

# **NATIONAL PAEDIATRIC MORTALITY REGISTER ANNUAL REPORT 2025**

**DATA FROM 1ST JANUARY 2019  
TO 31ST DECEMBER 2023**

**APPENDICES**



**PUBLISHED FEBRUARY 2025**

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## APPENDIX 1: National Paediatric Mortality Register Governance Committee membership and meeting attendance, 2023–2024

National Paediatric Mortality Register (NPMR) Governance Committee meeting attendance for 2023–2024								
Organisation/role	Name	27.04.23	29.06.23	28.09.23	04.12.23	07.03.24	27.06.24	19.09.24
Committee Chair	Prof. Michael Barrett	✓	✓	✓	✓	✓	✓	✓
Patient and Public Interest Representative	Kate Burke	✓	x	✓	x	x	x	✓
Health Service Executive (HSE) Department of Public Health Representative	Dr Abigail Collins	x	x	x	✓	x	✓	x
Coroner's Society of Ireland Representative	Dr Myra Cullinane/Dr Cróna Gallagher	✓	✓	✓	✓	✓	x	x
Paediatric Palliative Medicine Representative	Dr Mary Devins/Dr Fiona McElligott	✓	✓	✓	✓	x	✓	✓
Children's Health Ireland (CHI) Nursing Representative	Annemarie Dowling	✓	x	x	x	x	x	x
General Practitioners Representative	Prof. Tom Fahey	✓	x	✓	✓	x	x	x
Faculty of Paediatrics at the Royal College of Physicians of Ireland	Dr Alan Finan	n/a	n/a	n/a	n/a	✓	✓	x
Paediatric Emergency Medicine Representative	Dr Angharad Griffiths	n/a	n/a	n/a	n/a	n/a	✓	✓
Paediatric Programme Audit Assistant Manager	Karina Hamilton	✓	✓	✓	✓	✓	✓	x
NPMR Clinical Lead	Associate Professor Martina Healy	✓	x	x	✓	✓	x	x
Paediatric Pathology Representative	Dr Michael McDermott	✓	✓	✓	✓	✓	✓	✓

Paediatric Programme Manager	Cliona McGarvey	✓	✓	✓	✓	✓	✓	✓
Regional Paediatrician Representative	Dr Orla Neylon	✓	✓	✓	✓	x	✓	✓
Patient and Public Interest Representative	Liz O'Donoghue	n/a	n/a	n/a	n/a	n/a	n/a	✓
General Paediatric Representative	Dr Aisling O'Riordan	n/a	n/a	n/a	n/a	n/a	n/a	✓
Trinity College Dublin Department of Statistics Representative	Myra O'Regan	x	✓	✓	x	x	✓	x
Public and Patient Interest	Mary Desmond Vasseghi	✓	✓	x	R			
✓ = Attended x = Did not attend	n/a = not applicable R = Retired							

Note: Meeting on 27 April 2023 was rescheduled from 30 April 2023.



