December 2023 and included all women with a multiple pregnancy who booked and gave birth at Birmingham Women’s Hospital.

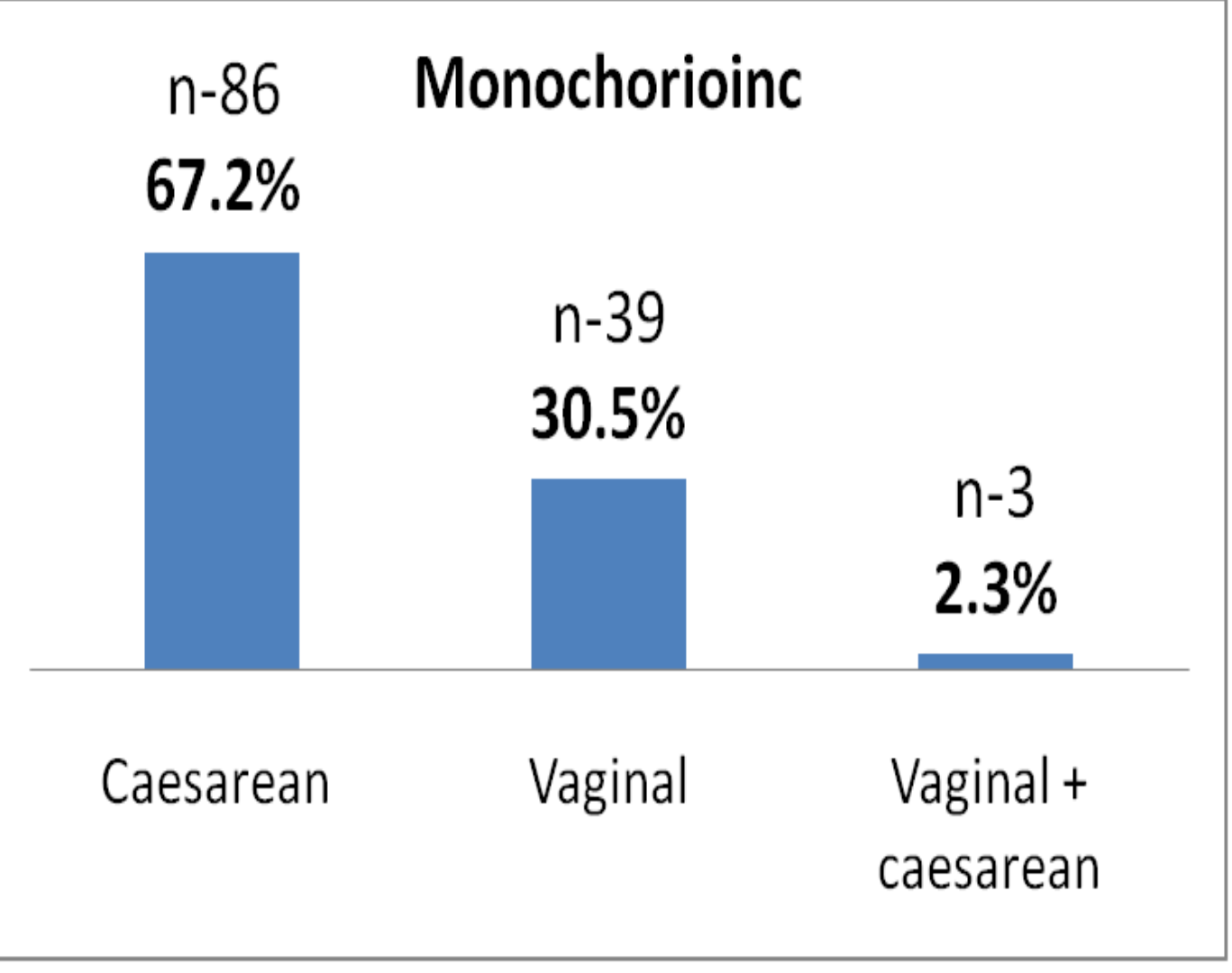
