

# Publication Report



## **Child Health 27-30 Month Review Statistics Financial Year 2013/14**

**Publication date – 16 December 2014**

**Contents**

Introduction ..... 2

Methods and Definitions..... 3

    Data collection ..... 3

    Estimated Coverage Methodology..... 3

    Development Assessment Analysis Methodology ..... 4

    Definitions..... 4

Key points ..... 5

Results and Commentary..... 6

    Estimated Review Coverage ..... 6

    Developmental Assessments ..... 7

Glossary ..... 10

List of Tables..... 11

Contact..... 12

Further Information..... 12

Rate this publication..... 12

Appendix ..... 13

    A1 – Background Information ..... 13

    A2 – Publication Metadata (including revisions details) ..... 16

    A3 – Early Access details (including Pre-Release Access) ..... 18

    A4 – ISD and Official Statistics ..... 19

## Introduction

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.

The 27-30 month review was introduced in Scotland in April 2013. National guidance on the purpose, content, and delivery of the reviews was published by the Scottish Government in December 2012 in order to support a consistent approach to provision of effective reviews across Scotland (<http://www.scotland.gov.uk/Publications/2012/12/1478>).

The 27-30 month review is a universal review and should be offered to every child reaching the appropriate age. One of the overall priorities identified in the national guidance document is 'promotion of strong early child development'. This publication provides 'developmental' information on review coverage (the proportion of eligible children that received a review) and on the outcome of the Health Visitors' assessment of children's development that is an integral part of the reviews.

The statistics are published as 'developmental statistics' as they are new official statistics undergoing evaluation and there are data completeness issues which are explained in subsequent sections. A key part of the 'developmental' label is user engagement in the evaluation of these statistics to help inform their development. Readers are invited to send comments on the publication to [NSS.isdchildhealth@nhs.net](mailto:NSS.isdchildhealth@nhs.net).

## Methods and Definitions

### Data collection

These statistics are derived from records of 27-30 month reviews provided in the financial year 2013/14 and recorded on the CHSP-PS system. During 27-30 month reviews, the health professional (normally a Health Visitor) assesses children's developmental status and records the outcome (i.e. no concern, concern newly suspected as a result of the assessment, or concern or disorder already known prior to the review) against each of nine developmental domains (e.g. social development, speech, language and communication, etc).

ISD receives quarterly data extracts from the CHSP-PS system for the purpose of producing and publishing statistics.

### Estimated Coverage Methodology

A number of different methods for assessing review coverage were explored. Details of those children invited for a 27-30 month review but did not attend are not centrally held. Therefore exact uptake figures cannot be produced.

Estimated coverage presented in this report was calculated by comparing the total number of completed reviews to the estimated total number of children eligible for review. Eligible children were defined as those turning 27 months during the analysis period who were registered to receive the child health programme on the Scottish Immunisation & Recall system (SIRS supports the administration of childhood immunisations in Scotland).

It is important to note that this method produces *estimated* coverage rates and not final achieved coverage. Calculating final achieved coverage would require an analysis based on following up individual children registered on SIRS who turned 27 months in any particular period to assess how many of them had a 27-30 month review record entered on the CHSP-PS system over time. This is technically possible but long lag periods are required before all relevant review records have been recorded on CHSP-PS and final achieved coverage can be stated with any certainty. The estimated coverage method used in this publication by contrast allows relatively quick quarter by quarter reporting and hence is useful for local services trying to regularly review their success in reaching all eligible children.

Caution should be taken when interpreting estimated coverage for smaller areas and/or for short time periods. This is because in this kind of unlinked analysis (i.e. based on aggregate numbers of reviews provided and eligible children rather than follow up of individual children) there is an inevitable degree of mismatch between the numerator and denominator and this has proportionately greater impact when looking at smaller areas and/or short time periods. Estimated coverage by quarter can occasionally provide results of greater than 100% because the denominator only includes children who turned 27

months in the quarter of interest whereas the numerator includes all children that had a review regardless of the quarter they turned 27 months in.

## Development Assessment Analysis Methodology

The 27-30 month review records capture the outcome of developmental assessment for the following 9 domains: social, emotional, behavioural, attention, speech language & communication, gross motor, fine motor, vision and hearing. The Health Visitor can record for each domain whether there were no concerns, a concern that was newly suspected as a result of the assessment carried out during the 27-30 month review, a concern or disorder that was known prior to the review, or if the assessment was incomplete. The analysis looks at the responses for all 9 domains individually as well as summary information for all 9 domains combined. All percentages are based on the total number of reviews provided (not the number of reviews with meaningful assessment information recorded). For more information on developmental assessments please see [Appendix 1](#) (Background Information).

