

Gestational Diabetes Mellitus (GDM): Diagnosis, Management & Outcomes – A study closing the loop (2024)

Megha Batra, Oreekha Amin, Sucheta Jindal

Objectives

- To analyze data in women who have GDM
 - Diagnosis
 - Discussions
 - Interventions
 - Outcomes
- To compare data with NICE standards
- To educate and increase awareness of staff
- To make service improvement recommendations to improve patient care

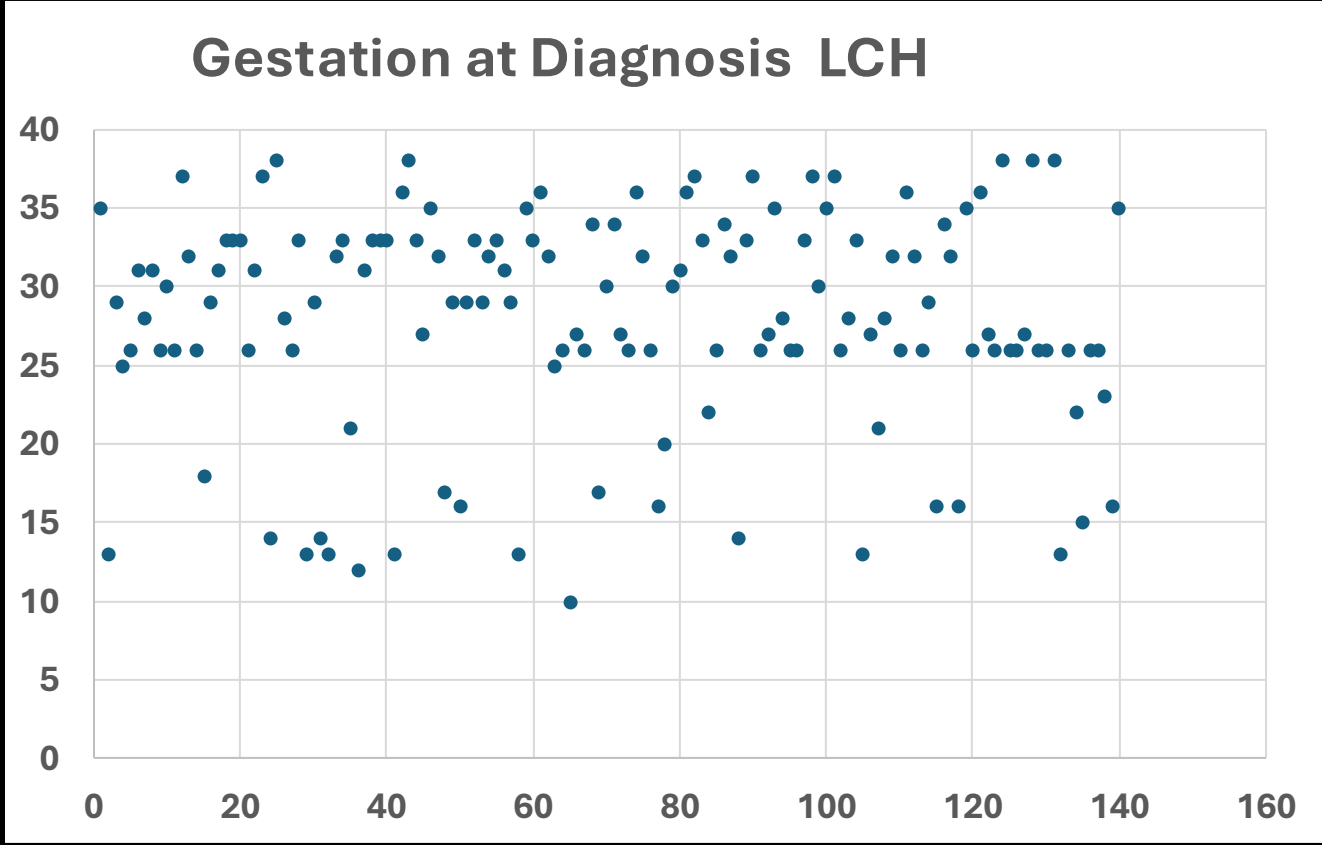
Methods

- Retrospective study conducted across United Lincolnshire Teaching Hospitals(ULTH)
 - 140 cases in Lincoln County Hospital
 - 72 cases in Pilgrim Hospital
- Time period of data analysis January 2023-April 2023
- Comparing current practices to previous studies (2019 and 2021) to assess progress and close the study loop