## Appendix 2: National Paediatric Mortality Register Child Death Notification form

<b>To be completed on all Paediatric deaths and forwarded to <a href="mailto:npmr@noca.ie">npmr@noca.ie</a></b>	
1. Name: ..... 2. Address: .....	
3. Hospital Number: ..... Date of Birth: .....	
5. Gender: Female <input type="checkbox"/> Male <input type="checkbox"/>	
6. Point of Admission: ED <input type="checkbox"/> ICU <input type="checkbox"/> Ward <input type="checkbox"/> Theatre <input type="checkbox"/>	
7. Admission Date: ..... 8. Time of first contact: ..... Please use 24hr clock (ED Only)	
9. Date of Death: ..... 10. Time of Death: ..... Please use 24hr clock	
11. Dead on arrival: <input type="checkbox"/> Dead within 24hrs of admission <input type="checkbox"/> Other: <input type="checkbox"/>	
12. Location of Death: Home <input type="checkbox"/> ED <input type="checkbox"/> ICU <input type="checkbox"/> Hospital Ward <input type="checkbox"/>	
If Other: Please specify	
13. Transferred from another hospital? Yes <input type="checkbox"/> No <input type="checkbox"/> If Yes, ..... (Please specify hospital)	
14. Was death unexpected? Yes <input type="checkbox"/> No <input type="checkbox"/> (Unexpected death is defined as the death of a child which was not anticipated as a possibility 24 hrs prior to death or where there was an unexpected collapse precipitating events that led to the death)	
15. Advance care directive in place? Yes <input type="checkbox"/> No <input type="checkbox"/>	
16. Was the coroner notified? Yes <input type="checkbox"/> No <input type="checkbox"/>	
17. Was an autopsy carried out? Yes, coroner's PM <input type="checkbox"/> Yes, hospital PM <input type="checkbox"/> No <input type="checkbox"/>	
18. Was there an inquest? Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know <input type="checkbox"/>	
19. Child in state care? Yes <input type="checkbox"/> No <input type="checkbox"/>	
20. Provisional diagnosis leading to death:	
21. Were any of the following events known to have occurred? (Tick all that apply)	
Neonatal Death <input type="checkbox"/>	Acute Asthma <input type="checkbox"/> Infection <input type="checkbox"/> Acute epilepsy <input type="checkbox"/>
Sudden unexpected death in infancy <input type="checkbox"/>	Road Traffic Accident <input type="checkbox"/> Drowning <input type="checkbox"/> Apparent suicide <input type="checkbox"/>
Death of a child with life limiting condition <input type="checkbox"/>	Death from malignancy <input type="checkbox"/> Poisoning <input type="checkbox"/> Fall <input type="checkbox"/>
Acute metabolic/diabetic ketoacidosis <input type="checkbox"/>	Apparent homicide <input type="checkbox"/>
Asphyxia: ..... (Please specify)	
Other unintentional injury: ..... (please specify)	
<b>For unexpected deaths in infancy and children under 5 years:</b>	
22. Position child found: Back <input type="checkbox"/> Prone <input type="checkbox"/> Side <input type="checkbox"/>	
23. Where was child found: Cot <input type="checkbox"/> Bed <input type="checkbox"/> Sofa/armchair <input type="checkbox"/> Other <input type="checkbox"/> ..... (Please specify)	
24. Child co-sleeping with adult: Yes <input type="checkbox"/> No <input type="checkbox"/>	
25. Child co-sleeping with another child: Yes <input type="checkbox"/> No <input type="checkbox"/>	
Completed by (block capitals): ..... MCRN: .....	
Hospital: .....	Tel: .....
Signed: .....	Date: .....

## Appendix 3: Frequency tables

**FIGURE 4.1:** ANNUAL TRENDS IN INFANT, POSTNEONATAL AND NEONATAL MORTALITY RATES IN IRELAND, 1990–2023

Year	Live births	IMR (aged <1 year)		PNMR (aged 29–364 days)		Neonatal mortality rate (aged ≤28 days)	
		n	n/1000 live births	n	n/1000 live births	n	n/1000 live births
1990	53 044	434	8.2	179	3.4	255	4.8
1991	52 718	401	7.6	137	2.6	264	5.0
1992	51 089	331	6.5	112	2.2	219	4.3
1993	49 304	302	6.1	104	2.1	198	4.0
1994	48 255	277	5.7	84	1.7	193	4.0
1995	48 757	311	6.4	79	1.6	232	4.8
1996	50 655	303	6.0	94	1.9	209	4.1
1997	52 775	321	6.1	135	2.6	186	3.5
1998	53 969	316	5.9	86	1.6	230	4.3
1999	53 924	317	5.9	99	1.8	218	4.0
2000	54 789	338	6.2	104	1.9	234	4.3
2001	57 854	331	5.7	101	1.7	230	4.0
2002	60 503	305	5.0	89	1.5	216	3.6
2003	61 529	326	5.3	93	1.5	233	3.8
2004	61 972	287	4.6	78	1.3	209	3.4
2005	61 372	236	3.9	69	1.1	167	2.7
2006	65 425	255	3.9	76	1.1	179	2.7
2007	71 389	230	3.2	74	1.0	156	2.2
2008	75 173	284	3.8	84	1.1	200	2.7
2009	75 554	247	3.3	79	1.0	168	2.2
2010	75 174	271	3.6	76	1.0	195	2.6
2011	74 033	262	3.5	74	1.0	188	2.5
2012	71 674	237	3.3	52	0.7	185	2.6
2013	68 954	245	3.6	64	0.9	181	2.6
2014	67 295	224	3.3	66	1.0	158	2.3
2015	65 536	225	3.4	51	0.8	174	2.6
2016	63 841	194	3.0	47	0.7	147	2.3
2017	61 824	188	3.0	48	0.8	140	2.3
2018	61 022	174	2.9	43	0.7	131	2.1
2019	59 294	190	3.2	48	0.7	142	2.4
2020	56 812	153	2.7	41	0.7	112	2.0
2021	60 575	192	3.2	41	0.7	151	2.5
2022	57 540	191	3.3	51	0.9	140	2.4
2023	54 678	172	3.1	40	0.7	132	2.4

