Estimating the number of vulnerable babies

Alma Economics - May 2018

Introduction

As part of the second phase of the Children's Commissioner's Office's (CCO) Measuring Vulnerability Project, Alma Economics conducted a rapid data review on groups of vulnerable babies aged under 1. This technical paper provides an overview of the methodology and data sources used to obtain aggregate totals for babies with different vulnerability types.

The Measuring Vulnerability II project has identified 41 groups of vulnerable children in consultation with key stakeholders. Of these groups, 16 were found to be relevant to the scope of this report[1]. A review was conducted to identify data sources for each of these groups, considering a range of factors including disaggregation and data quality. While the report focuses on babies aged under 1, where high quality data was available and appropriately disaggregated, we have also recorded numbers for children aged 0-4 to provide context.

These lower level groups have been classified into 3 vulnerability types:

- o **Type 1: In the system** – groups of babies who are supported by the state
- o **Type 2: Health needs** – groups of babies who have physical or mental health needs
- o **Type 3: Invisible babies** – groups of babies with personal or contextual needs that are not well addressed by universal services

Methodology

While every effort has been made to produce headline numbers that are as accurate as possible, it is important to stress that our estimates should be seen as indicative only.

In order to arrive at the total number of children under 1 for each vulnerability type, overlaps between the constituent, lower-level groups have been considered. For example, children whose parents use substances problematically may also be in the troubled families programme so simply adding up the different groups would give rise to double-counting.

In order to account for these overlaps, we used official statistics where possible. Due to time constraints, we did not utilise individual-level datasets that may have helped us estimate overlaps more accurately.

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[1] The groups are: 1) children in need (CIN), 2) CIN who have experienced abuse or neglect, 3) children looked after, 4) children who are subject to Child Protection Plans, 5) children who were adopted, 6) children subject to special guardianship orders, 7) babies with mental health difficulties, 8) babies with physical health issues, 9) babies who have special educational needs and/or disability, 10) babies in the 'troubled families' programme, 11) babies whose parents use substances problematically, 12) babies with domestic violence in household, 13) babies with mental ill-health in the family, 14) children who are homeless or who are insecure/unstable housing, 15) children not meeting the threshold for social worker intervention, and 16) children of prisoners.

We note there are certain limitations encountered when trying to identify the number of babies with certain vulnerabilities in England. While we have high-quality data on groups in the system (e.g. looked after children, adopted children), there is very little known about 'invisible babies' and consequently estimates are based on small-scale surveys or one-off reports. Another issue encountered is inconsistent age disaggregation - some sources report information using age brackets (e.g. 0-4, 1-4), while others provide information for each age group.

Data quality

The following scheme is used to classify the accuracy of each data source:

1. **Population statistics (e.g. administrative data):**
   1a. Accurate (National Statistics)
   1b. Accurate (Official Statistics)

2. **Official estimates based on survey data (e.g. LFS, FRS etc.):**
   2a. Accurate Estimates (National Statistics)
   2b. Accurate Estimates (Official Statistics)

3. **Experimental estimates**

4. **Non-official estimates based on assumptions and/or survey data**

Type 1: In system

'Babies in the system' refers to babies who have established vulnerabilities, identified by the state. Due to contact with government departments, babies in these groups are usually well-represented in the official data. All the figures in the table below are from official or national statistics.

Table 1. Babies in the system

Group	Definition	Number aged <1	Number aged 0-4	Data Source	Data quality
Children in need at 31 March 2017	A child is defined as being in need if: i) the child is unlikely to achieve or maintain a reasonable standard of health or development without the provision of services by a LA; ii) the child's health or development is likely to be significantly impaired or further impaired, without the provision of such services; or iii) the child is disabled (Children Act 1989).	19,640	89,400	Characteristics of children in need: 2016 to 2017	1b. Accurate (Official Statistics)
Children in Need (CIN) who have experienced abuse or neglect	The main reason why the child started to receive services is recorded as their primary need at assessment. This group measures babies with a primary need at assessment as abuse or neglect.	12,286	54,699	Characteristics of children in need: 2016 to 2017	1b. Accurate (Official Statistics)
Children looked after at 31 March 2017	A child is looked after by a Local Authority (LA) if a court has granted a care order to place a child in care, or a children's services department has cared for the child for more than 24 hours (Children Act 1989).	3,820	12,990	Children looked after in England (including adoption) year ending 31 March 2017	1a. Accurate (National Statistics)

