

Publication Report



Breastfeeding Statistics

Financial Year 2011/12

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Introduction

Nutrition plays a crucial role in the early months and years of life and is important in achieving optimal health. [Improving Maternal and Infant Nutrition: A Framework for Action](#) was published by the Scottish Government in January 2011. It is a framework for action which can be taken by NHS Boards, local authorities and others to improve the nutrition of pregnant women, babies and young children in Scotland. Promoting and supporting breastfeeding is a key component of this as breastfeeding rates are low in Scotland. As outlined in the document "the Scottish Government has adopted as policy World Health Organisation guidance recommending exclusive breastfeeding for the first six months of an infant's life. It is recommended breastfeeding should continue beyond six months, alongside the introduction of appropriate solid foods, for up to two years of age or as long as the mother chooses".

Encouraging and supporting breastfeeding is recognised as an important public health activity. There is good evidence that breastfeeding in infancy has a protective effect against many childhood illnesses. Breastfed infants are likely to have a reduced risk of infection, particularly those affecting the ear, respiratory tract and gastro-intestinal tract. This protective effect is particularly marked in low birth weight infants. Other probable benefits include improved cognitive and psychological development, and a reduced risk of childhood obesity. There is evidence that women who breastfed have lower risks of breast cancer, epithelial ovarian cancer and hip fracture later in life.

Support and encouragement for breastfeeding can be provided at many levels. For example: health promotion campaigns at a national level; policies in maternity hospitals at NHS board level and primary care teams working with individual women and groups within the community. While these can support and encourage mothers to initiate and continue breastfeeding, there are a wide range of other factors that influence mothers. Maternal age and deprivation are known to be strongly associated with the likelihood of breastfeeding.

Breastfeeding rates in Scotland are monitored and published annually. Statistics are presented by NHS Board, Council Area and Community Health Partnership (CHP), and also by maternal age, deprivation and smoking status. The information is derived from data collected at routine child health reviews at around 10 days and 6-8 weeks of age, and recorded on the Child Health Systems Programme Pre-School system (CHSP Pre-School). This release provides an update of breastfeeding statistics in Scotland to include data for babies born in the financial year 2011/12.

Methods and Definitions

Data collection

NHS Scotland provides a universal health promotion programme to all children and their families known as the child health programme. The programme includes various elements such as formal screening for specific medical problems, routine childhood immunisations, and a structured programme of needs assessment, health promotion, and parenting support provided through regular scheduled contacts with health visitors, school nurses and other health professionals.

The delivery of the child health programme to pre-school aged children in Scotland is supported by the CHSP Pre-School system. The system facilitates the invitation of children for specific child health programme contacts as they reach the appropriate age and also allows recording of information obtained and/or care given during the contacts.

These statistics are derived from data collected at the child health programme public health nurse/health visitor First Visit review (which takes place at around 10 days of age) and 6-8 week review. At these reviews, the health professional (normally a public health nurse/health visitor) records the type of milk the baby is fed i.e. whether the baby is fed breast milk only, fed formula milk only, or fed both breast and formula milk. These data are then recorded on the CHSP Pre-School system. ISD receive data extracts from the system for the purpose of producing and publishing statistics.

Data Completeness

The target population these statistics aim to cover is all babies born in Scotland each year i.e. the data is not a sample.

Data completeness has increased over the years presented (2001/02 to 2011/12).

Factors affecting data completeness and impact on reported rates

1. The number of Boards using the CHSP Pre-School system and recording data has increased since 2001/02 from 10 to all 14 NHS Boards in Scotland. NHS Western Isles have recorded data from 2006/07, NHS Shetland from 2008/09, and NHS Grampian and NHS Orkney from 2010/11. Data for NHS Grampian and NHS Orkney for 2010/11 are partial. These Boards implemented the system in June 2010 and July 2010 respectively and therefore data are not available for babies born in the first quarter of 2010/11 who had a First Visit or 6-8 week review before the implementation date. In addition it should be noted that NHS Highland did not fully implement the system until May 2007, though data are available for the area of NHS Highland inherited from former NHS Argyll & Clyde (i.e. Argyll & Bute Council Area) for financial years 2001/02 to 2006/07.

Three of the four NHS Boards that don't have data available for all years are island boards (Orkney, Shetland and Western Isles). These boards have a small number of births each year and therefore the impact of data not being available for these boards on the 'Scotland' / 'All participating NHS Boards' rates and trend is negligible. However NHS Grampian has a relatively large number of births each year (around 10% of all births in Scotland). Grampian did not start recording data on the system until 2010/11 and the reported breastfeeding rates in Grampian in 2010/11 and 2011/12 are higher than the Scotland average. This means that if Grampian data had been available for years 2001/02 to 2009/10, it is likely that the 'Scotland' level reported breastfeeding rates at the First Visit and 6-8 week reviews would have been slightly higher for these years (possibly around 1.0 percentage point higher for overall breastfeeding and around 0.5 percentage points higher for exclusive breastfeeding). This should be borne in mind when comparing the 'Scotland' breastfeeding rates for 2010/11 and 2011/12 with previous years.

Due to the phased implementation of the CHSP Pre-School system, data are not available for all years for some participating NHS Boards and the constituent Council Areas / Community Health Partnerships in the tables accompanying this release.

2. It is estimated that each year First Visit and 6-8 week review data are missing for approximately 1% and 5.5% respectively of babies eligible to receive these reviews. These figures vary across NHS Board areas and in general are higher in areas of deprivation. In some cases a First Visit / 6-8 week review will have taken place but the data has not been recorded on the system due, for example, to the review form not being returned for data entry. A proportion of the missing information will also be due to babies not receiving a First Visit / 6-8 week review which can happen for a variety of reasons e.g. due to a hospital stay or the public health nurse/health visitor being unable to make contact with the family. As the proportion of data that is missing is small, this has little impact on the accuracy of the reported rates.

3. Data on feeding status is missing or invalid on a small proportion of First Visit / 6-8 week review records each year. For the financial year 2011/12, feeding status is missing or invalid on 1.0% of First Visit and 1.2% of 6-8 week review records. These figures vary slightly between NHS Boards. The proportion of records with missing feeding status has stayed broadly consistent in recent years. The highest proportion of records with unknown feeding status was in 2001/02, with this information missing on 2.5% of First Visit and 3.2% of 6-8 week review records. As the proportion of data with a missing or unknown feeding status is small, this has little impact on the accuracy of the reported rates. The number of reviews used as the denominator for the breastfeeding rates relates to babies who received a First Visit / 6-8 week review and whose feeding status is known.

Annual overall estimates of the completeness of the breastfeeding data at the First Visit and 6-8 week reviews at Scotland level are shown in the table below:

Financial year	Number of live births ¹	First Visit reviews with known feeding status		6-8 week reviews with known feeding status	
		Number	%	Number	%
2001/02	52,527	41,802	80	39,984	76
2002/03	51,270	41,592	81	40,032	78
2003/04	52,432	43,191	82	41,822	80
2004/05	53,957	44,270	82	42,589	79
2005/06	54,386	44,443	82	42,850	79
2006/07	55,690	45,973	83	44,533	80
2007/08	57,781	50,358	87	47,843	83
2008/09	60,041	51,561	86	48,866	81
2009/10	59,046	51,331	87	48,816	83
2010/11	58,791	55,477	94	53,835	92
2011/12	58,590	56,818	97	54,011	92

1. Data on live births are sourced from National Records of Scotland birth registrations and are collated by calendar year. Data on breastfeeding at the First Visit / 6-8 week reviews are collated by financial year. Therefore, for example, data completeness estimates for 2011/12 are based on live births in calendar year 2011.

Source: National Records of Scotland; CHSP Pre-School Aug 2012

Breastfeeding rates at Scotland level are also presented by maternal age, deprivation and smoking status. As only a small proportion of these data are missing this has a negligible impact on the accuracy of rates reported by maternal age, deprivation and smoking status. The details are:

- Maternal age is missing on approximately 3% of First Visit records and 5% of 6-8 week review records across all years. Records where maternal age is not known are included in the “All ages” totals presented in the tables. Maternal age is recorded at the public health nurse/health visitor First Visit review and is matched to the 6-8 week review data to allow breastfeeding rates at this review to be produced by maternal age group.
- Maternal smoking status is recorded at the public health nurse/health visitor First Visit review. The proportion of records with unknown smoking status has decreased from 6.6% in 2001/02 to around 3% in recent years. Records where the smoking status is unknown are included in the totals presented in the tables. Maternal smoking status is not collected at the 6-8 week review, therefore the tables on maternal smoking status relate to the First Visit review only.
- Scottish Index of Multiple Deprivation (SIMD) 2009 quintile is missing on 1% or less of records across all years. SIMD 2009 quintile is derived from the child’s home postcode.

Definitions

Exclusively breastfed: babies fed only breast milk in the 24 hours prior to the First Visit / 6-8 week review

Mixed breast and formula fed: babies fed both breast milk and formula milk in the 24 hours prior to the First Visit / 6-8 week review. This is sometimes referred to as partially breastfed.

Breastfed: babies fed only breast milk and babies fed both breast milk and formula milk in the 24 hours prior to the First Visit / 6-8 week review.

Number of reviews: the number of babies whose feeding status at the First Visit / 6-8 week review is recorded and valid. This is the denominator used in the calculation of breastfeeding rates.

% Exclusively breastfed is calculated as:

$$\frac{\text{Number of babies exclusively breastfed}}{\text{Number of reviews}} \times 100$$

% Breastfed (includes mixed breast and formula fed) is calculated as:

$$\frac{\text{Number of babies exclusively breastfed} + \text{number of babies mixed breast and formula fed}}{\text{Number of reviews}} \times 100$$

Note this is sometimes referred to as the overall breastfeeding rate.

