



North East and North Cumbria's Child Health and Wellbeing Network

***The Facts of Life* for children and young people growing
up in the North East and North Cumbria:**

Chapter 7 – Strong start in life

September 2021

@NorthNetChild



7	Strong start in life	3
7.1	Relevance	3
7.2	Commentary and findings	4
7.2.1	Mortality and outcomes	4
7.2.2	Conceptions and preconception health	9
7.2.3	Healthy pregnancy	13
7.2.4	Mothers and deliveries	16
7.2.5	Breastfeeding	22
7.2.6	Perinatal mental health	24
7.2.7	Access to screening	28
7.2.8	Access to services	31
7.2.9	Early development	33
7.3	Commentary on network actions	37
7.4	Relevant key policy and research papers	38



We do well on screening measures within the control of the NHS but despite a lot of focused work, we still lag behind the England average in teenage pregnancy, smoking status at time of delivery and breast feeding at 6-8 weeks. Newcastle (the only green among all the reds) bucks the trend in breast feeding. There may be some learning to share and an opportunity to gain a better understanding of the underlying causes of these behaviours.

.....
Chapter Seven SPOTLIGHT to direct momentum for initiatives

7 Strong start in life

7.1 Relevance

Giving every child the best start in life is crucial to improving health and reducing health inequalities across the life course. The foundations for virtually every aspect of human development – physical, intellectual and emotional– are laid in early childhood. What happens during these early years (starting in the womb) has lifelong effects on many aspects of health and well-being– from obesity, heart disease and mental health, to educational achievement and economic status¹.

This chapter describes risk factors and outcomes in relation to preconception care, delivery and fertility rates, maternity high impact areas², perinatal health, pre-school child health services, and early development.

¹ Marmot M. (2010) Fair society, healthy lives. Strategic review of health inequalities in England post 2010: [link](#)

² PHE (2021) Supporting public health: children, young people and families: [link](#)

7.2 Commentary and findings

7.2.1 Mortality and outcomes

Perinatal and infant mortality rates are powerful summary outcome indicators of child and maternal health and care within populations.

Birth weight is used as an indicator of fetal growth and nutrition. Low birth weight is caused by intrauterine growth restriction, prematurity (born before 37 weeks) or both. It contributes to a range of poor health outcomes and is closely associated with fetal and neonatal mortality and morbidity, inhibited growth and cognitive development, and the development of long-term conditions and mental health problems in adulthood. At a population level, a high proportion of low birth weight babies (defined as a birth weight under 2,500 grams) and very low birth weight (defined as less than 1,500 grams) is primarily related to poorer antenatal maternal health³.

³ Nuffield Trust (2021) Low birth weight: [link](#)

	Period	England	Region	Clinical commissioning groups							
				North Cumbria	North of Tyne and Gateshead			Durham, South Tyneside and Sunderland			Tees Valley
				North Cumbria	Newcastle Gateshead	Northumberland	North Tyneside	County Durham	South Tyneside	Sunderland	Tees Valley
Stillbirth rate (Persons, 0yrs, Crude rate- per 1,000)	2017-19	4.0	4.0	4.8	3.8	3.8	3.3	*	5.0	3.6	*
Neonatal mortality rate (Persons, <28 days, Crude rate- per 1,000)	2017-19	2.9	2.6	3.1	3.1	2.3	2.6	*	2.0	1.9	*
Post-neonatal mortality rate (Persons, 28 days - 1 yr, Crude rate- per 1,000)	2017-19	1.1	0.8	0.5	0.8	0.9	0.9	*	0.7	1.1	*

Figure 7.1 – Mortality and outcomes – CCG



	Clinical commissioning groups										
	Period	England	Region	North Cumbria	North of Tyne and Gateshead			Durham, South Tyneside and Sunderland			Tees Valley
				North Cumbria	Newcastle Gateshead	Northumberland	North Tyneside	County Durham	South Tyneside	Sunderland	Tees Valley
Child mortality rate (1-17 years) (Persons, 1-17 yrs, Directly standardised rate- per 100,000)	2017-19	10.8	-	7.8	13.1	8.9	10.9	10.2	12.0	10.0	14.1
Very low birth weight of all babies (Persons, 0 yrs, Proportion- %)	2018	1.2 ▼	0.7	0.7 ▼	0.7 ▼	0.5 ►	0.2 ▼	*	1.3 ►	1.2 ▼	*
Low birth weight of all babies (Persons, 0 yrs, Proportion- %)	2018	7.4 ►	6.7	6.5 ►	6.5 ▼	5.7 ►	5.6 ▼	*	6.6 ►	9.0 ►	*

Figure 7.1 – Mortality and outcomes – CCG (continued)

On average, where available, the data relating to the **North East and North Cumbria (NENC) region** indicate that:

- During 2017-19, key summary measures of childhood mortality in the **NENC region** were similar to the England average.
- The proportion of low and very low birth weight babies born in the **NENC region** was significantly lower than the England average.

At a locality level, where available, the data indicate that on average:

- Key summary measures of childhood mortality in all NENC CCGs were similar to the England average.
- All **North of Tyne and Gateshead** CCGs have significantly lower proportions of low and very low birth weight of all babies than the England average.
- **Sunderland** (9.0%) has a significantly higher proportion of babies born with low birth weight than the England average (7.4%).



	Period	England	Region	Lower tier local authorities															
				North Cumbria				North of Tyne and Gateshead				Durham, South Tyneside and Sunderland			Tees Valley				
				Allerdale	Carlisle	Copeland	Eden	Gateshead	Newcastle upon Tyne	Northumberland	North Tyneside	County Durham	South Tyneside	Sunderland	Darlington	Hartlepool	Middlesbrough	Redcar and Cleveland	Stockton-on-Tees
Infant mortality rate (Persons, <1 yr, Crude rate- per 1,000)	2017-19	3.9	3.4	3.6	2.8	4.4	3.3	4.0	3.9	3.2	3.5	3.2	2.6	3.0	3.7	3.0	3.2	3.4	3.6
Low birth weight of term babies (Persons, >=37 weeks gestational age at birth, Proportion- %)	2019	2.9 ▲	3.0 ▶	3.1 ▶	2.1 ▶	2.9 ▶	1.1 ▶	3.1 ▶	3.6 ▶	2.5 ▶	2.6 ▶	3.3 ▶	3.2 ▶	3.6 ▶	2.6 ▶	3.9 ▲	3.2 ▶	2.1 ▶	3.1 ▶
Premature births (less than 37 weeks gestation) (Persons, >=37 weeks gestational age at birth, Crude rate- per 1,000)	2016-18	81.2	-	70.7	76.3	89.3	83.7	83.8	83.5	79.8	71.7	86.2	74.3	79.3	99.4	95.1	84.2	90.1	92.8

Figure 7.2 – Mortality and outcomes – Lower tier local authority

On average, where available, the data relating to the **NENC region** indicate that:

- During 2017-19, the infant mortality rate across the **NENC region** (3.4 per 1000) was significantly lower than the national average (3.9 per 1000)
- During 2019, the proportion of low birth weight babies born in the **NENC region** at term (3.0%) is similar to the national average (2.9%).

At a locality level, the data indicate that on average:

- For low birth weight of term babies there were two outliers in the region: **Eden** (1.1%) where the proportion was significantly lower and **Newcastle upon Tyne** (3.6%) where it was significantly higher than the England average.



- During 2016-18, compared with the England average (81.2 per 1000) there were significantly higher rates of premature births registered in five local authority areas in the NENC region, while there was a significantly lower rate registered in **North Tyneside** (71.7 per 1000).