**FIGURE 4.3: AGE DISTRIBUTION OF INFANT DEATHS REGISTERED IN IRELAND, 2019–2023 (n=898)**

Year	Neonatal (aged ≤28 days)		Postneonatal (aged 29–364 days)		Total (aged <1 year)
	n	%	n	%	N
2019	142	74.7%	48	25.3%	190
2020	112	73.2%	41	26.8%	153
2021	151	78.7%	41	21.4%	192
<b>2019–2021</b>	<b>405</b>	<b>75.7%</b>	<b>130</b>	<b>24.3%</b>	<b>535</b>
2022	140	73.3%	51	26.7%	191
2023	132	76.7%	40	23.3%	172
<b>2022–2023</b>	<b>272</b>	<b>74.9%</b>	<b>91</b>	<b>25.1%</b>	<b>363</b>
<b>2019–2023</b>	<b>677</b>	<b>75.4%</b>	<b>221</b>	<b>24.6%</b>	<b>898</b>

**FIGURE 4.4: SEX DISTRIBUTION OF INFANT DEATHS REGISTERED IN IRELAND, 2019–2023 (n=898)**

Year	Male		Female		Total (aged <1 year)
	n	%	n	%	N
2019	104	54.7%	86	45.3%	190
2020	78	51.0%	75	49.0%	153
2021	98	51.0%	94	49.0%	192
2022	107	56.0%	84	44.0%	191
2023	91	52.9%	81	47.1%	172
<b>2019–2023</b>	<b>478</b>	<b>53.2%</b>	<b>420</b>	<b>46.8%</b>	<b>898</b>

**FIGURE 4.5: SEX DISTRIBUTION OF INFANT DEATHS REGISTERED IN IRELAND, BY AGE GROUP, 2019–2023 (n=898)**

	Male		Female		Total (aged <1 year)
	n	%	n	%	N
Neonatal deaths	366	54.1%	311	45.9%	677
Postneonatal deaths	112	50.7%	109	49.3%	221
<b>Total</b>	<b>478</b>	<b>53.2%</b>	<b>420</b>	<b>46.8%</b>	<b>898</b>

**Table 4.4:** Ranking of main causes of postneonatal deaths in Ireland, 2019–2021 versus 2022–2023

Cause of death category	2019–2021		2022–2023		2019–2023	
	n	%	n	%	n	%
Congenital malformations and chromosomal abnormalities	53	40.8%	28	30.8%	81	36.7%
SIDS (R95)	31	23.8%	34	37.4%	65	29.4%
Perinatal conditions	24	18.5%	12	13.2%	36	16.3%
Diseases of the nervous system	6	4.6%	~	~	~	~
Diseases of the circulatory system	6	4.6%	~	~	~	~
Neoplasms	~	~	~	~	~	~
Certain infectious and parasitic diseases	~	~	~	~	7	3.2%
Endocrine, nutritional and metabolic disorders	~	~	~	~	~	~
Diseases of the respiratory system	~	~	~	~	~	~
All other causes	~	~	~	~	~	~
Total	130	100.0%	91	100.0%	221	100.0%

~denotes fewer than 5 cases

**FIGURE 4.6:** INFANT MORTALITY IN IRELAND BY PLACE OF DEATH, 2019–2023 (n=898)

Place of death	n	%
Home	55	6.1%
Hospice	7	0.8%
Maternity hospital	461	51.3%
CHI hospital	186	20.7%
Other hospital	184	20.5%
Other address/scene of injury	6	0.7%
<b>Total</b>	<b>898</b>	<b>100.0%</b>

