



Public Health
England

Protecting and improving the nation's health

Cover of Vaccination Evaluated Rapidly (COVER) Implementation Guidance v2.2

DCB0089 Amd 60/2019

About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-leading science, research, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and a distinct delivery organisation with operational autonomy. We provide government, local government, the NHS, Parliament, industry and the public with evidence-based professional, scientific and delivery expertise and support.

Public Health England
Wellington House
133-155 Waterloo Road
London SE1 8UG
Tel: 020 7654 8000

www.gov.uk/phe

Twitter: [@PHE_uk](https://twitter.com/PHE_uk)

Facebook: www.facebook.com/PublicHealthEngland

Prepared by: Joanne White, Michael Edelstein, Simon Burton
For queries relating to this document, please contact:
COVER [@phe.gov.uk](mailto:COVER@phe.gov.uk)



© Crown copyright 2020

You may re-use this information (excluding logos) free of charge in any format or medium, under the terms of the Open Government Licence v3.0. To view this licence, visit [OGL](https://www.ogilive.com/). Where we have identified any third party copyright information you will need to obtain permission from the copyright holders concerned.

Published February 2020
PHE publications
gateway number: GW-979

PHE supports the UN
Sustainable Development Goals



Data Coordination Board

This information standard (DCB0089) has been approved for publication by the Department of Health and Social Care under [section 250 of the Health and Social Care Act 2012](#).

Assurance that this information standard meets the requirements of the Act and is appropriate for the use specified in the specification document has been provided by the Data Coordination Board (DCB), a sub-group of the Digital Delivery Board.

This information standard comprises the following documents:

- Requirements Specification
- Implementation Guidance

An Information Standards Notice (DCB0089 Amd 60/2019) has been issued as a notification of use and implementation timescales. Please read this alongside the documents for the standard.

The controlled versions of these documents can be found on the [NHS Digital website](#). Any copies held outside of that area, in whatever format (For example, paper, email attachment), are considered to have passed out of control and should be checked for currency and validity.

Date of publication: 6th February 2020

Contents

About Public Health England	2
Document information	4
Document history	4
Document review plan	4
Purpose	6
1.1 Overview	6
1.2 Related documents	7
2 Human Behavioural Guidance	8
2.1 CHISs IT systems	8
2.2 Child health record departments	8
3 Organisation Guidance	9
3.1 Information Governance	9
3.2 Data Quality	9
3.3 Conformance	9
4 Technical Guidance	10
4.1 User (CHRDs)	10
4.2 IT systems	10
5 Process Flows	11
6 Technical Specification	12
6.1 Time period	12
6.2 Frequency	12
6.3 Format	12
6.4 Transmission	12
6.5 Definitions	12

Purpose

This document outlines how to implement the COVER standard. The COVER (Cover of Vaccination Evaluated Rapidly) surveillance system measures vaccine coverage for each vaccine of the routine childhood immunisation programme in England up to the age of 5 years old. In addition, Public Health England (PHE) in collaboration with the National Public Health Service for Wales, Public Health Agency, Northern Ireland and Health Protection Scotland, reports UK immunisation coverage data for children aged one, 2 and 5 years of age.

Vaccine coverage data are extracted quarterly (official statistics) and annually (national statistics) from local Child Health Information Systems (CHISs) and submitted to NHS Digital via the Strategic Data Collection Service (SDCS) portal. PHE uses the data collected in SDCS to produce quarterly and annual (in collaboration with NHS Digital) reports and associated coverage data. CHISs are commissioned by NHS England and NHS Improvement.

The ability to reliably measure vaccine coverage plays an essential role in evaluating the success of a vaccination programme, identifying susceptible populations for further interventions and informing future vaccine policy decisions. This is dependent on having an accurate eligible population (denominator) and a robust method of ascertaining the number of those eligible individuals who have received a particular vaccine dose (numerator).