## Definitions

**Estimated number of children eligible for review:** total number of children turning 27 months during 2013/14 who were registered for child health surveillance on the Scottish Immunisation & Recall System (SIRS)

**Number of reviews recorded on CHSP-PS:** total number of children who received a 27-30 month review that was recorded on the system

**Estimated % of eligible children reviewed is calculated as:**

$$\frac{\text{Number of reviews recorded on CHSP-PS}}{\text{Estimated number of children eligible for review}} \times 100$$

**Meaningful developmental assessment outcome data (N, C, P) across all domains:** the number of children reviewed who had meaningful assessment data recorded for all 9 development domains. Meaningful data is defined as N=No Concerns, C=Concern newly suspected, or P=Concern/disorder previously identified.

## Key points

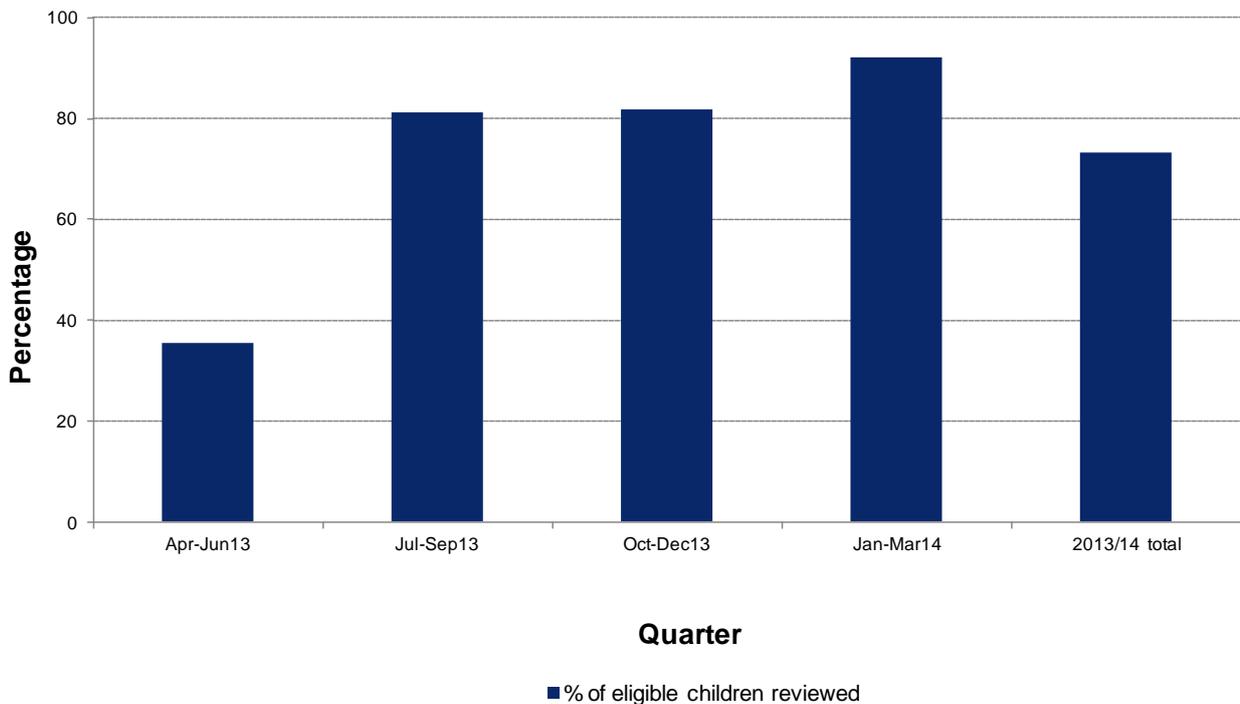
- Between 1<sup>st</sup> April 2013 and 31<sup>st</sup> March 2014 the number of 27-30 month reviews completed was 43,102.
- Estimated review coverage for 2013/14 was 73%. Estimated coverage gradually increased over the year and by the last quarter (January to March 2014) had reached 92% (Figure 1).
- In 2013/14, 72% of all children receiving a review had no concerns recorded against all of the nine developmental domains assessed as part 27-30 month reviews.
- Speech, language & communication was the domain where most concerns were identified. 10% of children reviewed had a concern newly identified about their speech, language & communication and an additional 3% already had a known concern in this domain prior to their review.