**FIGURE 4.7:** INFANT MORTALITY IN IRELAND BY YEARLY QUARTER, 2019–2021 VERSUS 2022–2023 (n=898)

	Quarter of death								
Year of registration	January to March		April to June		July to September		October to December		Total
	n	%	n	%	n	%	n	%	N
2019	41	21.6%	57	30.0%	49	25.8%	43	22.6%	190
2020	39	25.5%	43	28.1%	37	24.2%	34	22.2%	153
2021	59	31.0%	39	20.3%	43	22.4%	51	26.6%	192
2019–2021	139	26.0%	139	26.0%	129	24.1%	128	23.9%	535
2022	46	24.0%	47	24.6%	49	25.6%	49	25.6%	191
2023	43	25.0%	49	28.5%	32	18.6%	48	27.9%	172
2022–2023	89	24.5%	96	26.4%	81	22.3%	97	26.7%	363
Total	228	25.4%	235	26.2%	210	23.4%	225	25.1%	898



**FIGURE 5.1: SEX DISTRIBUTION OF CHILD DEATHS REGISTERED BASED ON YEAR OF REGISTRATION, BY AGE GROUP, 2019–2023 (n=592)**

Age group	Male		Female		Total
	n	%	n	%	N
1–4 years	64	55.7%	51	44.3%	115
5–9 years	63	62.4%	38	37.6%	101
10–14 years	82	62.6%	49	37.4%	131
15–18 years	166	67.8%	79	32.2%	245
<b>Total</b>	<b>375</b>	<b>63.3%</b>	<b>217</b>	<b>36.7%</b>	<b>592</b>

**FIGURE 5.2: PLACE OF DEATH OF CHILD DEATHS BASED ON YEAR OF REGISTRATION, BY AGE GROUP, 2019–2023 (n=591)**

Location	Aged 1–14 years		Aged 15–18 years	
	n	%	n	%
CHI	122	35.2%	25	10.3%
Home	107	30.8%	111	45.5%
Hospice	8	2.3%	6	2.5%
Maternity hospital	~	~	n/a	n/a
Other address	~	~	12	4.9%
Other hospital	97	28.0%	66	27.1%
Scene of injury	9	2.6	24	9.8%
<b>Total</b>	<b>347</b>	<b>100.0%</b>	<b>244</b>	<b>100.0%</b>

~ denotes fewer than 5 cases

**FIGURE 5.3: OCCURRENCE OF CHILD DEATHS BY ANNUAL QUARTER, BY AGE GROUP, 2019–2023 (n=592)**

Year	Age group	Quarter of death								
		January to March		April to June		July to September		October to December		Total
		n	%	n	%	n	%	n	%	N
2019–2021	1–14 years	61	30.2%	46	22.3%	48	23.8%	47	23.2%	202
	15–18 years	40	28.4%	38	27.0%	38	27.0%	25	17.7%	141
2022–2023	1–14 years	35	24.1%	37	25.5%	36	24.8%	37	25.5%	145
	15–18 years	28	26.9%	27	26.0%	24	23.1%	25	24.0%	104

**FIGURE 5.4: ANNUAL TRENDS IN CHILD MORTALITY RATES IN IRELAND, BY AGE GROUP, 2007–2023 (3-YEAR MOVING AVERAGE RATES)**

Year	Aged 1–4 years				Aged 5–9 years			
	Population (thousands)	Deaths (n)	Deaths per 100 000 population	3-year average	Population (thousands)	Deaths (n)	Deaths per 100 000 population	3-year average
2007	244.2	54	22.1	21.78	297.2	17	5.7	7.43
2008	251.6	52	20.7	19.86	306.2	28	9.1	8.69
2009	261.7	59	22.5	16.51	310.7	23	7.4	8.25
2010	272.0	45	16.5	14.03	314.6	30	9.5	8.54
2011	283.6	31	10.9	13.94	319.6	25	7.8	8.79
2012	285.5	42	14.7	15.08	325.3	27	8.3	9.19
2013	284.4	46	16.2	14.10	333.0	34	10.2	8.29
2014	278.4	40	14.4	12.54	342.1	31	9.1	6.11
2015	273.8	32	11.7	11.69	349.3	20	5.7	5.64
2016	269.2	31	11.5	10.91	355.3	13	3.7	4.94
2017	260.7	31	11.9	10.61	359.1	27	7.5	6.64
2018	257.8	24	9.3	9.96	356.9	13	3.6	6.26
2019	253.9	27	10.6	8.94	352.3	31	8.8	6.59
2020	251.2	25	10.0	8.04	344.1	22	6.4	5.18
2021	244.2	15	6.1	8.05	335.0	15	4.5	4.91
2022	238.2	19	8.0	n/a	343.6	16	4.7	n/a
2023	238.1	24	10.1	n/a	338.6	19	5.6	n/a

