GP 2020 Contract

Chronic Disease Management Programme
Message Specification

Document History	
Created	26/08/2019
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Version History

Date	Version	Authors	Change
26/08/2019	0.1	Karen Wynne	First draft
13/09/2019	0.2	Karen Wynne	Included ICD-10, Loinc & local codes, sample clinical xml, appendices for Investigation Tables, PCERS Data Items, provision for PCERS web services appendix.
23/09/2019	0.3	Karen Wynne	Updated table of investigations and dataset based on final datasets circulated 20/09/19.
25/09/2019	0.4	Karen Wynne	Remove reference to 4 months between reviews, change Clinical to Clinical Repository, removed references to populate ethnicity for Diabetes only.
18/10/2019	0.5	Karen Wynne	Updated tables in relation to final dataset, included updated Table of Investigations, included Snomed codes where applicable, included scenario when adding a new diagnosis after first registration complete.
31/10/2019	1.0	Karen Wynne	Updated references to PCERS, changed Central to CDM Clinical Data Repository, included 'Other' option to Other Major Diagnosis, amended Echocardiography result, reverted to Local code for Dyspnoea Scale as Snomed code seems invalid, updated section 8 and applied text changes as per feedback.
08/11/2019	1.1	Karen Wynne	Updates following the Design Working Group workshop on 06/11/19; Medications Review to be a separate section, B-type Natriuretic Test (BNP) and B-type Natriuretic Test (NT Pro BNP) test results should be recorded individually, remove "Not Available" option for labs tests asides from LDL & Natriuretic Tests
15/11/2019	1.2	Karen Wynne	Included 'Not Available' option for ACR tests, facilitate PCERS Claim No in MSA.3 of Ack (Phase 1), include OBX for Vendor Version Number, Diabetes Exams to be a separate section, updates based on latest dataset.
22/11/2019	1.3	Karen Wynne	Removed 'NA' option & comment in foot and limb review, marked Disease Assessment Scores as Conditional, removed NA for Echo Result, mark Other Major Diagnoses as optional, mark CVD Risk Score and Echocardiography as Conditional.
13/01/2020	1.4	Karen Wynne	Updated reimbursement sample xml.
17/01/2020	1.5	Karen Wynne	Updated Scope section, included additional PCERS appendix, updated PCERS Claim Message data items appendix.

20/01/2020	1.6	Karen Wynne	Update to ECG options based on recent clarifications.
07/02/2020	1.7	Karen Wynne	Updates arising from early adopters feedback: change Diabetes - FPG in 'Investigations Table' to "FPG (not mandatory)"; Referred for Retinal Screening to include option 'Patient Declined'; update 'ECG' to 'ECG since last review'.
12/06/2020	1.8	Karen Wynne	Updates to facilitate *CDM 2020 Changes (i.e. full reviews and/or modified telephone reviews), including fields that are no longer mandatory for modified reviews and* consultation type in the messages."
19/06/2020	1.9	Karen Wynne	Updates based on requests from Fergus Murray.
25/06/2020	1.10	Karen Wynne	Requested updates by Fergus Murray & Dr. Orlaith O'Reilly
20/04/2021	2.0	Karen Wynne	Phase 2 updates for OCF and PP programmes
12/05/2021	2.1	Fearghal Duffy	Phase 2 further updates and new Appendix A for sample XML codes
14/09/2021	2.1.1	Sean Kilkenny/Allison Cullinan	Phase 2 further additions for OCF and PP
15/09/2021	2.1.1	Sean Kilkenny/Allison Cullinan	Changes to CDM Dataset for Phase 2 added
15/09/2021	2.1.2	Fearghal Duffy	Updated phase II scope section including rules for OCF and PP and CDM phasing table
20/09/2021	2.1.3	Allison Cullinan	Updated Risk Factor segments to ensure consistency across spec
21/09/2021	2.1.4	Allison Cullinan	Applied agreed changes from Messaging Workshop on Tuesday, 21st September 2021
28/09/2021	2.1.5	Allison Cullinan	Updated local codes for Covid Vaccine in the Risk Factors segment for CDM Programme
30/09/2021	2.1.6	Allison Cullinan	Updated the Other Major Diagnoses Section, the Vaping Status section under the Risk Factors Segments and the Covid Vaccine section as per the CWG workshop on 30/09/2021.
19/10/2021	2.1.7	Allison Cullinan	Moved the CDM Visit Type to the Diagnosis Segment for the CDM Clinical message and removed Visit Type from the Reimbursement Message
21/10/2021	2.1.7	Allison Cullinan	Added SNOMED Codes provided by EA and CWG
21/10/2021	2.1.7	Allison Cullinan	Applied changes to the Indications for OCF Segment making Ethnicity and the Other fields

			Y/N answers. Removed Proteinuria and Haematuria from the Preventative Programme.
22/10/2021	2.1.7	Allison Cullinan	Removed the Additional Risk Factor Identified and Year Additional Risk Factor Identified from the PP Clinical Details Segment and moved PP Visit Type from the PP Programme Segment to the PP Clinical Details Segment.
28/10/2021	2.1.8	Gavin Keogh	Assigned local codes where Snomed codes not available.
02/11/2021	2.1.9	Gavin Keogh	Assigned local code to Visit Type
03/11/2021	2.1.10	Allison Cullinan	Added MECC Changes for Alcohol into the Risk Factors Segments in the CDM and Prevention Programmes.
03/11/2021	2.1.10	Allison Cullinan	Added ACR to the Laboratory Segment for OCF.
04/11/2021	2.1.10	Allison Cullinan	Added Creatinine Clearance to the Lab Segment for CDM
08/11/2021	2.1.11	Gavin Keogh	Assigned local codes to Opportunistic Case Finding, Prevention Programme, Creatinine Clearance, and new alcohol related risk factors. Updated CDM Diagnosis code in PP Outcome to Snomed Code. Added details for 'Message Version No'
12/11/2021	2.1.12	Karen Wynne	Updated details for Message Version No segment
15/11/2021	2.1.13	Allison Cullinan	Updated ACR Code in all sections to reflect code in SNOMED code table. Also, changed Arthritis to Inflammatory Arthritis in the Other Major Diagnosis Segment in CDM Programme.
16/11/2021	2.1.13	Allison Cullinan	Serum Creatinine and Fasting Glucose updated to include a N/A option in the CDM Laboratory Segment. Fasting Glucose updated to include a N/A option in the Lab Segment for PP.
16/11/2021	2.1.13	Allison Cullinan	Min/Max character specified in Free text option in the Indications for OCF segments. Min/Max value specified for the Message Version No and an initial value for this included. Updated the Message Version No to be a mandatory field for all Phase 2 messages.
16/11/2021	2.1.13	Allison Cullinan	Updated the Message Flow section to reflect changes to the messages for Phase 2.
16/11/2021	2.1.13	Allison Cullinan	SNOMED Code Table updated with SNOMED codes added for Phase 2
19/11/2021	2.2	Allison Cullinan	Updated Covid Vaccine to M for Reg and AR's only. Added note to Creatinine Clearance Calculator to indicate which result to include in

