

# Oldham, Rochdale and Bury Child Death Overview Panel annual report 2021-2022

## 1 Executive Summary

This is an annual review of the Child Death Overview Panel (CDOP) data for Oldham, Rochdale and Bury (ORB), one of the four CDOP groupings in Greater Manchester (GM). CDOPs review all child deaths under 18 years, apart from still births, late foetal loss, or termination of pregnancy. CDOPs are not responsible for establishing the cause of death, they explore all factors relating the death of the child. The findings of the report will be used to inform future action and to generate recommendations on behalf of ORB CDOP.

CDOPs collate information annually on closed cases, this is used to establish themes in the data enabling each area to identify lessons learnt and recognise where service or population level interventions are needed. The report is supported by a GM report which gives an overview of patterns across all four CDOPS. In view of the relatively small numbers, and consequent difficulties with data analysis, this can be helpful when analysing the data.

### 1.1 Key Findings in Bury, Oldham and Rochdale

Between April 2021 to March 2022 there were 64 notified deaths and 44 CDOP case reviews that were closed in the ORB area. Deaths are not necessarily notified in the same year that CDOP case review is completed and none of the cases closed in the period covered by this report are deaths that were also notified during this time. A CDOP review must be completed and the case considered closed before there is enough information to perform analysis which may contribute to the development of themes from the data. This process means that CDOP reviews do not contain a substantial amount of information for the deaths that have occurred in the year the analysis takes place.

In the period covered in this report the number of cases being closed has started to rise compared to previous years after a decrease caused by several factors including process and IT changes, staffing constraints, and other organisational changes. It is hoped that this increase in closed cases will continue and reach the point where it is back to pre-pandemic levels. The ORB area took around 172 days longer than the GM average to close cases for this period.

For registered deaths most children died in hospital for both the ORB and GM areas with a similar proportion dying at home in both areas.

The largest proportion of deaths for both the ORB and GM area were due to perinatal/neonatal events. In the ORB area this proportion was 59%, which was statistically similar to GM (56% of deaths). In Both ORB and GM there was a higher proportion of male deaths in closed cases and in the ORB area there was a disproportionate number of deaths in ethnic minorities (38.6%) when considering the proportion of ethnic minorities in the ORB population as a whole (17.1% to 31.9% depending on ORB area). In the ORB area 55% of deaths in closed cases were in children under 27 days old and 55% of all child deaths were considered to include modifiable factors.

### 1.2 Summary of Recommendations

- I. To mitigate for limitations in analysis due to a small dataset for notifications and closed cases, future report should include an overview and headline analysis for the year with in depth investigation of the data over a three-year period. This would increase the ability to identify any patterns and themes which are occurring and allow

for more meaningful comparisons with the North West data which is predominantly reported in this way.

- II. A number of data fields for both death notifications and closed cases did not meet the completeness threshold and were identified as requiring improvement. Of those identified the fields which allow for learning points to be shared and advise of action to be taken had particularly poor completion rates at 27%, suggesting immediate improvement is needed in the collection of this type of data.
- III. There is currently a backlog of CDOP reviews which is increasing each year due to the occurrence of more deaths each year than reviews being completed. Some of this has been due to external factors such as the impact of the COVID-19 pandemic in services and the implementation of a new nationwide database, however, a review of available resources is needed to ensure that this issue can be resolved to prevent the backlog increasing each year.

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## 2 Introduction

The following report will provide an analysis of child deaths in Oldham, Bury and Rochdale (ORB) for the period April 2021-March 2022. The report is intended to guide population and service level interventions with an aim to reduce childhood mortality in the area. It will conclude with recommendations which will be presented to the relevant health and wellbeing boards across the three boroughs.

For each child death that occurs a review takes place to explore the circumstances surrounding the death to identify potentially modifiable factors that contributed to the death. The reviews allow the system to learn from these tragic incidents and work together to prevent children from dying from the same modifiable causes in future.

Child Death Overview Panels (CDOP) review the deaths of those under 18, excluding still births, late foetal loss or termination of pregnancy. Oldham, Bury and Rochdale combine to make one of the four CDOPs in GM.

The four CDOPs in Greater Manchester (GM) are:

- Oldham, Bury, Rochdale
- Tameside, Trafford, Stockport
- Bolton, Salford, Wigan
- Manchester

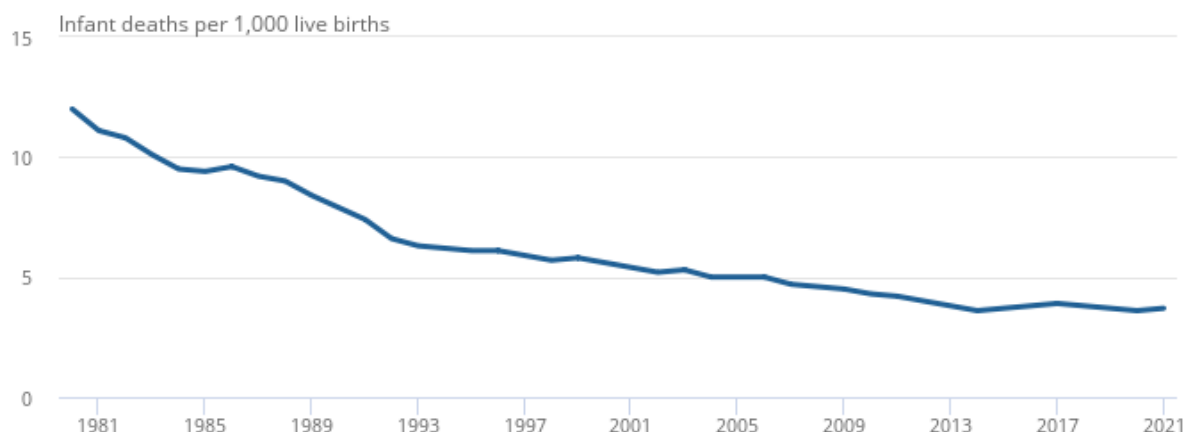
Each year CDOPs collate information from the previous twelve months to inform decision making and future action.