  

Year	Aged 10–14 years				Aged 15–19 years			
	Population (thousands)	Deaths (n)	Deaths per 100 000 population	3-year average	Population (thousands)	Deaths (n)	Deaths per 100 000 population	3-year average
2007	276.5	50	18.1	14.23	291.4	149	51.1	44.71
2008	283.1	40	14.1	10.69	295.6	131	44.3	39.34
2009	290.5	31	10.7	8.44	294.3	114	38.7	37.23
2010	296.1	22	7.4	8.43	289.4	101	34.9	33.92
2011	301.0	22	7.3	8.65	281.0	107	38.1	29.40
2012	304.5	32	10.5	9.11	281.5	81	28.8	23.46
2013	307.9	25	8.1	7.50	284.4	61	21.4	21.35
2014	310.1	27	8.7	7.95	290.6	59	20.3	23.76
2015	314.4	18	5.7	6.89	296.1	66	22.3	23.48
2016	318.9	30	9.4	8.51	301.2	86	28.6	22.24
2017	323.3	18	5.6	7.62	308.5	58	18.8	19.05
2018	332.6	35	10.5	7.91	316.2	62	19.6	19.68
2019	341.4	23	6.7	6.59	319.9	60	18.8	20.33
2020	350.0	23	6.6	7.01	323.9	67	20.7	21.12
2021	358.0	27	7.5	7.46	325.3	72	22.1	20.70
2022	374.9	26	6.9		337.8	71	21.0	
2023	379.2	30	7.9		349.5	67	19.2	

**FIGURE 5.5A:** PRINCIPAL CAUSE OF DEATH CATEGORIES IN CHILDREN AGED 1–14 YEARS BASED ON YEAR OF REGISTRATION, 2019–2023 (n=347)

Cause of death category	n	%
Neoplasms	85	24.5%
External causes	68	19.6%
Congenital malformations and chromosomal abnormalities	56	16.1%
Diseases of the nervous system	32	9.2%
Diseases of the circulatory system	25	7.2%
Infectious diseases	21	6.1%
Diseases of the respiratory system	16	4.6%
Endocrine, nutritional and metabolic diseases	15	4.3%
SIDS/SUDC	8	2.3%
Mental and behavioural disorders	5	1.4%
Diseases of the blood and <b>blood-forming</b> organs	5	1.4%
All other causes	11	3.2%
Total	347	100.0%

**FIGURE 5.5B:** PRINCIPAL CAUSE OF DEATH CATEGORIES IN CHILDREN AGED 1–14 YEARS BASED ON YEAR OF REGISTRATION, 2007–2018 (n=1124)

Cause of death category	n	%
Diseases of the circulatory system	38	3.4%
Congenital malformations and chromosomal abnormalities	157	14.0%
Diseases of the blood and blood-forming organs	27	2.4%
Endocrine, nutritional and metabolic diseases	55	4.9%
External causes	307	27.3%
Certain infectious and parasitic diseases	46	4.1%
Neoplasms	227	20.2%
Diseases of the nervous system	147	13.1%
Diseases of the respiratory system	51	4.5%
SIDS/SUDC	33	2.9%
Certain conditions originating in the perinatal period	10	0.9%
Other	26	2.3%
Total	1124	100.0%

**FIGURE 5.6A:** PRINCIPAL CAUSE OF DEATH CATEGORIES IN ADOLESCENTS AGED 15–18 YEARS BASED ON YEAR OF REGISTRATION, 2019–2023 (n=245)