Differences in definition of exclusive breastfeeding with data from other sources

The World Health Organisation (WHO) defines exclusive breastfeeding as where the baby has only ever been given breast milk and has never been fed formula milk, solid foods, or any other liquids. The data reported here on exclusive breastfeeding differs from the WHO definition as it relates to the type of milk feeding only in the 24 hours prior to the review.

However it is likely that most babies fed only breast milk in the 24 hours prior to the review, and therefore defined here as exclusively breastfed, will probably have been fed only breast milk since birth. Some of these babies might have been fed formula milk at some point since birth because, for example, the mother was ill and did not feel well enough to breastfeed. However we can be reasonably confident that babies classified as exclusively breastfed here will have been very substantially breast milk fed since birth, and that their exposure to cow's milk-based formula milk is likely to have been minimal. Therefore despite the differences in the definition with WHO, in terms of the type of milk babies are being fed, these data are a good indicator of exclusive breastfeeding rates in Scotland and are broadly comparable with data from other sources.

The guidance that the type of milk feeding recorded should relate to the previous 24 hour period was added to the guidelines for health professionals who use CHSP Pre-School in October 2010. Type of milk feeding in previous 24 hour period was seen as a practical, 'easy to use' definition for use at routine child health reviews where these data are collected i.e. it is straightforward and quick for mothers to recall the type of feeding in the last 24 hour period. Prior to this clarification no specific definitional guidance existed and therefore there may have been some variation in how public health nurses/health visitors categorised type of feeding. However there has been no noticeable change in the trend in exclusive breastfeeding rates which suggests this definitional clarification has not impacted on the comparability of the data prior to, and following, the introduction of the guidance.

Breastfeeding rates for Scotland are also reported in the UK wide [Infant Feeding Survey](#) which has been carried out every five years since 1975. The Infant Feeding Survey is based on a sample of mothers in Scotland and uses the WHO definition of exclusive breastfeeding. Results of the survey tend to give a higher breastfeeding rate compared with the data from routine health reviews reported here, however the trends demonstrated are similar. As the survey is based on a sample, the results may be influenced by selective participation i.e. mothers who are breastfeeding may be more likely to respond and participate in the survey. This may explain why the survey reports higher breastfeeding rates in Scotland compared to the data reported here at broadly comparable stages (i.e. when babies are around 10 days and six to eight weeks of age).

Timing of the 6-8 week review and comparability of figures

The timing of the 6-8 week review is important to consider as there is a known drop-off in breastfeeding rates with time i.e. breastfeeding rates decrease with increasing age of child at the review. At Scotland level, as the vast majority of reviews are carried out when babies are between, or close to, 6 to 8 weeks of age, the impact on the reported rates is small. The reported rates at the 6-8 weeks review will marginally underestimate the actual prevalence of breastfeeding (overall, exclusive and mixed) between 6 to 8 weeks of age in Scotland by around one percentage point. The impact of variation in the timing of the 6-8 week review on the reported rates is more important to consider when making comparisons between NHS Boards, Council Areas, and CHPs, and when comparing these rates to the Scotland rates. This is discussed in more detail in the Results and Commentary, Timing of the 6-8 Week Review section.

Accuracy and reliability

This is an established data collection which covers a very high proportion of the target population. These data are a reliable indicator of breastfeeding rates in Scotland and are broadly comparable with data from other sources.

Key points

- Across Scotland, the overall breastfeeding rate at the First Visit review, which takes place around 10 days of age, has remained at a broadly similar level over the last decade, with slight increases in the most recent years due to an increase in mixed feeding. Over the same period there has been a slight decrease in the exclusive breastfeeding rate at the First Visit. The prevalence of overall and exclusive breastfeeding at the 6-8 week review has remained static across Scotland over the last decade.
- In 2011/12, 47.0% of babies were breastfed at the First Visit review, which takes place at around 10 days of age (a slight increase from 46.8% in 2010/11). The overall breastfeeding rate comprises 35.9% of babies who were exclusively breastfed (a decrease from 36.3% in 2010/11) and 11.1% who were mixed fed both breast milk and formula milk (an increase from 10.5% in 2010/11).
- In 2011/12, 36.7% of babies were breastfed at the 6-8 week review (a slight decrease from 37.1% in 2010/11). The overall breastfeeding rate comprises 26.2% of babies who were exclusively breastfed (a decrease from 26.5% in 2010/11) and 10.5% who were mixed fed both breast milk and formula milk (similar to 10.6% in 2010/11).

Results and Commentary

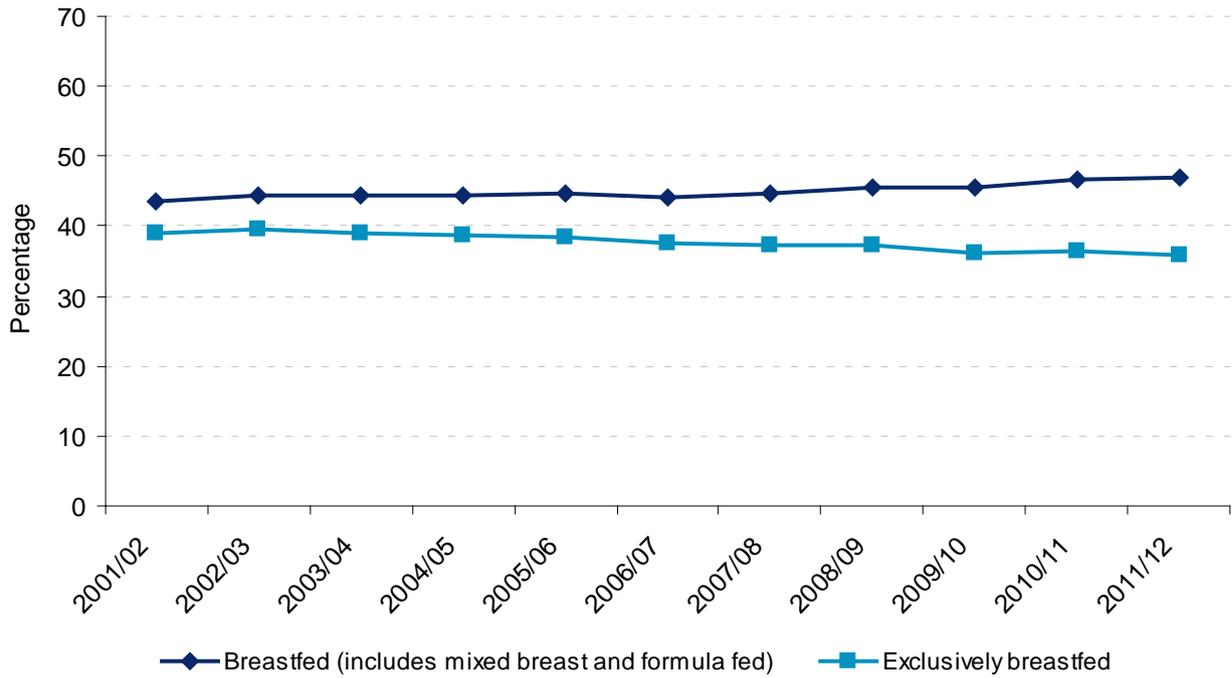
Breastfeeding at the First Visit

In 2011/12, 47.0% of babies were breastfed at the First Visit review, which takes place at around 10 days (a slight increase from 46.8% in 2010/11). The overall breastfeeding rate comprises 35.9% of babies who were exclusively breastfed (a decrease from 36.3% in 2010/11) and 11.1% who were mixed fed both breast milk and formula milk (an increase from 10.5% in 2010/11).

Across Scotland, the overall breastfeeding rate at the First Visit review has remained at a broadly similar level over the last decade, with slight increases in the most recent years due to an increase in mixed feeding. The percentage of babies who were mixed fed both breast milk and formula milk at the First Visit has increased from 4.5% to 11.1% between 2001/02 and 2011/12. Over the same period there has been a slight decrease in the exclusive breastfeeding rate (Figure 1).

It is important to note that data for NHS Grampian is not included in these statistics until 2010/11. Grampian has a relatively large number of births each year (around 10% of all births in Scotland) and in 2010/11 and 2011/12 had breastfeeding rates higher than the Scotland average. This means that if Grampian data been available for years 2001/02 to 2009/10, it is likely that the 'All participating NHS Boards' reported breastfeeding rates would have been slightly higher for these years (possibly around 1.0 percentage point higher for overall breastfeeding and around 0.5 percentage points higher for exclusive breastfeeding). This should be borne in mind when comparing the 'All participating NHS Boards' breastfeeding rates for 2010/11 and 2011/12 with previous years.