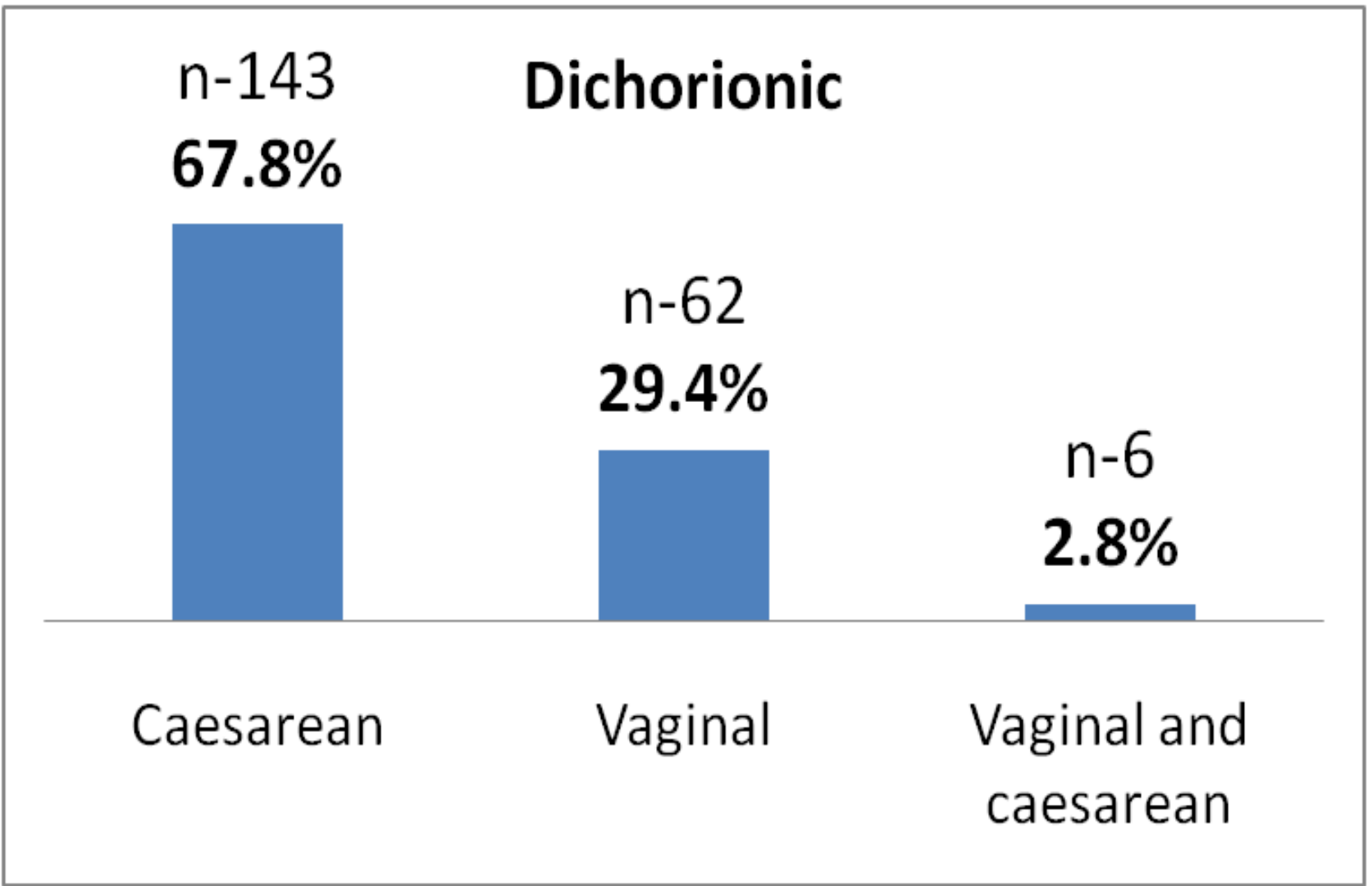
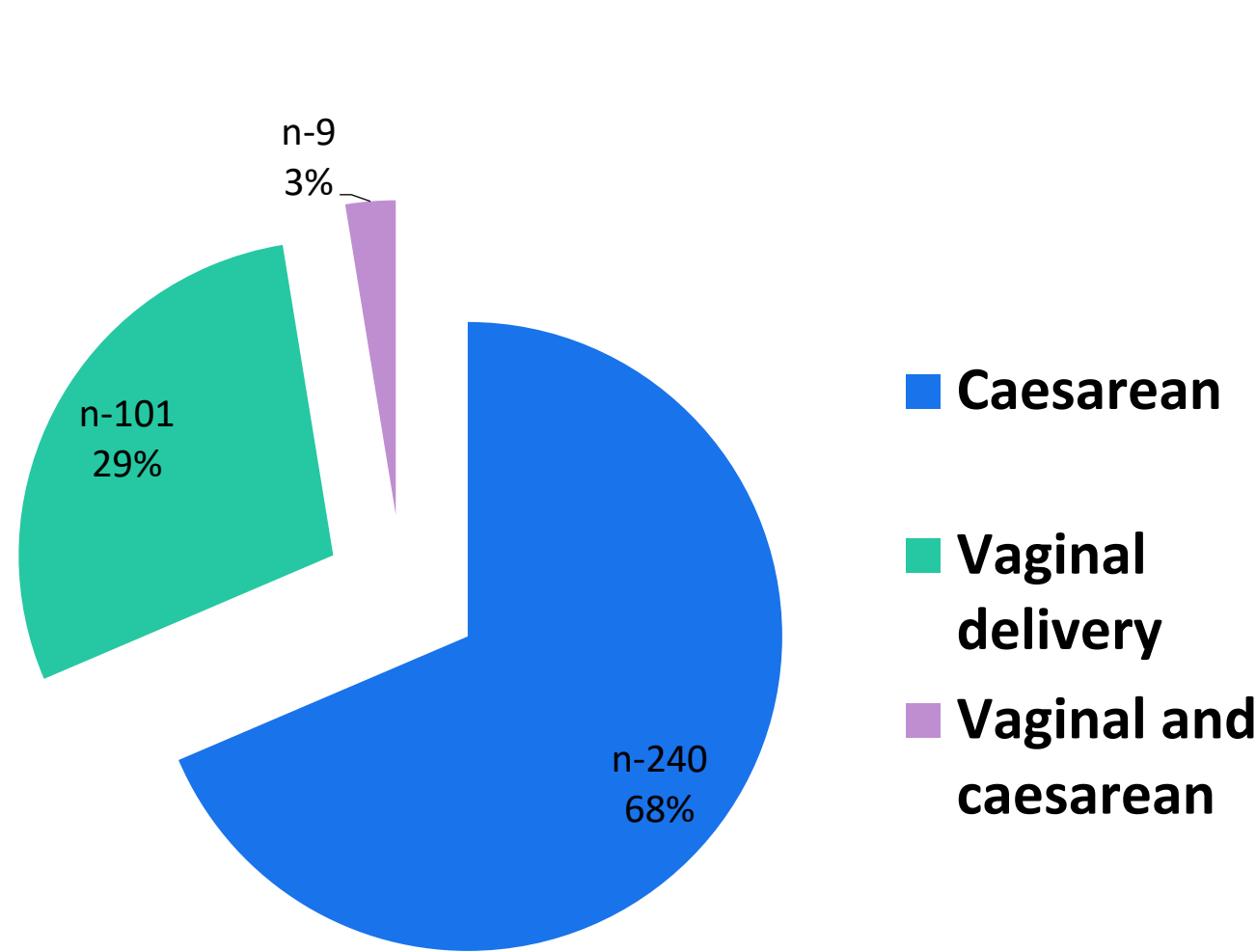
Method