	Period	England	Region	Upper tier local authorities												
				North Cumbria	North of Tyne and Gateshead				Durham, South Tyneside and Sunderland			Tees Valley				
				Cumbria	Gateshead	Newcastle upon Tyne	Northumberland	North Tyneside	County Durham	South Tyneside	Sunderland	Darlington	Hartlepool	Middlesbrough	Redcar and Cleveland	Stockton-on-Tees
Neonatal mortality and stillbirth rate (Persons, <28 days, Crude rate- per 1,000)	2018	6.8 ▶	6.5 ▶	6.7 ▶	8.4 ▶	5.9 ▶	5.7 ▶	5.0 ▶	7.8 ▶	10.4 ▶	6.5 ▶	8.0 ▶	5.8 ▶	6.4 ▶	2.9 ▶	3.3 ▶

Figure 7.3 – Mortality and outcomes – Upper tier local authority

On average, the data relating to the **North East and Cumbria** indicate that:

- The rate of stillbirths and deaths within 28 days per 1,000 live births and stillbirths within the **North East and Cumbria** (6.5 per 1000) was similar to the average for England (6.8 per 1000)

Live indicators from this section can be viewed at <https://fingertips.phe.org.uk/indicator-list/view/RRa5zfYSOE>.

7.2.2 Conceptions and preconception health

Women and partners who are healthier at conception have a better chance of becoming pregnant, having a healthy and safe pregnancy and giving birth to a healthy baby. Promoting health during the preconception period can also reduce inequalities and



improve the subsequent life chances for women and their children. Unplanned pregnancy (45% of all pregnancies⁴) is a risk factor for a range of adverse outcomes, including low birthweight, prematurity and postnatal depression. Teenagers are the group at highest risk of unplanned pregnancy⁵.

Key areas of support for preconception health include smoking cessation, advice on nutrition, oral health, physical activity, alcohol and folic acid supplements⁶.

	Period	England	Region	Clinical commissioning groups							
				North Cumbria	North of Tyne and Gateshead			Durham, South Tyneside and Sunderland			Tees Valley
				North Cumbria	Newcastle Gateshead	Northumberland	North Tyneside	County Durham	South Tyneside	Sunderland	Tees Valley
Folic acid supplements before pregnancy (Female, Proportion, %)	2018/19	27.3	-	34.7	23.3	33.8	32.4	*	*	24.7	*

Figure 7.4 – Conception and preconception health - CCG

⁴ RCOG (2019) Better for women: [link](#)

⁵ PHE (2020) Maternity high impact area 1 Improving planning and preparation for pregnancy: [link](#)

⁶ PHE (2018) Making the case for Preconception care: [link](#)

worse	similar	better
lower	similar	higher



These data show that the information relating to folic acid supplementation is incomplete. This data comes from the Maternity Services Data Set (MSDS)⁷ and is a new source with data quality improving over time. Where data is available:

- During 2018/19, existing data indicated folic acid supplementation before pregnancy ranged from 23.3% of women in **Newcastle Gateshead** to 34.7% in **North Cumbria**.

Period	England	Region	Lower tier local authorities																
			North Cumbria				North of Tyne and Gateshead				Durham, South Tyneside and Sunderland			Tees Valley					
			Allerdale	Carlisle	Copeland	Eden	Gateshead	Newcastle upon Tyne	Northumberland	North Tyneside	County Durham	South Tyneside	Sunderland	Darlington	Hartlepool	Middlesbrough	Redcar and Cleveland	Stockton-on-Tees	
Under 18s conception rate / 1,000 (Female, <18 yrs, Crude rate- per 1,000)	2018	16.7 ▼	24.0 ▼	19.4 ▶	19.1 ▶	11.0 ▶	11.8 ▶	16.9 ▼	24.2 ▶	17.3 ▶	18.4 ▶	26.4 ▶	20.1 ▶	29.0 ▶	19.5 ▶	38.0 ▶	39.4 ▶	34.6 ▶	26.8 ▶
Under 18s conceptions leading to abortion (%) (Female, <18 yrs, Proportion- %)	2018	53.0 ▲	45.0 ▶	27.6 ▶	48.4 ▶	45.5 ▶	77.8 ▶	44.2 ▶	43.4 ▶	51.2 ▶	42.1 ▶	46.5 ▶	46.7 ▶	52.1 ▶	39.4 ▶	36.8 ▶	36.4 ▶	38.9 ▶	52.4 ▶

Figure 7.5 – Conception and preconception health – Lower tier local authority

On average, the data relating to the **NENC region** indicate that:

- The **NENC region** has a significantly higher rate of under 18s conceptions (24.0 per 1000) than England (16.7 per 1000), though this is falling in both the region and nationally.

⁷ NHS Digital Maternity Services Data Set: [link](#)



- The **NENC region** has a significantly lower proportion of under 18s conceptions leading to abortion (45.0%) than the average for England (53.0%)

At a locality level, the data indicate that on average:

- The rate of under 18s conceptions varies between local authorities in the NENC region ranging from 11.0 per 1000 in **Copeland** to 39.4 per 1000 in **Middlesbrough**.
- The proportion of under 18s conception leading to abortion varies between local authorities in the NENC region ranging between 27.6% in **Allerdale** and 77.8% in **Eden**.

	Period	England	Region	Upper tier local authorities												
				North Cumbria	North of Tyne and Gateshead				Durham, South Tyneside and Sunderland			Tees Valley				
				Cumbria	Gateshead	Newcastle upon Tyne	Northumberland	North Tyneside	County Durham	South Tyneside	Sunderland	Darlington	Hartlepool	Middlesbrough	Redcar and Cleveland	Stockton-on-Tees
Under 16s conception rate / 1,000 (Female, <16 yrs, Crude rate- per 1,000)	2018	2.5 ▼	-	2.3 ▶	3.3 ▶	4.1 ▶	2.1 ▶	3.1 ▶	4.6 ▶	3.9 ▶	4.8 ▶	4.0 ▶	7.7 ▶	9.9 ▶	8.3 ▶	4.2 ▶
Under 25s repeat abortions (%) (Female, 15-24 yrs, Proportion- %)	2019	27.7 ▲	24.4 ▶	19.9 ▶	28.7 ▶	20.5 ▶	27.7 ▶	22.5 ▶	20.8 ▶	28.6 ▶	26.4 ▶	23.8 ▶	24.6 ▶	32.4 ▶	22.8 ▶	27.9 ▶

Figure 7.6 – Conception and preconception health – Upper tier local authority

On average, the data relating to the **North East and Cumbria** indicate that:

- On average in England, under 16s conception rates are falling over time but this is not the case in any of the local authorities in the region.
- Rates of repeat abortions in under 25s are significantly lower in the **North East and Cumbria** (24.4%) compared with England (27.7%).

At a locality level, the data indicate that on average:

- Under 16s conception rates vary between local authorities in the region, ranging between 2.1 per 1000 in **Northumberland** to 9.9 per 1000 in **Middlesbrough**.
- Under 16s conception rates are significantly higher than the average for England (2.5 per 1000) in five local authorities - **County Durham, Sunderland, Hartlepool, Middlesbrough** and **Redcar & Cleveland**.

Live indicators from this section can be viewed at <https://fingertips.phe.org.uk/indicator-list/view/blTw4VhknE>.