The following report includes information for cases closed between 1<sup>st</sup> April 2021 and 31<sup>st</sup> March 2022. During this period there were 229 notifications of deaths of under 18s in GM, with 64 of those occurring in the ORB area. In GM, 143 reviews were closed in this period with 44 of those from the ORB area. A case is defined as closed at the end of the CDOP review process, this does not always occur in the same year as notification of death.

### 2.1 Infant Mortality in the UK and comparisons with Bury, Oldham and Rochdale

Over recent decades the UK's infant mortality rates has fallen, however, the rate of improvement has slowed when compared to other European countries.

Figure 1- Overall decline in infant mortality in England and Wales 1980-2021 (ONS)

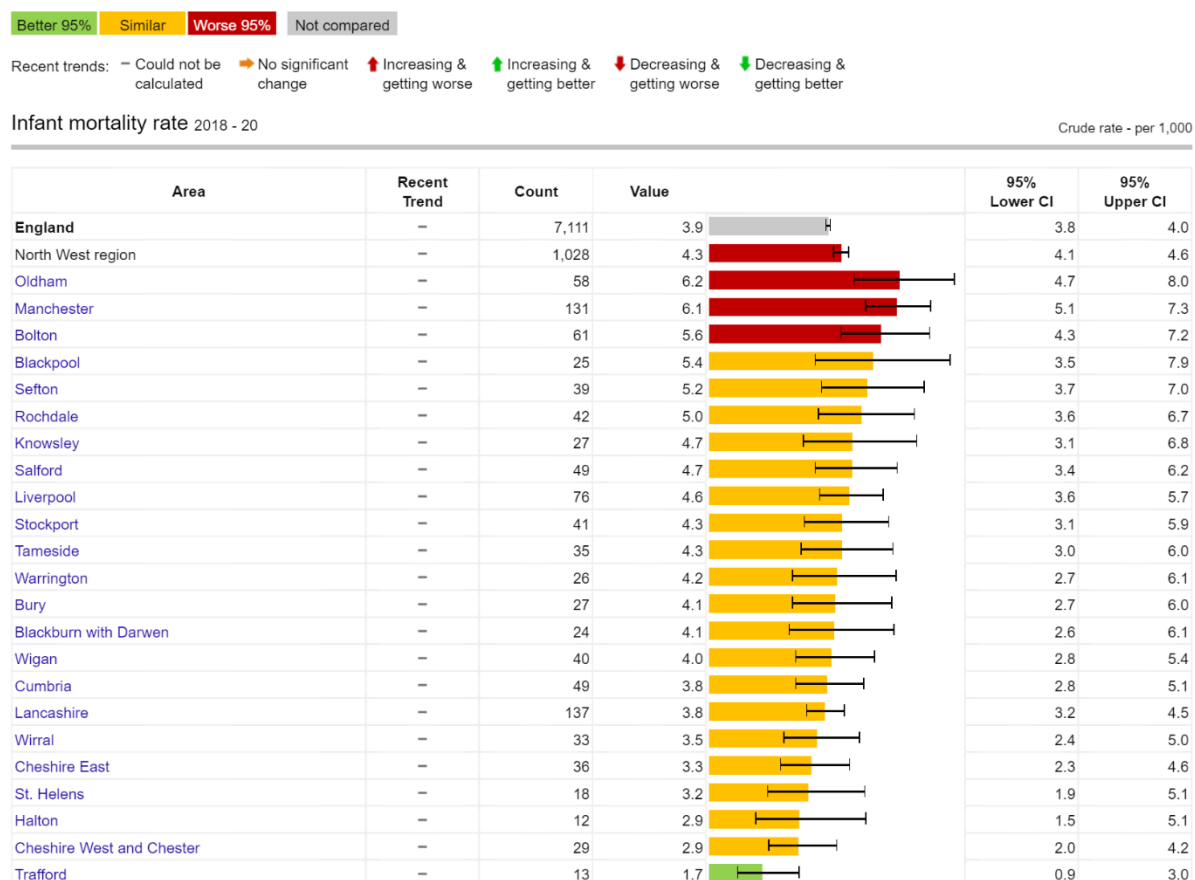


Across the UK, there are inequalities in child deaths and factors such as geography, deprivation and ethnicity affect rates of childhood mortality. For example, infant mortality rates are significantly higher in the 10% most deprived areas compared with the 10% least deprived areas in England. Infant mortality rates are highest among babies of Pakistani ethnicity and lowest in babies of white ethnicity.

The crude rate infant mortality (2018-20) was 3.9 per 1000 births in England with a slightly higher rate of 4.3 across the North West. Bury has a similar level of infant mortality rate to the rest of England and the North West at 4.1 per 1000 births. Rochdale and Oldham have higher rates at 5.0 and 6.2 per 1000 births respectively.<sup>1</sup>

<sup>1</sup> Although the difference between the infant mortality rate in Rochdale and England is not statistically significant, this is likely due to small numbers of deaths in each rolling three year period. Rochdale's rate has been higher than England since the 2015-17 period and if aggregated over a longer time period, the difference is statistically significant.