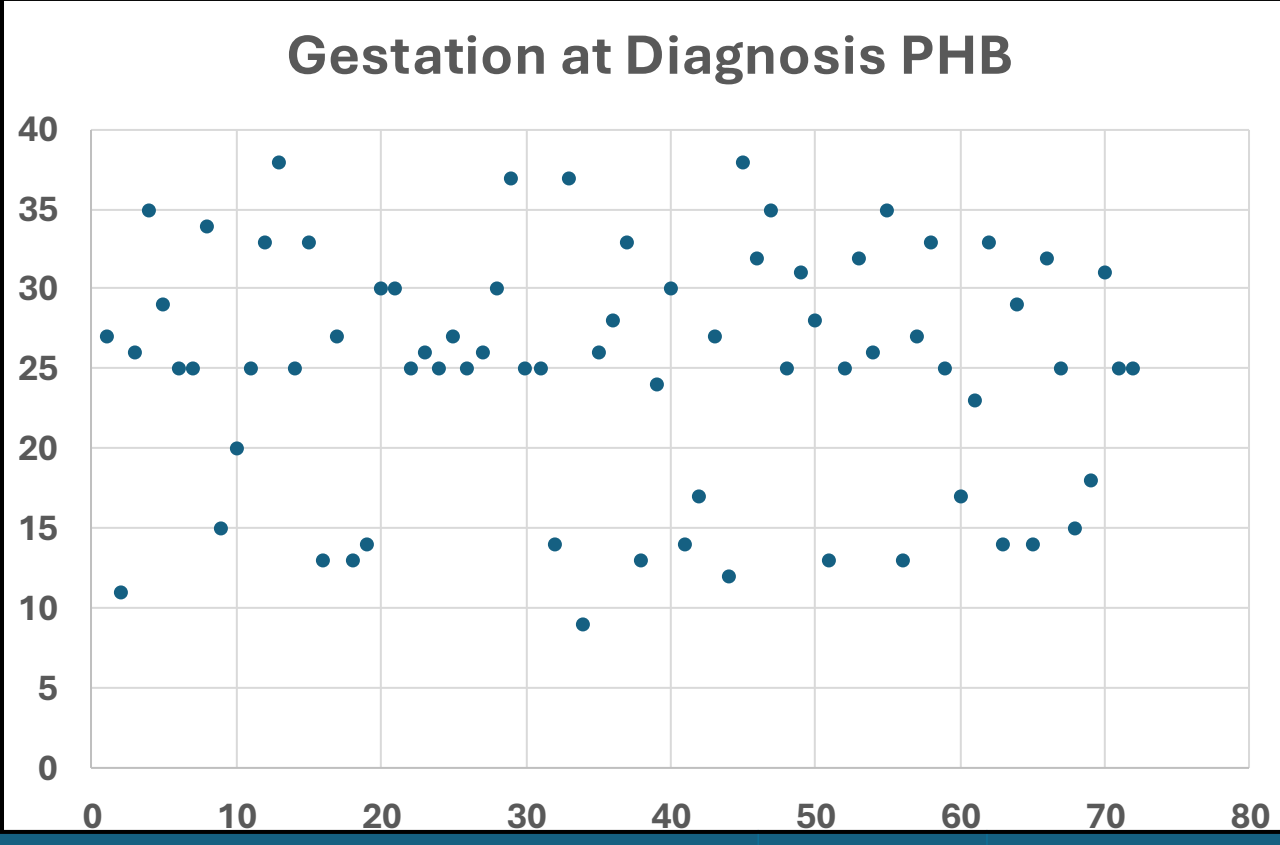
Results

- GDM prevalence across ULHT in 2019 -**785**
 - 17.4%** of total deliveries
- GDM prevalence across ULHT in 2021 – **744**
 - 17%** of total deliveries
- Prevalence of GDM during our study period, Jan –April 2023
 - 15% (212/1411)**
- Approximately 69% of women with GDM were diagnosed between 25 and 36 weeks of gestation, while 21% were diagnosed before 25 weeks.
- Management consisted of dietary control in 55% of cases, while 45% required pharmacological treatment, including metformin and insulin.
- Compliance with NICE standards was high, with 95% of women receiving serial growth scans and the majority having documented discussions on delivery mode and timing
- Timing of delivery followed local and national guidelines, with women managed on diet-only delivering by 41 weeks, on Metformin by 40 weeks, and on Insulin by 39 weeks.
- Macrosomia was reported in 9% of cases, which was lower in well-controlled GDM.
- Neonatal unit (NNU) admissions showed reduced rates of 11% in GDM pregnancies.
- These findings reflect the importance of maintaining optimal glycaemic management to improve outcomes

Gestation at Diagnosis

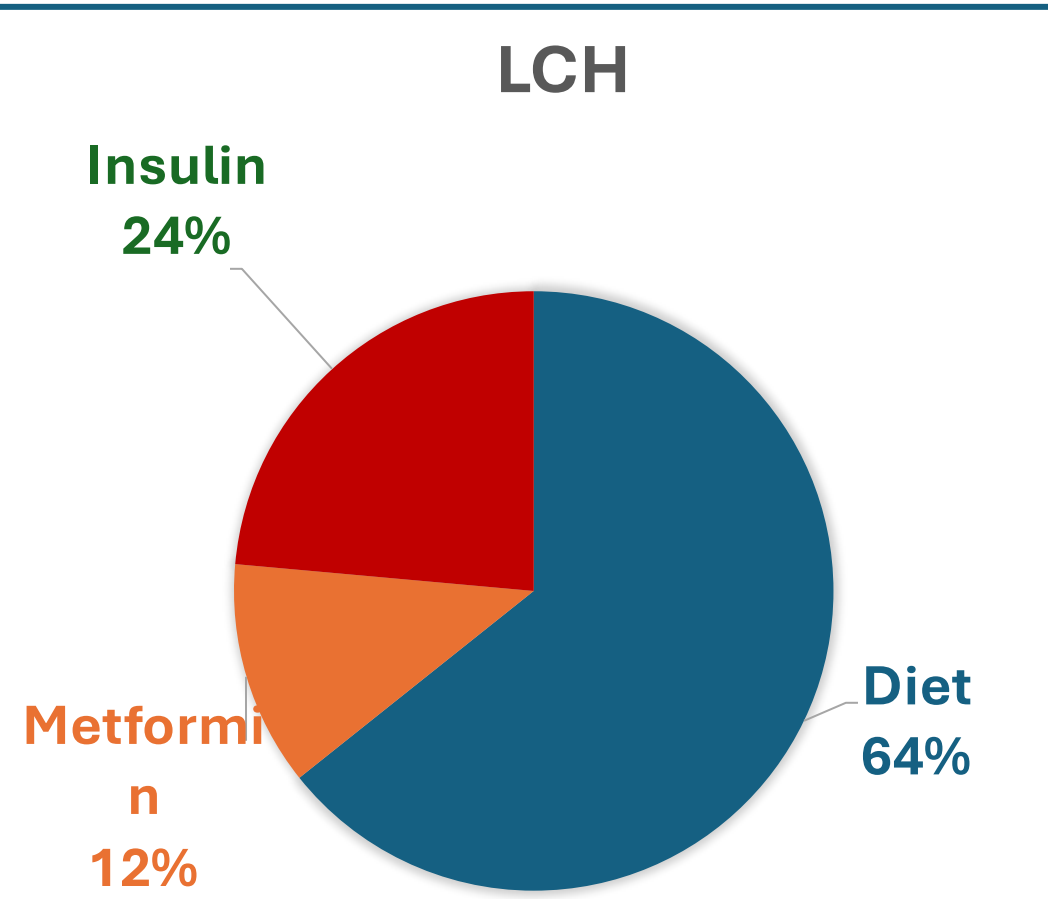


Gestation at diagnosis	N	%
<25 week	25	17.8
25-36 week	98	70
> 36 week	17	12.1
Total (LCH)	140	100