7.2.3 Healthy pregnancy

To get the best possible start in life, a baby's mother needs to be healthy before and during pregnancy and childbirth. Tackling maternal weight and reducing the risks associated with smoking, drugs and alcohol in pregnancy are key maternity high impact areas⁸ with significant implications for the health of the developing foetus and subsequent life chances of mothers, babies, children and families.⁹

New indicators taken from the MSDS detail potential risk factors relating to pregnancy which are displayed in this report by geography, however additional breakdowns by age, deprivation, ethnicity, first or subsequent pregnancy and complex social factors are available from Fingertips through the Inequalities view.

⁸ PHE (2021) Supporting public health: children, young people and families: [link](#)

⁹ CMO (2014) The health of the 51% - Women: [link](#)



	Period	England	Region	Clinical commissioning groups							
				North Cumbria	North of Tyne and Gateshead			Durham, South Tyneside and Sunderland		Tees Valley	
				North Cumbria	Newcastle Gateshead	Northumberland	North Tyneside	County Durham	South Tyneside	Sunderland	Tees Valley
Obesity in early pregnancy (Female, Proportion- %)	2018/19	22.1	*	25.4	23.3	29.2	24.2	*	28.2	30.4	*
Smoking in early pregnancy (Female, Proportion- %)	2018/19	12.8	*	14.7	15.2	15.7	12.6	*	17.9	25.7	*
Drinking in early pregnancy (Female, Proportion- %)	2018/19	4.1	*	*	*	*	*	*	*	*	*
Drug misuse in early pregnancy (Female, Proportion- %)	2018/19	1.4	*	*	*	*	*	*	*	*	*

Figure 7.7 – Healthy pregnancy - CCG



This figure shows that, where data is available

- A significantly higher proportion of pregnant women who smoke at the time of delivery is present in most NENC CCGs compared to England.
- A significantly higher proportion of pregnant women are obese in early pregnancy in most NENC CCGs compared to England.

While data quality for drinking and drug misuse in early pregnancy is currently not robust enough to present at CCG level, this is expected to improve over time so these indicators will become more useful.

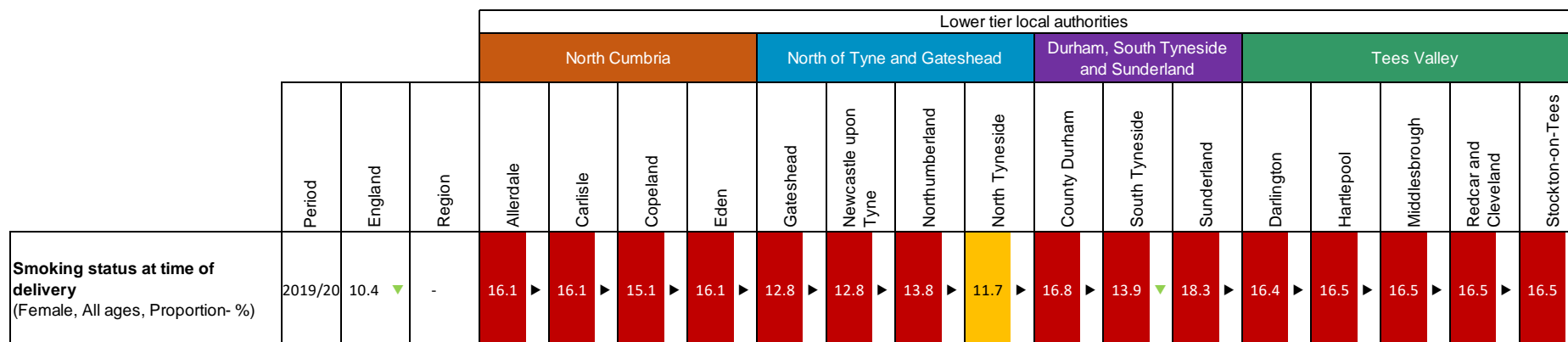


Figure 7.8 – Healthy pregnancy – Lower tier local authority

On average, the data relating to the **NENC region** indicate that:

- All NENC local authorities with the exception of **North Tyneside** (11.7%) have a significantly higher proportion of women smoking at time of delivery than the England average.

Live indicators from this section can be viewed at <https://fingertips.phe.org.uk/indicator-list/view/PSzvAePy0q>.

Chart legend

Significance compared with England



7.2.4 Mothers and deliveries

A detailed understanding of local birth and fertility rates across geographies and risk groups is fundamental to planning local child and maternal health and wellbeing services and strategies.

Factors which are commonly associated with poor maternal and child health outcomes include maternal age^{10 11}, and Black, Asian and Minority Ethnic (BAME) ethnicity¹². Other factors which are linked with some increased risks include multiple pregnancy¹³ and delivery by caesarean section¹⁴.

Indicators relating to mothers and deliveries are presented across four different geography types, indicators here are grouped by these geographies for ease of comparison.

	Period	England	Region	Lower tier local authorities															
				North Cumbria				North of Tyne and Gateshead				Durham, South Tyneside and Sunderland			Tees Valley				
				Allerdale	Carlisle	Copeland	Eden	Gateshead	Newcastle upon Tyne	Northumberland	North Tyneside	County Durham	South Tyneside	Sunderland	Darlington	Hartlepool	Middlesbrough	Redcar and Cleveland	Stockton-on-Tees
Under 18s births rate / 1,000 (Female, All ages, Crude rate- per 1,000)	2019	4.1	7.0	5.6	3.7	2.0	0.0	6.7	7.8	4.1	6.3	6.6	4.8	7.3	6.4	8.8	17.4	14.5	6.0

Figure 7.9 – Mothers and deliveries – Lower tier local authority

¹⁰ PHE (2019) A framework for supporting teenage mothers and young fathers: [link](#)

¹¹ Fitzpatrick KE et al. (2017) Pregnancy at very advanced maternal age: a UK population-based cohort study. BJOG (2017); 124 (7): 1097-1106: [link](#)

¹² PHE (2020) Maternity high impact area 6: Reducing the inequality of outcomes for women from Black, Asian and Minority Ethnic (BAME) communities and their babies: [link](#)

¹³ NICE (2019) Guideline NG137. Twin and triplet pregnancy: [link](#)

¹⁴ NIHR (2018) Balance of long-term benefits and risks of caesarean delivery explained: [link](#)



- Under 18s in the **NENC region** have a significantly higher birth rate than the England average. However, this is showing a decreasing trend and there is variation across the region with 0 per 1,000 births to mothers under 18 in **Eden** and 17.4 per 1,000 in **Middlesbrough**.

	Period	England	Region	Upper tier local authorities												
				North Cumbria	North of Tyne and Gateshead				Durham, South Tyneside and Sunderland			Tees Valley				
				Cumbria	Gateshead	Newcastle upon Tyne	Northumberland	North Tyneside	County Durham	South Tyneside	Sunderland	Darlington	Hartlepool	Middlesbrough	Redcar and Cleveland	Stockton-on-Tees
Women of childbearing age (15-44): % of total population (Female, 15-44 yrs, Proportion- %)	2017	19.0	17.9	15.6	18.7	22.9	15.6	18.0	17.8	17.7	18.4	17.8	18.0	19.5	16.8	18.3
Births to non-UK parents: % of live births (Persons, <1 yr, Proportion- %)	2017	34.8	14.2	10.3	15.9	35.4	7.7	12.8	8.0	9.6	11.1	17.7	8.3	25.5	6.2	16.7
Percentage of deliveries to women aged 35 years or above (Female, 35+ yrs, Proportion- %)	2019/20	22.8 ▲	17.4 ▲	17.5 ▶	20.1 ▶	21.3 ▶	18.4 ▶	21.7 ▶	16.0 ▶	16.1 ▶	15.3 ▶	16.7 ▶	13.8 ▶	14.6 ▶	14.2 ▶	16.9 ▶

Figure 7.10 – Mothers and deliveries – Upper tier local authority

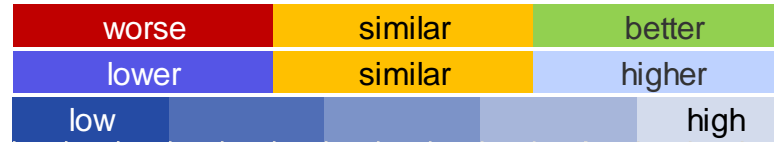
On average, the data relating to the **North East and Cumbria** indicate that:

- For the most recent data, the **region** on the whole has a slightly lower percentage of its total population that are women of childbearing age, a lower percentage of births to non-UK parents and a lower percentage of deliveries to women aged 35 years and above compared to the England averages.