Figure 1: Breastfeeding at the First Visit; All participating NHS Boards; Year of Birth 2001/02 to 2011/12¹

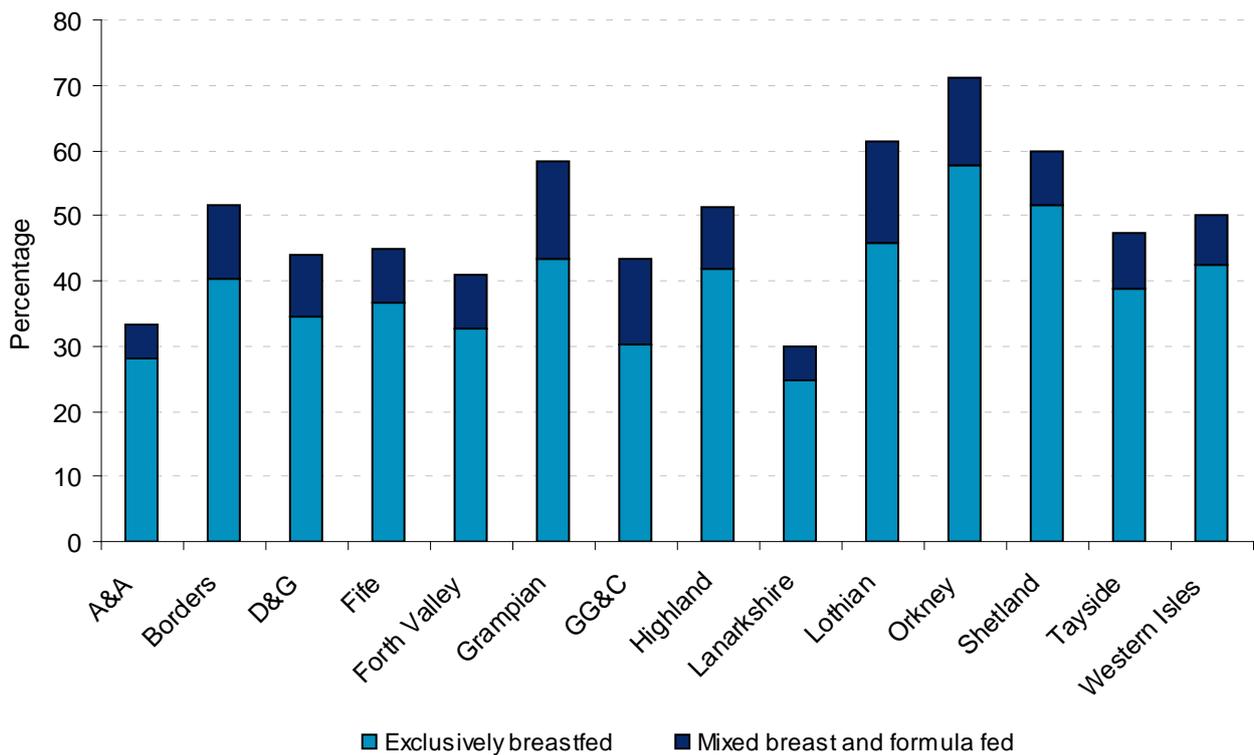


1. The number of NHS Boards included in these statistics has increased from 10 Boards in 2001/02 to all 14 Boards in Scotland. This should be borne in mind when examining the trend in breastfeeding rates for 'All participating NHS Boards' however the impact on the reported rates is small. See [Data Completeness](#) for further information.

Source: ISD Scotland, CHSP Pre-School Aug 2012

The prevalence of breastfeeding at the First Visit varies by geographical area. For example, exclusive breastfeeding rates in 2011/12 range from 24.7% in NHS Lanarkshire to 57.7% in NHS Orkney (Figure 2). There are a wide range of possible reasons for this geographical variation including, for example, differences in the deprivation (this is discussed later), and differences in local practices in maternity hospitals and primary care teams regarding support for breastfeeding. There is also variation in the trends observed, with rates in some boards being fairly static, while others have seen an increase or decrease in the prevalence of breastfeeding.

Figure 2: Breastfeeding at the First Visit by NHS Board of Review; Year of Birth 2011/12



Key
 A&A: Ayrshire & Arran
 D&G: Dumfries & Galloway
 GG&C: Greater Glasgow & Clyde

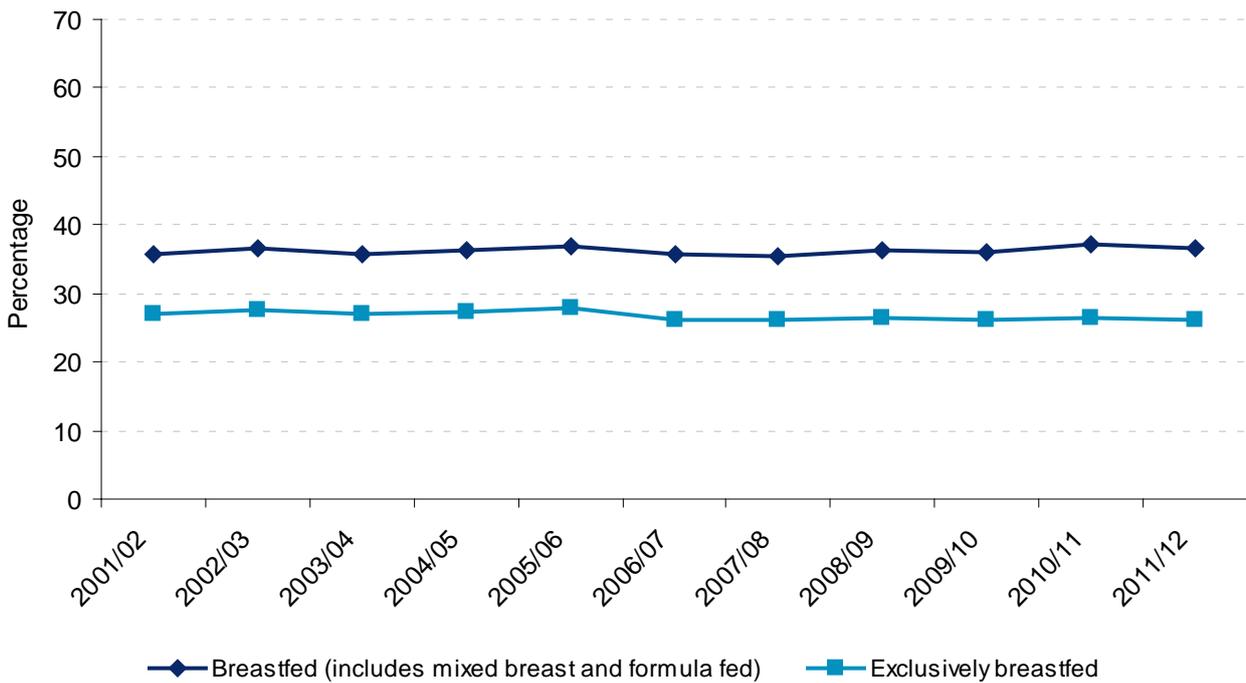
Source: ISD Scotland, CHSP Pre-School Aug 2012

Breastfeeding at the 6-8 Week Review

In 2011/12, 36.7% of babies were breastfed at the 6-8 week review (a slight decrease from 37.1% in 2010/11). The overall breastfeeding rate comprises 26.2% of babies who were exclusively breastfed (a decrease from 26.5% in 2010/11) and 10.5% who were mixed fed both breast milk and formula milk (a decrease from 10.6% in 2010/11).

The prevalence of overall and exclusive breastfeeding at the 6-8 week review has remained static across Scotland over the last decade (Figure 3). As previously discussed, data for NHS Grampian is not included in these statistics until 2010/11 and this means that if Grampian data been available for years 2001/02 to 2009/10, it is likely that the 'All participating NHS Boards' reported breastfeeding rates would have been slightly higher for these years (possibly around 1.0 percentage point higher for overall breastfeeding and around 0.5 percentage points higher for exclusive breastfeeding). This should be borne in mind when comparing the 'All participating NHS Boards' breastfeeding rates for 2010/11 and 2011/12 with previous years.

Figure 3: Breastfeeding at the 6-8 Week Review; All participating NHS Boards; Year of Birth 2001/02 to 2011/12¹



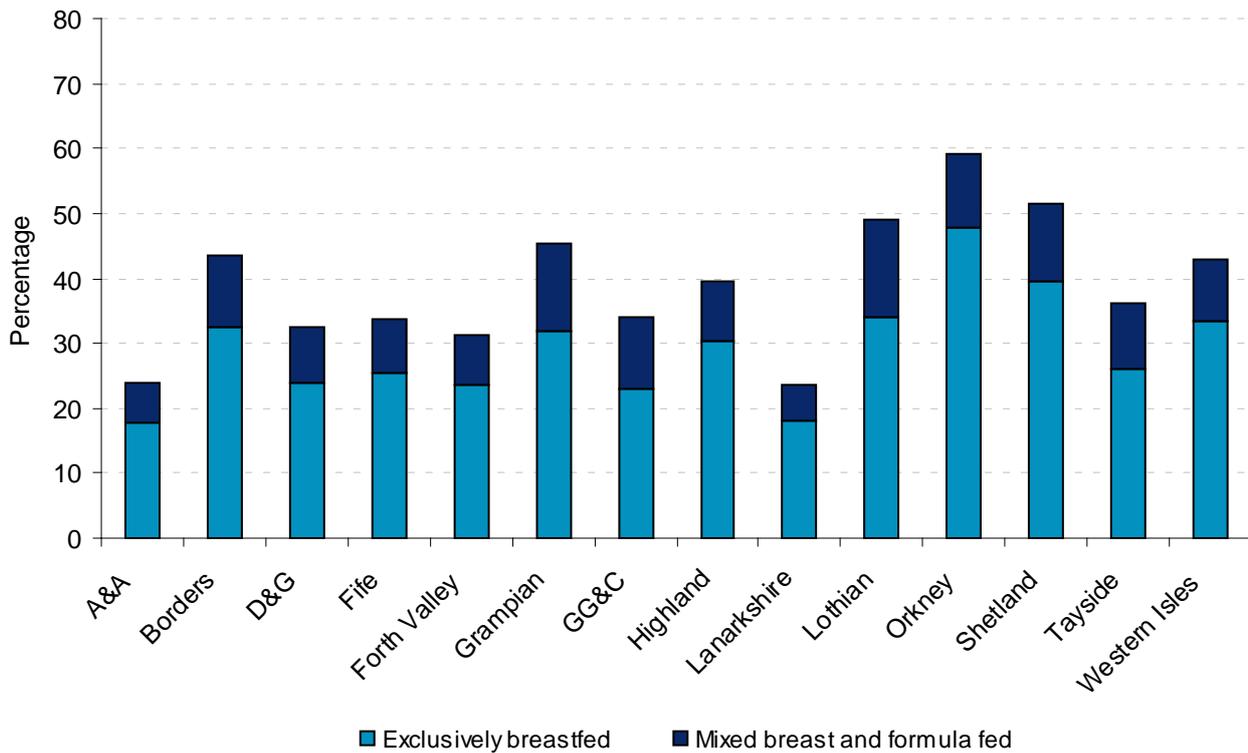
1. The number of NHS Boards included in these statistics has increased from 10 Boards in 2001/02 to all 14 Boards in Scotland. This should be borne in mind when examining the trend in breastfeeding rates for 'All participating NHS Boards' however the impact on the reported rates is small. See [Data Completeness](#) for further information.