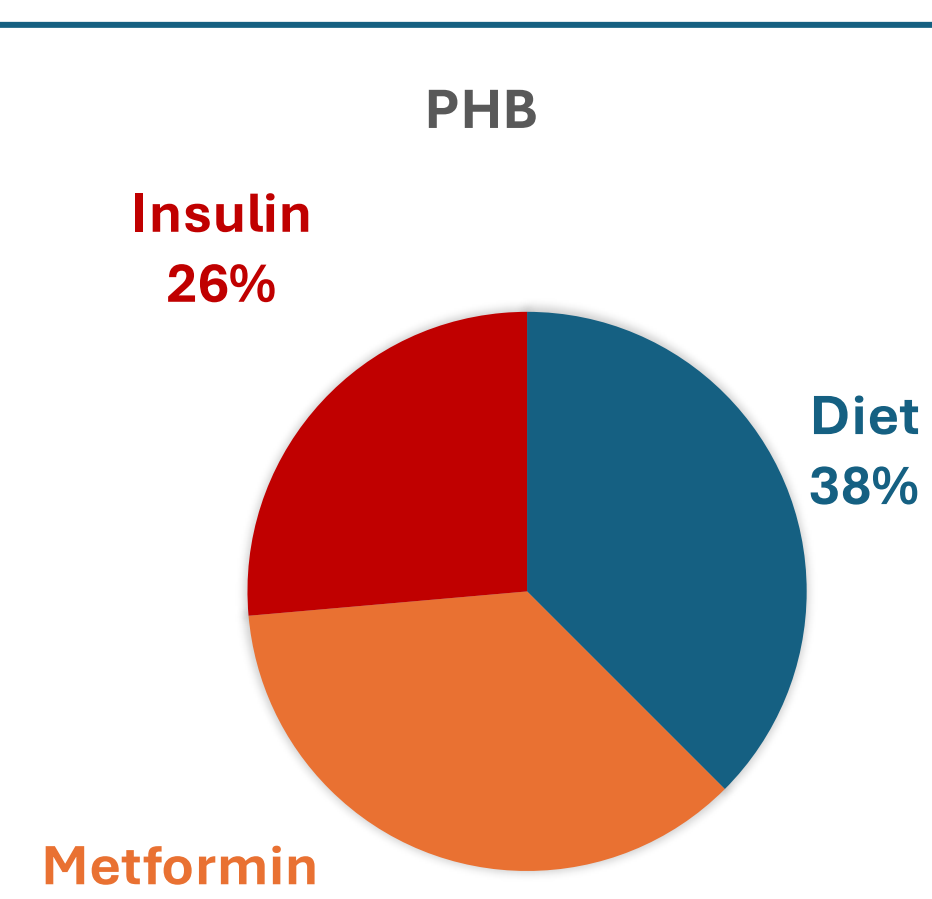
Gestation at diagnosis	N	%
<25 week	20	27.8
25-36 week	48	66.7
> 36 week	4	5.6
Total (PCH)	72	100