Figure 2- Infant mortality rates for the North West of England (PHOF)



## 2.2 Overview of Oldham, Bury and Rochdale Population aged under 18yrs

Across ORB there are approximately 160,171 children under the age of 18, equating to 23% of the total population of the area. This is similar to the percentage in both GM and England. Rochdale and Oldham have a higher percentage of under 18s than the North West average, with Bury having a lower percentage than Rochdale, Oldham, Greater Manchester and England (table 1).

Area	Under-18 Population size	Total Population	Percentage of population <18
Bury	43,754	224,087	20%
Oldham	61,748	242,072	26%
Rochdale	54,669	224,087	24%
Bury, Oldham, Rochdale (ORB)	160,171	690,246	23%
Greater Manchester (GM)	653,244	2,868,387	23%
North West	1,561,965	7,422,295	21%
England	13,838,088	56,536,419	24%

### 3 Notification of deaths and closed cases

The number of notified deaths and closed cases are reported each year within each CDOP area, when reviewing this data some important distinctions in terminology are important.

**Notified case:** A death that have been legally notified during the period of this report.

**Closed case:** A CDOP case which has reached its conclusion during the period of this report, this death did not necessarily take place in the period which the report covers and may have occurred in any of the years before the case being closed.

Most of the analysis in this report (and unless stated otherwise) will refer to closed cases as these are the cases for which the information needed for analysis is available. Due to the number of close cases for this period some analysis that has been performed in previous years will not be possible. It is also worth noting that any inferences must be made with caution due to the small numbers being dealt with throughout, as statistical significance cannot be assessed with any confidence.

#### 3.1 Notified cases 2021/2022

There were 64 notified deaths across ORB, almost one third of the GM total. This suggests a disproportionate amount of deaths in the ORB areas as ORB is home to around 25% of GM's children. The main contributor to this is Oldham with death at a rate of 4.86 per 10,000 people equating to just under half of the child deaths in the ORB area (table 2).

<sup>2</sup>

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwallesscotlandandnorthernireland>

Table 2: Number, percentage and rate per 10,000 of notified deaths across ORB, 2021/22				
Area	Number of Notified Deaths	Percentage of overall GM deaths	Population 0-17 years	Rate of Notified cases per 10,000 population aged 0-17
Bury	18	8%	43,754	4.11
Oldham	30	13%	61,748	4.86
Rochdale	16	7%	54,669	2.93
ORB	64	28%	160,171	4.00
GM	229	100%	653,244	3.51

Data is collected on the completeness of data entry of death notifications, any section which is shown to have been completed less than 90% of the time is considered as need improvement. For the period 2021-2022 the joint agency response field fell below this threshold with 88% completeness indicating improvement is needed in this area.

### 3.2 Closed Cases 2021/2022

In 2021- 22 there were 44 closed cases across the ORB CDOP. As seen in table 3, the closed cases in ORB account for 31% of GM's closed cases. Oldham has the highest rate of closed cases, 3.4 per 10,000 of the population. As previously mentioned, this information is only in relation to the reviews which were closed in this period and does not indicate what year the deaths took place in, this is because many factors may impact the length of time it takes to review a child's death.

Table 3: Number and percentage of deaths reviewed (cases closed) across ORB 2021/22			
Area	Total Deaths (Closed cases)	Percentage of overall GM deaths (Closed cases)	Rate of Closed cases per 10,000 population
Bury	9	6%	2.06
Oldham	21	15%	3.40
Rochdale	14	10%	2.56
ORB	44	31%	2.75
GM	143	100%	2.19

For the period 2021-2022 none of the case which were closed in the ORB area were deaths that were notified in that year, with fewer than five cases closed from this period across GM. This backlog that has been experienced in recent years is due to the ongoing impacts of workforce challenges and the aftereffects of the COVID-19 pandemic.

Table 4: Notified cases closed in the same year (2021/22)				
Area	Total Number Notified Cases 2021/22	Total Number of Closed Cases 2021/22	Number of cases notified and closed in 2021/22	% Cases notified and closed in 2021/22
ORB	65	44	0	0%
GM	229	143	<5	<11%

This year the number of closed cases has started to rise across both ORB and GM (table 5) after closed cases declined in 2019-2020 due to the introduction of new guidance and the subsequent increase in workload. This was exacerbated locally due to staffing issues, major organisational changes at the acute care provider, and a new data collection system which slowed down data retrieval. These issues have been mostly resolved which is expected to resolve the issue and ORBs closed cases can begin to reach previous levels.

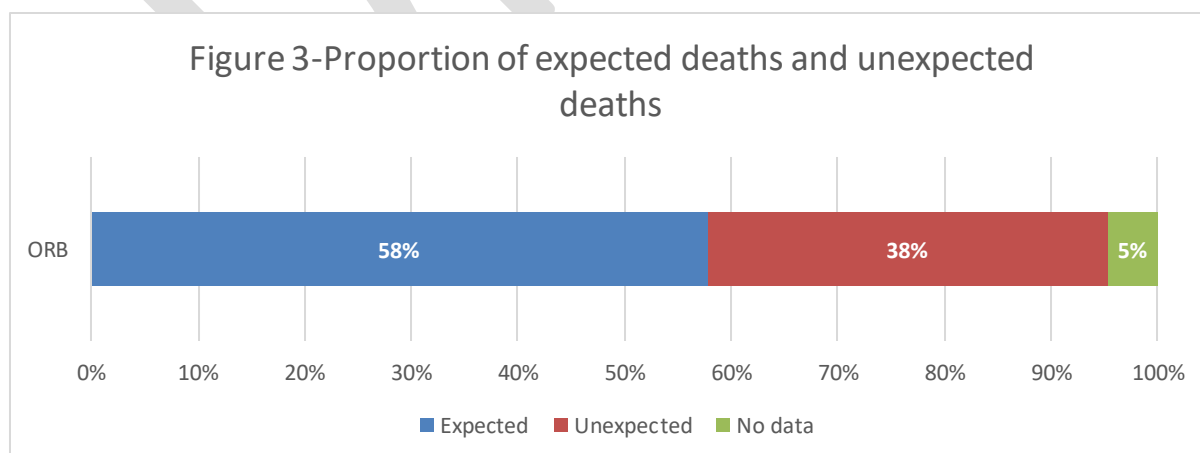
Table 5: Number of Closed Cases compared by year across each area										
Area	Number of Closed Cases per year									
	2012/ 13	2013/ 14	2014/ 15	2015/ 16	2016/ 17	2017/ 18	2018/ 19	2019/ 20	2020/ 21	2021/ 22
Bury	20	13	17	17	11	14	12	7	9	9
Oldham	27	24	36	29	25	31	14	14	8	21
Rochdale	25	20	28	28	15	26	27	8	12	14
ORB	72	57	81	74	51	71	53	29	29	44
GM	267	216	262	236	231	274	204	129	132	143