At a locality level, the data indicate that on average:

- For women of childbearing age there is variation across the region with **Cumbria** and **Northumberland** (15.6%) being in the lowest quintile across England whilst **Newcastle upon Tyne** (22.9%) is in the highest quintile.
- All local authorities apart from **Newcastle upon Tyne** have a lower percentage of births to non-UK parents than the England average.
- On the whole, there is a lower percentage of deliveries to women aged 35 years and above in the NENC region with eight of the 13 local authorities being in the lowest quintile for this indicator across England. However, for the region as a whole there is an increasing trend in the percentage of deliveries to women aged 35 and above, as is the case for the England average.

Chart legend
 Significance compared with England
 Significance compared with England
 Quintiles



	Period	England	Region	Clinical commissioning groups							
				North Cumbria	North of Tyne and Gateshead		Durham, South Tyneside and Sunderland			Tees Valley	
				North Cumbria	Newcastle Gateshead	Northumberland	North Tyneside	County Durham	South Tyneside	Sunderland	Tees Valley
General fertility rate (Female, 15-44 yrs, Crude rate- per 1,000)	2019	57.7 ▼	51.6	54.6	47.4 ▼	51.1 ▼	57.6 ▶	*	55.3 ▼	51.5 ▶	*
Teenage mothers (Female, 12-17 yrs, Proportion- %)	2019/20	0.6 ▶	1.1	0.7 ▶	1.2 ▶	1.0 ▶	0.7 ▶	1.0 ▶	0.7 ▶	1.4 ▶	1.5 ▶
Percentage of deliveries to mothers from Black and Minority Ethnic (BME) groups (Female, All ages, Proportion- %)	2019/20	20.8	-	1.5	15.7	2.4	5.4	2.3	6.6	6.4	10.3
Multiple births (Female, 15-44 yrs, Crude rate- per 1,000)	2018	15.4 ▶	14.3	12.7 ▶	14.2 ▶	16.5 ▶	13.4 ▶	*	12.5 ▶	15.8 ▶	*
Caesarean section % (Female, All ages, Percentage point-%)	2019/20	30.4	-	31.6	27.8	31.0	29.4	28.1	24.7	23.2	28.6

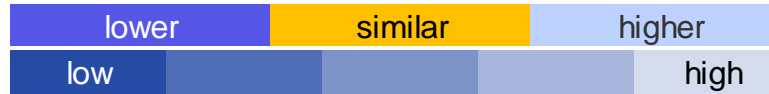
Figure 7.11 – Mothers and deliveries – CCG

On average, the data relating to the **NENC region** indicate that:

- On the whole, where data is available, women within the **NENC region** have a lower general fertility rate (51.6 per 1,000) than the England average (57.7 per 1,000).
- The percentage of deliveries where the mother is aged 12-17 in the **NENC region** (1.1%) is significantly higher than the England average (0.6%).

At a locality level, the data indicate that on average:

- There is a large range across the region in general fertility rates from **Newcastle Gateshead** (47.4 per 1,000) which is significantly lower than the England average to **North Tyneside** (57.6 per 1,000) which is similar to the England average. As is the case for the England average, the fertility rate trend in three of the NENC CCGs is decreasing.
- The percentage of deliveries where the mother is aged 12-17 is significantly higher than the England average in the majority of NENC CCGs.
- All of the CCGs in the NENC region have a lower percentage of deliveries to mothers from BME groups than the England average. **Newcastle Gateshead** and **Tees Valley** have percentages in the middle quintile for this indicator.
- The rate of multiple births per 1,000 total births for all CCGs is similar to the England average across all NENC CCGs where data is available. There are also no significant recent trends within any of the NENC CCGs data
- Five out of eight of the NENC CCGs have a significantly lower proportion of deliveries by caesarean section than the England average. The remaining three (**North Cumbria**, **North Tyneside** and **Northumberland**) have proportions similar to that of the England average (30.4%).



	Clinical commissioning groups													
	Period	England	Region	North Cumbria	North of Tyne and Gateshead			Durham, South Tyneside and Sunderland				Tees Valley		
				North Cumbria	Newcastle Gateshead	Northumberland	North Tyneside	North Durham	Durham Dales, Easington & Sedgfield	South Tyneside	Sunderland	South Tees	Hartlepool	Darlington
Births to mothers aged <20: % of live births (Female, All ages)	2017	2.9	4.7	3.9	4.3	4.1	3.1	4.2	5.5	4.3	5.9	6.5	4.9	5.1
Births to mothers aged 40+: % of live births (Female, All ages)	2017	4.4	2.9	2.8	3.2	3.2	3.6	2.7	2.9	2.4	2.3	2.6	2.4	2.8
Sole registered births: % births registered by one parent only (Persons, 0 yrs)	2017	5.1	6.3	4.3	5.9	5.5	5.7	6.2	8.1	7.2	7.1	7.8	7.0	6.7

Figure 7.12 – Mothers and deliveries – CCGs prior to April 2020

On average, the data relating to the **NENC region** indicate that:

- The **region** has a higher proportion of births to mothers under 20 than the England average, and a lower proportion of births to mothers aged 40 and above.

- The **region** as a whole has a significantly higher percentage of births registered by one parent only than the England average.

At a locality level, the data indicate that on average:

- NENC CCGs all have a higher proportion of births to mothers aged under 20 than the England average. This is particularly the case in the **Tees Valley** and **Durham, South Tyneside and Sunderland ICP**.
- NENC CCGs all have a lower proportions of births to mothers aged 40+ than the England average with all apart from **North Tyneside** being in the two lowest quintiles for this indicator across England.
- Most NENC CCGs have a significantly higher percentage of births registered by one parent only than the England average. However, the main exception to this is **North Cumbria** CCG which has a significantly lower percentage of births registered by one parent only than the England average.

Live indicators from this section can be viewed at <https://fingertips.phe.org.uk/indicator-list/view/IDXP3OcRcU>.

7.2.5 Breastfeeding

There is overwhelming evidence concluding that breastfeeding provides substantial health benefits for mothers and babies which endure far beyond the period of breastfeeding itself¹⁵. Breastfeeding provides short-term and long-term health and economic and environmental advantages to children, women, and society e.g. a reduced risk of gastrointestinal and respiratory conditions in infants¹⁶, and of breast and ovarian cancer in mothers. Current UK policy is to promote exclusive breastfeeding (feeding only breast milk) for the first 6 months¹⁷.

Breastfeeding data is now available at birth from the MSDS, as well as at 6-8 weeks through a PHE data collection.