Treatments offered

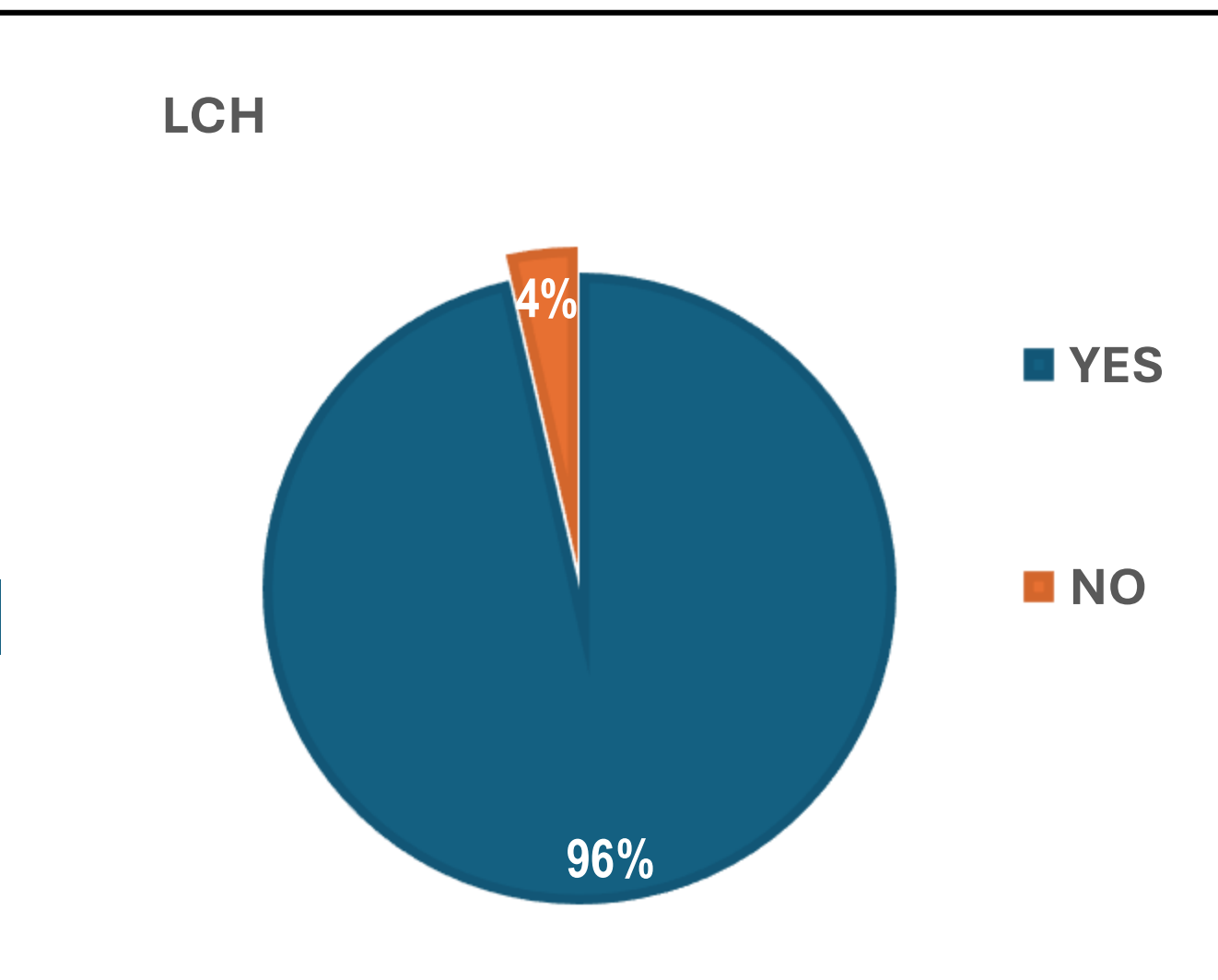


Diet	90
Metformin	17
Insulin	33
Total LCH	140

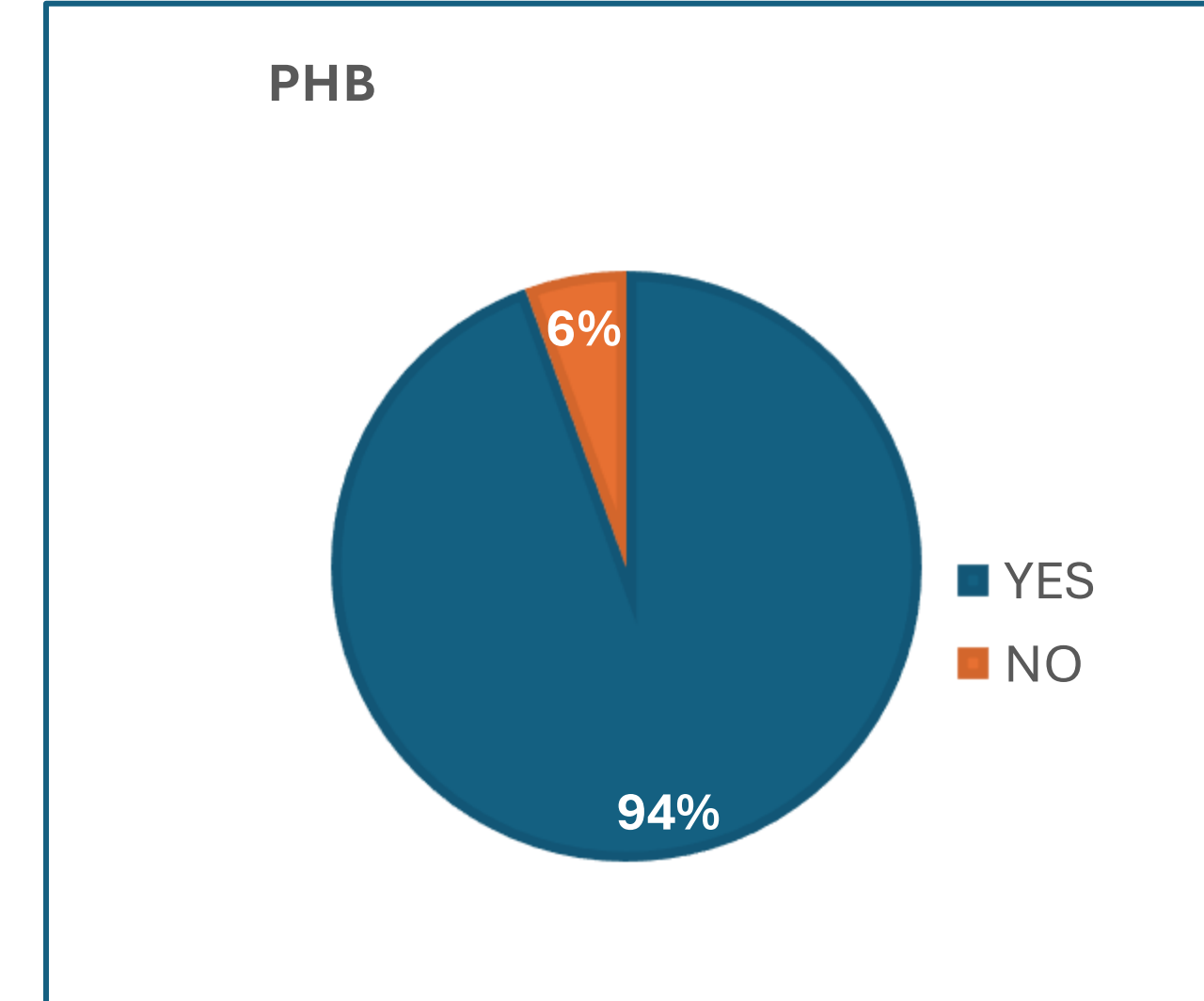
Diet	27
Metformin	26
Insulin	19
Total PHB	72