## Results and Commentary

### Estimated Review Coverage

Estimated review coverage for 2013/14 was 73%. Estimated coverage gradually increased over the year and by the last quarter (January to March 2014) had reached 92% (Figure 1).

**Figure 1: Estimated coverage of the 27-30 month review in Scotland; 2013/14**



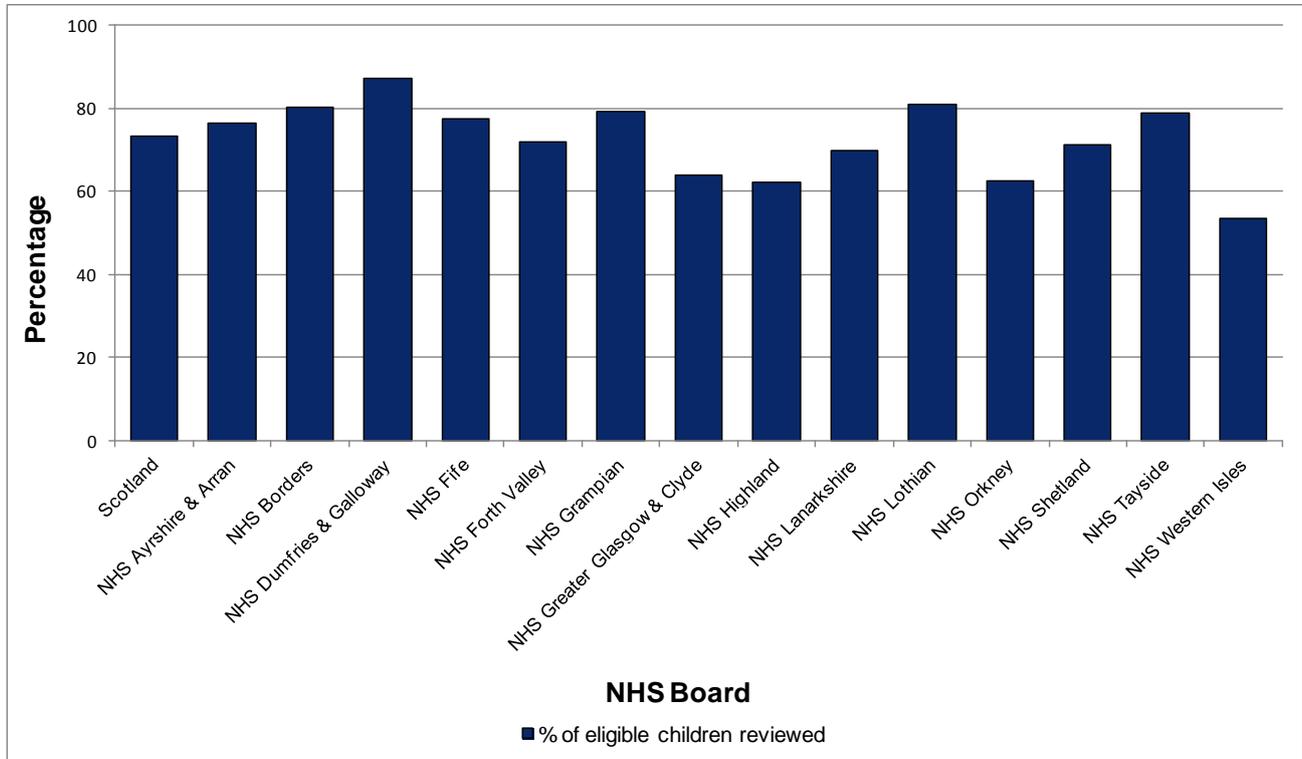
Source: ISD Scotland, CHSP Pre-School Aug 2014

In the mainland boards estimated coverage for 2013/14 varied from 62% in NHS Highland to 87% NHS Dumfries & Galloway (Figure 2). Variation across boards in implementation and the age at which children are called for reviews is likely to explain the apparently low estimated coverage in the first quarter and at least some of the variation in coverage seen between Boards. In accordance with national guidance, all areas have invited all children turning 27 months from the 1 April 2013 onwards for a 27-30 month review. However, Boards vary in the exact age at which they issue children's invitations for review and hence the average age within the 27-30 month window at which they provide reviews. In particular, it is known that at least one Board area (NHS Greater Glasgow & Clyde) invites children when they are approaching 30 months rather than 27 months. This inevitably means that fewer reviews were provided in the first quarter as the eligible children (i.e. those turning 27 months in the quarter) were not yet old enough to be invited and receive their review.