Data were collected from hospital electronic patient record systems: Badgernet (Maternal and neonatal), Viewpoint, Xero, ICE, and Telepath. Data were analyzed and presented as percentages.

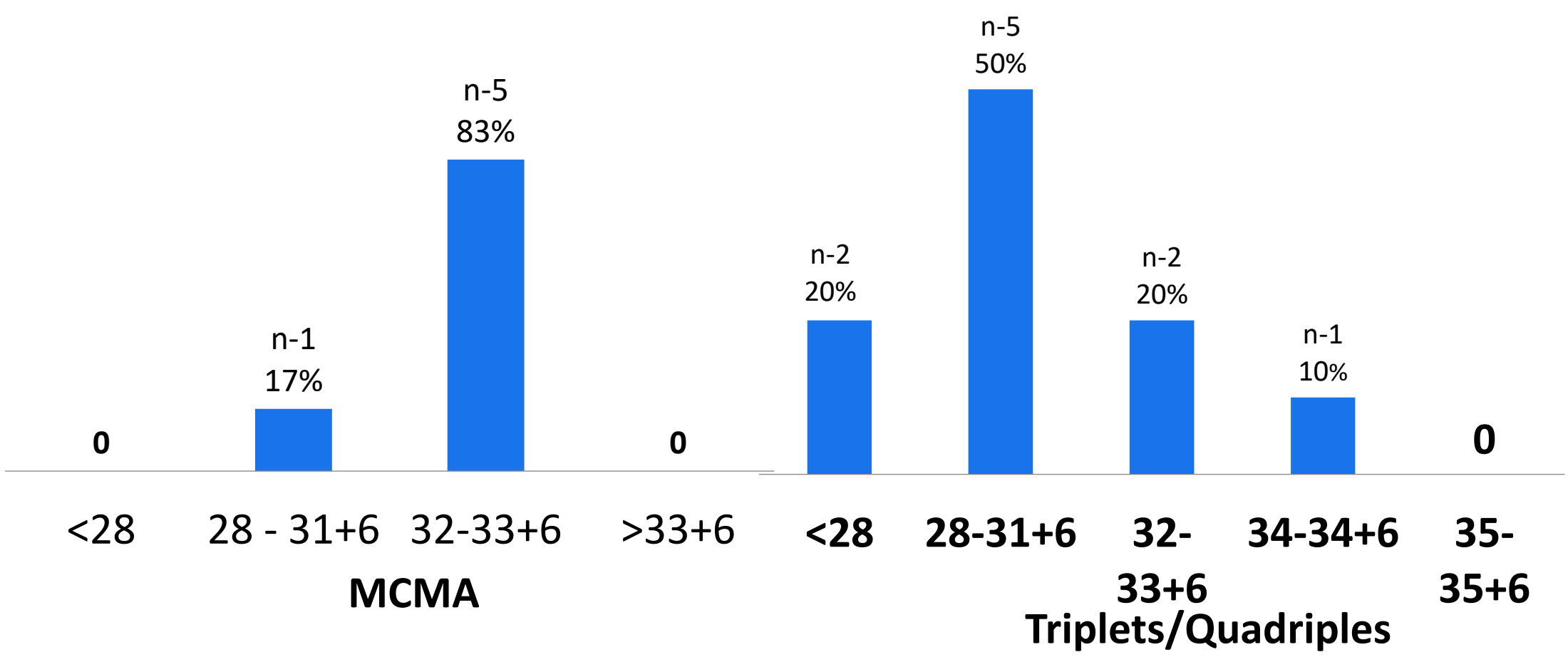
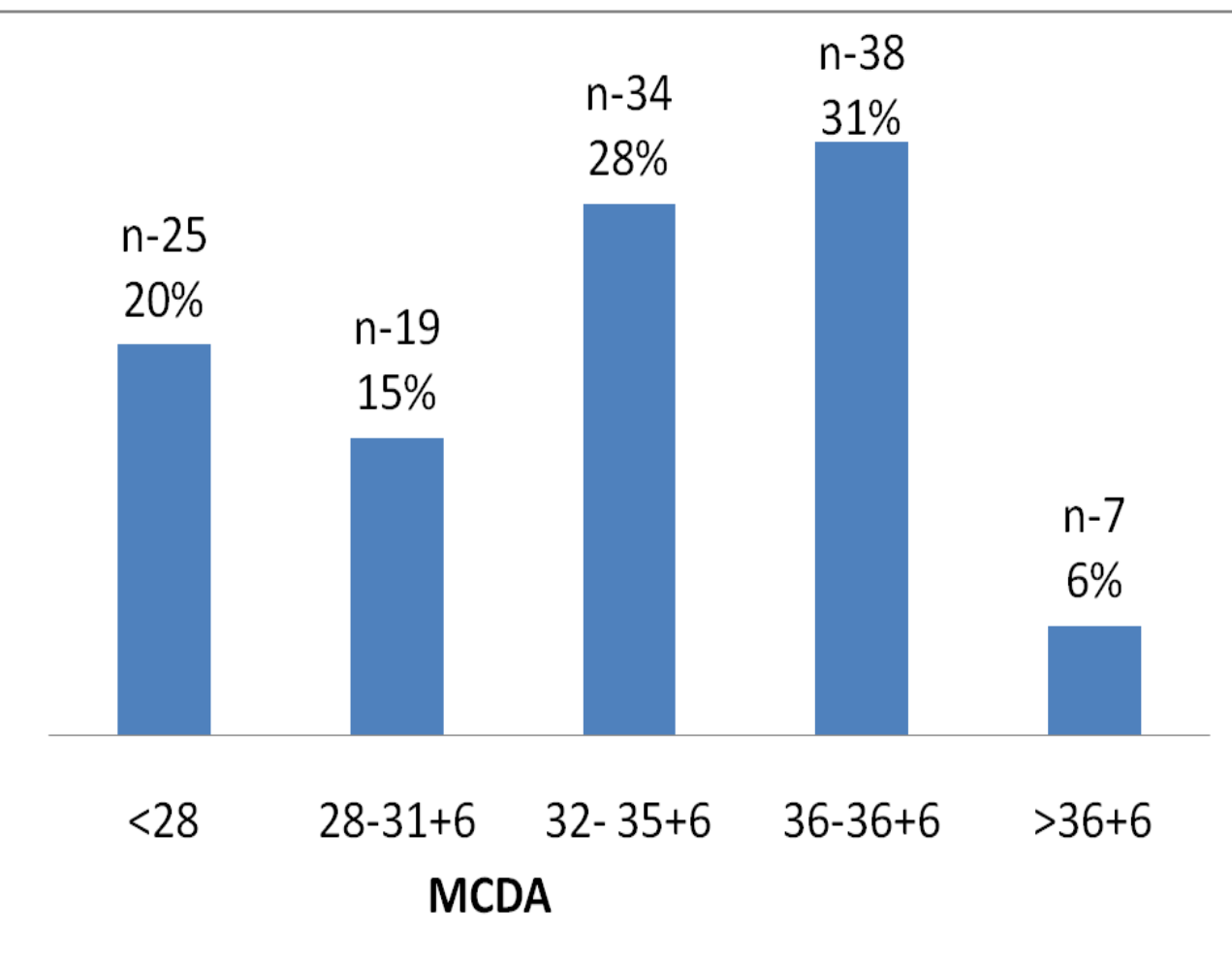
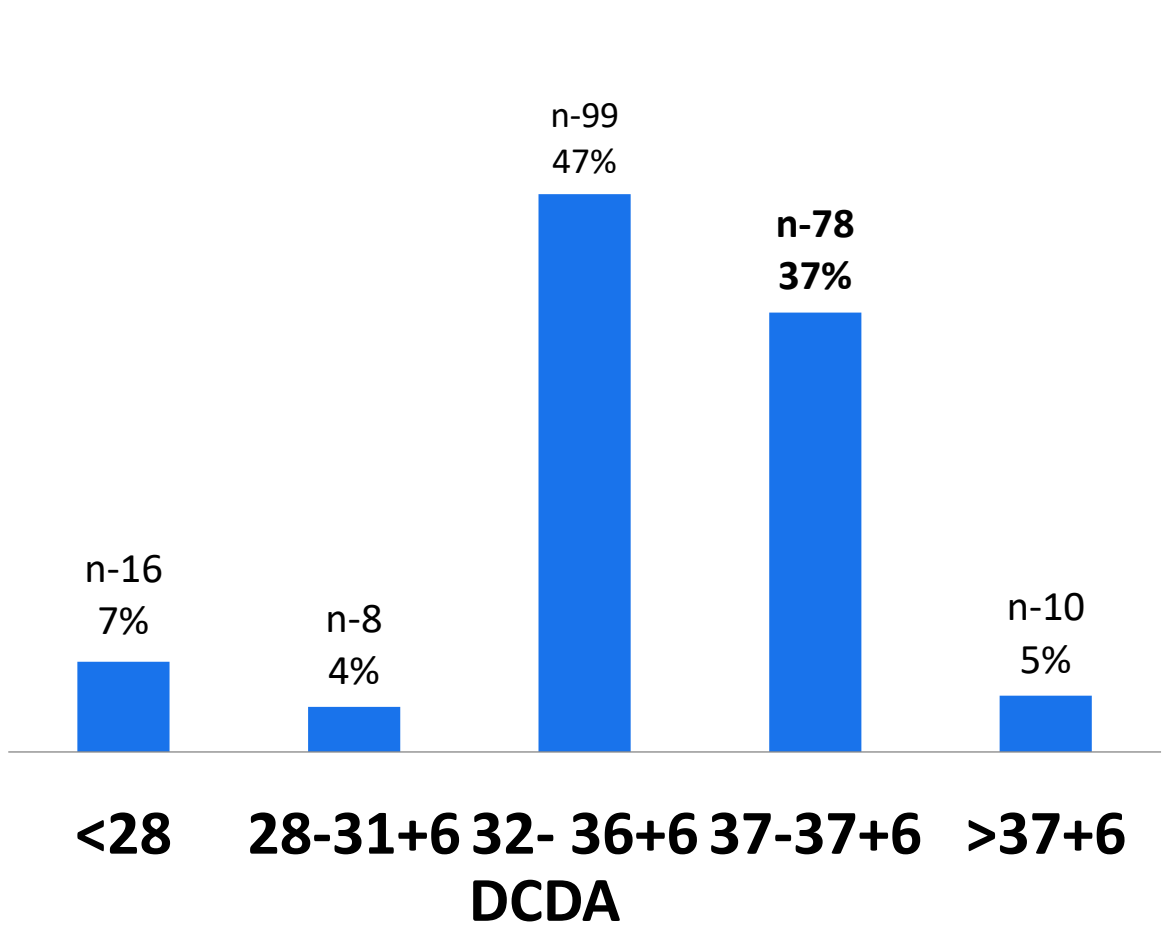
Results