Data is collected on the completeness of data entry of closed CDOP reviews, any section which is shown to have been completed less than 90% is considered as needing improvement. For the period 2020-2021 the field collecting information on joint agency response, ethnicity, mode of death, learning points, and actions all fell below this threshold indicating a need for improvement with learning point and actions both being completed less than 30% of the time.

#### 4 Analysis of Notified deaths

##### 4.1 Expected and unexpected deaths

Figure three below shows that there was a larger proportion of expected deaths than unexpected deaths in the ORB areas in the period 2021-22. This data cannot be broken down into the individual ORB areas due to the size of the data available.





## 4.2 Inequalities & Index of Multiple Deprivation (IMD)

Deprivation is linked to various health outcomes and to many of the modifiable risk factors associated with child deaths. The index of multiple deprivation 2019 (IMD) is an overall measure of deprivation including resources needed for an individual to meet their basic needs, such as education, employment, health and disability, housing and living environment alongside income deprivation.

All three local authorities have higher rates of deprivation when compared to both GM and nationally, however, Bury has a lower rate than the North West region. Oldham and Rochdale have a considerably higher percentage of people living in the 20% most deprived areas in England compared to Bury, GM, the North West and England. Oldham and Rochdale also a higher percentage of child poverty than Bury and England.

Area	IMD 2019 score	Percentage of people living in the 20% most deprived areas in England	Child poverty (proportion using IDACI <sup>3</sup> index)
Bury	23.7	20.50%	16.90%
Oldham	33.2	43.60%	23.30%
Rochdale	34.4	44.50%	23.50%
GM	21.7	20.20%	Not available
North West	28.1	31.90%	Not available
England	21.7	20.20%	17.10%

IMD scores can be split into deciles to enable comparisons to be made relating to deprivation, decile 1 represents the most deprived 10% of the population and decile 10 represents the least deprived. Figure 4 below indicates a relationship between the first three IMD deciles (i.e. the most deprived) and child deaths. This data may be influenced by differences in the spread of deprivation across the three ORB boroughs and it may also be influenced by a tendency for there to be more children in the more deprived deciles. This can be explored further through calculating rates per 10,000 for each IMD decile, this allows us to look at the proportion of deaths in relation to the number of children living in each decile.

<sup>3</sup> Income Deprivation Affecting Children Indicator, a measure of the proportion of children experiencing poverty included in the Indices of Multiple Deprivation.