Discussions about Mode and Timing of delivery NICE standard is 95%



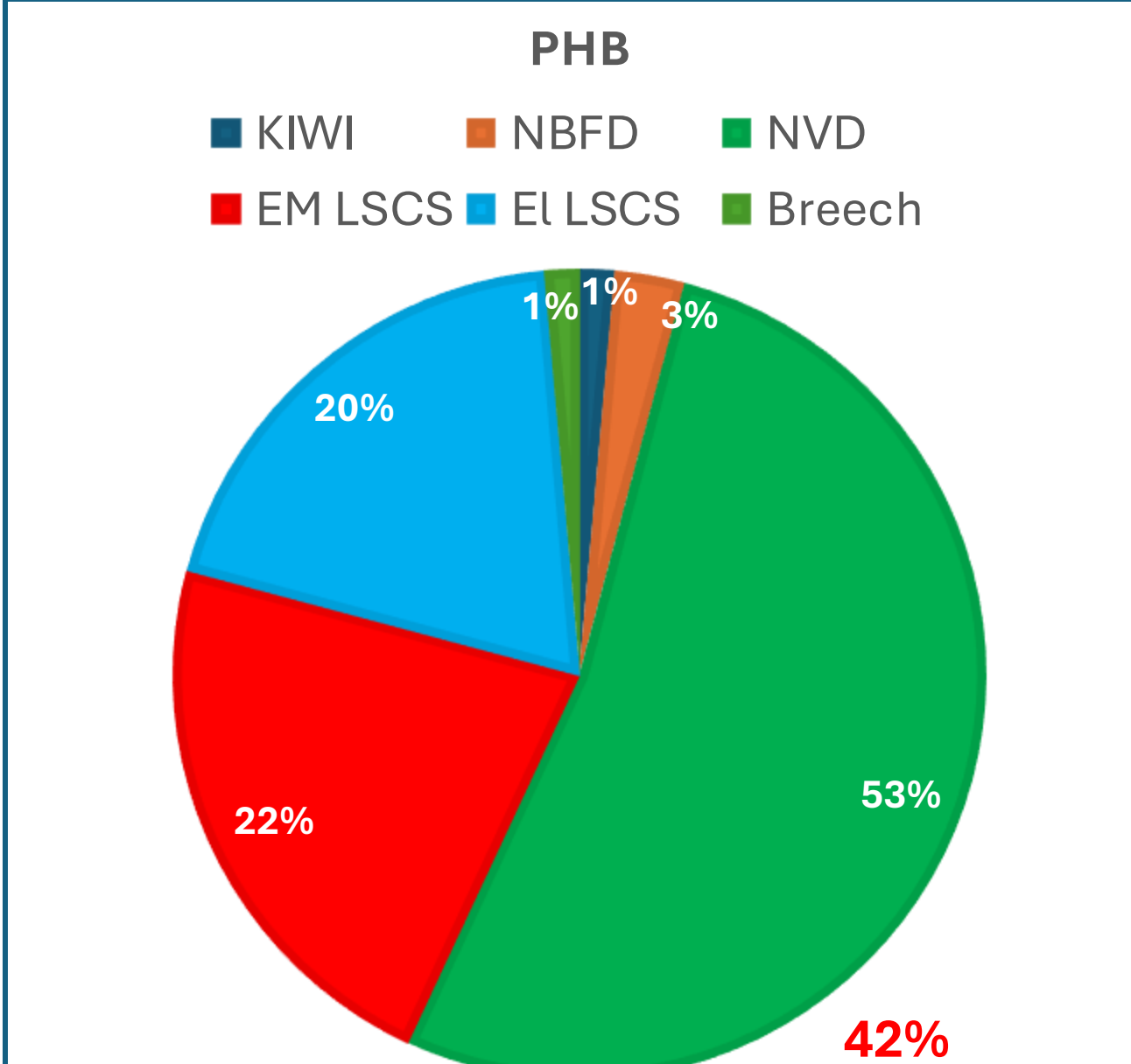
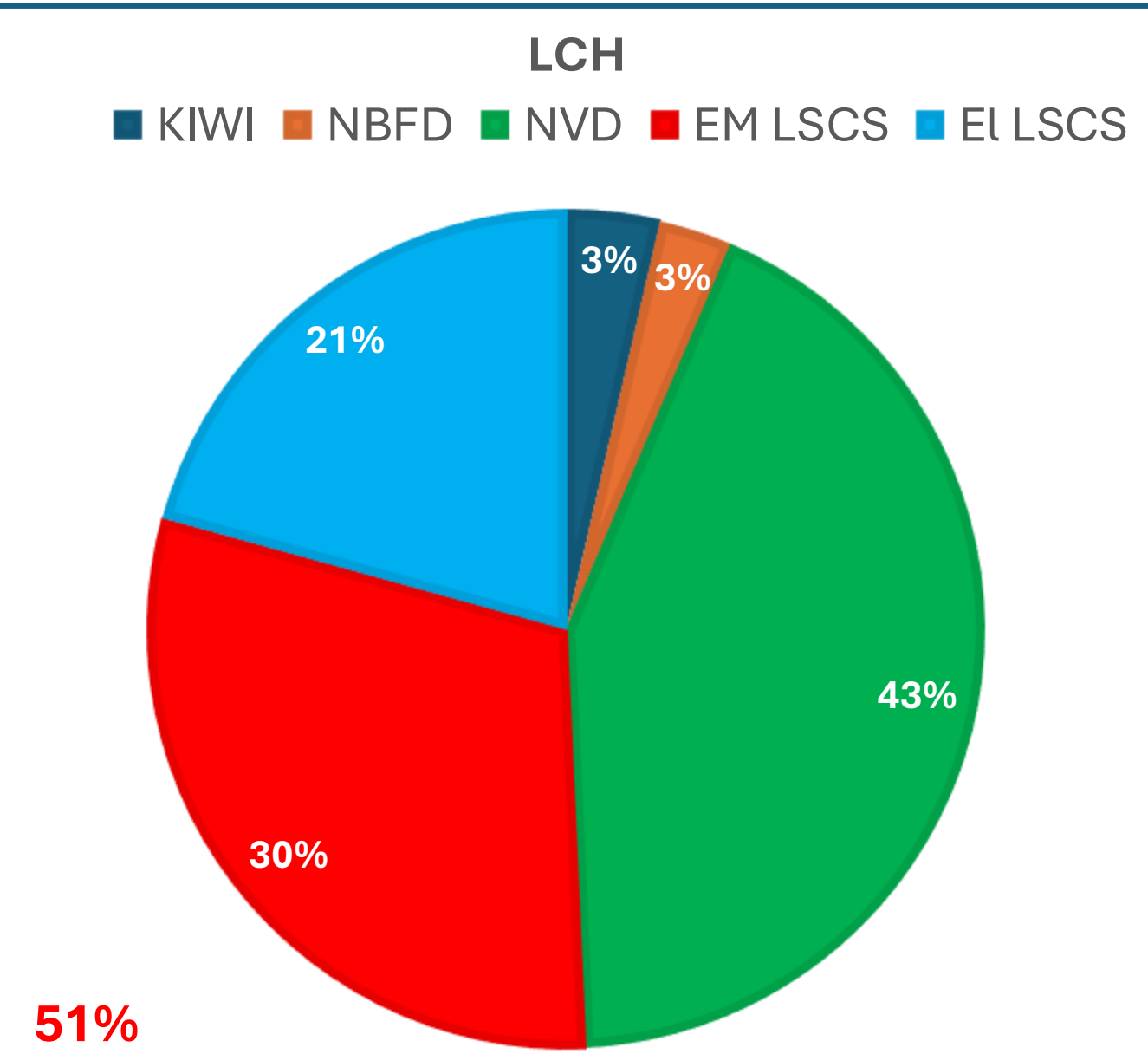
Documented discussions of TOD and MOD, LCH	
YES	135
NO	5
Total (N)	140