Local coverage data are used for performance management, local risk assessment and response to community outbreaks of vaccine-preventable diseases. The COVER return monitors whether age-dependent vaccinations have been given in a timely manner and promotes equal access to care services by providing coverage data for all local authorities (LA) and general practices (GP).

1.1 Overview

This information standard is sponsored by PHE and fully supported by the Department of Health and Social Care. It is being led by the National Infection Service of PHE. Child health information system providers have been facilitating the reporting of vaccine coverage data under the COVER programme since 1987.

PHE has worked with NHS Digital to maximise opportunities to link data collections and gain optimal value from them and now use the NHS Digital SDCS portal to collect vaccine coverage. SDCS has been used since 2018 to collect GP-level vaccine coverage management information. From April 2019, SDCS has become the data

source for the COVER programme with both LA level and GP level coverage data being submitted using a single submission template.

1.2 Related documents

Reference	Title
1	DCB0089 COVER – NHS Data Model and Dictionary Change Request
2	DCB0089 COVER – Requirements Specification
3	DCB0089 COVER - User Guide
4	CHIS Service Specification
5	CHIS Output and Information Requirements

2 Human Behavioural Guidance

The specification to the submission process for the COVER LA and GP level vaccine coverage data must be implemented using a COVER Standard that CHISs IT systems must comply with as per the [CHIS Service Specification](#). LA and GP level data must be submitted by CHISs to SDCS using a single submission template uploaded via an online portal. PHE use SDCS data to analyse and report coverage data quarterly and annually. Four quarterly and one annual submission of each data set is required. A user guide has been published on the PHE website and distributed via existing contact lists to data providers. PHE has also distributed guidance documents to relevant stakeholders in PHE, NHE England and local authorities.

2.1 CHISs IT systems

The CHISs IT systems are not expected to need more than one reporting quarter to implement the Information Standards Notice (ISN). NHS Digital will provide [guidance](#) to facilitate the implementation and will offer support to IT systems as appropriate. IT systems are expected to provide an IT end user experience that allows its users to provide PHE with the data it requires for its reports, as per COVER Information Standard. IT systems teams should also ensure that their users are provided with adequate technical guidance and support.

2.2 Child health record departments

Following the publication of the Standard, child health record departments will submit LA and GP level data via the SDCS portal, referring to the COVER programme user guide. For each LA, Child Health record departments should list all GPs whose practice forms part of that LA. PHE and NHS Digital will provide guidance to facilitate the submission of quarterly and annual data. Child health record departments may choose to train their staff on extracting and submitting COVER data and may use the user guide and other relevant Standard documentation for training.

Organisation Guidance

3.1 Information governance

COVER data outputs from CHISs do not contain patient identifiable information. Submissions are only required to include the eligible population size and the number vaccinated according to the relevant field definitions. Data are required to be submitted at aggregated LA and GP levels. Data submissions for the selective Hepatitis B programme, (at risk babies born to mothers who are hepatitis B surface antigen positive) will contain small numbers at the LA levels and figures are therefore suppressed in the published data due to potential disclosure as required by the code of practice for official statistics.

Data are collected by NHS Digital and transferred to PHE. Access and storage of COVER data is governed by the PHE Information Governance Policy. All information is used in accordance with the Data Protection Act 2018, the Public Health (Control of Disease) Act 1984, the Public Health (Infectious Diseases) Regulations 1988, and the NHS Act 2006 (section 251), the Health and Social Care Act 2012, and the Care Act 2014. All records are kept securely in compliance with the Caldicott guidelines. Access and storage of COVER data was assessed for GDPR compliance as part of a PHE-wide compliance exercise for all information assets, and was found to be compliant

The legal basis for NHS Digital to collect COVER data will be provided by a Direction from or on behalf of the Secretary of State for Health and Social Care (that is, via PHE).

3.2 Data quality

Data quality is ensured by following NHS Data Model and Dictionary formatting and definitions. COVER data are recommended to be submitted in the format of the approved request parameters. NHS Digital and the COVER team have data validation procedures, both automated and manual sense checking, that ensure data compliance and quality. Draft local data tables are also subject to data quality assurance from NHS England and NHS Improvements local teams prior to publication.

