

## Child Measurement Programme for Wales 2018 - 2019

### Data quality statement

#### Summary

This data quality statement relates to information released by the Child Measurement Programme for Wales in 2021, including the release of the 2018/19 report. The standards were designed in order to define arrangements that public bodies could adopt to drive improvement in the quality of their data, building confidence in the data used by all public sector bodies and partnerships. While the Audit Commission closed in 2015, the standards are still in use by many public sector bodies. A seventh standard on accessibility has also been included in this statement.

#### The Audit Commission “Standards for better quality data” 2007

- **Relevance** – data captured should be relevant to the purposes for which it is used. This entails periodic reviews of requirements to reflect changing needs.
- **Accuracy** – data should be sufficiently accurate for its intended purposes. Accuracy is most likely to be secured if data is captured as close to the point of activity as possible. Data should be captured once only, although it may have multiple uses (see section below). The importance of the uses for the data must be balanced with the costs and effort of collection. Where compromises have to be made on accuracy, the resulting limitations of the data should be clear.
- **Completeness** – data requirements should be clearly specified based on the information needs of the body and data collection processes matched to these requirements. Monitoring missing, incomplete, or invalid records can provide an indication of data quality and can also point to problems in the recording of certain data items.
- **Validity** – data should be recorded in compliance with relevant requirements, including the correct application of any rules or definitions. Where proxy data is used to compensate for an absence of actual data, organisations must consider how well this data is able to satisfy the intended purpose.
- **Timeliness** – data should be captured as quickly as possible after the event or activity and must be available for the intended use within a reasonable time period.
- **Reliability** – data should reflect stable and consistent data collection processes across collection points and over time. Users of the data should be confident that improvements reflect real changes rather than variations in data collection approaches or methods.

## Background and purpose

The Child Measurement Programme for Wales (CMP) was established by Welsh Government statute in 2011 and the first annual report was released in 2013. The regulations allow for information to be gathered to inform an annual programme under which children in reception year and year 4 are weighed and measured in schools. Currently these measurements only take place in reception year.

## Data quality statement

- **Relevance** – while school age children have been weighed and measured at this age for many years, since 2011 this has been done specifically to inform the CMP and data is entered on the specific CMP module within the National Community Child Health Database (NCCHD) in each Health Board. The CMP official statistics and report are usually released in the spring of the calendar year following the end of a completed school year. Due to delays caused by the acute COVID 19 response publication of the 2018/19 report was delayed until Spring 2021. So in 2021 the annual report related to measurements gathered in reception year in schools during 2018/19. The report includes measurements taken on children aged 4 to 5 years, attending mainstream schools in Wales, and with a postcode of residence in Wales.

Since the first report published in 2013 analysis of the data has changed. Since 2014 analysis by ethnicity has been carried out. The number of children from an ethnic origin other than white is small so from 2018 data was aggregated for five years and this was repeated this year, but is still made available for one year only. In 2015 analysis by urban / rural residence was carried out and this is repeated in 2021. Prevalence data for BMI categories can be explored by health board and local authority level. Data is also analysed by sex and deprivation. Data on small numbers is suppressed to avoid identification of individuals, in line with information governance good practice.

- **Accuracy** – measurements are carried out in a standardised way by trained school health team members across Wales. There is an online training package and video clip to enable standardisation of the measurement process.

Analysis of the information is also carried out in a standardised way which is described in the CMP technical document. Since 2014 analysis of child measurement by ethnicity has been carried out. There is a known issue with ethnicity recording on the NCCHD, in that some children have been coded for ethnicity using a coding system that was discontinued in 2002, although the children were born after 2002. An initial investigation suggests that some children have been assigned the ethnicity code recorded on their mother's maternity records, rather than being assigned their own code. For the 2021 report 72% of the children were coded using the post-2002 codes. 23.5% of children included in the programme had no coding for ethnicity attached to their records. This is an increase on the figure of 19.2% the previous year

Records from unknown school codes are not included in the analysis. In 2020 the list of excluded codes was revised and updated. Each year all records, including records from previous years, are analysed from source using a reproducible analytical pipeline. As a result there are some small differences in participation/prevalence rates reported in 2021 compared to those reported in 2019.