Documented discussions of TOD and MOD, PHB	
YES	68
NO	4
Total (N)	72

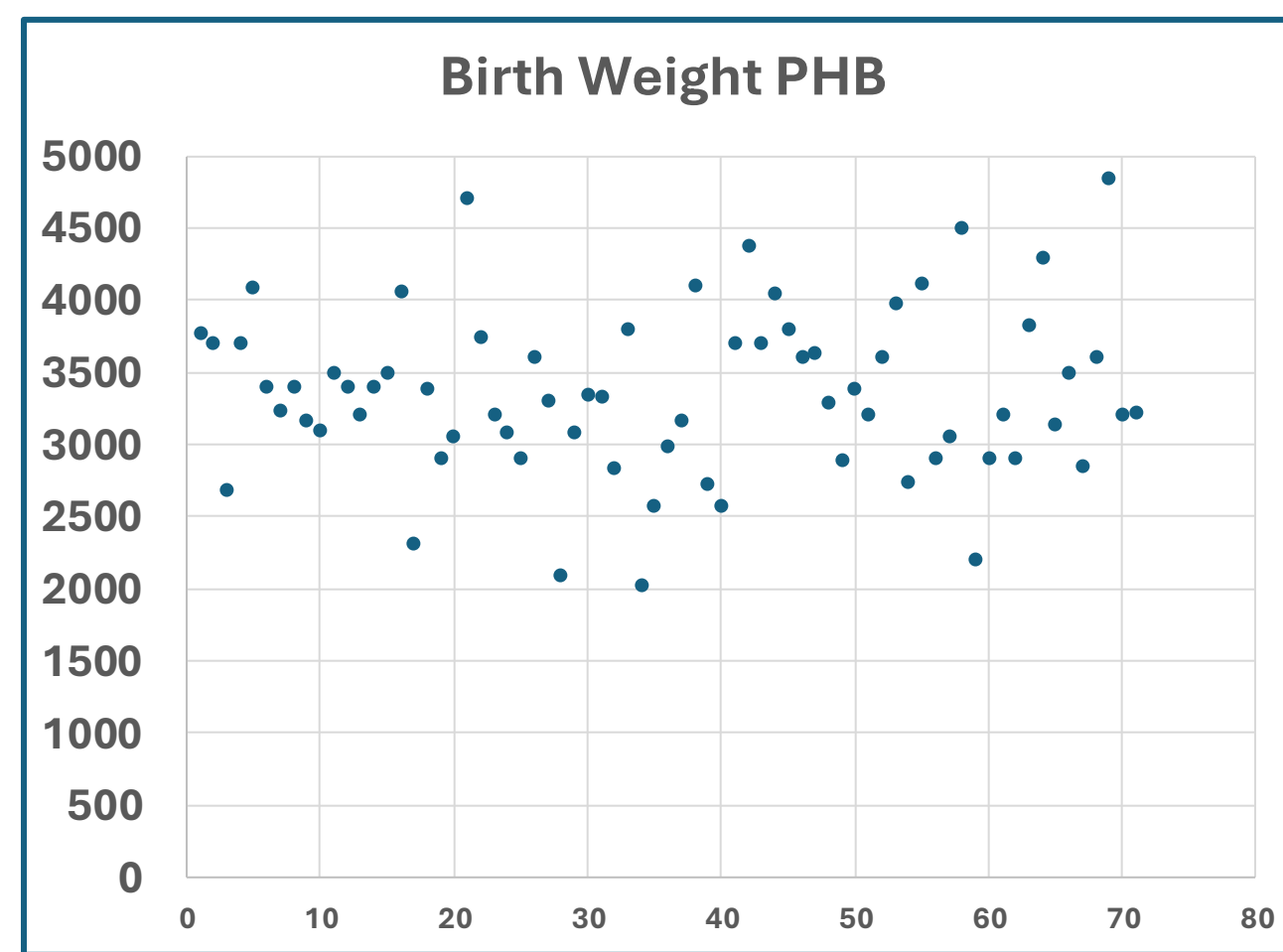
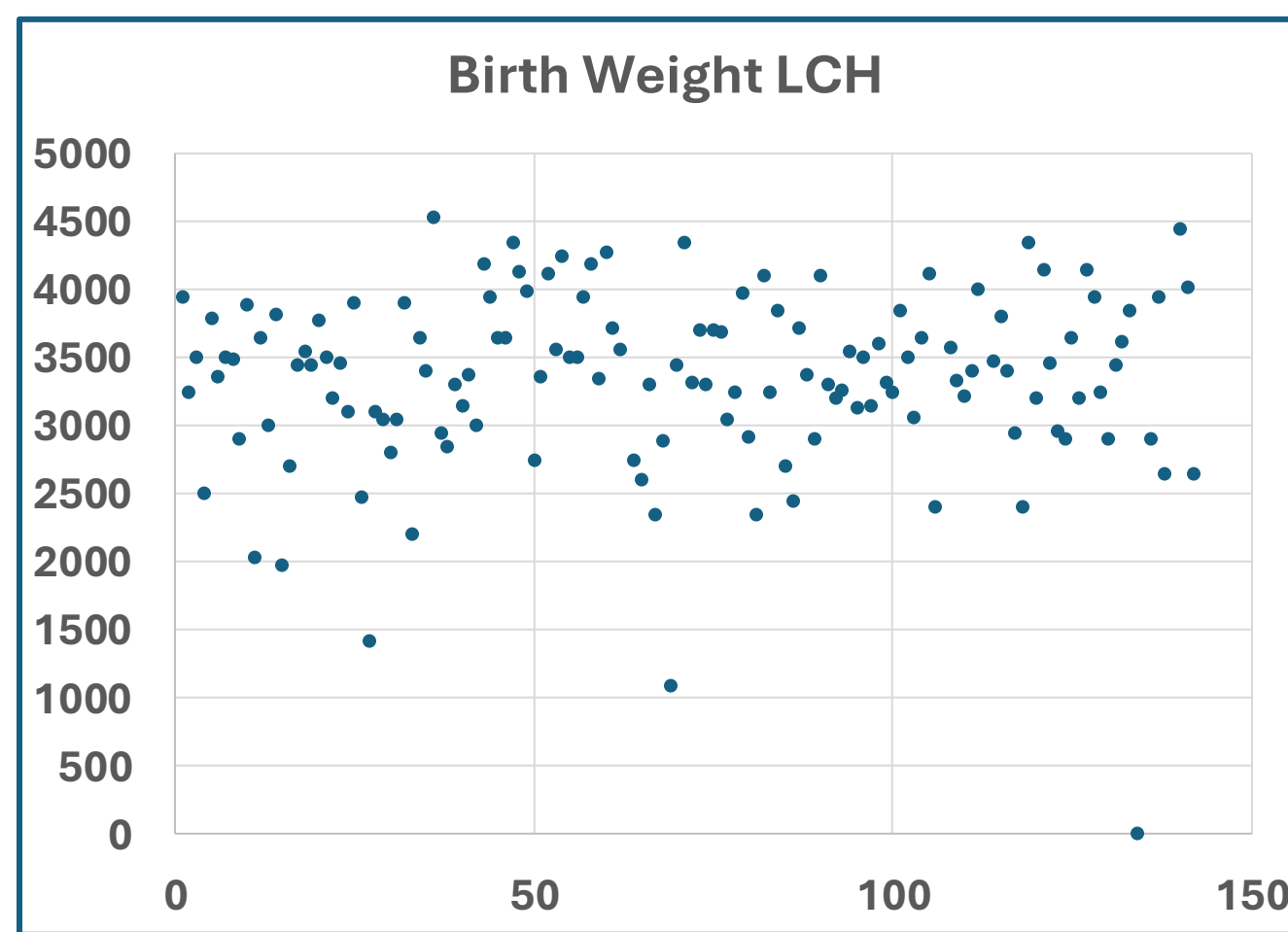
GDM and Mode of Delivery