Cause of death category	n	%
External causes	125	51.0%
Neoplasms	40	16.3%
Diseases of the nervous system	19	7.8%
Congenital malformations and chromosomal abnormalities	16	6.5%
Diseases of the circulatory system	15	6.1%
Infectious diseases	6	2.5%
Endocrine, nutritional and metabolic diseases	6	2.5%
Diseases of the respiratory system	6	2.5%
Other	12	4.9%
Total	245	100.0%

**FIGURE 5.6B:** PRINCIPAL CAUSE OF DEATH CATEGORIES IN ADOLESCENTS AGED 15–18 YEARS BASED ON YEAR OF REGISTRATION, 2012–2018 (n=425)

Cause of death category	n	%
Diseases of the circulatory system	39	9.2%
External causes	251	59.1%
Neoplasms	49	11.5%
Diseases of the nervous system	24	5.6%
Other	62	14.6%
Total	425	100.0%

**FIGURE 6.1A:** BREAKDOWN OF EXTERNAL-CAUSE DEATHS IN CHILDREN AGED 1–14 YEARS BASED ON YEAR OF REGISTRATION, BY INJURY TYPE, 2019–2023 (n=68)

Injury type	n	%
Ligature suspension/hanging	13	19.1%
RTC	18	26.5%
Accidental strangulation	~	~
Asphyxia (no information)	~	~
Drowning	8	11.8%
Fall	~	~
Farm accident	~	~
Homicide/unlawful killing	9	13.2%
Poisoning	9	13.2%
Postural asphyxia	~	~
Other	~	~
Total	68	100.0%

~ denotes fewer than 5 cases

**FIGURE 6.1B:** BREAKDOWN OF EXTERNAL-CAUSE DEATHS IN CHILDREN AGED 1–14 YEARS BASED ON YEAR OF REGISTRATION, BY INJURY TYPE, 2007–2018 (n=351)

Injury type	n	%
RTC	118	33.6%
Ligature suspension/hanging	41	11.7%
Drowning	34	9.7%
Homicide/filicide	23	6.6%
Farm accident	21	6.0%
House fire	19	5.4%
High fall	14	4.0%
Accidental strangulation	12	3.4%
Struck by heavy object	11	3.1%
Asphyxiation by choking	9	2.6%
Other external causes	49	14.0%
Total	351	100.0%

**FIGURE 6.2A:** BREAKDOWN OF EXTERNAL-CAUSE DEATHS IN ADOLESCENTS AGED 15–18 YEARS BASED ON YEAR OF REGISTRATION, BY INJURY TYPE, 2019–2023 (n=125)

Injury type	n	%
Ligature suspension/hanging	68	54.0%
RTC	17	13.5%
Alcohol/drug intoxication	6	4.8%
Drowning	7	5.6%
Fall from height	~	~
Homicide	~	~
Poisoning	5	4.0%
Ligature strangulation	5	4.0%
Other	10	8.0%
Total	125	100.0%

~ denotes fewer than 5 cases

**FIGURE 6.2B:** BREAKDOWN OF EXTERNAL-CAUSE DEATHS IN ADOLESCENTS AGED 15–18 YEARS BASED ON YEAR OF REGISTRATION, BY INJURY TYPE, 2012–2018 (n=251)

Injury type	n	%
Ligature suspension/hanging	120	47.8%
RTC	66	26.3%
Drowning	22	8.8%
Drug/alcohol toxicity	21	8.4%
High fall	5	2.0%
Other	17	6.8%
Total	251	100.0%



**FIGURE 7.1: PROPORTION OF PAEDIATRIC INPATIENT DEATHS AMONG CHILDREN AGED UNDER 19 YEARS IN CHILDREN'S HEALTH IRELAND AT TEMPLE STREET, BY AGE GROUP, 2019 TO Q3 2024 (n=124)**

Age group	2019–2021		2022 to Q3 2024	
	n	%	n	%
≤28 days	13	22.4%	10	15.2%
29–364 days	14	24.1%	17	25.8%
1–4 years	13	22.4%	11	16.7%
5–9 years	5	8.6%	10	15.2%
10–14 years	13	22.4%	16	24.2%
15–18 years	~	~	~	~
Total	58	100.0%	66	100.0%

