

## Clinical Activities

### Rationale for measurement

Demonstrates the volume of clinical activity in each organisation and information is reported on the total number of mothers delivered, the total numbers of births, the number of multiple pregnancies, and transfers in and out to hospitals.

### Measurement methodology and data sources:

Local extracts submitted monthly and extrapolated for analysis and publication.

### Target

These figures are not formatted in a way to support comparison with other hospitals or aggregation with other data.

### Performance

Hospital	Activity	2023 June	2023 Year to date
<b>Cavan Hospital</b>	Total Mothers delivered $\geq$ 500g (n)	95	594
	Multiple pregnancies (n)	2	7
	Total births $\geq$ 500 g (n)111	97	601
	In utero transfer – admitted (n)	0	1
	In utero transfer – sent out (n)	1	7
<b>Drogheda Hospital</b>	Total Mothers delivered >500g (n)	239	1328
	Multiple pregnancies (n)	8	13
	Total births >500 g (n)	247	1342
	In utero transfer – admitted (n)	1	9
	In utero transfer – sent out (n)	2	22
<b>Rotunda</b>	Total Mothers delivered >500g (n)	722	3975
	Multiple pregnancies (n)	12	72
	Total births >500 g (n)	734	4060
	In utero transfer – admitted (n)	(Reported Quarterly)	13 at Q1 2023
	In utero transfer – sent out (n)	(Reported Quarterly)	0 at Q1 2023

## HOME BIRTHS

### Introduction

Currently in Ireland there is a National Domiciliary Midwifery service available to eligible expectant mothers who wish to avail of a home birth service under the care of a self employed community midwife (SECM). This service is provided by the SECM on behalf of the HSE<sup>1</sup>.

### Rationale for measurement

Research shows that a planned home birth is an acceptable and safe alternative to a planned hospital birth for some pregnant women. The expectant mother, in consultation with her midwife and other Medical advisors of her choice, can decide whether home birth is a safe option for her and her baby<sup>1</sup>.

### Target

These figures are not formatted in a way to support comparison with other hospitals or aggregation with other data.

### Performance

	Month	N= Booked	N= Delivered at Home
Geographic area associated with the Rotunda Hospital	April	4	0
	May	3	2
	June	4	4
Geographic area associated with Drogheda Hospital	Month	N= Booked	N= Delivered at Home
	April	1	1
	May	0	0
June	1	1	
Geographic area associated with Cavan Hospital	Month	N= Booked	N= Delivered at Home
	April	0	0
	May	0	0
June	0	0	

#### References:

<sup>1</sup> HSE (2022) National Home Birth Services

## MIDWIFERY LED UNITS (MLUS)

### Introduction

Midwife-led maternity care is shown to be safe for women with low-risk during pregnancy. In Ireland, two midwife-led units (MLUs) were introduced in 2004. These are based in the RCSI HG in Drogheda and Cavan Hospitals. In the MLU a small team of midwives provide care for women throughout their pregnancy, during labour and in the postnatal period.

### Rationale for measurement

A number of studies have found that midwife-led care leads to a number of positive outcomes with no adverse effects for mothers and their babies. In fact, midwifery care for women at low-risk for complications during pregnancy is associated with various benefits, such as increased rates of maternal satisfaction and a decrease in unnecessary medical intervention<sup>1-3</sup>.

### Target

These figures are not formatted in a way to support comparison with other hospitals or aggregation with other data.

### Performance

Births – Drogheda Hospital	Jan-23	Feb-23	Mar-23	Apr-23
Total number of mothers who gave birth within the month	217	200	247	204
Number of mothers who gave birth in the MLU	20	15	19	6
% of mothers who gave birth in MLU within the month	9.2%	7.5%	7.7%	3%

Births – Cavan Hospital	Jan-23	Feb-23	Mar-23	Apr-23
Total number of mothers who gave birth within the month	107	88	94	111
Number of mothers who gave birth in the MLU	6	4	6	6
% of mothers who gave birth in MLU within the month	5.6%	4.5%	6.3%	5.4%

#### References:

<sup>1</sup> Chapman, S. (2016), *Midwife-led continuity models versus other models of care: review and reflections*, <https://www.evidentlycochrane.net> (Accessed 13 June 2023)

<sup>2</sup> Devane D, Begley C, Clarke M, Walsh D, Sandall J, Ryan P, Reville P, Normand C (2010). Socio-economic value of the midwife: A systematic review, meta-analysis, meta-synthesis and economic analysis of midwife-led models of care. London: RCM.

<sup>3</sup> Cummins, A, Coddington, R, Fox, D, Symon, A. (2020) *Exploring the qualities of midwifery-led continuity of care in Australia (MiLCCA) using the quality maternal and newborn care framework*. Women and Birth, Volume 33, Issue 2.