Caesarean rate is more in GDMs when compared to non GDMs



Birth Weight

Well controlled GDM is less likely to have big baby

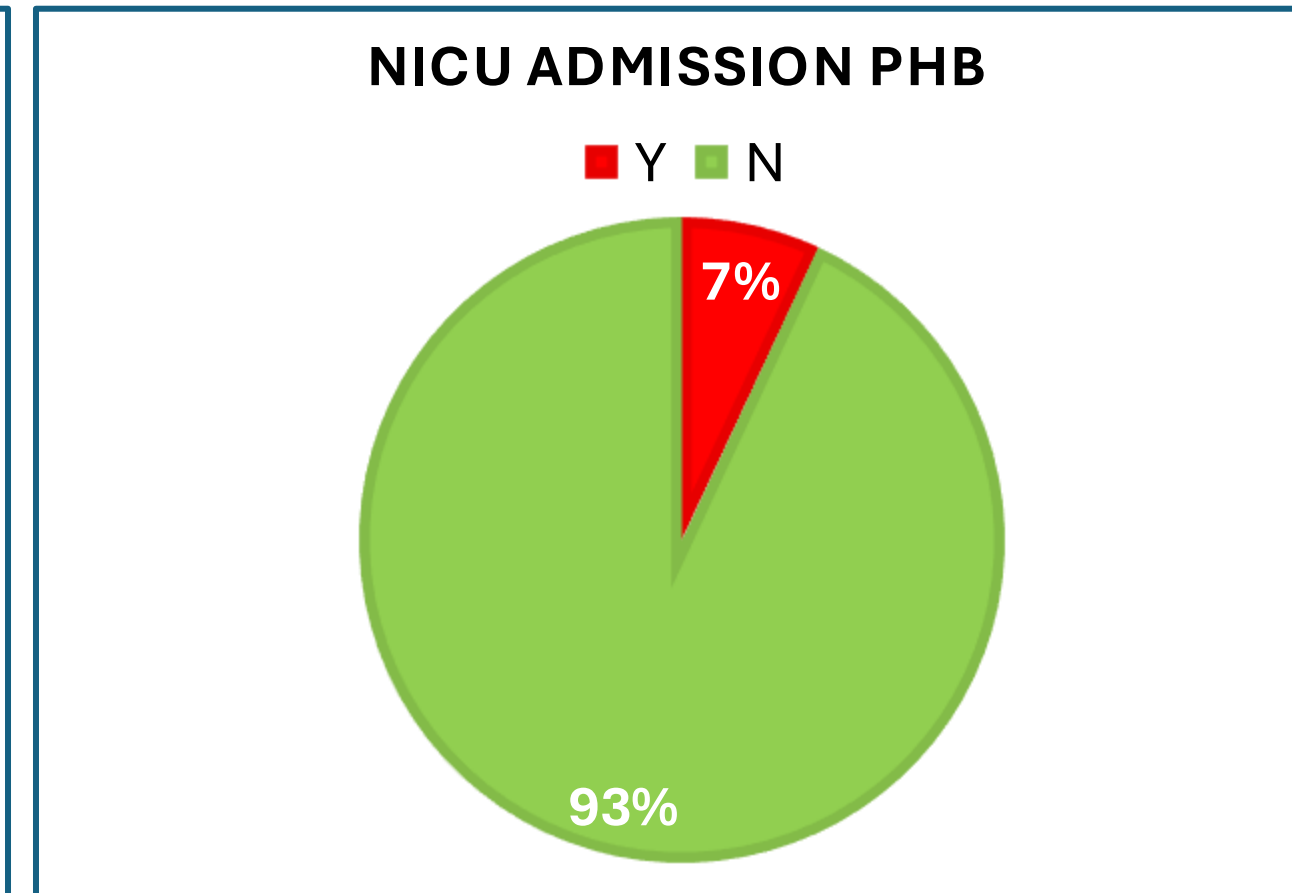
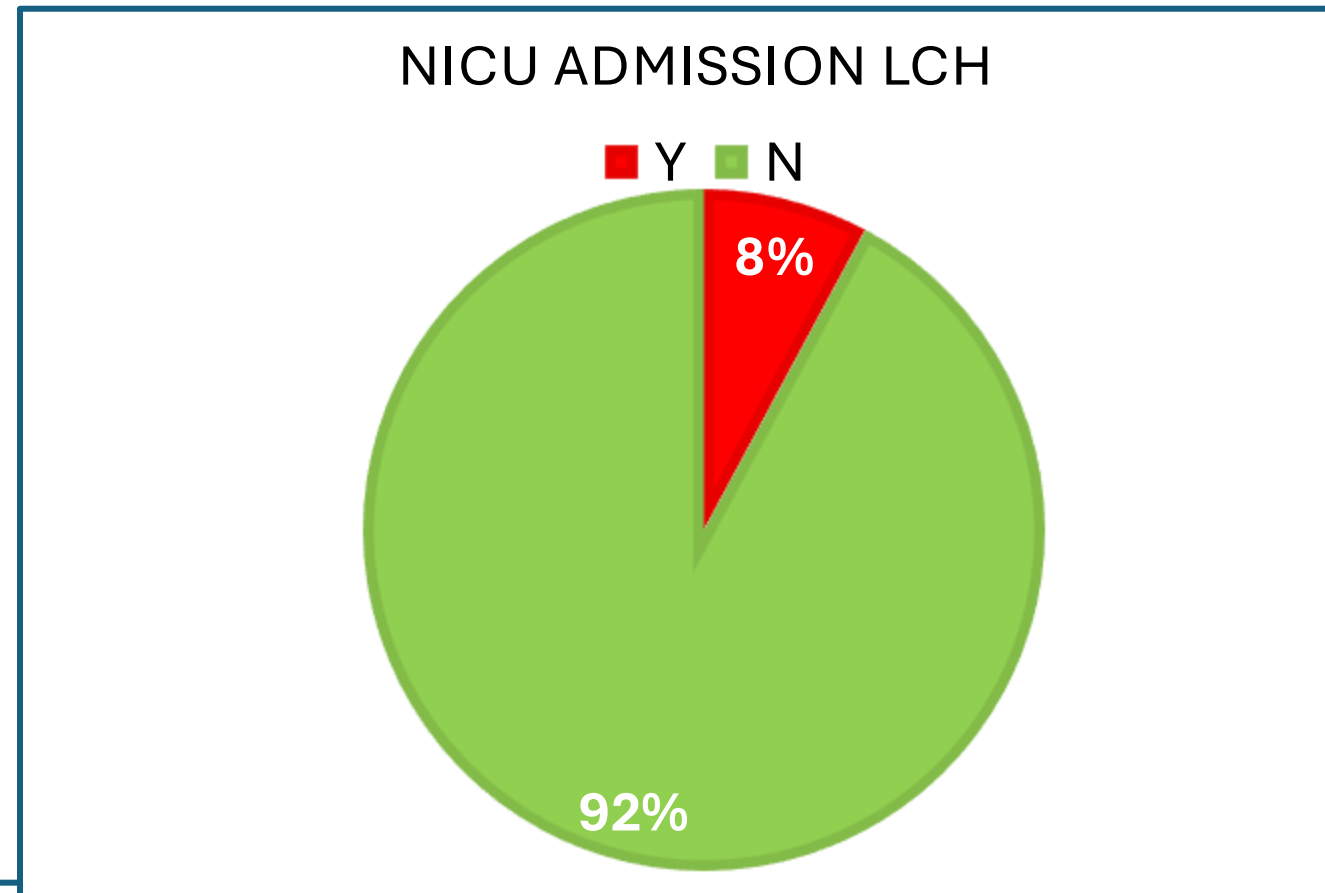


Birth Weight	N	%
<4000	122	87.1
4000-4500	17	12.1
>4500	1	0.7
Total (LCH)	140	100%

Birth Weight	N	%
<4000	61	84.7
4000-4500	8	11.1
>4500	3	4.2
Total (PHB)	72	100%

NNU Admissions

Well controlled GDM will see reduced NNU admissions



ULHT Data Comparison with NICE Standards

STANDARDS	TARGET	LCH	PHB
Offer ultrasound monitoring for foetal growth at 28, 32, 36 and +/- 39 weeks	95%	99%	100%
Documented evidence of providing information and advice about timing, mode and management of birth	95%	96 %	94 %
Documented evidence of providing information about risks and benefits of Vaginal birth, IOL and CS	95%	84 %	99 %
Birth no later than 40 weeks + 6 days	95%	99 %	100 %

Conclusion

- The study highlights significant progress in the management of GDM at our institution.
- Improved adherence to NICE standards and promising clinical outcomes.
- The persistent rise in GDM prevalence signals an ongoing need for earlier screening and timely diagnosis to further reduce the associated risks.
- Key findings align with existing literature, including Cochrane reviews, which emphasise the importance of glycaemic control in reducing complications such as macrosomia and neonatal unit admissions, thereby improving perinatal outcomes.
- Collaborative care approaches and ongoing education for healthcare professionals are crucial to optimise outcomes and enhance the quality of GDM care.