Coverage increased over the course of 2013/14 in all Board areas. In the final quarter of 2013/14 nine out of fourteen boards had estimated coverage of over 90%, approaching that

achieved for other more established child health reviews such as that provided at 6-8 weeks<sup>1</sup>.

**Figure 2: Estimated coverage of the 27-30 month review by Health Board; 2013/14**



Source: ISD Scotland, CHSP Pre-School Aug 2014

### Developmental Assessments

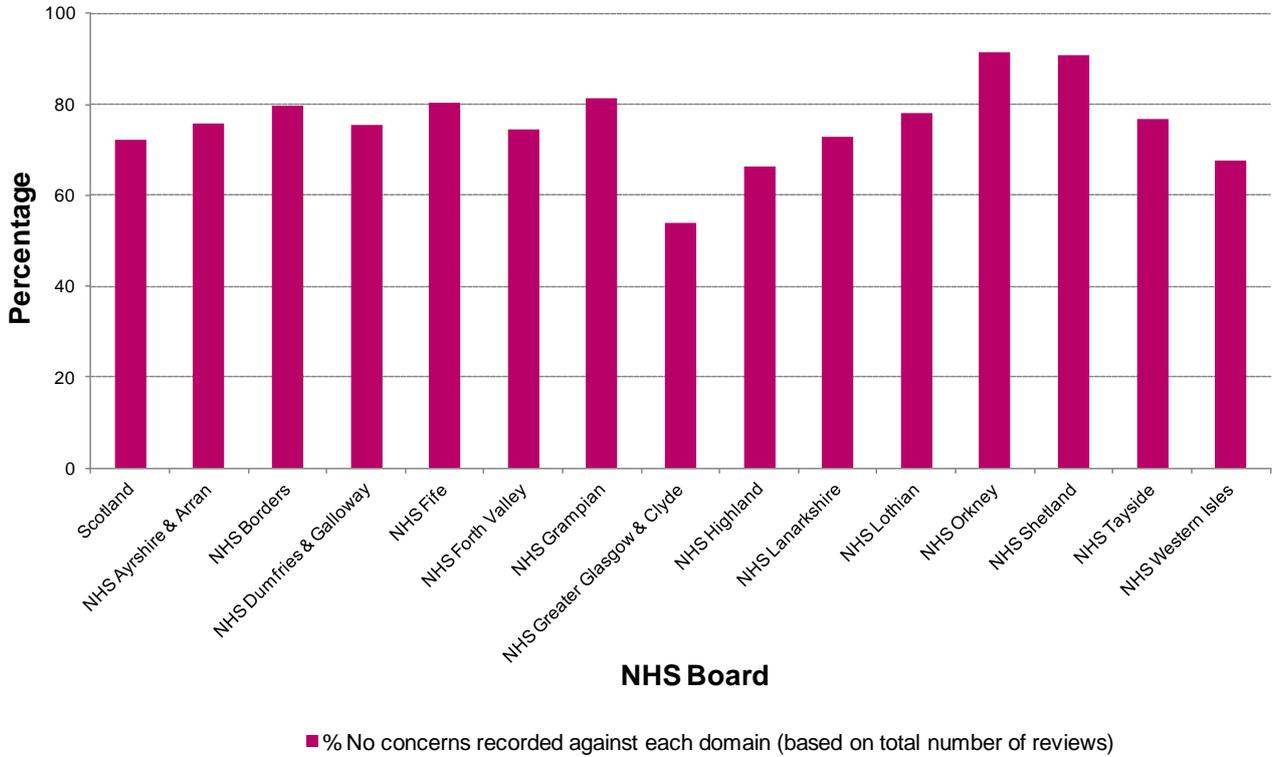
Between 1<sup>st</sup> April 2013 and 31<sup>st</sup> March 2014 the number of 27-30 month reviews completed was 43,102. Of these completed reviews 88% had meaningful assessment information recorded against each developmental domain. Eleven out of fourteen Boards recorded meaningful information against all development domains for 90% or more of children reviewed. From the mainland Boards NHS Fife recorded the highest level of meaningful information across all domains with 98.2%.