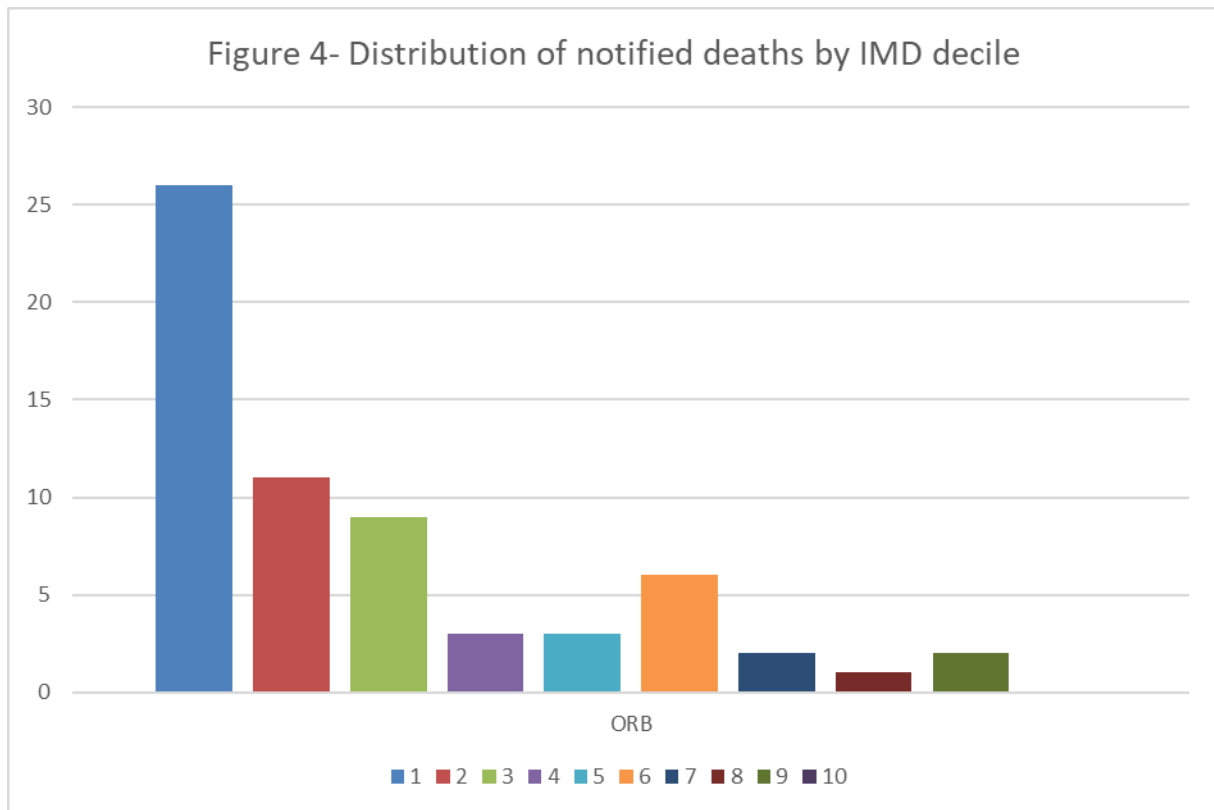


Table 7 explores the relationship between deprivation and notified deaths across the three boroughs further. The calculations performed to generate this data utilises 2021 census and IMD 2019 data and it must be noted that there were no child deaths in IMD decile 10 in Rochdale and Oldham as the boroughs have no decile 10 areas. From the data we can see that the decile six peak in figure 4 is due to deaths occurring in Bury and Rochdale as Oldham had no deaths in this decile. The variation in rates of notified deaths in individual boroughs does not establish as clear a pattern as when combined across the three areas, which demonstrates the need for cautions when dealing with small datasets such as this one. There is an evidenced link between deprivation and child deaths, to identify any local statistically significant variations the dataset would need to be increased by exploring the issue over a number of years.

**Table 7- Proportion of notified deaths across Index of Multiple Deprivation deciles across ORB (rates per 10,000)**

IMD decile	Bury	Oldham	Rochdale	ORB
1	7.42	5.89	4.02	5.30
2	3.29	8.22	1.13	4.46
3	5.80	4.35	3.36	4.41
4	2.77	2.83	2.89	2.83
5	5.42	0.00	3.27	3.16
6	8.39	6.95	0.00	6.62
7	0.00	3.63	3.82	2.34
8	0.00	2.50	0.00	0.80
9	7.19	0.00	0.00	2.78
10	0	0*	0*	0.00
No data	0	0	1	1

## 5 Reviews of child death cases 2021/22

### 5.1 Duration of Reviews

The duration of review can be described as the number of days from the notification of death to closing the case following the CDOP review. In 2021-22 the average duration of review across ORB was 823 days, higher than the GM average of 652 days (table 6). Many contributing factors, for example cause of death, the need for additional investigations such as coroner's inquest, and serious incident investigations can delay a case from reaching CDOP and delay its closure date. The backlog of cases from previous years will also be having an impact and contributing to the rise in the average duration.

**Table 8: Average Duration of Review by Area (Median)**

Area	Duration of Review (Days)
ORB	823
GM	651
NW	486

### 5.2 Location of Death

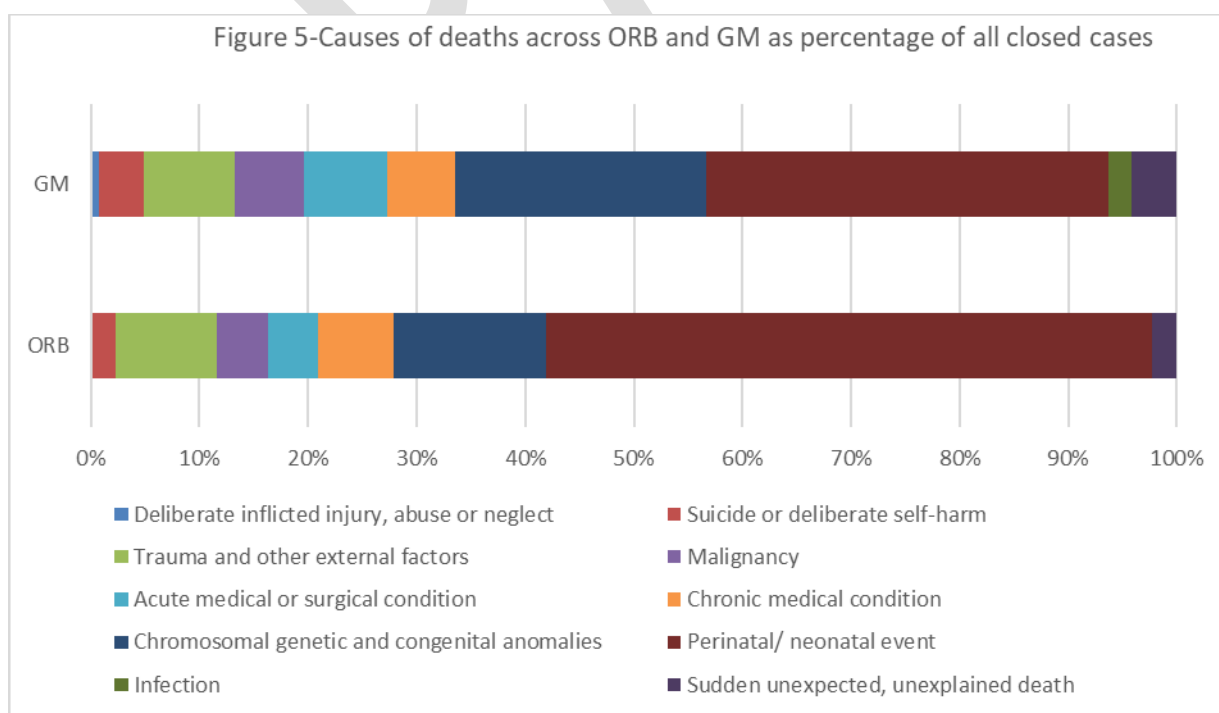
Most deaths of children occurred in a hospital setting across the ORB area. ORB's proportions of child deaths that happen in hospital are similar to GM's.