			the message. NA option removed for Serum Creatinine in the CDM Laboratory Segment.
22/11/2021	2.2	Allison Cullinan	Removed Y/N answers from Other in the Indications for OCF segments and updated the minimum character value to 10
24/11/2021	2.2	Allison Cullinan	Removed NA option for Serum Creatinine from the OCF and PP Lab Segments. Updated the PP Reason for Registration to include BP limits for Hypertension reasons.
25/11/2021	2.2	CDM Project Team	Document Aim section updated with clarified rules for all programmes.
26/11/2021	2.2	Allison Cullinan	Appendices updated to include up to date table3 investigations. Investigations Matrix and rules clarification document with calendars also included.
08/12/221	2.2.1	Allison Cullinan	Text amended to clarify rules around patient movement between OCF, PP and CDM Treatment Programmes
09/12/2021	2.2.2	Fearghal Duffy & Allison Cullinan	Further amendments added to the text to clarify patient flow.
09/12/2021	2.2.3	Karen Foley & Allison Cullinan	Text updated
13/12/2021	2.2.3	Allison Cullinan	Specified Creatine Clearance result as a numeric whole number

Table of Contents

1 Document Aim

This document aims to help General Practice (GP) Software Vendors to construct electronic messages to facilitate data returns related to the Chronic Disease Management (CDM) programme. The data returns are from the GP practice software systems via Healthlink, the National Messaging Broker, to the CDM Clinical Data Repository and the Primary Care Eligibility & Reimbursement Service (PCERS) of the Health Service Executive (HSE).

Reference:

- "Terms of Agreement between the Department of Health, the HSE and the IMO regarding GP Contractual Reform and Service Development" https://www.hse.ie/eng/about/who/gmscontracts/2019agreement/agreement-2019.pdf
- "CDM ICT Solution Specification"
- "Healthlink WS HealthlinkOnline Tech GP Vendor v1.15.pdf"
- "Healthlink Hospital Information & Interface Specification"

2 Scope

Phase 1

The first phase of the programme targets patients aged 75 years and over*, attending their GP's surgery for up to two full CDM reviews per year. However, due to the COVID-19 pandemic in 2020 the scope has been extended with effect from 1st July 2020 to target patients aged 70+ years with one or more of the qualifying chronic diseases, and to facilitate delivery of full and/or telephone CDM reviews (referred to as modified consultations in this spec).*

A modified CDM dataset (dated 15th April 2020) identifies the fields that are no longer mandatory for modified reviews (e.g. examinations/tests that cannot be done remotely). The existing CDM dataset applies for full reviews.

The chronic diseases included are:

- Diabetes Type 2
- Asthma
- Chronic Obstructive Pulmonary Disease (COPD)
- Cardiovascular Disease including:
    - Heart Failure
    - Ischaemic Heart Disease
    - Cerebrovascular Disease (Stroke/ Transient Ischemic Attack (TIA))
    - Atrial Fibrillation

In the first year a person is registered to the "Structured Management of Chronic Disease Programme" with their GP and there are 4 structured visits to the GP Practice. These visits comprise of:

- 1 registration/First Visit with the GP.
- 2 structured visits including phlebotomy with the practice nurse.
- 1 additional structured visit with the GP.

Each subsequent year there will be 4 structured visits to the GP Practice in a 12-month period. Each 12-month period is a 12-month window which commences on the anniversary of the initial Registration visit. The minimum allowable gap between reviews is 4 calendar months with a maximum of 2 reviews in the 12-month window.

If the Interim review does not take place within the 12-month window the next review will be an Annual Review. (see year 5 in the table below)

Example below illustrates the 12-month window and 4-month gap between reviews:

CDM	Date	Gap	Notes
Year 1			
Registration Review Date	01.02.2021		
Review 12-month window	**01.02.2021**	**31.01.2022**	
Earliest Date Interim Review can happen	01.06.2021		(earliest it can take place based on 4-month rule)
Actual Interim Review Date	01.11.2021	9 months	Interim review delayed, took place 9 months after registration date. Therefore, next annual review will be delayed.
Year 2			
Annual Review 12-month window	**01.02.2022**	**31.01.2023**	Based on the initial Registration Date
Earliest Date Annual Review can happen	01.03.2022		(earliest it can take place based on 4-month rule)
Actual Date of Annual Review	01.05.2022		
Earliest Date Interim Review can happen	01.09.2022		(earliest it can take place based on 4-month rule)
Actual Interim Review Date	31.12.2022	8 months	Interim review delayed, took place 8 months after the Y2 annual review. Therefore, next annual review will be delayed.
Year 3			
Annual Review 12-month window	**01.02.2023**	**31.01.2024**	
Earliest Date Annual Review can happen	30.04.2023		(earliest it can take place based on 4-month rule). The 31st April doesn't exist so earliest date for A/R can be 30th April, which is the last day of the month.
Actual Date of Annual Review	30.04.2023		
Earliest Date Interim Review can happen	30.08.2023		(earliest it can take place based on 4-month rule)
Actual Interim Review Date	01.12.2023	7 months	Interim review delayed. Therefore, next annual review will be delayed.
Year 4			
Annual Review 12-month window	**01.02.2024**	**31.01.2025**	
Earliest Date Annual Review can happen	01.04.2024		(earliest it can take place based on 4-month rule).
Actual Date of Annual Review	01.04.2024		
Earliest Date Interim Review can happen	01.08.2024		(earliest it can take place based on 4-month rule)
Actual Interim Review Date	01.08.2024	4 months	Patient attended and interim review took place on 1.8.24
Year 5			

Annual Review 12-month window	**01.02.2025**	**31/01/2026**	
Earliest Date Annual Review can happen	01.02.2025		
Actual Date of Annual Review	01.03.2025		
Earliest Date of Interim Review	01.07.2025		(earliest it can take place based on 4-month rule) Interim review did not take place before the 31.01.2026, therefore next review will be an Annual Review
Year 6			
Annual Review 12-month window	01.02.2026	31.01.2027	
Earliest Date Annual Review can happen	01.02.2026		

From a technical perspective, the GP visit and phlebotomy visit are treated as one review which is expected to generate one clinical data message and one reimbursement message.