Source: ISD Scotland, CHSP Pre-School Aug 2012

Breastfeeding rates at the 6-8 week review vary by geographical area. For example, exclusive breastfeeding rates in 2011/12 range from 17.9% in NHS Ayrshire & Arran to 47.8% in NHS Orkney (Figure 4). As previously discussed there are a wide range of possible reasons for this geographical variation including, for example, differences in the deprivation (this is discussed later), and differences in local practices in maternity hospitals

and primary care teams regarding support for breastfeeding. A small proportion of this variation may be accounted for by differences in the timing of the 6-8 week review between NHS Boards (this is discussed in the next section). There is also variation in the trends observed, with rates in some Boards being fairly static, while others have seen an increase or decrease in the prevalence of breastfeeding.

Figure 4: Breastfeeding at the 6-8 Week Review by NHS Board of Review; Year of Birth 2011/12



Key
 A&A: Ayrshire & Arran
 D&G: Dumfries & Galloway
 GG&C: Greater Glasgow & Clyde

Source: ISD Scotland, CHSP Pre-School Aug 2012

Breastfeeding rates at the First Visit and 6-8 week review are available for financial years 2001/02 to 2011/12, by NHS Board, Council Area and Community Health Partnership. For tables and charts please see:

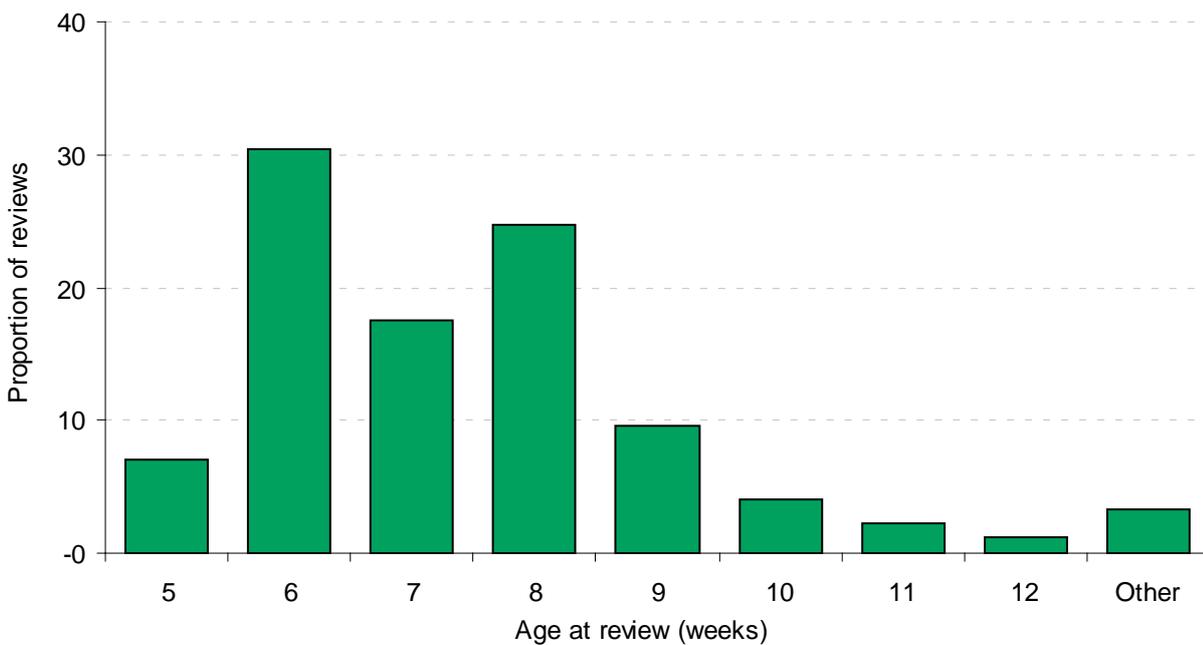
- [Breastfeeding by NHS Board of Review and Financial Year](#) 
- [Breastfeeding by Council Area and Financial Year](#) 
- [Breastfeeding by Community Health Partnership and Financial Year](#) 

Timing of the 6-8 Week Review

Across Scotland, there is variation in the timing of the 6–8 week review. The majority of babies receive their 6-8 week review between 6 and 8 weeks of age, however some reviews are recorded as taking place earlier than this and some later (Figure 5). The maximum age limit for the 6–8 week review is recommended as 12 weeks. A small percentage of reviews (3.4% in 2011/12) take place out-with between 5 and 12 weeks of age (most of these are beyond 12 weeks). Children born more than 28 days prematurely are scheduled for the 6-8 week review by gestational age (i.e. based on expected date of delivery). This accounts for a large portion of the reviews that occur beyond 12 weeks. At ‘Scotland’ level the distribution of timing of 6-8 reviews has remained fairly consistent over the time period reported.

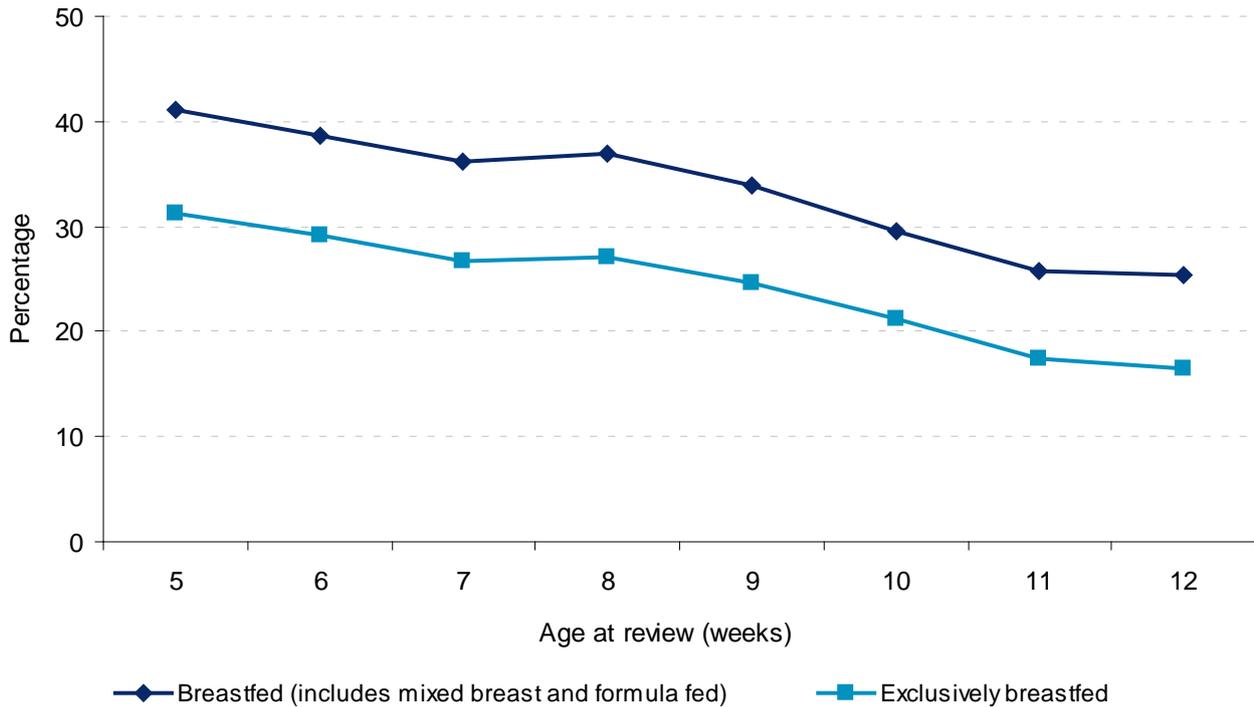
The timing of the 6-8 week review is important to consider as there is a known drop-off in breastfeeding rates with time i.e. breastfeeding rates decrease with increasing age of child at the review. At ‘Scotland’ level between 2001/02 and 2011/12, 41.1% of babies who received their review at 5 weeks were breastfed, compared with 36.9% who were reviewed at 8 weeks and 25.4% at 12 weeks (Figure 6). The timing of the 6-8 week review can therefore have some effect on the reported breastfeeding rates. However at Scotland level, as the vast majority of reviews are carried out when babies are between, or close to, 6 to 8 weeks of age, the impact on the reported rates is small. The reported rates at the 6-8 week review will marginally underestimate the actual prevalence of breastfeeding (overall, exclusive and mixed) between 6 to 8 weeks of age in Scotland by around one percentage point.

Figure 5: Timing of the 6-8 Week Review; Scotland; Year of birth 2011/12



Source: ISD Scotland, CHSP Pre-School Aug 2012

Figure 6: Breastfeeding at the 6-8 Week Review by age of child at review in weeks; All participating NHS Boards; Years of birth 2001/02 – 2011/12 combined



Source: ISD Scotland, CHSP Pre-School Aug 2012

The impact of variation in the timing of the 6-8 week review on the reported rates is more important to consider when making comparisons between NHS Boards, Council Areas, and CHPs, and when comparing these rates to the Scotland rates.