In 2013/14, 72% of all children receiving a review had ‘no concerns’ recorded against all of the nine developmental domains in their 27-30 month review. The percentage of children with no developmental concerns varied across the mainland Health Boards from 54% in NHS Greater Glasgow & Clyde to 81% in NHS Grampian (Figure 3). Children who are not included in the ‘no developmental concerns’ category include those that had specific concerns recorded and those that had incomplete or missing information recorded for one or more domains. Some of the variation between Boards in ‘no concern’ rates is therefore

<http://bmjopen.bmj.com/content/2/2/e000759.full?sid=32167f84-8238-4372-8102-6737d0bdcb9b/>

likely to reflect variation in data completeness as well as genuine variation in rates of concerns.

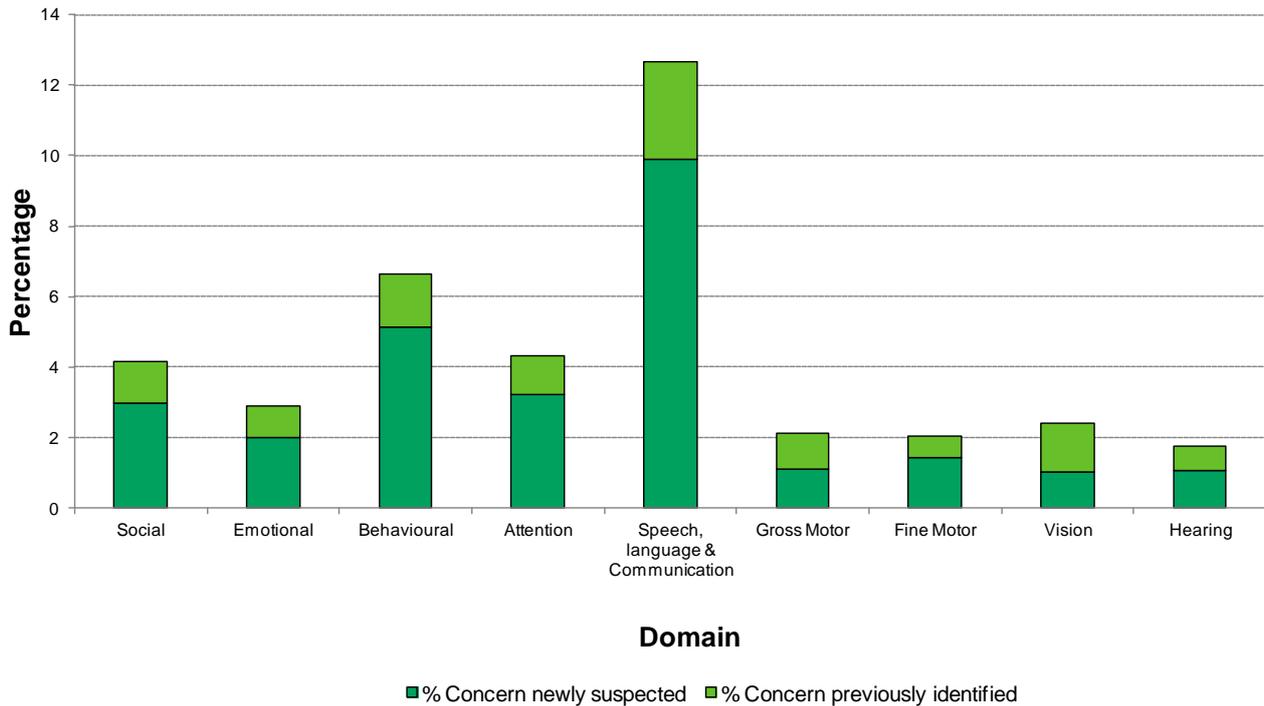
**Figure 3: Percentage of children reviewed with no concerns recorded against each developmental domain, by Health Board; 2013/14**



Source: ISD Scotland, CHSP Pre-School Aug 2014

Speech, language & communication was the domain where most concerns were identified (Figure 4). 10% of children reviewed had a concern newly identified about their speech, language & communication and an additional 3% had a known concern in this domain prior to their review. In comparison around 2% of those assessed had either a concern newly identified or a known concern prior to their review in the gross motor, fine motor, vision and hearing domains.