3.3 Conformance

The conformance to the implementation of the standard will be measured against the quality of the COVER data outputs, measured against the following criteria:

- data is complete and submitted in an appropriate format
- data is accurate and in line with vaccine coverage field definitions
- data is timely (in line with data submission deadlines)

- data output relates to correct data collection period
- data contains denominators for 12 month, 24 month and 5 year cohorts
- data is not missing numerators (excludes BCG and neonatal Hepatitis B)
- data relates to correct geographical area and code

4 Technical Guidance

4.1 User (CHRDs)

The user should conform to the checklist below to ensure that they:

- have contacted their IT system supplier if there are uncertainties about how the IT system output needs to be configured to ensure compliance with the Information Standard and agreed a solution.
- have trained all relevant staff members to ensure LA and GP data can routinely be submitted as per COVER Information Standard.
- have established a quality assurance process including external validation. It is recommended that COVER data (LA level at least) should be checked for major data quality issues by the relevant NHS England and NHS Improvements local team prior to submission - see process flow in section 5 of this document.

4.2 IT systems

Each IT system team should conform to the checklist below to ensure that it:

- is aware of and conforming to CHIS service specification - refer to CHIS service specification
- is compliant with the COVER Information Standard and has assured itself that it enables its users to extract data in compliance with the COVER Information Standard
- provides its users with adequate guidance, in the form of documentation and/or training, to enable them to extract data in compliance with the COVER Information Standard
- ensures the COVER data output satisfies the IT system conformance criteria
- has implemented an error reporting mechanism and has assured itself that system issues can be reported and logged.

5 Process flows

COVER data flows can be found below. Users and suppliers should refer to the technical guidance checklist, COVER specification and user guide for testing extracts against the vaccine definitions and conformance criteria.