PCERS expect to receive 2 reimbursement messages per patient, per annual window (running from anniversary of first submission to the next anniversary) The first valid review submitted to PCERS in the 12-month window that has a minimum 4-month gap since the previous paid review will be paid. The second valid review submitted to PCERS in the 12-month window that has a minimum 4-month gap since the previous paid review will be paid. Therefore, a review submitted for a patient on the 30th Sept would allow payment of another review from the 30th of Jan. A review submitted for a patient on the 29/30/31st Oct would allow payment of another review from the 28/29th Feb. This should cover edge cases where the 4-month gap results in review dates that do not exist (i.e.: 30/31st Feb)

Please refer to the reference calendars in the Appendices for details on non-standard dates and leap years.

Adding a new diagnosis after first registration on the CDM Treatment Programme:
(If a patient is diagnosed with another chronic disease after a CDM Review has been submitted and processed)

- Patient is first registered with CDM in Jan 2020 and has Diabetes
- First review and registration data has been submitted to PCRS and CDR
- Patient returns for the interim follow up visit in September.
- Patient has now developed COPD (second chronic disease)
- Software displays fields required for diabetes interim review and COPD registration first review.
- Data is submitted to PCRS and CDR
- The next review due from Jan 2021 will be an Annual Review for both Diabetes + COPD. ***No Interim Review for COPD in 2020***

The above process should be followed if a new diagnosis is added at any subsequent annual or interim review

Phase 2 – Introduction of the Opportunistic Case Finding and Prevention Programmes and further rollout of the CDM Treatment Programme

1. The CDM Treatment programme will apply to people aged 18 and over from 2022. The MCDM as a delivery option will continue in 2022.
2. Opportunistic Case Finding will apply to people aged 65 and over from 2022. There are 3 possible outputs from the OCF Assessment as follows:
   i. Diagnosis of a Chronic Disease: (Cardiovascular disease and/or Diabetes) - eligible patients can enter the CDM Treatment programme.
   ii. Prevention Programme: (high risk of developing a Cardiovascular disease and/or Diabetes). Eligible patients can enter the Prevention Programme
   iii. Low Risk (repeat OCF no earlier than 5 years)

Please Note: MCDM is not available as a delivery option for either the OCF or Prevention Programmes.

Opportunistic Case Finding

Opportunistic Case Finding for people aged 65 years and over will commence in 2022 (see details included above re the 3 possible outputs from OCF Assessments) to identify those patients at high risk of developing a Cardiovascular disease and/or Diabetes and enrol them into the Prevention Programme. This will include case finding and an annual prevention review for patients identified with high risk of;

- Cardiovascular Disease
- Diabetes

Opportunistic case finding means that a systematic approach to the identification of cases is not taken but that on an opportunistic basis (i.e., when a patient attends for another issue) risk criteria can be applied and appropriate tests/assessments carried out to identify those with a chronic disease or those at high risk of developing a chronic disease.

Patients with an undiagnosed listed (see above) chronic disease may also be identified through opportunistic case finding and enrolled into the Chronic Disease Management Treatment Programme.

The Opportunistic Case Finding Programme will commence from 2022. The GP practice will identify all their patients with diagnosed hypertension and categorise them with the **NICE (NG 136 2019) criteria** of:

a. stage 1 hypertension (>140/90), QRISK < 20% and no target organ damage.
b. patients with stage 1 hypertension with target organ damage or QRISK ≥ 20%.
c. hypertension stage 2 (≥ 160/100), pre-diabetes or BNP greater than 34 pg/ml or NT pro BNP **≥** 125 pg/ml.

In order to identify these in the GPs cohort of patients diagnosed as hypertensive the patient will need to have an OCF consultation which will include blood pressure, QRISK assessment, blood tests and renal function tests. Bloods should be sent for HbA1c, FPG and BNP levels to rule out other chronic disease and a pulse rate and rhythm should be examined.

If the required blood tests were already taken within 3 months prior to the OCF Assessment they do not need to be repeated and can be brought into the OCF Assessment from the existing patient record

To enable this case finding consultation a template has been developed and will be available in all GP software systems (see OCF dataset). An OCF Assessment will result in one of 3 outcomes:

1) Patients identified as the latter two of the NICE criteria groups ((b) and (c) above) should be enrolled in the Prevention Programme. The patient can be registered on the Prevention Programme on the same day as the OCF review. Patients can only be enrolled in one treatment programme at a time, so in this case the patient was originally enrolled in the OCF programme and then was moved to the Prevention Programme.
2) Patients opportunistically diagnosed with a chronic disease should move into the CDM treatment programme. The patient can be registered on the CDM treatment programme on the same day as the OCF review. Patients can only be enrolled in one element of the overall Structured CDM programme at a time (OCF or PP or Treatment Programme), so in this case the patient was originally enrolled in the OCF programme and then was moved to the CDM treatment Programme.
3) Patients with low risk stage 1 hypertension and no target organ damage (group (a) of the NICE criteria above) will not currently be included in the CDM Programme. These patients are considered low risk and can receive another OCF Assessment 5 years after the initial assessment. A 5 year gap is required between all further OCF Assessments.

See example below to illustrate the 5-year gap between OCF Assessments

OCF	Date	Gap	Notes
Year 1			
Date of OCF Initial Assessment	01.02.2022		
Year 5			
Earliest Date of OCF Subsequent Assessment	01.02.2027		5 years from previous OCF Assessment
Actual Date of OCF Subsequent Assessment	31.03.2027	5 years & 2 months	The OCF Subsequent Assessment is delayed slightly.
Year 10			
Earliest Date of OCF Subsequent Assessment	31.03.2032		5 years from previous OCF Assessment
Actual Date of OCF Subsequent Assessment	13.04.2032	5 years & 2 weeks	

From a technical perspective, an OCF assessment will generate one clinical data message and one reimbursement message.

Please note: Once a patient has been enrolled on the Prevention Programme or the CDM Treatment programme they do not require anymore OCF assessments. If any future OCF assessments are submitted these will be rejected.

Prevention Programme

The Prevention Programme commencing in 2022 for people aged 65 years and over at high risk of;

- Cardiovascular Disease
- Diabetes

High risk patients should be enrolled in the Prevention Programme and receive an annual GP and practice nurse visit. An annual review of risk factors will be carried out where medications and the self-management plan will be reviewed, and additional supports provided and/or referrals made. Appropriate medical treatment (e.g., for hypertension, smoking cessation, blood lipids) will be prescribed and appropriate blood tests carried out.

The patients for active management enrolled on the Prevention Programme comprise those patients not diagnosed with one of the selected chronic diseases for the Treatment Programme but who have either QRISK3 ≥ 20%, stage 1 hypertension with target organ damage, stage 2 hypertension, pre-diabetes or BNP greater than 34 pg/ml or NT pro BNP ≥ 125 pg/ml.