¹⁵ PHE (2016) Infant feeding: commissioning services: [link](#)

¹⁶ Quigley MA et al. (2007) Breastfeeding and hospitalisation for diarrheal and respiratory infection in the United Kingdom Millennium Cohort Study. *Pediatrics* 2007; 119(4): e837-42: [link](#)

¹⁷ NICE (2008): Public health guideline PH11. Maternal and child nutrition: [link](#)



	Period	England	Region	Clinical commissioning groups							
				North Cumbria	North of Tyne and Gateshead			Durham, South Tyneside and Sunderland			Tees Valley
				North Cumbria	Newcastle Gateshead	Northumberland	North Tyneside	County Durham	South Tyneside	Sunderland	Tees Valley
Baby's first feed breastmilk (Persons, Newborn, Proportion- %)	2018/19	67.4	52.1	51.5	*	53.2	51.1	50.7	*	48.5	54.5

Figure 7.13 – Baby’s first feed breastmilk

- Where data are available, all of the CCGs in **NENC** have a lower percentage of babies whose first feed is breastmilk than the England average (67.4%). **Sunderland** (48.5%) has the lowest percentage in the NENC region.



Period	England	Region	Upper tier local authorities												
			North Cumbria	North of Tyne and Gateshead				Durham, South Tyneside and Sunderland			Tees Valley				
			Cumbria	Gateshead	Newcastle upon Tyne	Northumberland	North Tyneside	County Durham	South Tyneside	Sunderland	Darlington	Hartlepool	Middlesbrough	Redcar and Cleveland	Stockton-on-Tees
2019/20	48.0 ▲	-	*	38.7	50.9 ▲	38.8 ▶	42.2	27.8 ▶	*	25.7 ▶	33.5 ▶	*	32.6 ▲	27.6 ▶	*

Figure 7.14 – Breastfeeding at 6-8 weeks

- Where data is available the majority of **North East and Cumbria** local authorities have a lower percentage of infants that are totally or partially breastfed at age 6-8 weeks than the England average (48.0%). The exception to this is **Newcastle upon Tyne** (50.9%) which has a significantly higher percentage than the England average. **Sunderland** (25.7%) has the lowest percentage in the region.

Live indicators from this section can be viewed at <https://fingertips.phe.org.uk/indicator-list/view/4XhLI49Bc0>.

7.2.6 Perinatal mental health

Maternal mental health problems during the perinatal period (from conception to 1 year after birth) affect up to 20% of women and 15% of fathers. Parental mental health problems can have a negative impact on how parents interact, bond and respond to the needs of their baby and children¹⁸.

¹⁸ PHE (2020) Maternity high impact area 2: Supporting good parental mental health: [link](#)

If left unresolved, mental health issues can have significant long-term impacts on parents, their child and the broader family.

The most common mental health conditions to occur in pregnancy are depression and anxiety. Other disorders include obsessive-compulsive disorder, and post-traumatic stress disorder. Severe mental illness can emerge or relapse around the time of pregnancy¹⁹.

About half of all cases of perinatal depression and anxiety go undetected and fail to receive evidence-based treatment. Significant inequalities are experienced by women from black and minority ethnic (BAME) communities who are at greater risk of delays in diagnosis and treatment²⁰.

Perinatal mental health prevalence data is not collected at local level on a large scale, so prevalence estimates have been developed by applying national prevalences to the number of maternities in an area. Using this data a local area can begin to consider the possible level of need for mental health services. As this data are estimates based solely on population Figure 7.15 is not shaded, and data is shown without comment.

¹⁹ NIHR Dissemination Centre (2017) Themed review. Better beginnings. Improving health for pregnancy: [link](#)

²⁰ PHE (2020) Maternity high impact area 6: Reducing the inequality of outcomes for women from Black, Asian and Minority Ethnic (BAME) communities and their babies: [link](#)

	Clinical commissioning groups													
	Period	England	Region	North Cumbria	North of Tyne and Gateshead			Durham, South Tyneside and Sunderland				Tees Valley		
				North Cumbria	Newcastle Gateshead	Northumberland	North Tyneside	North Durham	Durham Dales, Easington & Sedgfield	South Tyneside	Sunderland	South Tees	Hartlepool	Darlington
Postpartum psychosis: Estimated number of women (Female, All ages, Count)	2017/18	984	48	5	8	4	3	3	4	2	4	5	5	2
Adjustment disorders and distress in perinatal period (lower estimate): Estimated number of women (Female, All ages, Count)	2017/18	73828	3633	338	611	315	249	257	317	185	333	383	360	130
Adjustment disorders and distress in perinatal period (upper estimate): Estimated number of women (Female, All ages, Count)	2017/18	147656	7266	676	1221	629	499	514	634	371	666	767	720	260
Chronic SMI in perinatal period: Estimated number of women (Female, All ages, Count)	2017/18	984	48	5	8	4	3	3	4	2	4	5	5	2

Figure 7.15 – Perinatal mental health prevalence

	Period	England	Region	Clinical commissioning groups										
				North Cumbria	North of Tyne and Gateshead			Durham, South Tyneside and Sunderland			Tees Valley			
				North Cumbria	Newcastle Gateshead	Northumberland	North Tyneside	North Durham	Durham Dales, Easington & Sedgfield	South Tyneside	Sunderland	South Tees	Hartlepool	Darlington
Severe depressive illness in perinatal period: Estimated number of women (Female, All ages, Count)	2017/18	14766	727	68	122	63	50	51	63	37	67	77	72	26
Mild-moderate depressive illness and anxiety in perinatal period (lower estimate): Estimated number of women (Female, All ages, Count)	2017/18	49219	2422	225	407	210	166	171	211	124	222	256	240	87
Mild-moderate depressive illness and anxiety in perinatal period (upper estimate): Estimated number of women (Female, All ages, Count)	2017/18	73828	3633	338	611	315	249	257	317	185	333	383	360	130
PTSD in perinatal period: Estimated number of women (Female, All ages, Count)	2017/18	14766	727	68	122	63	50	51	63	37	67	77	72	26

Figure 7.15 – Perinatal mental health prevalence (continued)

Live indicators from this section can be viewed at <https://fingertips.phe.org.uk/indicator-list/view/IMYftHSFAk>.

7.2.7 Access to screening

Screening programmes aim to identify those at high risk of a disorder to enable further investigation, diagnosis and early management. In England, the following screening programmes are offered to pregnant women and newborn babies:

- Fetal Anomaly Screening Programme (FASP)²¹
- Sickle cell and thalassaemia screening (SCT)²²
- Infectious diseases in pregnancy screening (IDPS)²³
- Newborn hearing screening (NHSP)²⁴
- Newborn bloodspot screening (NBS)²⁵
- Newborn and infant physical examination screening programme (NIPE)²⁶

Screening uptake is voluntary. Coverage statistics are collected to measure the delivery of screening to an eligible population. Low coverage might indicate that:

- Not all eligible babies were offered screening
- Those offered screening are not accepting the test

²¹ PHE (2021) NHS Fetal Anomaly Screening Programme (FASP): programme overview: [link](#)

²² PHE (2013) Sickle cell and thalassaemia screening: programme overview: [link](#)

²³ PHE (2021) Infectious diseases in pregnancy screening: programme overview: [link](#)

²⁴ PHE (2016) Newborn hearing screening: programme overview: [link](#)

²⁵ PHE (2018) Newborn blood spot screening: programme overview: [link](#)

²⁶ PHE (2021) Newborn and infant physical examination screening programme: [link](#)



- Those accepting the test are not tested within an effective timeframe

Many newborn and screening indicators are available at regional level only, so the figure below refers to the North East and compares with England.