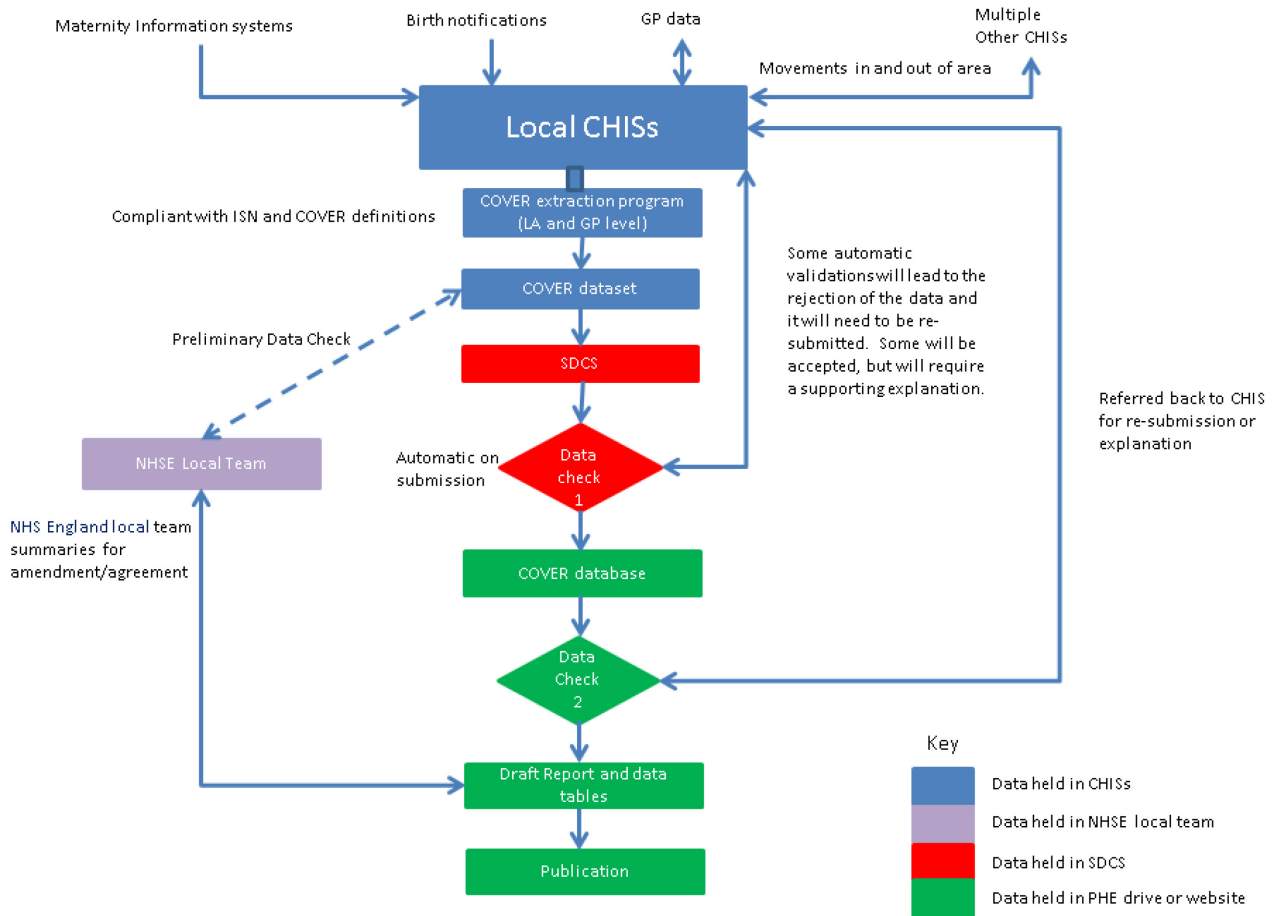


Figure 1. COVER data flows and quality / validation checks

6 Technical Specification

6.1 Time period

COVER data extracts (GP and LA) are required on a quarterly and annual cycle (financial year):

- Q1: 1 April – 30 June
- Q2: 1 July – 30 September
- Q3: 1 October – 31 December
- Q4: 1 January – 31 March

6.2 Frequency

Data submission deadlines can be found on the PHE COVER webpage (<https://www.gov.uk/government/collections/vaccine-uptake>). Data extracts should be run within one month of the end of the quarter. The basic cycle of COVER submissions throughout a financial year can be found below.

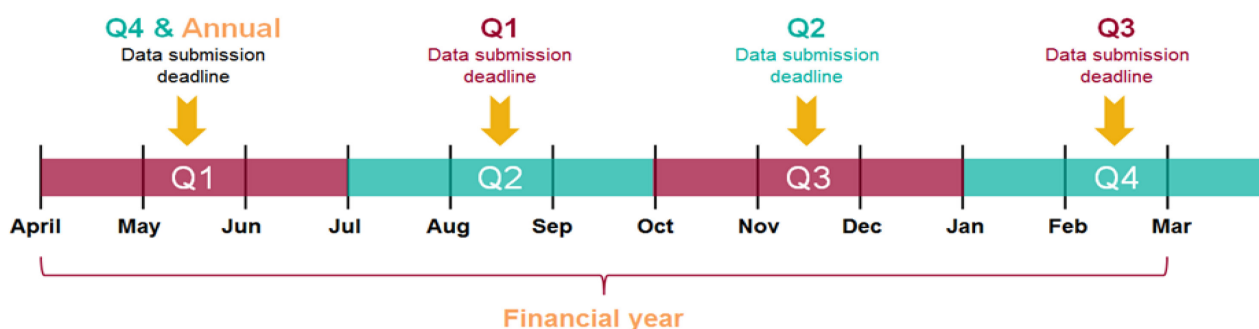


Figure 2. COVER data submission cycle

6.3 Format

LA and GP level data are to be submitted using the data collection template via the SDCS.

6.4 Transmission

All data for the COVER programme must be submitted via the SDCS portal.

6.5 Definitions

Refer to vaccine field definitions and codes in COVER User Guide and requirements specification.