- High risk patients should be enrolled in the Prevention Programme and receive an annual GP and practice nurse visit.
- The GP should review the patient's medications and perform any appropriate blood tests.
- All patients should be given health promotion advice, advice on lifestyle modification and have risk factors and interventions recorded.
- All high-risk patients should be actively managed and have self-management supported by an annual visit to the practice nurse and a personalised care plan agreed and documented.
- Patients diagnosed with pre-diabetes should be referred to the Diabetes Prevention Programme for pre diabetic education.

See the Prevention Programme dataset which will form the basis for the development of software to be deployed to all participating GP practices.

Rules for reviews for the Prevention Programme

In the Prevention Programme the patient will receive an annual GP and practice nurse visit.

From a technical perspective, the annual GP visit and practice nurse visit are treated as one review which will generate one clinical data message and one reimbursement message.

An OCF Assessment is required to determine whether a patient needs to be enrolled on the Prevention Programme. Therefore, an OCF Assessment must have previously been completed on the patient and submitted before a Prevention Programme review can be submitted and accepted.

Rules for reviews for entry on to Prevention Programme post OCF review

When a patient has been identified as High Risk following an Opportunistic Case Finding Assessment:

- Patient should be registered on the Prevention Programme. The first annual Prevention Programme review to occur ideally within **4 months** from the OCF assessment date but can take place at any stage after an OCF Assessment.
- The patient can be registered on the Prevention Programme on the same day as the OCF Assessment.
- If blood tests are less than 3 months old at the date of the Prevention Programme review the blood tests do **not** need to be repeated and can be populated from the existing patient chart or record.
- If blood tests are more than 3 months old at the date of the Prevention Programme review the blood tests will need to be repeated.
- Annual Prevention Programme reviews require a minimum 9 month gap between reviews.

Please see Table below for an illustration of the 9-month gap between Prevention Programme reviews:

PP	Date	Gap	Notes
Year 1			
Date of Initial PP Review	**16.01.2022**		
Earliest Date of Next PP Annual Review	16.10.2022	9 months	
Actual Date of Next PP Annual Review	20.10.2022	9 months & 4 days	
Year 2			
Earliest Date of Next PP Annual Review	20.07.2023	9 months	
Actual Date of Next PP Annual Review	31.07.2023	9 months & 11 days	
Year 3			
Earliest Date of Next PP Annual Review	30.04.2024	9 months	The 31st April doesn't exist so it's on the last day of April.
Actual Date of Next PP Annual Review	30.04.2024	9 months	
Year 4			
Earliest Date of Next PP Annual Review	30.01.2025	9 months	
Actual Date of Next PP Annual Review	05.02.2025	9 months & 6 days	
Earliest Date of Next PP Annual Review	05.11.2025		
Actual Date of Next PP Annual Review	10.11.2025	9 months & 5 days	

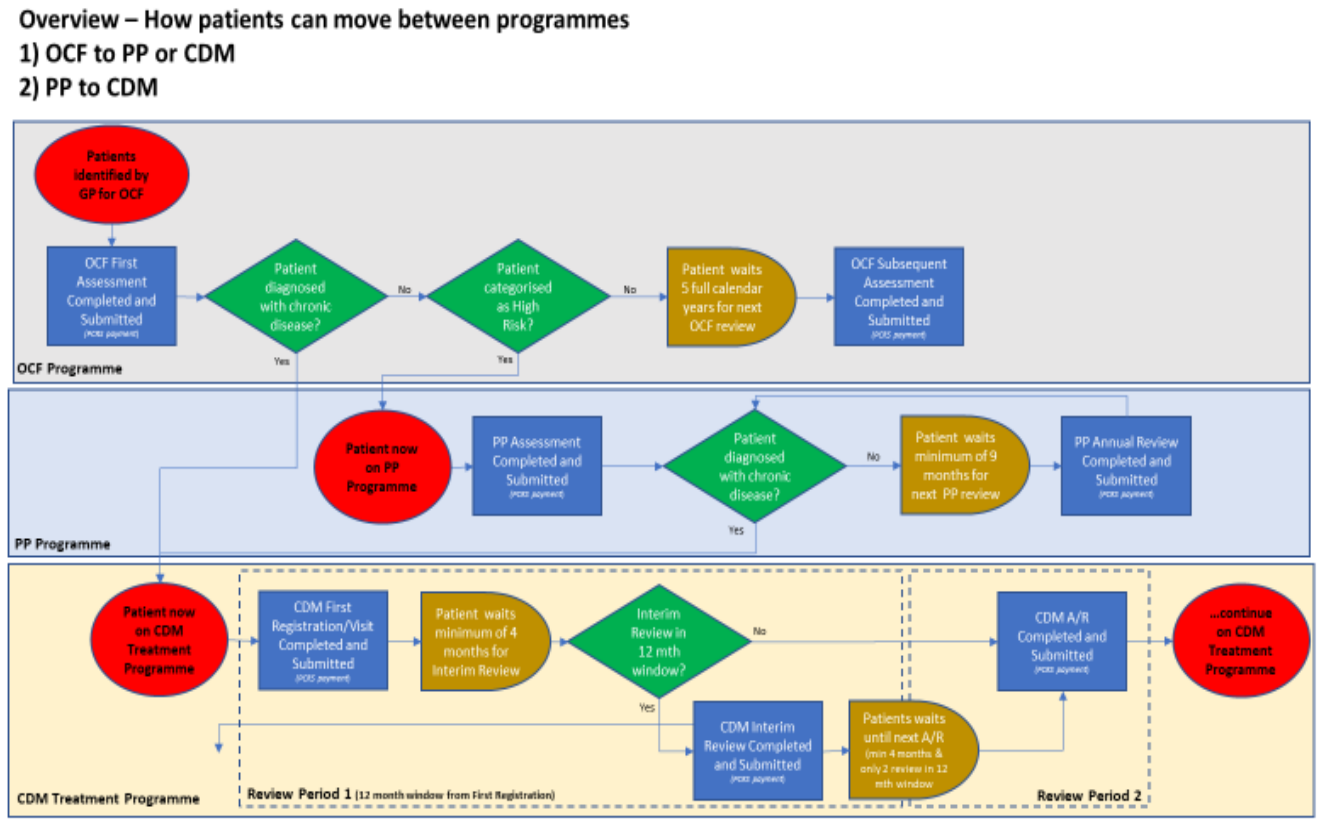
Please note: A patient may be diagnosed with a Chronic Disease while enrolled on the Prevention Programme. These patients should be moved on to the CDM Treatment Programme. Once a patient has been registered on the CDM Treatment programme they do not require any further PP reviews. If any future PP reviews are submitted these will be rejected. As previously mentioned, a patient can only be enrolled in one element of the overall Structured CDM programme (OCF or PP or Treatment Programme) at any one time.