Table 9: Comparison of Location of Death for death registered 2021/22						
Area	Hospital		Home		Other	
	No	%	No	%	No	%
ORB	50	78%	10	16%	4	6.25%
GM	174	76%	40	17%	15	7%

### 5.3 Causes/Category of Death

Each case is assigned a category of death from 10 defined classifications. The category of which is deemed the most relevant is recorded as the primary category and cause of death, others as recorded as secondary categories. The nationally defined categories of death are as follows:

- A. Deliberate inflicted injury, abuse or neglect
- B. Suicide or deliberate self-harm
- C. Trauma and other external factors
- D. Malignancy
- E. Acute medical or surgical condition
- F. Chronic medical condition
- G. Chromosomal genetic and congenital anomalies
- H. Perinatal/neonatal event
- I. Infection
- J. Sudden unexpected, unexplained death

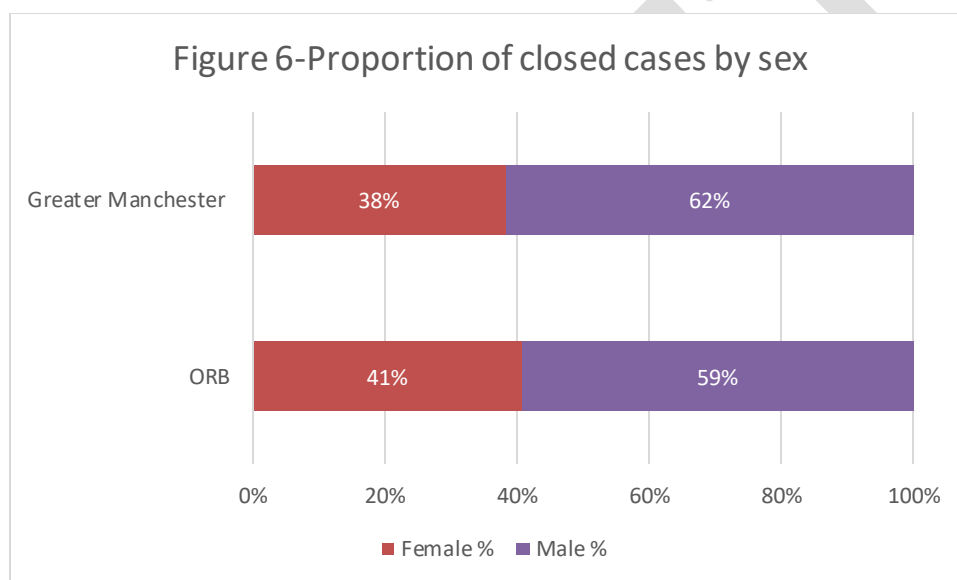


The figure above refers to the cause of death/primary category. In the ORB area cases closed for the period 2021-22 is perinatal/neonatal events are the main cause of death, this is also the case for GM. Due to the small numbers involved, and the deaths occurring across various years, it is not possible to comment on any patterns or trends in this data and it is not appropriate to break this data down by individual Local Authority areas.

## 6 Socio-demographics of cases closed in 2021/2022

### 6.1 Sex

In both the ORB and the wider GM area males represent a higher proportion of deaths than females, this difference is consistent with previous years. This is an established phenomenon, accounted for by higher rates of death from a number of causes, notably neonatal abnormalities, neoplasms, and external causes.



### 6.2 Ethnicity

The 2021 census is the most up to date and accurate proportions of ethnicities in the UK and has released data on the proportions of ethnicities in Local Authority areas, this data has been used to estimate the percentage of children from white and ethnic minorities in the ORB, regional and national areas. Ethnic diversity varies across ORB with Bury having a higher proportion of residents from White ethnic groups than the other ORB areas, regionally and nationally. Whilst Bury has a larger White population than others there is cultural diversity, with a larger than average Jewish population, this not be captured using data on ethnicity and consideration is needed into how the needs of this population is met and how any potential patterns in CDOP data could be observed for this community. Both Rochdale and Oldham have higher proportions of ethnic minorities than the regional and national averages (table 10).

**Table 10: Child Population Ethnicity across Oldham, Bury and Rochdale, using mid 2019 population estimates.**

Area	<18 population	White		Ethnic minorities	
		No	%	No	%
Bury	43,754	36,272	82.9%	7,482	17.1%
Oldham	61,748	42,050	68.1%	19,698	31.9%
Rochdale	54,669	40,455	74.0%	14,214	26.0%
NW	653,244	559,177	85.6%	94,067	14.4%
England and Wales	12,378,116	10,112,921	81.7%	2,265,195	18.3%