At NHS Board level there is a considerable amount of variation in the timing of the 6-8 week review. For example, the majority of 6-8 week reviews in NHS Borders are carried out at 5 or 6 weeks (74.9% of reviews in 2011/12). However in NHS Tayside most reviews are carried out at 8 or 9 weeks (72.2% of reviews in 2011/12). This means the reported rates for NHS Borders at the 6-8 week review will slightly overestimate the actual prevalence of breastfeeding at between 6 to 8 weeks of age in NHS Borders. Similarly, the reported rates for NHS Tayside at the 6-8 week review will slightly underestimate the actual prevalence of breastfeeding at between 6 to 8 weeks of age in NHS Tayside. Although differences in the timing of review across NHS Boards are important to consider, the variation seen in the reported breastfeeding rates between NHS Boards is only partly attributable to differences in timing of the 6-8 week review. For example the distribution of reviews in NHS Fife and NHS Grampian is broadly similar; however the prevalence of breastfeeding in these Boards is quite different. As previously mentioned, there are a range of possible reasons for variation in breastfeeding rates between geographical areas.

Although at Scotland level, the distribution of the timing of 6-8 week reviews has remained fairly consistent over the 11 year time period reported, changes in the timing of review are observed in some NHS Boards over this period. For example in NHS Lanarkshire in 2001/02, 41.5% of reviews took place at 5 or 6 weeks of age and this had decreased to 25.3% in 2011/12. Therefore when examining rates for a particular NHS Board over time it is important to consider whether changes in the timing of the 6-8 week review is impacting on the trend in reported rates for a particular Board.

ISD have previously assessed whether it would be possible to produce adjusted breastfeeding rates at NHS Board level which would take account of variation in the timing of review between NHS Boards, however the model was found to be not technically feasible and robust. This was due to the small number of reviews at some ages at NHS Board level (particularly in the smaller Boards or Boards which carry out the majority of reviews at a certain age).

Breastfeeding rates at the 6-8 week review by age in weeks are available at Scotland level for births in 2001/02 to 2011/12 combined. Information on the distribution of reviews by age in weeks is available at Scotland and NHS Board level for financial years 2001/02 to 2011/12. For tables and charts please see:

[Breastfeeding at the 6-8 week review by age of child at review](#) 

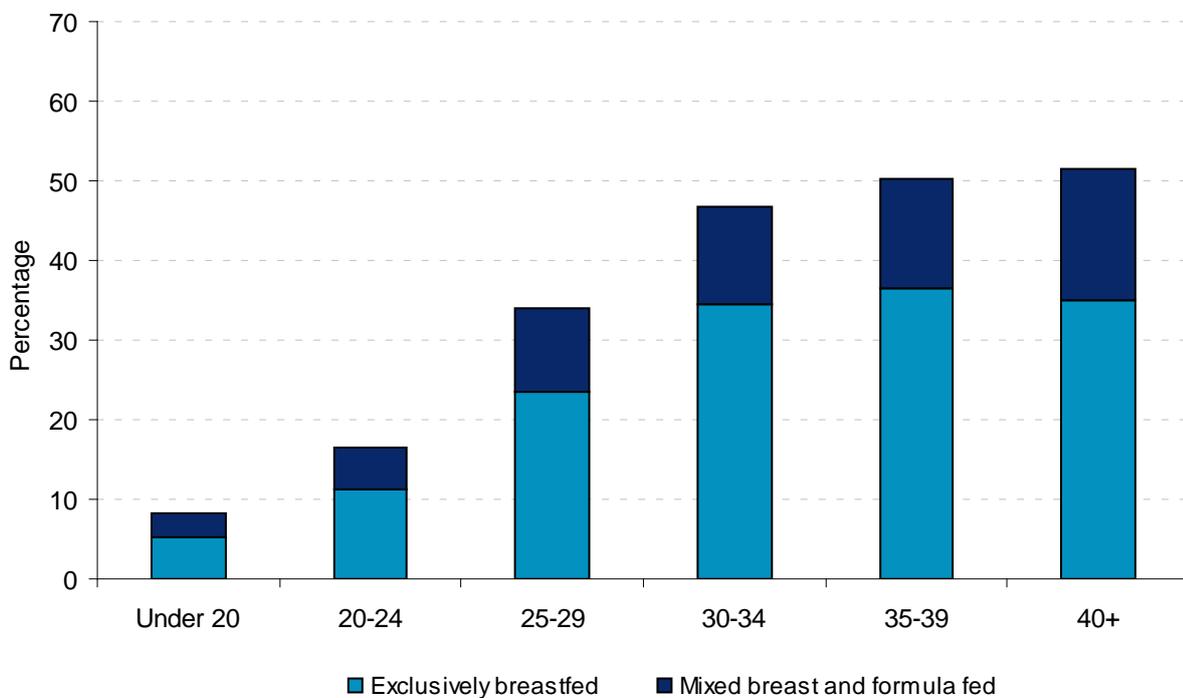
Breastfeeding by Maternal Age, Deprivation and Smoking Status

There are a number of personal, social and cultural issues that are strongly associated with the likelihood of breastfeeding including maternal age, deprivation and smoking status. The analysis presented in this section demonstrates the correlation between each of these factors and breastfeeding.

Maternal Age

Older mothers are more likely to breastfeed than younger mothers. There is a strong trend of increasing breastfeeding rates associated with increasing age of the mother, although this tails off in the 35 plus age groups (Figure 7). In 2011/12, only 5.3% of mothers aged under 20 were exclusively breastfeeding at 6-8 weeks, compared with 34.9% of mothers aged 40 and over. A similar pattern is seen in the overall breastfeeding rate.

Figure 7: Breastfeeding at the 6-8 Week Review by Maternal Age; Scotland; Year of Birth 2011/12



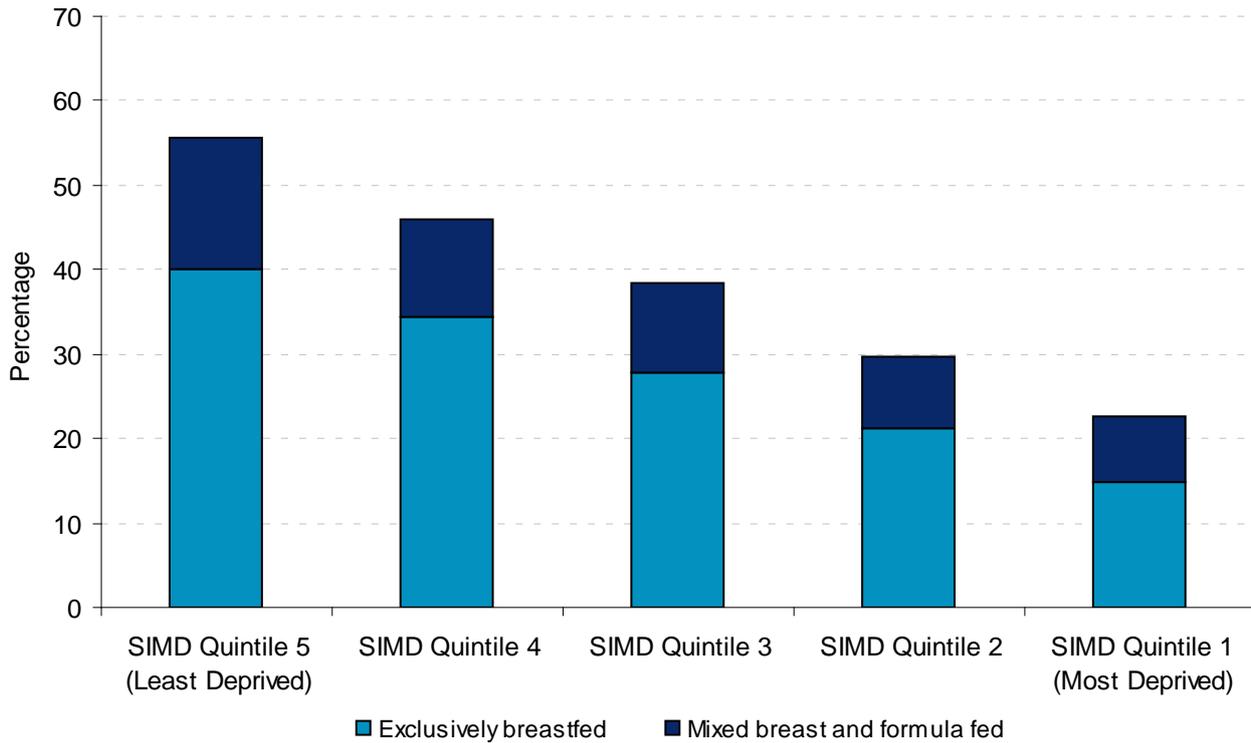
Source: ISD Scotland, CHSP Pre-School Aug 2012

The slight increase in the overall prevalence of breastfeeding at the First Visit in recent years can be largely attributed to an increase in breastfeeding among mothers aged 25 to 39. Breastfeeding rates in the younger and older age groups have remained fairly static.

Deprivation

There is a clear association between breastfeeding and deprivation. In 2011/12, 40.1% of mothers in the least deprived areas were exclusively breastfeeding at the 6-8 review, compared with 14.8% of mothers in the most deprived areas (Figure 8). This means mothers in the least deprived areas were nearly three times as likely to exclusively breastfeed at 6-8 weeks compared with mothers in the most deprived areas. A similar pattern is seen in the overall breastfeeding rate.