**Figure 4: Percentage of newly suspected and previously identified concerns in Scotland by developmental domain; 2013/14**



Source: ISD Scotland, CHSP Pre-School Aug 2014

Substantial differences by Health Board can be observed across the individual domains. For example 13% of those children reviewed in NHS Dumfries & Galloway and NHS Lanarkshire had a concern newly identified for speech, language & communication compared to less than 5% in NHS Grampian.

ISD has produced a supplementary paper on [Use of developmental assessment questionnaires within 27 month child health reviews: insights from the first year of review delivery](#) which provides more information on the different approaches to assessing development within 27-30 month reviews that different areas are taking and the impact this may be having on both data completeness and the number and type of concerns identified<sup>2</sup>.

[Estimated coverage of the 27-30 month review by HB and CHP/LA](#)   
[Outcome of developmental assessments at 27-30 month review by NHS Board and CHP/LA](#) 

<sup>2</sup> Note the numbers quoted in the paper differ slightly to those published in this publication. This is because the publication is based on a more recent analysis file.

## Glossary

ISD

Information Services Division

CHSP Pre-School

Child Health Systems Programme Pre-School

SIRS

Scottish Immunisation & Recall System

## List of Tables

Table No.	Name	Time period	File & size
1, 2	<a href="#">Estimated coverage of the 27-30 month review by HB and CHP/LA</a>	Financial year 2013/14	Excel [110kb]
3, 4	<a href="#">Outcome of developmental assessments at 27-30 month review by NHS Board and CHP/LA</a>	Financial year 2013/14	Excel [140kb]

## Contact

### Dr Rachael Wood

Consultant in Public Health Medicine

[rachaelwood@nhs.net](mailto:rachaelwood@nhs.net)

0131 275 7028

### Calum MacDonald

Principal Information Analyst

[calum.macdonald@nhs.net](mailto:calum.macdonald@nhs.net)

0131 275 7656

## 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

Information on data sources, methods and definitions can be found in the main report – [Methods and Definitions](#).

#### Developmental Assessment tools

The national guidance (<http://www.scotland.gov.uk/Publications/2012/12/1478>) recommended that 27-30 month reviews should include ‘*systematic consideration of all children’s development as part of ongoing surveillance*’. The guidance described developmental surveillance as comprising the following steps:

- Asking parents about any concerns they have regarding their child’s development
- Asking parents about their child’s developmental abilities and attainment of relevant milestones
- Structured observation of the child within the context of the review to assess their developmental progress
- Then, if there are any uncertainties or concerns (from the parent or Health Visitor) about the child’s development, using an appropriate developmental assessment questionnaire to obtain objective information on the child’s developmental status and to help inform decisions about further assessment and support needs.

#### Geographical information

NHS Board figures are based on NHS Board of review as recorded on CHSP Pre-School. For the vast majority of children, the NHS Board where they received their 27-30 month 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 latest postcode as recorded on the Community Health Index (CHI) database. 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 Scotland total.

Figures by CHP/LA are based on the child’s home postcode at the time of the review, or where this is not available, from latest postcode as recorded on the Community Health Index (CHI) database. For a small proportion of records postcode data is not available and therefore it is not possible to derive a CHP/LA; these records are included in the Scotland total. Figures for CHPs/LAs with a congruent health board (e.g. the island boards) may differ slightly from figures presented at board level due to records where a postcode is not available or there is no mapping to CHP/LA.

Other ISD publications have previously presented information for NHS Board, Community Health Partnership (CHP) and Local Authority (LA). As approximate information by Local Authority can be obtained by combining relevant CHP data (see table below) the separate breakdown of the information by LA is not provided.