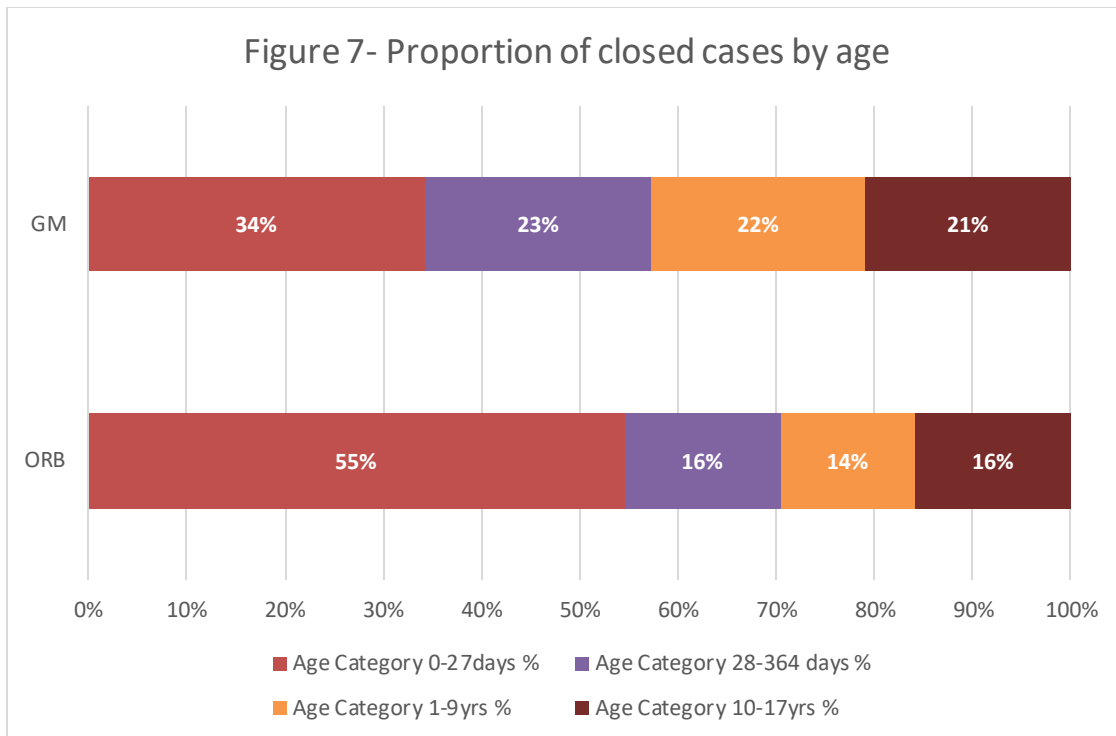
The proportion of deaths categorised as ethnic minorities in ORB is similar to that of GM although around 20% of ORB cases and around 9% of GM closed case's ethnicity were unknown. Due to the small number of closed cases in this period the data cannot be meaningfully analysed at a locality level, multiple years data or a wider geography would need to be utilised to assess whether any patterns linked to ethnicity exist.

**Table 11: Cases Closed by Ethnicity for Each Area**

Area	White		Ethnic minorities	
	No	%	No	%
ORB	18	40.9%	17	38.6%
GM	75	52.4%	56	39.2%

### 6.3 Age at death

Risk of mortality is higher the younger the child is, with the highest risk of death occurring in the neonatal period. In the ORB area over half of deaths were in this aged group for cases closed in this period. This is a much higher proportion than the GM figure, as a result GM has a higher proportion of deaths in all other age categories. However, due to the small number of cases closed in this period it is not possible to conclude whether this difference is statistically meaningful.



## 7 Modifiable and other risk factors

### 7.1 Factors Identified that may have contributed to vulnerability, ill health or death.

At CDOP review meetings all available information about the circumstances surrounding a child's death is collated from the people and agencies involved in the child's care. The information gathered is used to complete 'Form C', the child death analysis form which is used to inform the child death review meeting. This process is used to determine whether there were any modifiable factors involved which facilitates learning than can be used to prevent future child deaths.

The factors which can contribute to a child death are separated into four domains:

- a. Factors Intrinsic to the Child
- b. Factors in Social Environment including Family and Parenting Capacity
- c. Factors in the Physical Environment
- d. Factors in Service Provision

Each domain is then allocated a level of influence from the following:

0. Information not available
1. No factors identified, or factors identified but are unlikely to have contributed to the death
2. Factors identified that may have contributed to vulnerability, ill health or death

Factors identified in closed cases in ORB that may have contributed to vulnerability, ill health or death:

#### Domain A: Factors Intrinsic to the Child

- Acute Sudden onset illness
- Other Chronic long- term illness (excluding Asthma, epilepsy and diabetes)
- Learning disability
- Other disability or impairment

#### Domain B: Factors in Social Environment including family and parenting Capacity

- Emotional/behavioural/mental/physical health condition in a parent or carer

#### Domain D: Factors in Service Provision

- Prior medical Intervention
- Intra and inter service communication
- Resourcing issues

### 7.2 Modifiable Factors

Identifying modifiable factors in child deaths is an important element of CDOP reviews, it allows learning to be used to explore ways in which to reduce further risk where modifiable factors are present. A set standard of modifiable factors has been agreed by the GM CDOP Network to ensure consistency when categorising the preventability of child deaths. This is to reduce the subjectivity surrounding these matters.

The agreed definition of modifiable factors Identified is:

*‘The panel have identified one or more factors, in any domain, which may have contributed to the death of the child and which, by means of locally or nationally achievable interventions, could be modified to reduce the risk of future child deaths’*

Modifiable Factors are categorised and defined as:

#### *Modifiable Factors in Perinatal / Neonatal Deaths*

- Smoking in pregnancy
- Obesity during pregnancy (BMI 30 +)
- Underweight during pregnancy (BMI < 18.5)
- Unbooked pregnancies (someone who has not attended any antenatal clinic session with a trained personnel before presentation in labour)
- Concealed pregnancies
- Necrotizing Enterocolitis (NEC) where the baby was not fed expressed breast milk

#### *Modifiable Factors in Sudden Unexpected, Unexplained Deaths*

- Unsafe sleeping arrangements (co-sleeping bed/sofa)
- Parental smoking

#### *Modifiable Factors in Consanguineous Related Deaths*



- Where there has been an older sibling who has died or is affected by the same genetic autosomal recessive disorder