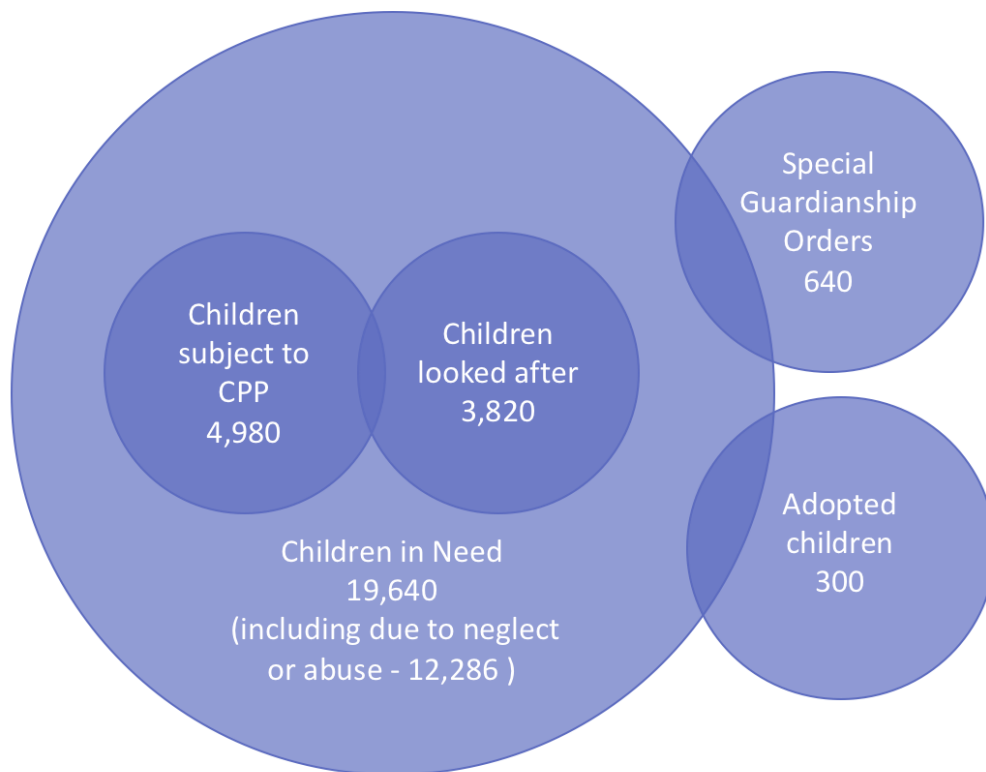|					
Children who are subject to Child Protection Plans (CPP) at 31 March 2017	A Child Protection Plan (CPP) is a plan detailing the ways in which a child is to be kept safe, including how his or her health and development is to be promoted, and ways in which professionals can support the child's family, if this is in the child's best interest, in promoting his or her welfare.	4,980	18,520	Characteristics of children in need: 2016 to 2017	1b. Accurate (Official Statistics)
Children who were adopted during the year ending 31 March 2017	Adoption places a child or young person in a permanent home. Once an adoption order has been granted, the birth parents lose parental responsibility.	300	3,370	Children looked after in England (including adoption) year ending 31 March 2017	1a. Accurate (National Statistics)
Children who ceased to be looked after during the year ending 31 March 2017 subject to a SGO	A special guardianship is an order made by the Family Court that places a child or a young person to live with someone other than their parents on a long-term basis. (Adoption and Children Act 2002).	640	1,980	Children looked after in England (including adoption) year ending 31 March 2017: additional tables	1a. Accurate (National Statistics)
Estimated total for babies under 1			**20,570**		

Overlaps

As outlined in Figure 1, Children in Need includes the following groups:

- children looked after
- children who are subject to CPPs
- children in need with abuse or neglect as a primary category of need at assessment

The headline number has been reached by calculating the number of babies in three groups: i) Children in Need; ii) children who are adopted, and iii) children subject to a SGO. It is possible that there are overlaps between these groups, however we are unable to confirm the exact numbers with the currently data available. In any case, it is expected that potential overlaps would be minimal, as adopted children and children subject to SGOs have established relationships with social care services.

Figure 1. Type 1 overlaps (including the number of children under 1)

Special
Guardianship
Orders
640

Children
subject to
CPP
4,980

Children
looked after
3,820

Adopted
children
300

Children in Need
19,640
(including due to neglect
or abuse - 12,286)

Type 2 – Babies with health needs

This vulnerability type refers to any health-related issue that might affect a baby's life, outcomes and opportunities, including physical health issues, mental health difficulties and special educational needs and/or disabilities (SEND).