Rules for reviews for entry on to CDM Treatment Programme post OCF Assessment/PP Review

- Patient diagnosed with one or more of the chronic diseases outlined in the CDM Treatment programme should be registered on the CDM Treatment Programme. This first Registration CDM Treatment Programme review should occur ideally within **4 months** from the OCF Assessment or PP Review but can take place at any stage afterwards.
- The patient can be registered on the CDM Treatment Programme on the same day as the OCF Assessment or PP Review.
- If blood tests are less than 3 months old at the date of the CDM Treatment Programme review the blood tests do **not** need to be repeated and can be populated from the existing patient chart or record.
- If blood tests are more than 3 months old at the date of the CDM Treatment Programme review the blood tests will need to be repeated.
- Once registered on the CDM Treatment Programme the CDM Treatment Programme rules apply.

Please Note: A patient can be registered on the CDM Treatment Programme once they have been diagnosed with one or more of the outlined (listed above) Chronic Diseases. They **do not** require an OCF Assessment or a PP Review prior to registration on the CDM Treatment Programme.

Patient Flow Process Map – indicates how a patient can move between all Programmes



CDM Phasing Table

	Chronic Disease Treatment Programme	Opportunistic Case Finding Programme	Annual CDM Prevention Programme
2020	Aged 70 & over		
2021	Aged 65 & over	Aged 75 & over	Aged 75 & over
2022	All adults age 18 and over	Aged 65 & over	Aged 65 & over
2023	Programme continues	Aged 45 & over	Aged 45 & over

3 Message Flow

When a GP patient review has been completed the GP practice system will generate two HL7 Observation Result message (ORU_R01), one reimbursement message to the PCERS to indicate that the review has taken place and one clinical message to a CDM Clinical Data Repository. An acknowledgement message will be returned by both the PCERS and the CDM Clinical Data Repository to the GP.

When a GP submits a message validation will already have been carried out to ensure the GP is on the panel and the patient has a valid active GMS number on the date of exam. Therefore, there will be limited reasons for a message failing on receipt by PCERS or the CDM Clinical Data Repository. For example, if the patient was previously registered by another GP, or the GP date of birth for the patient *reviewed on 15th May 2020* suggest 75+ years yet the PCERS indicates <75 years, NACKs will be returned for such submissions.

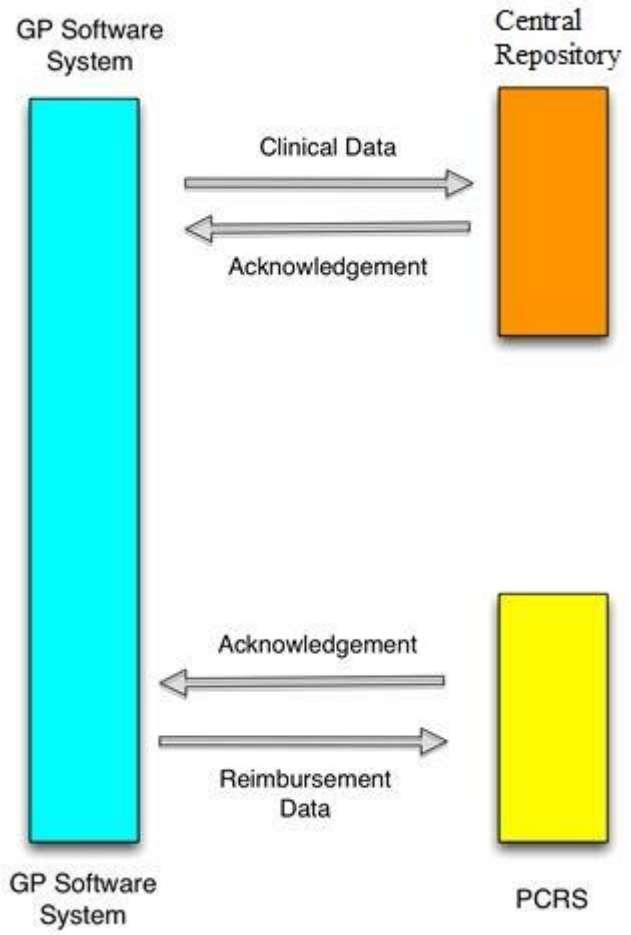
The Reimbursement message will contain the following information:

- Date and Time of message
- GP identifier: Doctor's GMS number
- Patient identifiers: Patient's GMS number (Medical Card Number), pseudo-anonymised name, date of birth, gender
- Review Date
- CDM Programme Type (CDM, OCF, PP)
- Diagnosis type(s) e.g., COPD, diabetes, etc. (for CDM messages only)
- Reason for Registration on PP (for PP messages only)
- Indications for OCF Assessment (for OCF messages only)
- Vendor Version No, Consultation Type and Message Version No (for Phase 2 message types)

The Clinical message will contain the following information:

- Date and Time of message
- GP identifier: Doctor's GMS number
- Patient identifiers: Patient GMS & IHI (if available), pseudo-anonymised name, date of birth, gender, address including Eircode (if available), ethnicity
- CDM Programme Type (e.g.: CDM, OCF, PP) and Visit Type
- Vendor Version No and Message Version No (for Phase 2 message types)

- Clinical Data



4 Reimbursement Message

ORU^R01	Unsolicited Observation Message	Chapter
MSH	Message Header	2
{		
[		
PID	Patient Identification	3
[PD1]	Additional Demographics	3
[{NK1}]	Next of Kin/Associated Parties	3
[{NTE}]	Notes and Comments	2
[		
PV1	Patient Visit	3
[PV2]	Patient Visit - Additional Info	3
]		
]		
{		
[ORC]	Order common	4
OBR	Observations Report ID	7
{[NTE]}	Notes and comments	2
[CTD]	Contact Data	11
{		
[OBX]	Observation/Result	7
{[NTE]}	Notes and comments	2
}		
[{FT1}]	Financial Transaction	6
{[CTI]}	Clinical Trial Identification	7
}		

ORU^R01	Unsolicited Observation Message	Chapter
}		
[DSC]	Continuation Pointer	2

Abstract Message Structure for Unsolicited Observation Message

The following sections describe how to construct a reimbursement message and a clinical message. Please see Appendix PCERS for PCERS reimbursements requirements.