- There were 350 multiple pregnancies (with 711 babies) over the three-year period, including 340 twins(60% Dichorionic and 37 % Monochorionic) 9 triplets and 1 quadruplet. The incidence of multiple pregnancy was 1.58%.
- Risk assessment for pre- eclampsia (PET) was conducted in all cases; 41% were at moderate or high risk of PET and 85% of eligible women received low dose aspirin.
- Pre-eclampsia or gestational hypertension occurred in 12.3% and gestational diabetes in 14.3%.
- Around 68% (240/350) of women gave birth by caesarean section, 29% (101/350) vaginally, and 3% (9/341) needed a caesarean section for the second twin.
- Premature birth (<37 weeks) occurred in 73% (255/350), with 22% (76/350) delivering prior to 32 weeks.
- Two third (67%) of women had postpartum hemorrhage (>500 mls) and 30% had major postpartum hemorrhage (>1000 mls).
- Complications in monochorionic twins include 22.5% sFGR, 14% TTTS, 1.5% TAPS.
- Neonatal unit admission rate was 10.4%, and 97% of babies (72/74) were alive at discharge. The most common cause of neonatal admission was prematurity.
- Nine stillbirth and two neonatal deaths occurred , giving a stillbirth rate of 12.6/1000 and neonatal mortality rate of 2.8/1000 respectively.
- All stillbirths occurred in monochorionic twins, 78% secondary to complications of feto-fetal transfusion.