~ denotes fewer than 5 cases

**FIGURE 7.2: LOCATION OF DEATHS IN CHILDREN'S HEALTH IRELAND AT TEMPLE STREET, 2019 TO Q3 2024 (n=112)**

Year	ICU		ED/ward/home/other		Total	
	n	%	n	%	N	%
2019	12	57.1%	9	42.9%	21	100.0%
2020	9	100.0%	~	~	9	100.0%
2021	12	75.0%	~	~	16	100.0%
2022	15	65.2%	8	34.8%	23	100.0%
2023	19	90.5%	~	~	21	100.0%
2024 (Q1–Q3)	13	59.1%	9	40.9%	22	100.0%
<b>2019–2021</b>	<b>33</b>	<b>71.7%</b>	<b>13</b>	<b>28.3%</b>	<b>46</b>	<b>100.0%</b>
<b>2022 to Q3 2024</b>	<b>47</b>	<b>71.2%</b>	<b>19</b>	<b>29.8%</b>	<b>66</b>	<b>100.0%</b>

~ denotes fewer than 5 cases

**FIGURE 7.3: MAIN CAUSE OF DEATH CATEGORIES OF PAEDIATRIC DEATHS IN CHILDREN'S HEALTH IRELAND AT TEMPLE STREET REPORTED TO THE NATIONAL PAEDIATRIC MORTALITY REGISTER, 2019–2021 COMPARED WITH 2022 TO Q3 2024 (n=124)**

Cause of death category	2019–2021		2022 to Q3 2024	
	n	%	n	%
External causes	12	20.7%	14	21.2%
Infection/sepsis	7	12.1%	16	24.2%
Life-limiting conditions	9	15.5%	13	19.7%
Other neonatal conditions	9	15.5%	4	6.1%
Sudden unexplained death in infancy and childhood (SUDI/SUDC)	5	8.6%	3	4.5%
Necrotising enterocolitis	6	10.3%	6	9.1%
All other causes	5	8.6%	8	12.1%
No cause of death specified	5	8.6%	2	3.0%
Total	58	100.0%	66	100.0%

**FIGURE 7.4: AGE DISTRIBUTION OF INFECTION/SEPSIS-RELATED DEATHS IN CHILDREN'S HEALTH IRELAND AT TEMPLE STREET, 2019 TO Q3 2024 (n=124)**

Age group	Infection/sepsis-related deaths		Deaths from other causes	
	n	%	n	%
≤28 days	2	8.7%	21	20.8%
29–364 days	7	30.4%	24	23.8%
1–4 years	6	26.1%	18	17.8%
5–9 years	3	13.0%	12	11.9%
10–14 years	4	17.4%	25	24.8%
15–18 years	1	4.3%	1	1.0%
Total	23	100.0%	101	100.0%

**FIGURE 7.5: DISTRIBUTION OF INFECTION/SEPSIS-RELATED DEATHS IN CHILDREN'S HEALTH IRELAND AT TEMPLE STREET BY YEARLY QUARTER, 2019 TO Q3 2024 (n=124)**

Quarter	Infection/sepsis-related deaths		Deaths from other causes	
	n	%	n	%
Q1 (January to March)	6	26.1%	26	25.7%
Q2 (April to June)	3	13.0%	29	28.7%
Q3 (July to September)	3	13.0%	26	25.7%
Q4 (October to December)	11	47.8%	20	19.8%
Total	23	100.0%	101	100.0%

#### Appendix 4: Annual trends in main causes of death in children in the postneonatal age group, 2007–2021

Year	Perinatal conditions		Congenital malformations and chromosomal abnormalities		SIDS	
	n	%	n	%	n	%
2007	7	9.0%	27	34.6%	23	29.5%
2008	19	20.7%	38	41.3%	21	22.8%
2009	10	13.3%	25	33.3%	24	32.0%
2010	18	19.2%	33	35.1%	18	19.2%
2011	12	16.2%	27	36.5%	16	21.6%
2012	8	14.3%	16	28.6%	21	37.5%
2013	16	24.6%	24	36.9%	17	26.2%
2014	13	27.1%	23	47.9%	10	20.8%
2015	10	17.9%	22	39.3%	14	25.0%
2016	6	10.5%	27	47.4%	13	22.8%
2017	8	21.1%	13	34.2%	7	18.4%
2018	13	25.0%	13	25.0%	22	42.3%
2019	9	18.8%	22	45.8%	11	22.9%
2020	10	24.4%	18	43.9%	8	19.5%
2021	6	13.3%	15	33.3%	12	26.7%