Identifying non-physical health needs of babies can be challenging. While research shows that babies can present depression from four months old and can have serious psychiatric disorders, there are few assessment mechanisms or services for mental health available prior to the age of 5[2]. Consequently, any official data highlighted in Table 2 is likely to underestimate the prevalence of mental health conditions in babies.

Similarly, for babies with special education needs and/or disabilities, learning needs often emerge once a child starts attending school or nursery. *Special Educational Needs in England* provides data on children under the age of 2 attending state-funded primary, secondary, and special schools. In 2017, there was 172 children under 2 with Education, Health and Care (EHC) plans/statements and 1,672 receiving SEN support. As this data is collected through schools, it is likely the majority of children receiving support are aged 1-2. There is no disaggregated information available for babies under the age of 1.

Table 4 summarises various indicators of physical and mental health to provide a broad picture of this vulnerability type.

Table 2. Babies with health-related vulnerabilities

Group	Definition	Number aged <1	Number aged 0-4	Data Source	Data quality
Babies with mental health difficulties	First outpatient attendances for mental health conditions during the year ending March 2017	159 (no. of outpatient appointments) *Including:* - *6 learning disability* - *76 child and adolescent psychiatry* - *77 psychotherapy*	1,761 (no. of outpatient appointments) *Including:* - *254 learning disability* - *1,272 child and adolescent psychiatry* - *235 psychotherapy*	Hospital Outpatient Activity 2016-17 (NHS Digital)	1a. Accurate (National Statistics)

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[2] NSPCC (2016) Looking after infant mental health: our case for change, NSPCC.

Babies with mental health difficulties	Hospital admissions for mental health conditions during the year ending 31 March 2017	89 (no. of episodes of care) *Including:* - *69 other mental health and behavioural disorders* - *11 neurotic, behavioural and personality disorders* - *6 mental and behavioural disorders due to psychoactive substances* - *2 mood affective disorders*	1,201 (no. of episodes of care) *Including:* - *1,093 other mental health and behavioural disorders* - *77 neurotic, behavioural and personality disorders* - *14 mental and behavioural disorders due to psychoactive substances*	Hospital Admitted Patient Care Activity, 2016-17 (NHS Digital)	1a. Accurate (National Statistics)
Babies with physical health issues	Babies with longstanding illness (i.e. illness lasting or expected to last 12 months or more)	36,887	314,436	Health Survey for England, 2016 (NHS Digital)	1a. Accurate (National Statistics)
Babies with physical health issues	Babies with a limiting longstanding illness (i.e. any long-term illness, health problem or disability which limits someone's daily activities)	10,123	145,184	Health Survey for England, 2016 (NHS Digital)	1a. Accurate (National Statistics)
Babies with physical health issues	Very low birthweight live births during the year	6,685 (at birth)		Birth characteristics (ONS)	1a. Accurate (National Statistics)
Babies with physical health issues	Low birthweight live births during the year	46,183 (at birth)		Birth characteristics (ONS)	1a. Accurate (National Statistics)
Babies with physical health issues	Admissions for asthma	89 (no. of episodes of care)	8,673 (no. of episodes of care)	Hospital Admitted Patient Care Activity 2016/17 (NHS Digital)	1a. Accurate (National Statistics)

Babies with physical health issues	Admissions for diabetes	21 (no. of episodes of care)	842 (no. of episodes of care)	Hospital Admitted Patient Care Activity 2016/17 (NHS Digital)	1a. Accurate (National Statistics)
Babies with physical health issues	Admissions for epilepsy	1,326 (no. of episodes of care)	5,929 (no. of episodes of care)	Hospital Admitted Patient Care Activity 2016/17 (NHS Digital)	1a. Accurate (National Statistics)
Babies with physical health issues	Admissions for congenital malformations	39,364 (no. of episodes of care)	64,538 (no. of episodes of care)	Hospital Admitted Patient Care Activity 2016/17 (NHS Digital)	1a. Accurate (National Statistics)
Babies who have special educational needs and/or disability	Number of children with learning disabilities in England in 2014	23,500		Alma Economics estimates using Emerson et al. 2014.	4. Non-official estimates based on assumptions and/or survey data
Estimated total for babies under 1		**59,000**			

Babies who have special educational needs and/or disability

As we do not have comprehensive statistics on the number of babies under 1 with special educational needs and/or disabilities, we updated the estimates produced by Emerson et al. (2014).[3] Using *Special Educational Needs in England 2017*, we calculated the percentage of children in each age group who receive SEN support with a primary identified need associated with learning disabilities (moderate learning difficulties, severe learning difficulties or profound multiple learning disabilities). An average rate was then calculated for age groups that are considered more reliably diagnosed with SEND. For moderate and severe learning difficulties, this was ages 8-15. For profound multiple learning disabilities, this was ages 5-15. Emerson et al. (2014) used these brackets for two reasons – i) moderate to severe learning difficulties are likely to be diagnosed later and ii) young people with learning needs are more likely to leave school at 16. The average rate was then applied to the 2016 mid-year population estimate for babies aged under 1. This approach has limitations and consequently the final estimate should be used with caution.