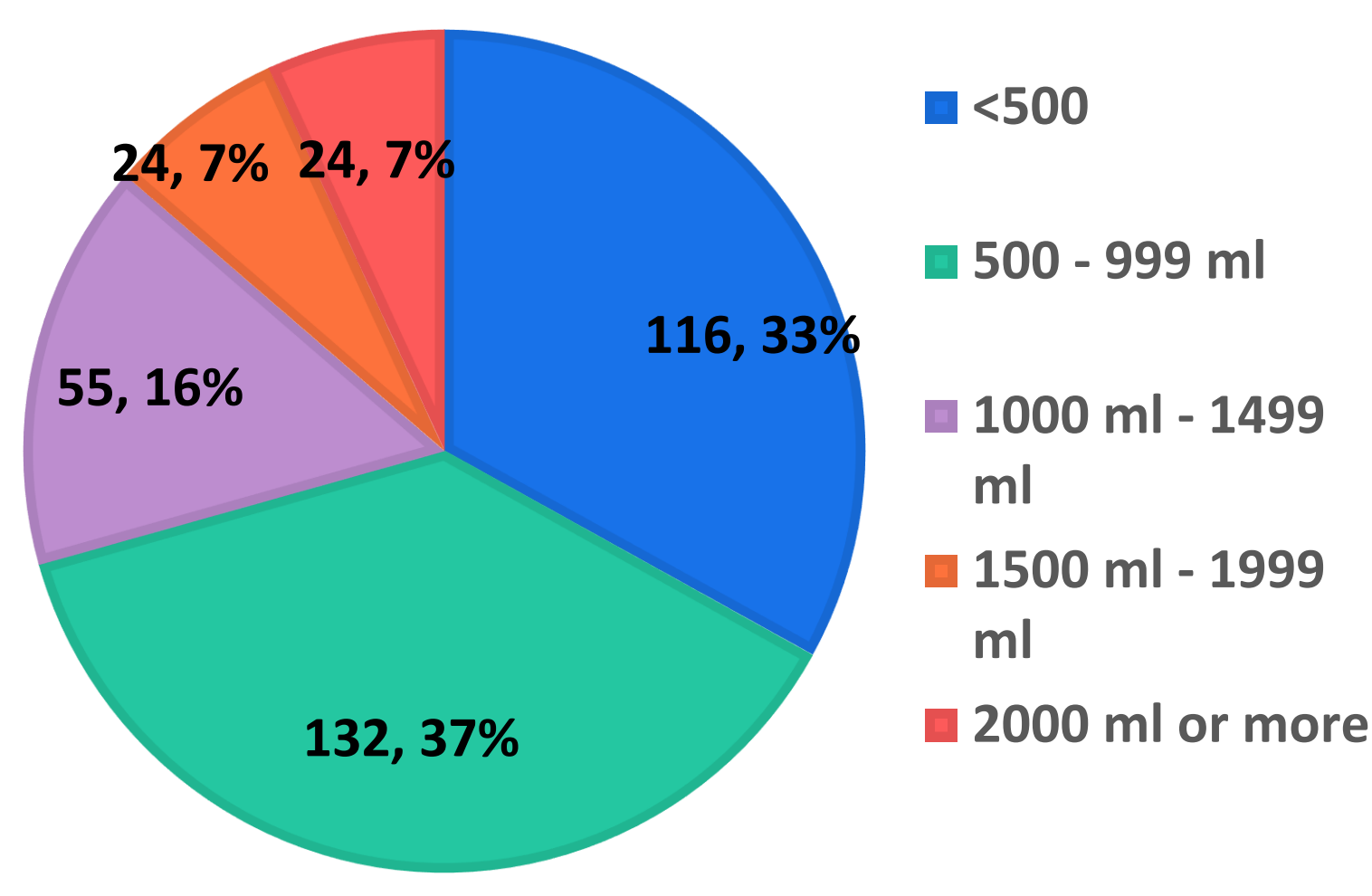
Mode of Delivery



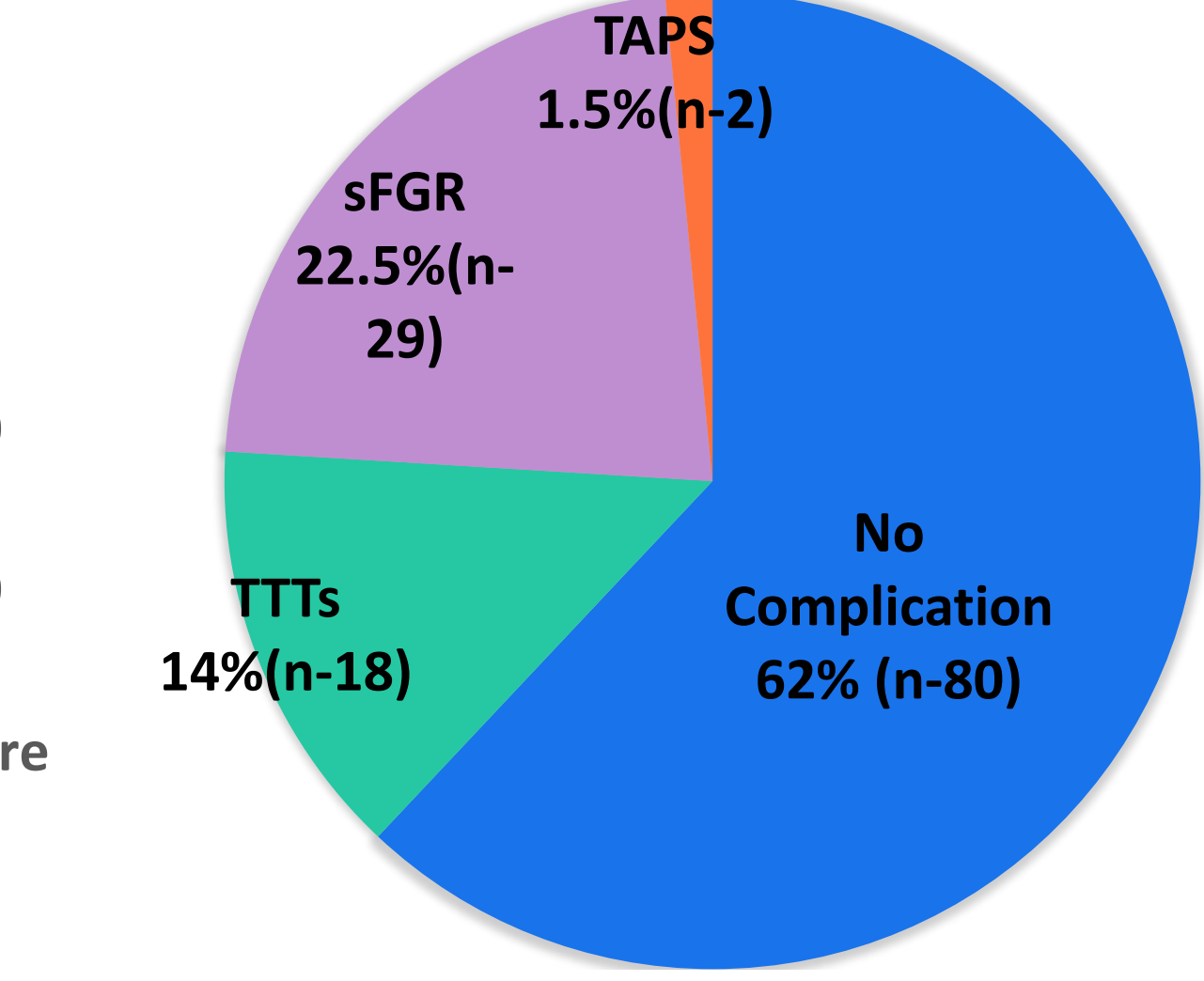
Gestation at Delivery



Post partum Blood loss: Average 824 ml



Monochorionic twin specific complications



Causes of stillbirth

Cause of Stillbirth	Type of pregnancy	Number of babies
Severe TTTS or its complications	MCDA	6
TAPS -Twin Anaemia Polycythaemia Sequence	MCDA	1
Body stalk anomaly	MCDA in Triplet	1
Intrauterine Hypoxia	MCDA	1

Conclusion

Multiple pregnancy is associated with a higher incidence of hypertensive disorders, gestational diabetes and PPH compared to singleton pregnancies. The incidence of premature birth prior to 32 weeks was higher compared to other studies (22% vs 10%). Caesarean section rate is high, seen in over two-thirds of women but the incidence of needing caesarean section for the second twin was lower than seen in other studies (3% vs 10%). Perinatal mortality remains high in monochorionic twins due to feto-fetal transfusion. This information will be useful in counselling women with multiple pregnancy and planning management and resources.

Limitations

- Single center study retrospective
- Inadequate / poor documentation in electronic patient record
- Unable to assess for FGR as birth centile not documented
- Unable to audit other aspects of intrapartum care (Fetal heart rate monitoring and prophylactic oxytocin) due to complexity in obtaining / interpreting data.

References

Multiple births in the UK 2013 to 2023 - Office for National Statistics
Tamba Report - Neonatal Care in England
Overview | Twin and triplet pregnancy | Guidance | NICE
NICE impact report: maternity and neonatal care