These are the segments used for the reimbursement message to the PCERS:

ORU_R01	Observation Message	HL7 Chapter
MSH	Message Header	2
PID	Patient Identification	3
PV1	Patient Visit	3
OBR	Observation Request	7

Message Header Segment (MSH)

Field	Mand	Value	Comment	HL7
Sending Application	Yes	HELIXPM.HEALTHLINK .71	Made up of name of GP Practice Software System, Healthlink and Healthlink Message Type, see code tables for possible values	<MSH.3>
Sending Facility	Yes		GP's Medical Council Number & Practice ID	<MSH.4>
Receiving Application	Yes	PCERS (Constant)	Defined application within Primary Care Eligibility & Reimbursement Service (PCERS)	<MSH.5>
Receiving Facility	Yes	PCERS (Constant)	PCERS	<MSH.6>
Date/time of message	Yes	YYYYMMDDHHMM		<MSH.7>
Message Type	Yes	ORU_R01 (Constant)		<MSH.9>
Message Control ID	Yes	ORU20190823162054 05003564	Uniquely identifies the message. The suggested format to generate the Message Control ID is "ORU" + date and time in the format YYYYMMDDHHMMSSSS + GP's 6 digit Medical Council Number. Note the max length of this field is 50 characters.	<MSH.10>
Processing ID	Yes	P (Constant)		<MSH.11>
Version ID	Yes	2.4 (Constant)	HL7 version number	<MSH.12>

Accept ACK Type	Yes	AL (Constant)	ACK always expected	<MSH.15>

Patient Identification Segment (PID)

Field	Mand	Value	Comment	HL7
Patient Identifier	Yes	1234567A	Patient's GMS number. Individual Health Identifier as a repeating field, which will become mandatory when available.	<PID.3>
Patient Name	Yes	Varchar(50)	Pseudo-anonymised name. XPN.7 must contain the value 'S' to indicate pseudo-anonymisation.	<PID.5>
Date of Birth	Yes	YYYYMMDD	Min: 19000101 Max: current date	<PID.7>
Gender	Yes	F, M, O	F for female, M for male, O for other	<PID.8>
Address	No	Five lines including Eircode, each line Varchar(30)	PCERS do not require address fields	<PID.11>

Patient Visit Segment (PV1)

Field	Mand	Value	Comment	HL7
Patient Class	Yes	G	Indicates GP patient	<PV1.2>
Attending doctor	Yes	Identifies GP's GMS number. Refer to code table 0010 for permitted values.	This indicates the patient's registered GP. Individual Health Professional Identifier (IHPI) as a repeating field, which will also be mandatory when it becomes available. See HL7 formatting in Patient Visit Segment	<PV1.7>

Observation Request Segment (OBR)

Field	Mand	Value	Comment	HL7
Set ID	Yes	Numeric	Starts at 1 and incrementally increases	<OBR.1>
Placer Order Number	Yes	MSH.10 of original reimbursement message	Unique number to identify returns. Required for linking to clinical messages	<OBR.2>
Filler Order Number	*C	Required for corrected messages in Phase 2	Claim no returned by PCERS	<OBR.3>

Universal Service Identifier	Yes	X0135-0 for 1st OBR, ICD-10 code for diagnosis, Snomed generally used, otherwise Local codes.	Code and name for observation request. See ICD-10 Diagnosis codes	<OBR.4>
Observation time	Yes	YYYYMMDD	Date of the consultation	<OBR.7>
Result Status	Yes	F, C	F for Final C for Corrected	<OBR.25>

Observation Result Segment (OBX)

Field	Mand	Value	Comment	HL7
Set ID	Yes	Numeric	Starts at 1 and incrementally increases	<OBX.1>
Value type	Yes	FT, NM, CE, DT	See permitted codes for Value Type	<OBX.2>
Observation 3identifier	Yes	Code and name for observation result.	See Codes for OBX Segments, e.g. Snomed code for Weight measured in Kg is 3141-9	<OBX.3>
Observation value	Yes		The value of the observation	<OBX.5>
Observation result status	Yes	F, C	F for Final C for Corrected	<OBX.11>
Date/time of the observation	No	YYYYMMDD	Timestamp	<OBX.14>

The following tables define the list of reimbursement observations relevant to CDM returns:

Reimbursement Information Requirements

OBR Segment	Mand	Comment	Code Type	Value
CDM Programme	Yes	• Chronic Disease Management • Opportunistic Case Finding • Prevention Programme	Local Local Local	• X0135-0 • X0330-0 • X0329-0
Diagnosis	*C	Required for CDM Programme	Snomed	416239002
Reason for Registration on PP	*C	Required for Prevention Programme	Local	X0316-0
Indications for OCF	*C	Required for Opportunistic Case Finding	Local	X0311-0

CDM Programme Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Vendor Version ID	Yes		Vendor implementation version	Local	X0243-0

Consultation Type	Yes		Telephone consultation Consultation (default for OCF & PP)	Local Snomed Snomed	X0257-0 386472008 11429006
Message Version No	Yes		Numeric value to identify message phase e.g. 1, 2, 3 Min 1, Max 9 (initial value 2 to indicate Phase 2 messages)	Local	X0335-0

Diagnosis Segments (CDM only)

OBX Segment	Mand	When	Comment	ICD-10	Snomed
Diagnosis	Yes	ER	• Diabetes Type 2 • Asthma • COPD • Heart Failure • Ischaemic Heart Disease • Cerebrovascular Disease Stroke • Cerebrovascular Disease TIA • Atrial Fibrillation	• E11 • J45 • J44 • I50 • I25 • I64 • G45 • I48	• 44054006 • 195967001 • 13645005 • 84114007 • 414545008 • 230690007 • 266257000 • 49436004
Year of Diagnosis	Yes	ER	Year of diagnosis (observable entity)	Snomed	231000220104
Attending Hospital?	Yes	ER	Yes No	Snomed Local	268529002 • Yes • No

Indications for OCF Segment *(One or more options must be selected from the list below)* ***(OCF Only)***

OBX Segment	Mand	When	Comment	Code Type	Value
Hypertension >= 140/90mmHg	*C	ER	Radio Button • Yes • No	Local Local	X0312-0 • YES • NO
Current Smoking Status	*C	ER	Radio Button • Yes • No	Snomed Local	308512009 • YES • NO
BMI >=30kg/m2	*C	ER	Radio Button • Yes • No	Local Local	X0313-0 • YES • NO
Previous BNP >= 34pg/ml or NTproBNP >=125pg/ml	*C	ER	Radio Button • Yes • No	Snomed Local	414798009 • YES • NO