Figure 8: Breastfeeding at the 6-8 Week Review by Scottish Index of Multiple Deprivation (SIMD) 2009 quintile; Scotland; Year of Birth 2011/12



Source: ISD Scotland, CHSP Pre-School Aug 2012

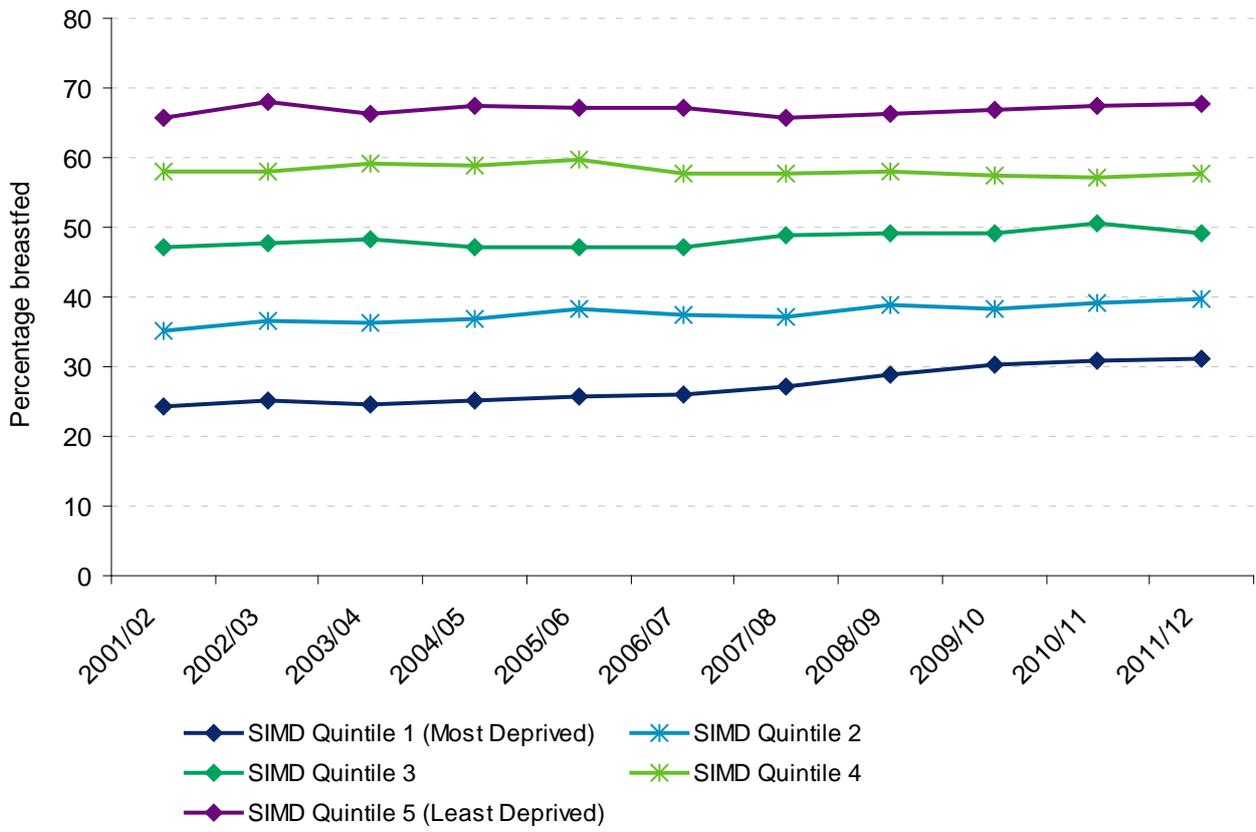
Figures 9 and 10 show the trend in overall and exclusive breastfeeding rates by deprivation. Breastfeeding rates have increased in the most deprived areas of Scotland over the last decade. The overall breastfeeding rate at the First Visit in the most deprived areas (SIMD quintile 1) in 2011/12 was 31.0%; this has increased from 24.3% in 2001/02. At the 6-8 week review, 22.6% of babies in the most deprived areas were breastfed in 2011/12 compared with 18.1% in 2001/02.

The increase in overall breastfeeding rates in the most deprived areas (SIMD quintile 1) is mainly due to an increase in the percentage of mothers who are mixed feeding their child. For example, the percentage of babies in the most deprived areas who were mixed fed at the First Visit increased from 2.9% to 9.1% between 2001/02 and 2011/12, while the prevalence of exclusive breastfeeding has remained at a similar level over this period.

In the most affluent areas there has been an increase in the prevalence of mixed feeding and a decline in the prevalence of exclusive breastfeeding, particularly at the First Visit. At the First Visit the percentage of babies in the least deprived areas (SIMD quintile 5) who were mixed fed increased from 5.8% in 2001/02 to 15.1% in 2011/12. The percentage of babies exclusively breastfed fell from 59.9% in 2001/02 to 52.5% in 2010/11. Similar trends are observed in SIMD quintile 4. The overall breastfeeding rate at the First Visit has remained fairly static in the most affluent areas over the last decade.

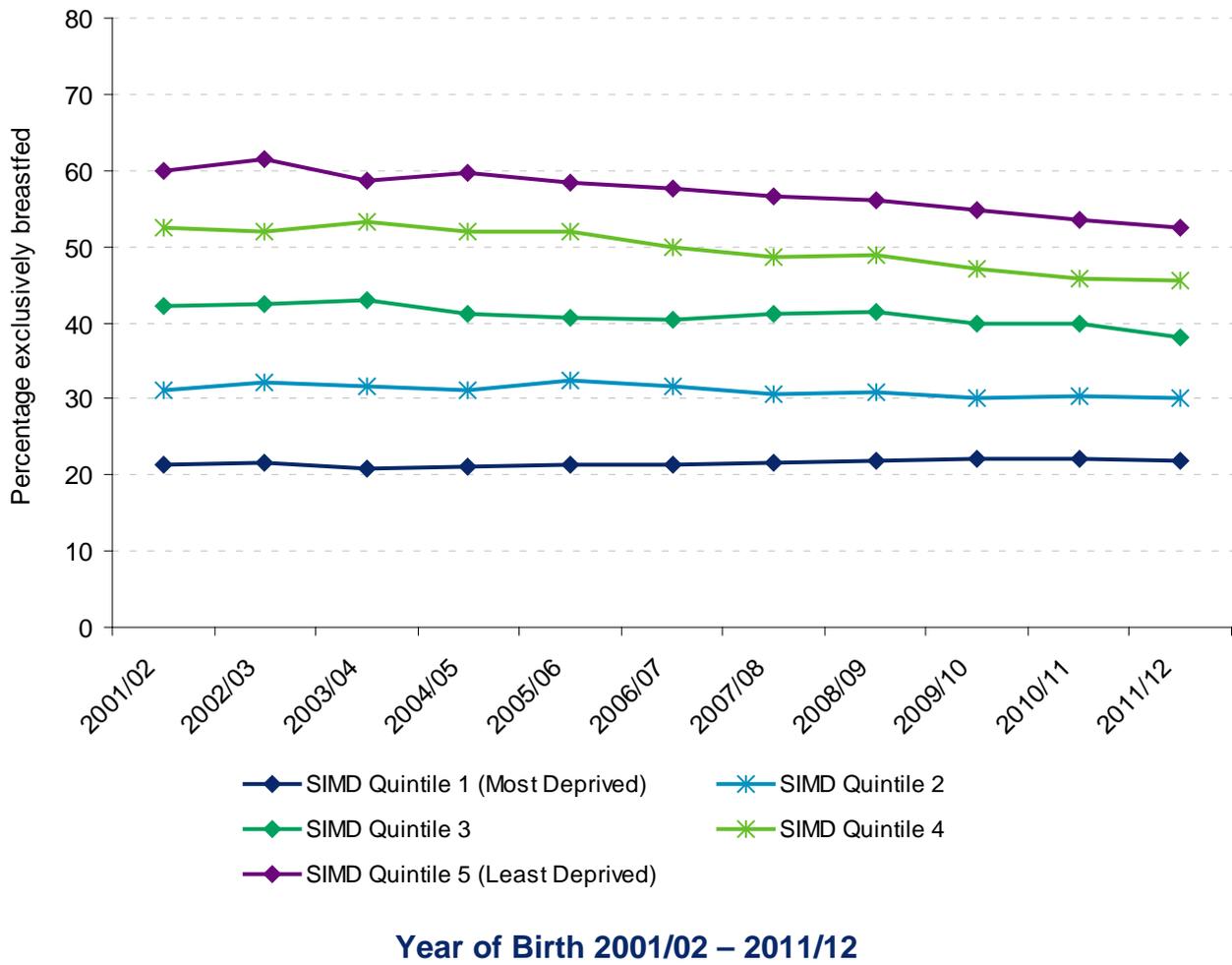
The number of Boards included in these statistics has increased from 10 to 14 over the last 11 years. However, a similar pattern in the prevalence of breastfeeding by deprivation quintile is observed amongst the 10 Boards for which data is available across the entire period presented.