Where more than one set measurements is recorded on the database for a single child, only the most recent measurements are included in the analysis. Records are included in the programme if they meet all of the following criteria:

- The location of residence can be determined
- The child is resident in Wales
- The school is located in Wales
- They were born during the time period relevant for the report.
- The child's sex is recorded

Eligible records are included in the number measured, if they meet all of the following criteria:

- All required data fields are completed
  - The height measurement is recorded and is not an implausible<sup>1</sup> measurement
  - The weight measurement is recorded and is not an implausible measurement
  - Consent has not been withdrawn
  - The measurement was collected during the relevant academic year.
- **Completeness** – Participation is recorded at health board and local authority level to ensure coverage is within acceptable levels. Participation in the programme in 2018/19 was 93.4%. However 31,756 children were measured this year, compared with 32,166 in 2017/18. More children eligible for measurement (8,619) live in the most deprived quintile than in any of the other deprivation quintiles. Of these children, 92.7% were measured, compared to 92.6% in the least deprived quintile. Participation was lower for boys than girls (93.0%: 93.8%). Parents / carers of 468 of the children opted them out of the measurement programme for this year's report.

Children opted out by Local Health Board	
Aneurin Bevan UHB	42
Betsi Cadwaladr UHB	-
Cardiff & Vale University UHB	382
Cwm Taf Morgannwg	-
Hywel Dda UHB	12
Powys THB	27
Swansea Bay UHB	-
Total opt-outs	<b>468</b>

The number of children eligible for measurement is assessed against the number of children recorded on the Welsh Government School Census (PLASC). In 2018/19, 34,009 children were recorded on the NCCHD on 31<sup>st</sup> July 2019 as eligible for inclusion in the measurement programme. In January of the same year the School Census recorded that 33,845 children were attending reception year classes in Wales. This is a difference of 164 children. There

<sup>1</sup> In a very few cases it is apparent that human error results in the wrong figures being entered into the wrong fields. Although it appears as if the height and weight measurements had been switched there is no way to confirm this so measurements are not included.

will be a difference as children with a postcode of residence in England but attending school in Wales are not eligible for inclusion in the CMP. Additionally the counts are taken six months apart and movements in and out of schools will occur in the meantime.

- **Validity** – the Child Measurement Programme is underpinned by statute which sets out regulations for the collection, collation and analysis. These are disseminated to the Health Boards in Wales by the CMP in the form of the Child Measurement Programme Standards and Guidelines.
- **Timeliness** – the measurements are taken at any time during the school year (2018/19). This data is then entered onto the National Community Child Health Database before the end of September. Each child's date of birth and date of measurement is used to calculate their BMI accurately. The measurements are received as a download, and the data cleaned and analysed between October and January, and prepared for publication during February and March. Due to delays caused by the acute COVID 19 response publication of the 2018/19 report was delayed until Spring 2021.
- **Reliability** – the data used to inform the CMP annual release is collected for the specific purpose of surveillance of child measurements in this age group and recorded on the CMP module of the NCCHD. The measurements are taken by staff trained to take the measurements in a standardised way, using equipment that is calibrated annually. The data is received from NWIS in a download. This is then processed by analysts in the Public Health Wales Observatory, and all results are quality checked by other team members.
- **Accessibility** – the data is made available via a website in both English and Welsh. Data is provided in the form of spreadsheets, which are accompanied by relevant maps, charts, a report and a presentation. Commentary is published either in the form of PDFs, or as web text.

Not all the data/information will be accessible to people with a visual disability. The analysis and report is not provided in languages other than Welsh and English, however information for parents on the programme itself is available in six community languages and in easy-read format.

- **Other** –A comparison is made with Scotland's national measurement programme. We were unable to find confidence intervals for the data from Scotland, to ascertain statistical significance. Additionally the Scottish measurements are carried out in Primary 1 year, so children are slightly older at between 4.5 and 6.25.

Finally analysis, including the five year averages, has been carried out using Welsh Health Board boundaries that came into force on the 1<sup>st</sup> April 2019. This affects two health boards, Cwm Taf Morgannwg UHB and Swansea Bay UHB as Bridgend local authority area moves from the former to the latter.