	Period	England	North East Region
Newborn Blood Spot Screening - Coverage (Persons, <1 yr, Proportion- %)	2019/20	97.9 ▲	98.7 ▲
Infectious Diseases in Pregnancy Screening - HIV Coverage (Female, All ages, Proportion- %)	2019/20	99.8 ►	99.8 ▲
Sickle Cell and Thalassaemia Screening - Coverage (Female, All ages, Proportion- %)	2019/20	99.7 ▲	99.8 ▲
Infectious Diseases in Pregnancy Screening - Hepatitis B Coverage (Female, All ages, Proportion- %)	2019/20	99.8	99.8
Infectious Diseases in Pregnancy Screening - Syphilis Coverage (Female, All ages, Proportion- %)	2019/20	99.8	99.9
Newborn and Infant Physical Examination Screening - Coverage (Persons, < 1 yr, Proportion- %)	2019/20	96.7 ▲	96.3 ▲
Fetal Anomaly Screening - Coverage (Female, Proportion- %)	2019/20	99.1	99.2

Figure 7.16 – Access to screening – Region

- In 2019/20 the **North East** had higher proportions than England in the majority of screening programs with increasing trends across four of the seven and no downward trends. Fetal anomaly screening coverage was similar to England, and only newborn and infant physical examination coverage was significantly lower than England.

Chart legend

Significance compared with England



	Period	England	Region	Upper tier local authorities												
				North Cumbria	North of Tyne and Gateshead				Durham, South Tyneside and Sunderland			Tees Valley				
				Cumbria	Gateshead	Newcastle upon Tyne	Northumberland	North Tyneside	County Durham	South Tyneside	Sunderland	Darlington	Hartlepool	Middlesbrough	Redcar and Cleveland	Stockton-on-Tees
Newborn Hearing Screening - Coverage (Persons, <1 yr, Proportion- %)	2019/20	98.2 ▶	-	98.2	99.0	99.1	99.0	99.5	98.1	98.1	98.3	98.4	99.2	95.3	96.2	99.4

Figure 7.17 – Access to screening – Newborn hearing

- The proportion of babies eligible for newborn hearing screening for whom the screening process is complete by 4 weeks corrected age (hospital programmes: well babies, NICU babies) or by 5 weeks corrected age (community programmes: well babies) within the **North East and Cumbria** varies from **Middlesbrough** (95.3%) to **North Tyneside** (99.5%). Two local authorities, **Middlesbrough** and **Redcar & Cleveland**, have significantly lower proportions than the England average whilst six out of thirteen have significantly higher proportions.

Live indicators from this section can be viewed at <https://fingertips.phe.org.uk/indicator-list/view/ykVuEaEkw0>.

7.2.8 Access to services

Health visitors are specialist public health nurses leading the 0 to 5 year olds element of the Healthy Child Programme²⁷ and supporting families from the antenatal period up to school entry. The service is delivered in a range of settings including families' own homes, the local community or primary care. The programme is tailored to the needs of children and families and includes safeguarding as a core element. The programme also includes five mandated reviews²⁸:

- Antenatal health promoting visit;
- New baby review;
- 6-8 week assessment;
- 1 year assessment;
- 2 – 2½ year review

Service performance metrics on health visitor activity can be used to inform local service evaluations.

The ASQ-3 is a national outcome measure which has been developed²⁹ to help monitor child development at age 2 – 2½ years³⁰. Health visiting teams should have been using ASQ-3 as part of HCP two year reviews from April 2015. Coverage statistics can inform the interpretation of ASQ-3 derived indicators.

²⁷ PHE (2021) Healthy child programme 0 to 19: health visitor and school nurse commissioning: [link](#)

²⁸ PHE (2021) Healthy visiting and school nursing service delivery model: [link](#)

²⁹ PHE (2018) Feasibility study: developing the capability for population surveillance using indicators of child development outcomes aged 2 to 2 and a half years: [link](#)

³⁰ PHE Fingertips Indicator definition: Proportion of children aged 2-2½yrs receiving ASQ-3 as part of the Healthy Child Programme or integrated review: [link](#)

	Period	England	Region	Upper tier local authorities												
				North Cumbria	North of Tyne and Gateshead			Durham, South Tyneside and Sunderland			Tees Valley					
				Cumbria	Gateshead	Newcastle upon Tyne	Northumberland	North Tyneside	County Durham	South Tyneside	Sunderland	Darlington	Hartlepool	Middlesbrough	Redcar and Cleveland	Stockton-on-Tees
Proportion of New Birth Visits (NBVs) completed within 14 days (Persons, <14 days, Proportion- %)	2019/20	86.8	-	81.7	96.2	89.0	90.9	92.2	96.3	90.8	98.2	91.5	79.6	98.5	88.4	83.4
Proportion of infants receiving a 6 to 8 week review (Persons, 6-8 weeks, Proportion- %)	2019/20	85.1	89.1	73.7	95.5	86.4	86.6	95.2	95.1	89.1	96.6	93.9	79.0	96.7	94.1	85.3
Proportion of children receiving a 12-month review (Persons, 1 yr, Proportion- %)	2019/20	83.6	93.1	77.0	97.3	93.2	95.0	93.7	97.4	86.2	99.0	99.7	93.8	98.8	95.6	95.4
Proportion of children who received a 2-2½ year review (Persons, 2-2.5 yrs, Proportion- %)	2019/20	78.6	86.7	61.6	88.7	85.5	90.1	85.7	93.7	87.9	97.7	97.8	76.7	99.2	93.6	89.6
Proportion of children aged 2-2½yrs receiving ASQ-3 as part of the Healthy Child Programme or integrated review (Persons, 2-2.5 yrs, Proportion- %)	2019/20	92.6 ▲	93.1 ▲	*	87.3	96.5	95.4 ▲	96.1 ►	96.5 ▲	86.5	87.4	99.4 ▲	96.5 ▲	98.8	98.6	97.6

Figure 7.18 – Access to services

On average, the data relating to the **North East and Cumbria** indicate that:

- The **region** has a significantly higher proportion of children receiving a 6 to 8 week review (89.1%) and a 12 month review (93.1%) than the England averages (85.1% and 83.6% respectively).
- The **region** as a whole has a significantly higher proportion of children receiving a 2 – 2½ year review (86.7%) and receiving ASQ-3 (93.1%) than the England averages (78.6% and 92.6% respectively).

At a locality level, the data indicate that on average:

- The majority of North East and Cumbria local authorities have a significantly higher proportion of visits and reviews completed than England averages, with few exceptions. Specifically identifying those with significantly lower proportions these are **Cumbria** for all four reviews, **Hartlepool** for new birth visits and 6 to 8 week reviews, and **Stockton-on-Tees** for new birth visits.
- Most local authorities have significantly higher proportions of children receiving ASQ-3 than the England average, with the exceptions of **Gateshead**, **South Tyneside** and **Sunderland** which are all significantly lower.

Live indicators from this section can be viewed at <https://fingertips.phe.org.uk/indicator-list/view/XYnu0NddvE>.

7.2.9 Early development

Leading cohort studies such as the Millennium Cohort Study³¹ have identified associations between deprivation and child development. The ASQ-3 (see above) provides the opportunity to explore these associations at a whole population level, by helping to monitor child development outcomes across England, over time and across various vulnerable groups, demographic or socioeconomic factors.

The ASQ-3 explores five domains of child development: communication, gross motor skills, fine motor skills, problem solving and personal-social development. Early results indicate that the development of communication skills is most heavily influenced by

³¹ UCL Millennium Cohort Study: [link](#)

demographic and social factors, and is the one where the gap between boys and girls is the largest. Evidence is clear that poor communication skills can have long term consequences for social, educational, health and economic outcomes, and therefore the use of ASQ-3 and the publication of national statistics on child development outcomes provides an opportunity for early intervention to improve health and wellbeing outcomes for children and to reduce inequalities in those outcomes³².