			(if mapped previously, it may be possible display BNP/NT Pro BNP result)		
Ethnicity – auto populate with Y – if PID.22 above is one of the following: (Irish Travellers,Roma, Black African, Black Irish,Other Black, Other Asian)	*C	ER	Radio Button • Yes • No	Local Local	X0314-0 • YES • NO
History of Gestational Diabetes	*C	ER	Radio Button • Yes • No	Snomed Local	472971004 • YES • NO
Dyslipidaemia(Previously recorded)	*C	ER	Radio Button • Yes • No (If mapped previously it may be possible to display HDL result)	Snomed Local	370992007 • YES • NO
Moderate or severe chronic Kidney disease(eGFR <60ml/min 1.73m2(previously recorded)	*C	ER	Radio Button • Yes • No (If mapped previously it may be possible to display eGFR result)	Snomed Local	709044004 • YES • NO
History of severe Mental illness	*C	ER	Radio Button • Yes • No	Snomed Local	128293007 • YES • NO
Other	*C	ER	Free text box – If other is Y GP must insert free text. (Min no of characters required = 10, Max = 140)	Snomed Local	74964007 • FT

Reason for Registration on PP Segments (PP Only)

OBX Segment	Mand	When	Comment	ICD-10	Snomed
Reason for registration on PP	Yes	ER	Radio Button & Multi select • QRISK 3 greater or equal to 20%	 Local Local	X0316-0 X0316-1 X0316-2

			• Hypertension Stage 1 (BP 140/90 to 159/99mmHg) with target organ damage • Hypertension Stage 2 or 3 (BP>160/100mmHg) • Pre-Diabetes • Previous BNP greater or equal to 34 pg/ml or NT pro BNP greater or equal to 125pg/ml, if previously recorded Collected at registration and submitted always	Local Local Snomed	X0316-3 X0316-4 414798009
Year of Registration on PP	Yes	ER	Year Identified YYYY Collected at registration and submitted always	Local	X0317-0

5 Clinical Message

These are the segments used for clinical messages to the Clinical Data Repository:

ORU_R01	Observation Message	HL7 Chapter
MSH	Message Header	2
PID	Patient Identification	3
PV1	Patient Visit	3
OBR	Observation Request	7
OBX	Observation Result	7

Message Header Segment (MSH)

Field	Mand	Value	Comment	HL7
Sending Application	Yes	HELIXPM.HEALTHLINK.70	Made up of name of GP Practice Software System, Healthlink and Healthlink Message Type, see tables for possible values	<MSH.3>
Sending Facility	Yes		GP's Medical Council Number & Practice ID	<MSH.4>
Receiving Application	Yes	CDM Clinical Data Repository (Constant)	Defined application within CDM Clinical Data Repository	<MSH.5>
Receiving Facility	Yes	CDM Clinical Data Repository (Constant)	HSE CDM Clinical Data Repository	<MSH.6>

Date/time of message	Yes	YYYYMMDDHHMM		<MSH.7>
Message Type	Yes	ORU_R01 (Constant)		<MSH.9>
Message Control ID	Yes	ORU20190823162054050035 64	Uniquely identifies the message. The format used to generate the Message Control ID is "ORU" + date and time in the format YYYYMMDDHHMMSSS S + GP's 6 digit Medical Council Number. Note the max length of this field is 50 characters.	<MSH.10>
Processing ID	Yes	P (Constant)		<MSH.11>
Version ID	Yes	2.4 (Constant)	HL7 version number	<MSH.12>
Accept ACK Type	Yes	AL (Constant)	ACK always expected	<MSH.15>

Patient Identification Segment (PID)

Field	Mand	Value	Comment	HL7
Patient Identifier	Yes		Patient's GMS number. Individual Health Identifier as a repeating field, which will become mandatory when available.	<PID.3>
Patient Name	Yes	Varchar(50)	Pseudo-anonymized name	<PID.5>
Date of Birth	Yes	YYYYMMDD	Min: 19000101 Max: current date	<PID.7>
Gender	Yes	F, M, O	F for female, M for male, O for other	<PID.8>
Patient Address/Eircode	Yes	Five lines including Eircode, each line Varchar(30)	Four lines, first two are mandatory. Eircode to populate 5th line when available	<PID.11>
Ethnic Group	*C	See permitted codes for Ethnic Group.	Required on registration	<PID.22>

Patient Visit Segment (PV1)

Field	Mand	Value	Comment	HL7

Patient Class	Yes	G	GP	<PV1.2>
Attending doctor	Yes	Identifies GP's GMS number. Refer to code table 0010 for permitted values.	This indicates the patient's registered GP. Individual Health Professional Identifier (IHPI) as a repeating field, which will also be mandatory when it becomes available. See HL7 formatting in Patient Visit Segment	<PV1.7>

Observation Request Segment (OBR)

Field	Mand	Value	Comment	HL7
Set ID	Yes	Numeric	Starts at 1 and incrementally increases	<OBR.1>
Placer Order Number	Yes		Unique number to identify returns. Requiring for linking to reimbursement messages	<OBR.2>
Universal Service Identifier	Yes	Codes and names for observation requests	See Clinical Information Requirements section	<OBR.4>
Observation time	Yes	YYYYMMDD	Date of the consultation	<OBR.7>
Result Status	Yes	F, C	F for Final C for Corrected	<OBR.25>

Observation Result Segment (OBX)

Field	Mand	Value	Comment	HL7
Set ID	Yes	Numeric	Starts at 1 and incrementally increases, order is not significant	<OBX.1>
Value type	Yes	FT, NM, CE	FT for formatted text, NM for numeric, CE for coded entry	<OBX.2>
Observation identifier	Yes	Snomed/Local code and name for observation result. Local code where other not available	See Codes for OBX Segments, e.g. Snomed code for Weight measured in Kg is 3141-9	<OBX.3>
Observation value	Yes		The value of the observation	<OBX.5>
Observation units	No	Units relevant to result	May be populated for laboratory reports	<OBX.6>
Reference range	No	Reference range of result	May be populated for laboratory reports	<OBX.7>

Abnormal flag	No	Abnormal flag value	May be populated for laboratory reports	<OBX.8>
Observation result status	Yes			<OBX.11>
Date/time of the observation	Yes	YYYYMMDD	Timestamp	<OBX.14>

Chronic Disease Management (Phase 1 dataset)

The following tables define the list of clinical observations relevant to CDM returns:

Clinical Information Requirements

OBR Segment	Mand	Comment	Code Type	Value
CDM Programme	Yes	• Chronic Disease Management • Opportunistic Case Finding • Prevention Programme	Local Local Local	• X0135-0 • X0330-0 • X0329-0
Diagnosis	Yes		Snomed	416239002
Other Major Diagnoses	No		Snomed	27624003
Medication Review	Yes		Snomed	182836005
Risk Factors	Yes		Local	X0115-0
Physical exam section	Yes		Snomed	425044008
Diabetes	*C	Required for Diabetes	Snomed	44054006
Diagnostic Investigations	No		Local	X0220-0
Laboratory report	*C	Required for Full CDM but not for modified CDM	Snomed	4241000179101
Disease Assessment Scores	*C	Required based on diagnoses and/or when clinically indicated	Local	X0221-0
Patient Education	Yes		Snomed	171035004