Figure 9: Breastfeeding at the First Visit by Scottish Index of Multiple Deprivation (SIMD) 2009 quintile; All participating NHS Boards; Year of Birth 2001/02 – 2011/12



Source: ISD Scotland, CHSP Pre-School Aug 2012

Figure 10: Exclusive Breastfeeding at the First Visit by Scottish Index of Multiple Deprivation (SIMD) 2009 quintile; All participating NHS Boards;

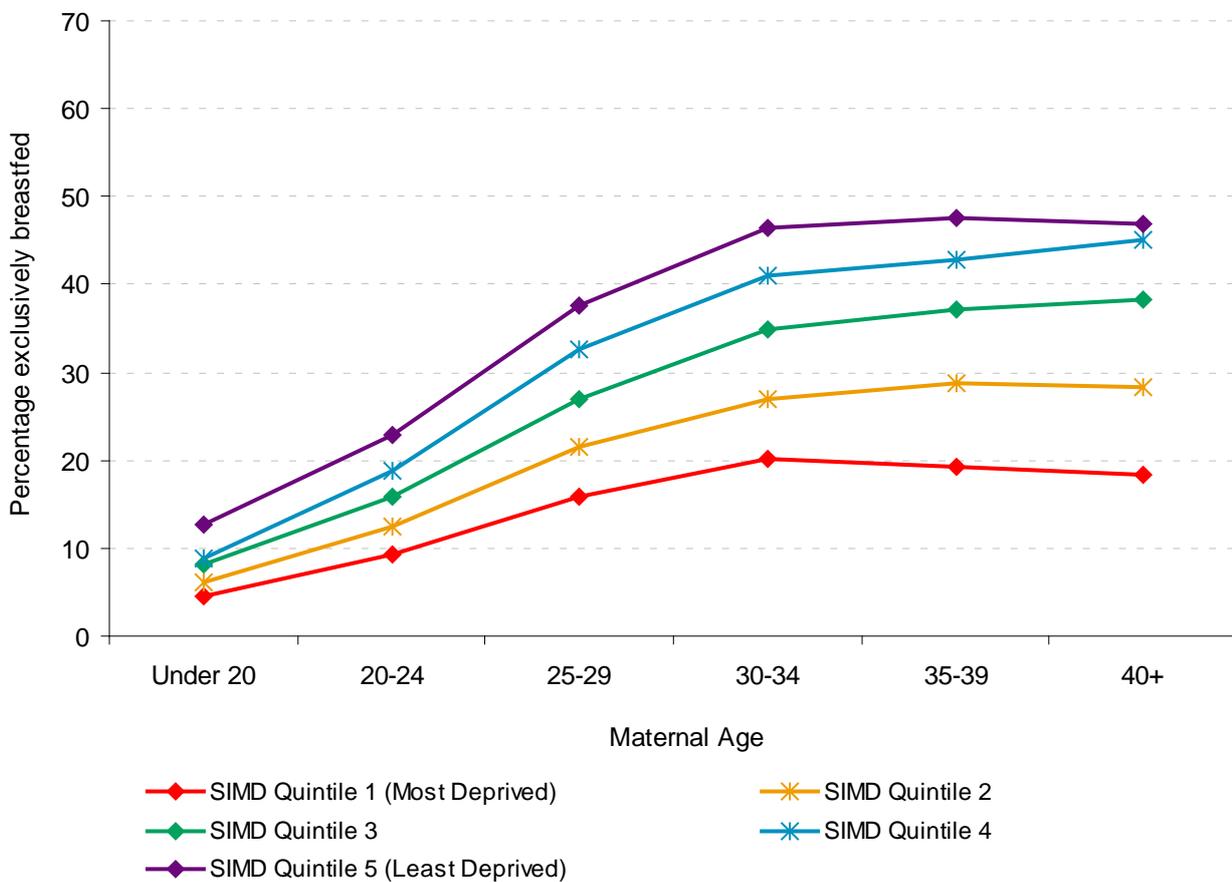


Source: ISD Scotland, CHSP Pre-School Aug 2012

Maternal Age and Deprivation

Older mothers are more likely to breastfeed but the increase in breastfeeding with age is less pronounced in the more deprived areas. The combined effect of the age of the mother and deprivation on breastfeeding rates is such that, for children born between 2001/02 and 2011/12, only 4.6% of younger mothers (under 20 years of age) in the most deprived areas were exclusively breastfeeding at 6-8 weeks compared with 18.4% of mothers aged 40 and over. In comparison, 12.7% of younger mothers in the least deprived areas were exclusively breastfeeding at 6-8 weeks compared with 46.9% of mothers aged 40 and over (Figure 11).

Figure 11: Exclusive Breastfeeding at the 6-8 Week Review by Maternal Age and Scottish Index of Multiple Deprivation (SIMD) 2009 quintile; All participating NHS Boards; Years of Birth 2001/02-2011/12



Source: ISD Scotland, CHSP Pre-School Aug 2012

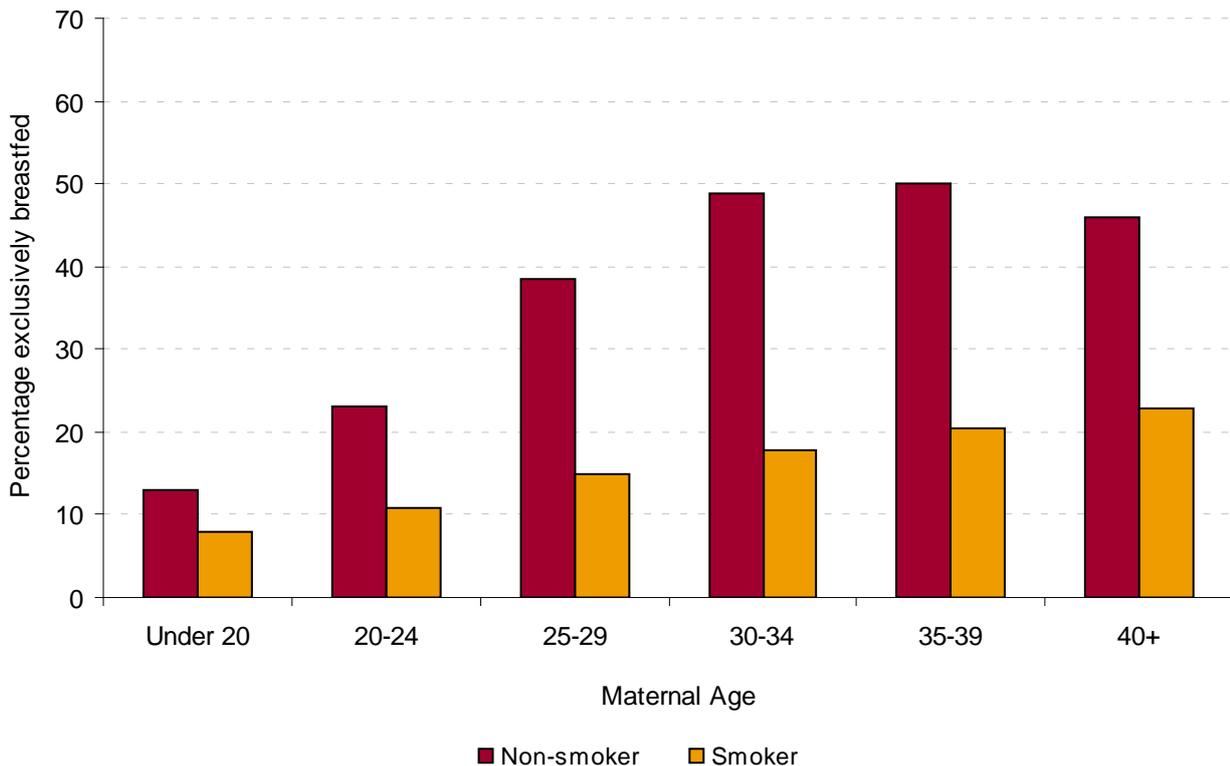
Smoking

Passive smoking has adverse effects on children's health and is known to significantly increase the risk of sudden infant death, middle ear disease, meningitis and admission to hospital for respiratory disease.

Maternal smoking status is recorded at the First Visit review. At the First Visit, non-smoking mothers are around three times as likely to exclusively breastfeed as mothers who

smoke. This is likely to be a reflection of an association between smoking and other social and cultural factors. In 2011/12, 40.4% of non-smoking mothers exclusively breastfed their babies, compared with 14.2% of mothers who smoked. A similar pattern is seen across maternal age groups (Figure 12), deprivation categories and in the overall breastfeeding rate. Maternal smoking status is not collected at the 6-8 week review.

Figure 12: Exclusive Breastfeeding at the First Visit by Maternal Age and Smoking



Status; Scotland; Year of Birth 2011/12

Source: ISD Scotland, CHSP Pre-School Aug 2012

Breastfeeding rates by maternal age, deprivation and smoking status are available for financial years 2001/02 to 2011/12. For tables and charts please see:

- [Breastfeeding by maternal age](#) 
- [Breastfeeding by deprivation](#) 
- [Breastfeeding by maternal age and deprivation](#) 
- [Breastfeeding by maternal age and smoking status](#) 
- [Breastfeeding by deprivation and smoking status](#) 

Breastfeeding rates in the UK

Comparative data on breastfeeding rates for each of the countries in the UK is available in the [Infant Feeding Survey](#). The 2005 survey was the first to provide separate estimates for all four countries in the UK, as well as for the UK as a whole. The survey provides estimates of the breastfeeding initiation (i.e. the percentage of babies who were breastfed initially) as well as the prevalence and duration of breastfeeding. The survey also includes information on other feeding practices adopted by mothers from the birth of their baby up to around ten months and information about the smoking and drinking behaviour of mothers before, during and after pregnancy.

As previously discussed, results of the survey tend to give a higher breastfeeding rate in Scotland compared with the data from routine health reviews reported here, however the trends demonstrated are similar. As the survey is based on a sample, the results may be influenced by selective participation i.e. mothers who are breastfeeding may be more likely to respond and participate in the survey. This may explain why the survey reports higher breastfeeding rates in Scotland compared to the data reported here at broadly comparable stages (i.e. when babies are around 10 days and six to eight weeks of age).

Other relevant links:

[Quarterly statistical releases](#) on breastfeeding initiation and 6-8 week breastfeeding in England are published by the Department of Health.

There are several sources of [breastfeeding data in Wales in development](#). Data on breastfeeding at birth is published in 'Births in Wales 2011' (published in July 2012) at the above link.

The [2011 Annual Report of the Director of Public Health for Northern Ireland](#) (published June 2012) includes some statistics on breastfeeding.