Data is currently collected through PHE's interim data collection system, however the longer-term strategic plan for data collection and reporting the ASQ-3 metrics and associated outcomes of child development is NHS Digital's Community Services Dataset (formerly the Children and Young Peoples (CYPHS) data set). It is mandatory for the providers of public funded services to submit the dataset to NHS Digital. Whilst the data set is operational and reporting has begun, providers are at different stages of maturity with their submissions or readiness to flow the data therefore it is expected to take some additional time for this data set to reach sufficient coverage for reporting purposes.

Indicators of early development using the Ages and Stages Questionnaire (ASQ-3) are presented for four individual sets of skills as well as the overall indicator of development. Disparities in child development are recognisable in the second year of life and have an impact by the time children enter school. If left unsupported, these children are more likely to fail to achieve their full potential.

³² PHE (2018) Feasibility study: developing the capability for population surveillance using indicators of child development outcomes aged 2 to 2 and a half years: [link](#)



	Period	England	Region	Upper tier local authorities												
				North Cumbria	North of Tyne and Gateshead				Durham, South Tyneside and Sunderland			Tees Valley				
				Cumbria	Gateshead	Newcastle upon Tyne	Northumberland	North Tyneside	County Durham	South Tyneside	Sunderland	Darlington	Hartlepool	Middlesbrough	Redcar and Cleveland	Stockton-on-Tees
Child development: percentage of children achieving a good level of development at 2-2½ years (Persons, 2-2.5 yrs, Proportion- %)	2019/20	83.3	-	*	85.6	85.7	91.2	87.8	89.8	*	83.2	93.9	62.1	89.4	88.0	89.8
Child development: percentage of children achieving the expected level in communication skills at 2-2½ years (Persons, 2-2.5 yrs, Proportion- %)	2019/20	88.9	-	*	89.9	89.7	95.7	92.9	92.1	*	87.6	93.7	80.2	92.9	93.4	93.0
Child development: percentage of children achieving the expected level in gross motor skills at 2-2½ years (Persons, 2-2.5 yrs, Proportion- %)	2019/20	93.8	95.6	*	95.6	95.7	98.0	97.9	95.9	*	94.0	98.5	74.5	97.9	94.1	96.5
Child development: percentage of children achieving the expected level in problem solving skills at 2-2½ years (Persons, 2-2.5 yrs, Proportion- %)	2019/20	93.9	95.3	*	95.7	95.2	97.8	96.1	95.9	*	92.6	97.5	82.8	96.5	95.6	95.2
Child development: percentage of children achieving the expected level in personal-social skills at 2-2½ years (Persons, 2-2.5 yrs, Proportion- %)	2019/20	92.9	-	*	95.6	95.1	96.5	97.1	94.8	*	93.4	97.7	80.3	96.4	95.1	94.4

Figure 7.19 – Access to screening – Early development

At a locality level, the data indicate that on average:

- Where data is available, the majority of **North East and Cumbria** local authorities have a significantly higher percentage of children achieving a good level of development at 2-2½ years than the England average. The exceptions to this are in **Sunderland** where the percentage is similar to the national average and in **Hartlepool** where the percentage is significantly lower.
- Where data is available for the percentage of children achieving the expected level in communication skills at 2-2½ years, only four local authorities do not have a significantly higher percentage than the England average. These are **Gateshead** and **Newcastle upon Tyne** which have results similar to that of the England average and **Hartlepool** and **Sunderland** which have significantly lower percentages.
- For gross motor skills most local authorities have significantly higher percentages of children achieving the expected level than the England average, with the exception of **Sunderland** and **Redcar & Cleveland** (similar) and **Hartlepool** (significantly lower).
- Where data is available, the majority of local authorities have a significantly higher percentage of children achieving the expected level in problem solving skills at 2-2½ years than the England average. The exceptions are **Sunderland** and **Hartlepool** both of which have a significantly lower percentage than the England average.
- The majority of local authorities have a higher percentage of children achieving the expected level in personal-social skills at 2-2½ years than the England average. The exceptions are **Sunderland** which has a similar percentage to the England average and **Hartlepool** which has a significantly lower percentage.

Live indicators from this section can be viewed at <https://fingertips.phe.org.uk/indicator-list/view/x8aFgAfo8k>.

7.3 Commentary on network actions

Strong start in life is a network priority and has threads across many areas its work and a close association to the Maternity and Perinatal Mental Health Clinical Networks a recent network. A recent ‘huddle’ seminar focused on the learning from the Surestart initiative to share learning from the national founding Director.

The Network’s Interactive Film is based around a group of young parents to be and highlight some issues they face including perinatal mental health. This acts as an educational tool for young people to Trylife in a safe environment and is freely available to those in NENC.

The Poverty Proofing consultation exercise accessed young people and families on the impact of poverty on accessing health care settings, which highlighted key items relating to access and transport.

Little Orange Book is an initiative developed by Newcastle Gateshead CCG and promoted by the network to be spread across the region. It offers guidance to parents of young children (5 and under) on the top conditions that are seen in A&E but can usually be managed safely at home.

The NENC Healthier Together website development (based on [Home :: Healthier Together \(what0-18.nhs.uk\)](https://www.what0-18.nhs.uk) is a region wide site and clinical repository for professionals and families relating to children’s,(and potentially also maternal and mental health) guidance. This has been successfully implemented elsewhere and reduced the attendances for young people in urgent and emergency care settings and includes information in relation to prevention.

For any further information and proposals on initiatives relating to strong start in life do contact the network via england.northernchildnetwork@nhs.net and the website [Child Health and Wellbeing Network | North East and North Cumbria ICS](#).

7.4 Relevant key policy and research papers

Fetal origins of adult disease theory

Barker DJP et al. Fetal nutrition and cardiovascular disease in adult life. The Lancet 1993; 341 (8850) 938-41
<https://www.sciencedirect.com/science/article/abs/pii/014067369391224A>

Barker DJP. Developmental origins of chronic disease. Public health 2012; 126(3): 185-9
<https://www.sciencedirect.com/science/article/abs/pii/S0033350611003660?via%3Dihub>

Bhutta ZA. Early nutrition and adult outcomes: piece of the puzzle. The Lancet 2013; 382 (9891): 486-7
[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(13\)60716-3/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(13)60716-3/fulltext)

Calkins K. et al. Fetal origins of adult disease. Curr Probl Pediatr Adolesc Health Care 2011; 41(6): 158-76
<https://www.sciencedirect.com/science/article/abs/pii/S1538544211000265?via%3Dihub>

Inequalities

UCL Millennium Cohort Study <https://cls.ucl.ac.uk/cls-studies/millennium-cohort-study/>

Marmot M. (2010) Fair society, healthy lives. Strategic review of health inequalities in England post 2010
<https://www.instituteofhealthequity.org/resources-reports/fair-society-healthy-lives-the-marmot-review/fair-society-healthy-lives-full-report-pdf.pdf>

Kings Fund Collection Best start in life <https://www.kingsfund.org.uk/projects/improving-publics-health/best-start-life>

Knight M. et al. (2019) Saving lives, improving mothers' care - lessons learned to inform maternity care from the UK and Ireland confidential enquiries into maternal deaths and morbidity 2015–17. Oxford: National Perinatal Epidemiology Unit, University of

Oxford; 2019 <https://www.npeu.ox.ac.uk/assets/downloads/mbrance-uk/reports/MBRRACE-UK%20Maternal%20Report%202019%20-%20WEB%20VERSION.pdf>