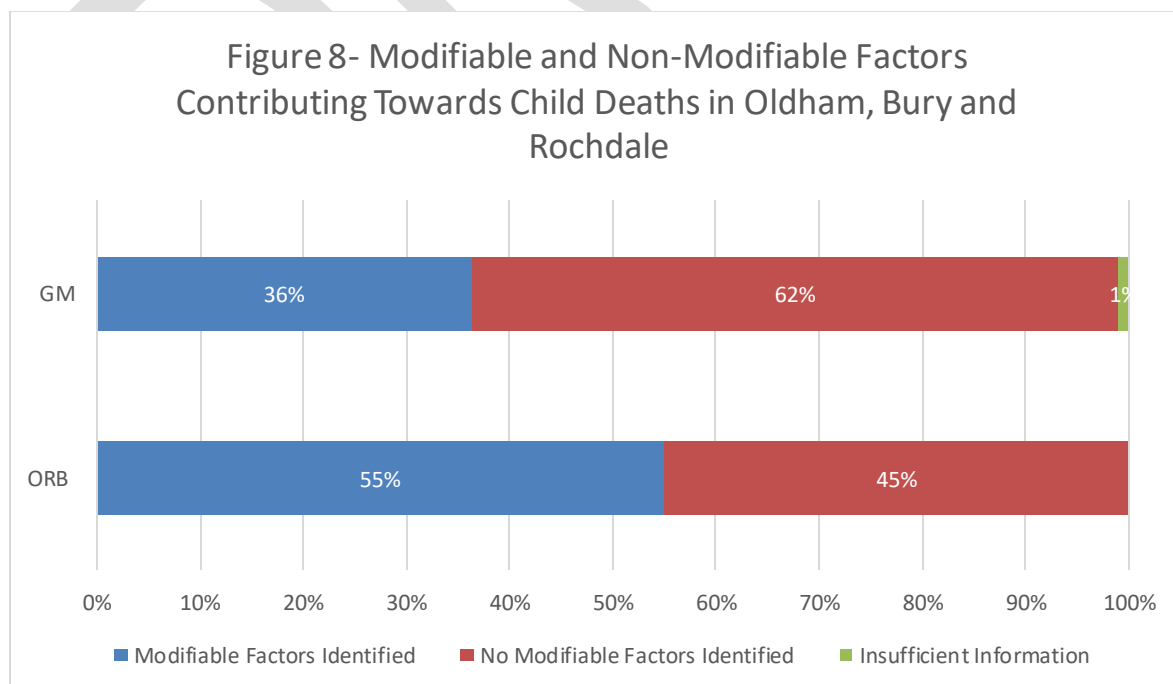
Across ORB 55% of cases had modifiable factors identified, ORB had a higher proportion of cases with modifiable factors when compared to GM (table 15). All cases across ORB had sufficient information to identify modifiable factors.

Table 12: Modifiable and Non-Modifiable Factors Contributing Towards Child Deaths in Oldham, Bury and Rochdale							
Area	Modifiable Factors Identified		No Modifiable Factors Identified		Insufficient Information		Total No
	No	%	No	%	No	%	
ORB	24	55%	20	45%	0	0%	44
GM	52	36%	89	62%	2	1%	143

It was not possible to explore the difference in modifiable factors between the ORB areas due to data limitations, however, it was possible identify which primary causes of death were most likely to have modifiable risk factors involved, these were:

- Acute medical or surgical condition
- Suicide or deliberate self-inflicted harm
- Sudden unexpected, unexplained death
- Trauma and other external factors, including medical/surgical complications/error
- Chronic medical condition

Again this data must be viewed with caution due to the number of deaths which are included in this analysis, along with the acknowledgment that these are the types of deaths that more likely to be influenced by modifiable factors.



## **Modifiable Risk Factors identified by the ORB CDOP in the closed cases of 2021/22 included:**

- Smoking in pregnancy
- Obesity during pregnancy
- Unbooked pregnancies
- Parental smoking
- Unsafe sleeping arrangements

## **8 Recommendations**

- I. The ORB area should continue to work towards reducing the key factors which are identified as contributing to child deaths, this will also have wider benefit for child health in general
- II. To mitigate for limitations in analysis due to a small dataset for notifications and closed cases, future report should include an overview and headline analysis for the year with in depth investigation of the data over a three year period. This would increase the ability to identify any patterns and themes which are occurring and allow for more meaningful comparisons with the North West data which is predominantly reported in this way.
- III. A number of data fields for both death notifications and closed cases did not meet the completeness threshold and were identified as requiring improvement. Of those identified the fields which allow for learning points to be shared and advise of action to be taken had particularly poor completion rates at 27%, suggesting immediate improvement is needed in the collection of this type of data.
- IV. There is currently a backlog of CDOP reviews which is increasing each year due to the occurrence of more deaths each year than reviews being completed. Some of this has been due to external factors such as the impact of the COVID-19 pandemic in services and the implementation of a new nationwide database, however, a review of available resources is needed to ensure that this issue can be resolved to prevent the backlog increasing each year.

## **9 Glossary**

CDOP- Child Death Overview Panel

Closed case- A case is defined as closed at the end of the CDOP review process and cases are not necessarily closed in the same year as notification of death

GM—Greater Manchester

IMD- Index of Multiple Deprivation

Infant Mortality- When a person dies before their first birthday

Neonatal-The period between the first seven days and the first 28 days of a person's life

Notified case- when a death has occurred and legally registered

ORB- Oldham, Rochdale and Bury

Perinatal- The first seven days of a person's life

SID- Sudden Infant Death

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