Glossary

CHSP Pre-School

Child Health Systems Programme Pre-School

See also the Methods and Definitions section

List of Tables

Table No.	Name	Time period	File & size
1, 2	Breastfeeding at the First Visit and 6-8 week review by NHS Board of Review	Financial years 2001/02 to 2011/12	Excel [278kb]
3, 4	Breastfeeding at the First Visit and 6-8 week review by Council Area	Financial years 2001/02 to 2011/12	Excel [379kb]
5, 6	Breastfeeding at the First Visit and 6-8 week review by Community Health Partnership	Financial years 2001/02 to 2011/12	Excel [439kb]
7, 8	Breastfeeding at the First Visit and 6-8 week review by Maternal Age	Financial years 2001/02 to 2011/12	Excel [188kb]
9, 10	Breastfeeding at the First Visit and 6-8 week review by Deprivation	Financial years 2001/02 to 2011/12	Excel [188kb]
11, 12	Breastfeeding at the First Visit and 6-8 week review by Maternal Age and Deprivation	Financial years 2001/02 to 2011/12	Excel [404kb]
13	Breastfeeding at the First Visit by Smoking Status and Maternal Age	Financial years 2001/02 to 2011/12	Excel [148kb]
14	Breastfeeding at the First Visit by Smoking Status and Deprivation	Financial years 2001/02 to 2011/12	Excel [137kb]
15, 16	Breastfeeding at the 6-8 week review by age of child at review	Financial years 2001/02 to 2011/12	Excel [185kb]

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Further Information

Further information on the CHSP Pre-School system, including details of other analyses available, is given on the [child health pages](#) of the ISD website.

Information on other ISD publications and datasets can be found on the [ISD website](#).

Rate this publication

[Click here](#) to provide feedback and rate this publication.

Appendix

A1 – Background Information

The main information on data sources, methods and definitions can be found in the main report.

Timeliness

Data for babies born in the previous financial year are extracted in mid-August and published by ISD in October. This publication includes data on breastfeeding rates at the 6-8 week review and the maximum age limit for this review is recommended as 12 weeks. Therefore some babies born towards the end of the financial year i.e. in late March may not receive a 6-8 week review until late June and a few will be slightly later. Therefore there is approximately a 4 month data lag between the review taking place and the data being published. This allows time for the data to be recorded on the CHSP Pre-School system by NHS Boards and for these breastfeeding statistics to be produced by ISD.

Revisions history

In the annual publication released in October 2011, a new methodology was implemented to improve the accuracy of breastfeeding statistics by NHS Board, Council Area, CHP and deprivation (SIMD 2009 quintile). The overall Scotland rates were not affected by the new methodology and the revision did not affect the overall interpretation or conclusions to be drawn from previously published data. Further information can be found in Appendix A1 of the [2011 publication](#).

Geographical information

NHS Board figures are based on NHS Board of review as recorded on CHS Pre-School. For the vast majority of children, the NHS Board where they received their First Visit / 6-8 week review will be the same as their NHS Board of residence, although there will be some children who live in one NHS board area and attend a practice in a neighbouring NHS board. Records on the system for the former Argyll & Clyde board area have been mapped to either NHS Greater Glasgow & Clyde or NHS Highland board areas based on the child's home postcode at the time of the review, or where this is not available, from home postcode at birth as derived from National Records of Scotland birth registrations. A small percentage of records for the former Argyll & Clyde board area could not be remapped due to missing postcode information; therefore the sum of the NHS Board areas does not equal the total for 'All participating NHS Boards'.

Figures by Council area, CHP and Scottish Index of Multiple Deprivation (SIMD 2009) quintiles are based on the child's home postcode at the time of the review, or where this is not available, from home postcode at birth as derived from National Records of Scotland birth registrations. Birth postcode is a proxy for postcode at review as few families will move home between the birth of their child and the First Visit/6-8 week review. For a small proportion of records postcode data is not available and therefore it is not possible to derive a council area, CHP or SIMD quintile; these records are included in the "All participating NHS Boards" total. Figures for Council Areas / CHPs with a congruent health board (e.g. the island boards) may differ slightly from figures presented at board level due to records

where a review or birth postcode is not available or there is no mapping to Council Area / CHP.

Data quality checks by ISD

Data are compared to figures for previous years and to expected trends.

A2 – Publication Metadata (including revisions details)

Metadata Indicator	Description
Publication title	Breastfeeding Statistics
Description	Update of breastfeeding statistics at the First Visit and 6-8 week review. Data are presented by: NHS Board, Council Area, Community Health Partnership, maternal age, deprivation and smoking status.
Theme	Health and Social Care
Topic	Child Health
Format	PDF document and Excel workbooks
Data source(s)	Child Health Systems Programme Pre-School (CHSP Pre-School)
Date that data are acquired	13 August 2012
Release date	30 October 2012
Frequency	Annual
Timeframe of data and timeliness	Includes children born up to 31 March 2012 and 6-8 week review data to June/July 2012. No delays between data availability and processing of data for publication.
Continuity of data	The number of NHS Boards included in these statistics has increased from 10 Boards in 2001/02 to all 14 Boards in Scotland in 2011/12. This should be borne in mind when comparing the 'All participating NHS Boards' breastfeeding rates for 2010/11 and 2011/12 with previous years however the impact on the continuity of the data is small. See Data Completeness for further information.
Revisions statement	<p>The publication is produced from the latest data extract from CHSP-PS which is a dynamic system, with ongoing updating of records. Data for the previous financial year are updated in the next release though any updates are expected to be minor.</p> <p>Occasionally data for earlier financial years may be updated where the publication includes a new presentation of the data as a time-series (for example a new geographical breakdown). This is to ensure there is consistency in the totals (for example the denominator number of reviews) presented for each year across the publication. Any changes are expected to be negligible.</p>
Revisions relevant to this publication	Data for 2010/11 have been updated. At Scotland level, there is no impact on the reported breastfeeding rates at the First Visit or 6-8 week review.
Concepts and definitions	See Methods and Definition .
Relevance and key uses of the statistics	Making information publicly available for planning, epidemiology, provision of services and providing comparative information.
Accuracy	This is an established data collection which covers a very

	high proportion of the target population. These data are reliable indicator of breastfeeding rates in Scotland
Completeness	See Data Completeness
Comparability	See 'Differences in definition of exclusive breastfeeding with data from other sources' in Methods and Definitions section and Breastfeeding rates in the UK
Accessibility	It is the policy of ISD Scotland to make its web sites and products accessible according to published guidelines .
Coherence and clarity	Breastfeeding tables and charts are accessible via the ISD website . Drop down menus are presented for selection of geography i.e. NHS Board, Community Health Partnership and Council Area.
Value type and unit of measurement	Numbers and percentages
Disclosure	The ISD protocol on Statistical Disclosure Protocol is followed.
Official Statistics designation	National Statistics
UK Statistics Authority Assessment	Awaiting assessment by UK Statistics Authority
Last published	25 October 2011
Next published	October 2013
Date of first publication	Data available from financial year 2001/02. Due to phased implementation of the CHSP Pre-School system, data are available for some NHS boards for earlier years.
Help email	NSS.isdchildhealth@nhs.net
Date form completed	17 October 2012

A3 – Early Access details (including Pre-Release Access)

Pre-Release Access

Under terms of the "Pre-Release Access to Official Statistics (Scotland) Order 2008", ISD are obliged to publish information on those receiving Pre-Release Access ("Pre-Release Access" refers to statistics in their final form prior to publication). The standard maximum Pre-Release Access is five working days. Shown below are details of those receiving standard Pre-Release Access and, separately, those receiving extended Pre-Release Access.

Standard Pre-Release Access:

Scottish Government Health Department
NHS Board Chief Executives
NHS Board Communication leads

Extended Pre-Release Access

Extended Pre-Release Access of 8 working days is given to a small number of named individuals in the Scottish Government Health Department (Analytical Services Division). This Pre-Release Access is for the sole purpose of enabling that department to gain an understanding of the statistics prior to briefing others in Scottish Government (during the period of standard Pre-Release Access).

Scottish Government Health Department (Analytical Services Division)

Early Access for Management Information

These statistics will also have been made available to those who needed access to 'management information', ie as part of the delivery of health and care:

NHS Board Directors of Public Health
NHS Board Infant Feeding Leads
Chair of CHSP Pre-School National User Group

A4 – ISD and Official Statistics

About ISD

Scotland has some of the best health service data in the world combining high quality, consistency, national coverage and the ability to link data to allow patient based analysis and follow up.

Information Services Division (ISD) is a business operating unit of NHS National Services Scotland and has been in existence for over 40 years. We are an essential support service to NHSScotland and the Scottish Government and others, responsive to the needs of NHSScotland as the delivery of health and social care evolves.

Purpose: To deliver effective national and specialist intelligence services to improve the health and wellbeing of people in Scotland.

Mission: Better Information, Better Decisions, Better Health

Vision: To be a valued partner in improving health and wellbeing in Scotland by providing a world class intelligence service.

Official Statistics

Information Services Division (ISD) is the principal and authoritative source of statistics on health and care services in Scotland. ISD is designated by legislation as a producer of 'Official Statistics'. Our official statistics publications are produced to a high professional standard and comply with the Code of Practice for Official Statistics. The Code of Practice is produced and monitored by the UK Statistics Authority which is independent of Government. Under the Code of Practice, the format, content and timing of statistics publications are the responsibility of professional staff working within ISD.

ISD's statistical publications are currently classified as one of the following:

- National Statistics (ie assessed by the UK Statistics Authority as complying with the Code of Practice)
- National Statistics (ie legacy, still to be assessed by the UK Statistics Authority)
- Official Statistics (ie still to be assessed by the UK Statistics Authority)
- other (not Official Statistics)

Further information on ISD's statistics, including compliance with the Code of Practice for Official Statistics, and on the UK Statistics Authority, is available on the [ISD website](#).

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics. Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs;
- are well explained and readily accessible;
- are produced according to sound methods, and
- are managed impartially and objectively in the public interest.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.