	<b>Community Health Partnership (CHP)</b>	<b>Local Authority (LA)</b>	<b>Best fit NHS Board<sup>1</sup></b>
1	East Ayrshire Community Health Partnership	East Ayrshire	Ayrshire & Arran
2	North Ayrshire Community Health Partnership	North Ayrshire	
3	South Ayrshire Community Health Partnership	South Ayrshire	
4	Scottish Borders Community Health & Care Partnership	Scottish Borders	Borders
5	Dumfries & Galloway Community Health Partnership	Dumfries & Galloway	Dumfries & Galloway
6	Dunfermline & West Fife Community Health Partnership	Fife	Fife
7	Glenrothes & North East Fife Community Health Partnership		
8	Kirkcaldy & Levenmouth Community Health Partnership		
9	Clackmannanshire Community Health Partnership	Clackmannanshire	Forth Valley
10	Falkirk Community Health Partnership	Falkirk	
11	Stirling Community Health Partnership	Stirling	
12	Aberdeen City Community Health Partnership	Aberdeen City	Grampian
13	Aberdeenshire Community Health Partnership	Aberdeenshire	
14	Moray Community Health & Social Care Partnership	Moray	
15	East Dunbartonshire Community Health Partnership	East Dunbartonshire	Greater Glasgow & Clyde
17	East Renfrewshire Community Health & Care Partnership	East Renfrewshire	
18	Inverclyde Community Health & Care Partnership	Inverclyde	
20	Renfrewshire Community Health Partnership	Renfrewshire	
23	West Dunbartonshire Community Health & Care Partnership	West Dunbartonshire	
25	Argyll & Bute Community Health Partnership	Argyll & Bute	Highland
<i>Continued.....</i>			

Community Health Partnership (CHP)		Local Council Area (LCA)	Best fit NHS Board <sup>1</sup>
<i>Continued...</i>			
29	North Lanarkshire Community Health Partnership	North Lanarkshire	Lanarkshire
30	South Lanarkshire Community Health Partnership	South Lanarkshire	
31	East Lothian Community Health Partnership	East Lothian	Lothian
32	Midlothian Community Health Partnership	Midlothian	
35	West Lothian Community Health & Care Partnership	West Lothian	
36	Orkney Community Health Partnership	Orkney Islands	Orkney
37	Shetland Community Health Partnership	Shetland Islands	Shetland
38	Angus Community Health Partnership	Angus	Tayside
39	Dundee Community Health Partnership	Dundee City	
40	Perth & Kinross Community Health Partnership	Perth & Kinross	
41	Western Isles Community Health and Social Care Partnership	Eilean Siar	Western Isles
42	Edinburgh Community Health Partnership	Edinburgh, City of	Lothian
43	Glasgow City Community Health Partnership	Glasgow City	Greater Glasgow & Clyde
44	Highland Health and Social Care Partnership	Highland	Highland

### Data quality checks by ISD

Quarterly reports were produced for the first year and shared with NHS Boards for management information and quality assurance purposes.

**A2 – Publication Metadata (including revisions details)**

Metadata Indicator	Description
Publication title	27-30 Month Review Statistics
Description	First release of statistics from the 27-30 month review. The figures presented are for financial year 2013/14 and contain information on the coverage of the review and the outcome of developmental assessments. Figures are presented by Health Board and CHP/LA.
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	11 August 2014
Release date	16 December 2014
Frequency	Annual
Timeframe of data and timeliness	Includes children eligible for the 27-30 month review between April 2013 to March 2014.  This first release experienced a longer period between receiving the data and publication release than would be expected going forward. This was in order to assess data quality and review methodology.
Continuity of data	This is the first release of these statistics. All fourteen Health Boards provided data although there may have been some slight variation in when Boards implemented the 27-30 month review.
Revisions statement	N/A
Revisions relevant to this publication	N/A
Concepts and definitions	See <a href="#">Methods and Definition</a> .
Relevance and key uses of the statistics	Making information publicly available for planning, provision of services and providing comparative information.
Accuracy	Boards were provided with quarterly reports for management information and quality assurance purposes for the first year.
Completeness	See <a href="#">Estimated Coverage</a> .
Comparability	N/A
Accessibility	It is the policy of ISD Scotland to make its web sites and

	products accessible according to <a href="#">published guidelines</a> .
Coherence and clarity	Tables and charts are accessible via the <a href="#">ISD website</a> . Information is presented by NHS Board and CHP/LA.
Value type and unit of measurement	Numbers and percentages
Disclosure	The <a href="#">ISD protocol on Statistical Disclosure Protocol</a> is followed.
Official Statistics designation	Official Statistics
UK Statistics Authority Assessment	These are new developmental statistics which have not been submitted for assessment by the UK statistics Authority.
Last published	N/A
Next published	2015
Date of first publication	16 December 2014
Help email	<a href="mailto:NSS.isdchildhealth@nhs.net">NSS.isdchildhealth@nhs.net</a>
Date form completed	26 November 2014

## **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 quarterly to those who needed access to 'management information', i.e. as part of the delivery of health and care:

- Relevant NHS Board Leads
- Early Years Collaborative Health Leads
- Scottish Government Policy Leads (Scotland level)

## 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.