Draper ES et al. (2019) MBRRACE-UK perinatal mortality surveillance report, UK perinatal deaths for births from January to 2017. Leicester: The Infant Mortality and Morbidity Studies, Department of Health Sciences, University of Leicester; 2019. https://www.npeu.ox.ac.uk/assets/downloads/mbrance-uk/reports/perinatal-surveillance-report-2018/MBRRACE-UK_Perinatal_Surveillance_Report_2018_-_final_v3.pdf

Children's Commissioner (2018) Growing up North <https://www.childrenscommissioner.gov.uk/report/growing-up-north-a-generation-of-children-await-the-powerhouse-promise/>

Life course approach

Wave Trust (2014) A cross party manifesto: The 10001 Critical Days – the importance of the conception to age two period. <https://www.wavetrust.org/Handlers/Download.ashx?IDMF=e1b25e67-b13b-4e19-a3f6-9093e56d6a31>

Department of Health and Social Care (2019) First 1000 days of life. <https://publications.parliament.uk/pa/cm201719/cmselect/cmhealth/1496/1496.pdf>

Early Intervention Foundation (2018) Realising the potential of early intervention. <https://www.eif.org.uk/report/realising-the-potential-of-early-intervention>

PHE (2019) Healthy beginnings: Applying All Our Health <https://www.gov.uk/government/publications/healthy-beginnings-applying-all-our-health/healthy-beginnings-applying-all-our-health>

PHE (2018) Making the case for Preconception care https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729018/Making_the_case_for_preconception_care.pdf

PHE (2019) Health of women before and during pregnancy: health behaviours, risk factors and inequalities
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/844210/Health_of_women_before_and_during_pregnancy_2019.pdf

PHE (2018) Health matters: reproductive health and pregnancy planning <https://www.gov.uk/government/publications/health-matters-reproductive-health-and-pregnancy-planning/health-matters-reproductive-health-and-pregnancy-planning>

Maternity care and maternal health

PHE (2020) Maternity high impact area 1: Improving planning and preparation for pregnancy
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/942474/Maternity_high_impact_area_1_Improving_planning_and_preparation_for_pregnancy.pdf

PHE (2020) Maternity high impact area 2: Supporting good parental mental health
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/942475/Maternity_high_impact_area_2_Supporting_good_parental_mental_health.pdf

PHE (2019) Maternity high impact area 3. Supporting healthy weight before and between pregnancy.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/942476/Maternity_high_impact_area_3_Supporting_healthy_weight_before_and_between_pregnancies_.pdf

PHE (2020) Maternity high impact area 4. Reducing the impact of harms caused by alcohol in pregnancy.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/942477/Maternity_high_impact_area_4_Reducing_the_incidence_of_harms_caused_by_alcohol_in_pregnancy.pdf

PHE (2019) Maternity high impact area 5. Supporting parents to have a smoke free pregnancy.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/942478/Maternity_high_impact_area_5_Supporting_parents_to_have_a_smokefree_pregnancy.pdf

PHE (2020) Maternity high impact area 6: Reducing the inequality of outcomes for women from Black, Asian and Minority Ethnic (BAME) communities and their babies.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/942480/Maternity_high_impact_area_6_Reducing_the_inequality_of_outcomes_for_women_from_Black_Asian_and_Minority_Ethnic_BAME_communities_and_their_babies.pdf

CMO (2014) The health of the 51% - Women

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/595439/CMO_annual_report_2014.pdf

RCOG (2019) Better for women <https://www.rcog.org.uk/globalassets/documents/news/campaigns-and-opinions/better-for-women/better-for-women-full-report.pdf>

NIHR Dissemination Centre (2017) Themed review. Better beginnings. Improving health for pregnancy

<https://evidence.nihr.ac.uk/wp-content/uploads/2020/03/Better-beginnings-web-interactive.pdf>

PHE (2019) A framework for supporting teenage mothers and young fathers

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/796582/PHE_Young_Parents_Support_Framework_April2019.pdf

RCOG (2011) Why should we consider a life course approach to Women's Health Care?

https://www.euro.who.int/_data/assets/pdf_file/0016/292201/Life-Course-Approach-Womens-Health-UK.pdf

Breastfeeding

Victora CG et al. (2016) Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. Lancet; 387 (10017): 475-90 <https://www.bpni.org/Article/Breastfeeding-in-the-21st-century-epidemiology-mechanisms.pdf>

Rollins NC. et al. (2016) Why invest, and what it will take to improve breastfeeding practices? Lancet; 387 (10017): 491-504
<https://www.ilcambiamento.it/files/allattamento2.pdf>

NICE (2008): Public health guideline PH11. Maternal and child nutrition. <https://www.nice.org.uk/guidance/ph11/chapter/2-public-health-need-and-practice>

Quigley MA et al. (2007) Breastfeeding and hospitalisation for diarrheal and respiratory infection in the United Kingdom Millennium Cohort Study. Pediatrics 2007; 119(4): e837-42 <https://pubmed.ncbi.nlm.nih.gov/17403827/>

Screening

PHE (2021) NHS Fetal Anomaly Screening Programme (FASP): programme overview. <https://www.gov.uk/guidance/fetal-anomaly-screening-programme-overview>

PHE (2013) Sickle cell and thalassaemia screening: programme overview <https://www.gov.uk/guidance/sickle-cell-and-thalassaemia-screening-programme-overview>

PHE (2021) Infectious diseases in pregnancy screening: programme overview <https://www.gov.uk/guidance/infectious-diseases-in-pregnancy-screening-programme-overview>

PHE (2016) Newborn hearing screening: programme overview <https://www.gov.uk/guidance/newborn-hearing-screening-programme-overview>

PHE (2018) Newborn blood spot screening: programme overview <https://www.gov.uk/guidance/newborn-blood-spot-screening-programme-overview>

PHE (2021) Newborn and infant physical examination screening programme <https://www.gov.uk/government/publications/newborn-and-infant-physical-examination-programme-handbook/newborn-and-infant-physical-examination-screening-programme-handbook>

Perinatal Mental Health

Gutierrez-Galve L, Stein A, Hanington L, Heron J, Lewis G, O'Farrelly C, et al. (2019) Association of maternal and paternal depression in the postnatal period with offspring depression at age 18 years. JAMA psychiatry. 2019;76(3):290-6.

<https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2719453>

NICE (2014) Clinical Guideline CG192. Antenatal and postnatal mental health <https://www.nice.org.uk/guidance/cg192>

PHE (2019) Perinatal Mental Health <https://www.gov.uk/government/publications/better-mental-health-jsna-toolkit/4-perinatal-mental-health>

RCGP (2021) Perinatal Mental Health Toolkit <https://www.rcgp.org.uk/clinical-and-research/resources/toolkits/perinatal-mental-health-toolkit.aspx>

Early years services and child development

PHE (2021) Supporting public health: children, young people and families

<https://www.gov.uk/government/publications/commissioning-of-public-health-services-for-children>

PHE (2018) Feasibility study: developing the capability for population surveillance using indicators of child development outcomes aged 2 to 2 and a half years.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/683601/Feasibility_study_developing_the_capability_for_population_surveillance_using_indicators_of_child_development_outcomes_aged_2_to_2_and_a_half_years.pdf

PHE (2021) Healthy child programme 0 to 19: health visitor and school nurse commissioning

<https://www.gov.uk/government/publications/healthy-child-programme-0-to-19-health-visitor-and-school-nurse-commissioning>

PHE (2021) Healthy visiting and school nursing service delivery model <https://www.gov.uk/government/publications/commissioning-of-public-health-services-for-children/health-visiting-and-school-nursing-service-delivery-model>