## PERINATAL MORTALITY RATE (ADJUSTED)

### Definition

The Adjusted Perinatal Mortality Rate is defined as Stillbirth and early neonatal death > 2500 grams excluding lethal congenital defects/1000 deliveries.

### Rationale for measurement

The perinatal mortality rate is recognised as an indicator of the quality and safety of antenatal and perinatal care

### Measurement methodology and data sources:

Local data extracts submitted monthly and extrapolated for analysis and publication.

### Target

The figures beneath are not formatted in a way to support comparison with other hospitals or aggregation with other data. Context is provided in the graph in section 'Perinatal Deaths  $\geq$ 2.5kg without a Congenital Anomaly (Perinatal Adjusted)'.

### Performance

Hospital	2023 June	2023 Year to date
Cavan General Hospital	0	0
Drogheda Hospital	0	2.24 (n=3)
Rotunda Hospital	(Reported Quarterly)	0 at Q1 2023

- June 2023 Perinatal Mortality Rate (Adjusted) for Cavan (0) was below the national rate of  $0.83 \pm 0.60-1.06$  (IMIS 2021). June 2023 Perinatal Mortality Rate (Adjusted) for Drogheda Hospital (0) was below the national rate of  $0.83 \pm 0.60-1.06$  (IMIS 2021). Q1-2023 Perinatal Mortality Rate (Adjusted) for Rotunda Hospital (0) was below the national rate of  $0.83 \pm 0.60-1.06$  (IMIS 2021).

## PERINATAL DEATHS $\geq 2.5\text{KG}$ WITHOUT A CONGENITAL ANOMALY (PERINATAL ADJUSTED)

### Rationale for measurement

Perinatal mortality Rate – Adjusted (PNMR-A) is defined as the number of perinatal deaths (stillbirths and early neonatal deaths) weighing 2.5kg or more without physiological or structural abnormalities that develop at or before birth and are present at the time of birth per 1,000 births. PNMR-Adjusted is an important indicator of the quality of care provided in Irish maternity services.

### Measurement methodology and data sources:

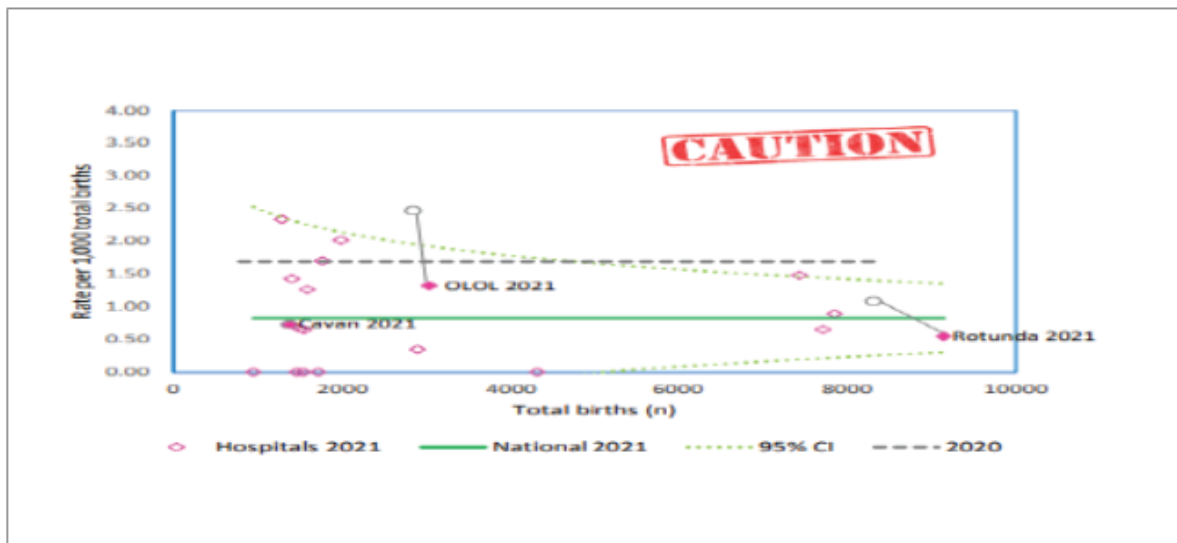
Maternity Units in the Rotunda, Drogheda and Cavan Hospitals submit perinatal mortality data on a monthly basis to the RCSI HG, which in turn is made available to the National Women and Infants Health Programme Clinical Programme *Irish Maternity Indicator System (IMIS)*. The IMIS report is published on an annual basis and allows scrutiny of individual hospital processes and outcomes for women and infants, while bench marking them against national performance.

Variations in PMR – Adjusted between maternity units could potentially be due to random chance or reflect differences in baseline characteristics of the childbearing population. For this reason, funnel plots are used to assess performance outcomes for individual maternity units in comparison to the overall average. The funnel plot is a scatter diagram of individual maternity unit mortality rates against the total number of births within that unit.