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[3] Emerson, E., Hastings, R.P., McGill, P., Pinney, A. & Shurlock, J. (2014) Estimating the number of children in England with learning disabilities and whose behaviours challenge. Working paper. Challenging Behaviour Foundation.

Overlaps

For estimating the total number of babies under 1, we used the following indicators, as they cover physical health issues, mental health difficulties and special educational needs and/or disabilities (SEND) as broadly as possible:

1. Babies with longstanding illness, including both mental and physical health conditions (Health Survey for England, NHS Digital)
2. Number of babies with learning disabilities in England in 2014 (Alma Economics)

The Health Survey for England provides an estimate of the number of babies with a longstanding illness, where a longstanding illness is any physical or mental health condition or illness lasting or expected to last 12 months or more. Consequently, the figure produced indicates the number of babies with either a mental or physical longstanding difficulty, accounting for any overlaps between them.

To find the overlaps between children with learning disabilities and mental/psychical conditions, we looked at the secondary type of need of children with learning disabilities, as reported in *Special Educational Needs in England 2017– Additional tables*. The percentage of pupils with relevant primary needs (moderate learning difficulties, severe learning difficulties or profound multiple learning disabilities) and secondary needs (social, emotional and mental, hearing impairment, visual impairment, multi-sensory impairment, and physical disability) was used to estimate the potential overlap.

Type 3: Invisible

This type of vulnerability refers to groups of babies that have personal or contextual needs that are not well addressed by universal services. The nature of this vulnerability type means that there are extensive knowledge gaps and no official statistics. For example, we do not have any information on the number of babies in the following groups:

- Children who are homeless or who are insecure/unstable housing
- Children not meeting the threshold for social worker intervention
- Children of prisoners

For other groups in this vulnerability type estimates tend to be based on small sample surveys or broad assumptions. Better quality data is required for the following groups:

- Babies in the 'troubled families' programme
- Children whose parents use substances problematically
- Children with domestic violence in the household
- Children with mental ill-health in the family

Due to the data limitations, a headline number has not been calculated for this vulnerability type.

Babies in the 'troubled families' programme

The 'troubled families' programme targets families with multiple problems, including children not attending school, exposed to domestic violence, with health problems and involved in crime and anti-social behaviour. While there is some information on the number of children in the 'troubled families' programme, the number of babies under the age of 1 is unclear.

In the *National Evaluation of the Troubled Families programme 2015 – 2020,* the authors provided an overview of the average families in the programme. It noted that the average household size was 4 and that approximately 13% of programme participants were aged 0-4 years.[4] At 31 December 2016, a total of 185,420 families were funded through the programme. Using the average household size, we can estimate that around 96,500 children aged 0-4 years are supported through the programme. Further disaggregated information is needed to understand the number of babies living in families with complex problems.

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[4] Ipsos Mori (2017) National Evaluation of the Troubled Families programme 2015 - 2020, family outcomes

Babies whose parents use substances problematically, babies with domestic violence in household & babies with mental ill-health in the family

There are two key issues when attempting to measure the number of babies in these groups – firstly, there is lack of high quality data available and secondly, there is no clear consensus on risk thresholds for these groups (e.g. what level of alcohol consumption is considered to heighten the vulnerability of children in living in the household?).

The NSPCC published a report in 2011 which sought to estimate the proportion of babies under the age of 1 who were living with parents misusing substances and other risk factors[5]. The NSPCC report uses the results from the National Psychiatric Morbidity Survey 2007, which had a sample of only 186 parents and 194 babies. The limited sample size means that the estimates produced should be considered to be indicative only. Some of the estimates highlighted in the report include:

- 26,409 babies under 1 are living with parents who are dependent drinkers
- 23,140 babies under 1 are living with parents who are drug dependent
- 19,807 babies under 1 are living with a parent who is both a problem drinker and drug user
- 33,012 babies under 1 are living with a parent who had experienced DV in the past year
- 122,238 babies under 1 are living a parent met the assessment criteria for the presence of a common mental health disorder

Further research is required to understand the prevalence of these groups and the interactions of different vulnerability types.

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[5] Manning, V. (2011) Estimates of the number of babies (under the age of one year) living with substance misusing parents. NSPCC