## Appendix 5: Hospitals from which cases notified to the National Paediatric Mortality Register were transferred to Children's Health Ireland at Temple Street

Hospital from which the patient was transferred	n	%
Children's Health Ireland at Tallaght	8	11.1%
Dublin maternity hospitals (Coombe Hospital, National Maternity Hospital, and Rotunda Hospital)	19	26.4%
University Hospital Limerick	7	9.7%
Cork University Hospital/Cork University Maternity Hospital	6	8.3%
Cavan General Hospital	~	~
Children's Health Ireland at Crumlin	~	~
University Hospital Galway	~	~
Midland Regional Hospital Portlaoise	~	~
Letterkenny University Hospital	~	~
Regional Hospital Mullingar	~	~
Mayo University Hospital	~	~
Naas General Hospital	~	~
Our Lady of Lourdes Hospital Drogheda	~	~
Portiuncula University Hospital	~	~
Sligo University Hospital	~	~
Tipperary University Hospital	~	~
University Hospital Kerry	~	~
Wexford General Hospital	~	~
Total	72	100.0%

~ Denotes 5 cases or fewer

## Appendix 6: Completion rate of variables included on the National Paediatric Mortality Register Child Death Notification form during the period from 1 January 2022 to 30 September 2024 in Children's Health Ireland at Temple Street

Variable	Denominator	Number of entries	Number of missing/redundant entries	Percentage captured
Year of death	66	66	0	100%
Medical record number	66	66	0	100%
Surname	66	66	0	100%
Given name	66	66	0	100%
Date of birth	66	66	0	100%
Sex	66	66	0	100%
Point of admission	66	66	2	100%
Date of admission	66	64	2	97%
Time of first contact	66	43	23	65%
Date of death	66	66	0	100%
Age at death	66	66	0	100%
Time of death	66	61	5	92%
Dead on arrival	66	57	5	86%
Location at time of death	66	66	0	100%
Location of death if "other"	6	6	0	100%
Transferred from another hospital	66	65	1	98%
Hospital transferred from	39	38	1	97%
Death expected	66	63	1	96%
Advanced care directive in place	66	62	2	94%
Coroner notified	66	64	1	97%
Autopsy conducted	66	64	5	92%
Inquest	66	62	5	92%
Child in State care	66	62	0	94%
Provisional diagnosis	66	65	1	98%
Event (list of tick boxes)	66	58	2	88%
Position found (sudden unexplained deaths in children aged <5 years)	4	3	1	75%
Location found (sudden unexplained deaths in children aged <5 years)	4	3	0	75%
Co-sleeping with adult (sudden unexplained deaths in children aged <5 years)	4	4	0	100%
Co-sleeping with child (sudden unexplained deaths in children aged <5 years)	4	4	0	100%
Name of notifying individual	66	65	1	98%
Date form completed	66	61	5	92%



## APPENDIX 7: Timeliness of submission of completed National Paediatric Mortality Register child death notification forms to the National Paediatric Mortality Register in the National Office of Clinical Audit for the period 2022 to Q3 2024

Days since death occurred	Child Death Notification forms completed	
	n	%
0	35	53.9%
1	11	16.9%
2	6	9.2%
3	1	1.5%
5	2	3.1%
8	1	1.6%
9	1	1.5%
10	1	1.5%
14	2	3.1%
21	4	6.2%
31	1	1.5%

## APPENDIX 8: Rules for interpreting statistical process control charts

### Statistical process control chart rules:

- A **shift** occurs when **6 or more** consecutive points appear on the **same side of the mean** (centre line).
- A **trend** occurs when there are **6 or more** consecutive points that move in the same direction (up or down, and can cross the mean).
- The **'2 out of 3'** rule highlights when 2 out of 3 data points are close to the upper or lower control limits.
- Extreme values (**special cause**): any value on the line graph that falls outside the control limits.
- **Common cause variation** (grey data points) refers to the natural, inherent variability present in a process over time.



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