In the funnel graph below:-

- The national rate for PNMR-A is indicated by the solid straight green line for 2021 and by a dashed grey line for 2020
- The curved dashed lines (the 95% confidence interval for 2021) represent the limits within which 95% of units are expected to lie
- Solid diamond-shaped markers represent the RCSI HG maternity hospitals/units
- The width of the confidence interval is adjusted to allow for meaningful comparison between unit-specific rates and the national rate. The confidence interval is wider for smaller units reflecting the lack of precision in rates calculated based on small numbers. The confidence interval narrows for larger maternity units, giving the diagram a 'funnel' shape.

## Performance



### Note:

Maternity units include in their figures of perinatal deaths babies that are transferred in utero from other units and die in their hospital. Annual rates of perinatal deaths  $\geq 2.5$  without a congenital anomaly should be **interpreted with caution**.

Drogheda, Cavan and Rotunda are all within the 95% confidence interval for 2021 (curved dashed lines).

## NEONATAL ENCEPHALOPATHY (NE)

### Rationale for measurement

Neonatal encephalopathy (NE) is a complex disease of a new-born infant and can be defined as clinical findings in three or more of the following domains: level of consciousness, spontaneous activity when awake or aroused, posture, tone, primitive reflexes, and autonomic system. NE can result from a wide variety of causes. Hypoxic Ischaemic Encephalopathy (HIE) is a subset of NE and is the most common cause of NE; however not all encephalopathies have a HIE.

### Measurement methodology and data sources:

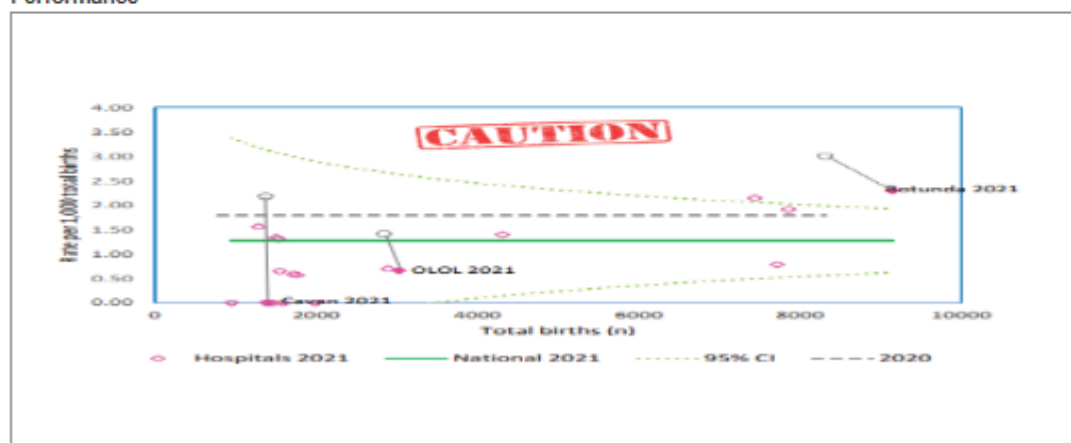
Maternity Units in the Rotunda, Drogheda and Cavan Hospitals submit perinatal mortality and morbidity data on a monthly basis to the RCSI HG, which in turn is made available to the National Women and Infants Health Programme Clinical Programme *Irish Maternity Indicator System (IMIS)*. The IMIS report is published on an annual basis and allows scrutiny of individual hospital processes and outcomes for women and infants, while bench marking them against national performance.

Variations in Neonatal Encephalopathy (NE) rates between maternity units could potentially be due to random chance or reflect differences in baseline characteristics of the childbearing population. For this reason, funnel plots are used to assess performance outcomes for individual maternity units in comparison to the overall average. The funnel plot is a scatter diagram of individual maternity unit mortality rates against the total number of births within that unit.

In the funnel graph below:-

- The national rate NE is indicated by the solid straight green line for 2021 and by a dashed grey line for 2020
- The curved dashed lines (the 95% confidence interval for 2021) represent the limits within which 95% of units are expected to lie
- Solid diamond-shaped markers represent the RCSI HG maternity hospitals/units
- The width of the confidence interval is adjusted to allow for meaningful comparison between unit-specific rates and the national rate. The confidence interval is wider for smaller units reflecting the lack of precision in rates calculated based on small numbers. The confidence interval narrows for larger maternity units, giving the diagram a 'funnel' shape.

### Performance



Description: All infants with  $\geq 35$  weeks' gestation who, during the first week of life, have either seizures alone and/or signs of neonatal encephalopathy. Caution is advised when dealing with small values

Drogheda and Cavan are within the 95% confidence interval for 2021 (curved dashed lines)

Rotunda is outside the 95% confidence interval for 2021 (curved dashed line)