Please note the following codes indicating when details are required

- ER: Every Review
- R: Registration
- AR: Annual Review
- DO ER: Diabetes Only, Every Review

Chronic Disease Management Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Vendor Version ID	Yes		Vendor implementation version	Local	X0243-0
Consultation Type	Yes		 Telephone consultation Consultation	Local Snomed Snomed	X0257-0 386472008 11429006

Message Version No	Yes		Numeric value to identify message phase e.g. 1, 2, 3 Min 1, Max 9 (initial value 2 to indicate Phase 2 messages)	Local	X0335-0

Diagnosis Segments

OBX Segment	Mand	When	Comment	ICD-10	Snomed
Diagnosis	Yes	ER	• Diabetes Type 2 • Asthma • COPD • Heart Failure • Ischaemic Heart Disease • Cerebrovascular Disease Stroke • Cerebrovascular Disease TIA • Atrial Fibrillation	• E11 • J45 • J44 • I50 • I25 • I64 • G45 • I48	• 44054006 • 195967001 • 13645005 • 84114007 • 414545008 • 230690007 • 266257000 • 49436004
Year of Diagnosis	Yes	ER	Year of diagnosis (observable entity)	Snomed	231000220104
Attending Hospital?	Yes	ER	Yes No	Snomed Local	268529002 • Yes • No
Visit Type	Yes		• CDM Registration • CDM Interim Review • CDM Annual Review	Local	X0318-0 • X0318-1 • X0318-2 • X0318-3

Other Major Diagnosis Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Diagnosis	Yes	ER	• Myocardial Infarction • Dementia • Cancer (stage 2 or higher) • Serious Mobility Issues • Chronic Kidney Disease • Significant Mental Illness (current) • Hypertension (On Treatment) • Inflammatory Arthritis • Other	SNOMED Local SNOMED Local Local Local	• 22298006 • 52448006 • X0249-0 • X0248-0 • 709044004 • 128293007 • X0319-1 • X0319-2 • FT

Please note that the new Value local codes assigned to "Cancer (stage 2 or higher)" and "Serious Mobility Issues" (i.e. "X0249-0" and "X0248-0") will be generated by the GP practice systems, once the CDM 2020 Changes go-live in July 2020 and are rolled out nationally. The original duplicate local codes assigned to these data items (i.e. "X0242-0" and "X0243-0") are stored on the CDM clinical messages that have been safeguarded within the Clinical Data Repository (CDR). This system has not gone live yet for a variety of reasons (e.g. COVID-19). These duplicate codes will be converted to the new unique codes, as each CDM clinical message is processed and imported into the CDR, following go live in July 2020

Medication Review Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Medication Review	Yes	ER	• Yes • No	Snomed Local	182836005 • YES • NO

Risk Factors Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Smoking Status	Yes	ER	Select one of: • Current (daily or occasional) • Ex-Smoker (gave up 6 months +) • Never • ~~Unknown / Not asked~~	Snomed Local	308512009 • CR • EX • NV • ~~UN~~
Smoking Intervention	*C	ER	Required if patient is a smoker i.e. current or quit within the last 6 months. Multi-select: • Brief Intervention • Signposted to HSE QUIT services • Referred to HSE QUIT service • Prescribed or referred for Stop Smoking medication • Patient declined / not interested • ~~No action documented~~	Local Local	X0231-0 • BI • SG • RF • PR • PD • ~~NA~~
Vaping Status	Yes	ER	Select one of: • Current (daily or occasional) • Ex-user (gave up 6 months +) • Never	Snomed Local	722499006 • CR • EX • NV
Alcohol AUDIT-C Risk Score	Yes	ER	Numeric	Local	X0331-0
Alcohol Brief Intervention Possible Dependence	*C	ER	Required if risk score is 20+ Multi-select: • Complete Full Audit Assessment • Referred to specialist substance misuse service • Patient declined / not interested	Local Local	X0332-0 • FA • RF • PD
Alcohol Brief Intervention Higher Risk	*C	ER	Required if risk score between 16-19 Multi-select: • Complete Full Audit Assessment	Local Local	X0333-0 • FA

			• Signposted to AskAboutAlcohol • Referral to HSE Drug and Alcohol confidential helpline • Patient declined / not interested		• SG • HL • PD
Alcohol Brief Intervention Increasing Risk	*C	ER	Required if risk score between 8-15 Multi-select: • Complete Full Audit Assessment • Brief Intervention • Signposted to AskAboutAlcohol • Patient declined / not interested		X0334-0 • FA • BI • SG • PD
Weight	Yes	ER	~~Required for Full CDM but not for Modified CDM…~~ Numeric, in kg Min 20kg, Max 220kg	Snomed	107647005
Height	Yes	R	Numeric, in cm Min 50cm, Max 250cm	Snomed	162755006
BMI	Yes	ER	Numeric, in kg/m2	Snomed	301331008
Waist Circumference	*CC	ER	Required for Full CDM but not for Modified CDM Numeric, in cm Min 50cm, Max 250cm	Snomed	276361009
Weight brief intervention – High Risk	*C	ER	Required if BMI <18.5 or >30 Multi-select: • Brief Intervention • Signposted to local weight management service. • REFERRED to Dietician • Patient declined / not interested • ~~No action documented~~	Local Local Snomed Local	X0139-1 • BI • 408289007 • 103699006 • PD • ~~NA~~
Weight brief intervention – Increased Risk	*C	ER	 Required if BMI >= 25 & <=30 Multi-select: • GIVEN brief advice/brief intervention on benefits of weight reduction • Signposted to local weight loss programmes • ~~REFERRED to Dietician~~ • Patient declined / not interested • ~~No action documented~~	Local Snomed Local	X0139-0 • 698471002 • 408289007 • ~~RF~~ • PD • ~~NA~~
Weight brief intervention – Normal	*C	ER	 Required if BMI >= 18.5 & <=24.9	Local	X0139-2

			Multi-select: • GIVEN brief advice/brief intervention to maintain healthy weight • Signposted to healthy living programme • Patient declined / not interested • ~~No action documented~~ • No Action Required	Snomed Local Snomed	• 698471002 • SG • PD • ~~NA~~ • 103316007
Physical Activity (Q1) – in a typical week how many days of physical activity 30+ mins		ER	Select one of: • 0 Days (Inadequate) • 1-4 days (Inadequate) • 5-7 days (Adequate) • Unable to be physically active • No information available	Local Local	X0223-0 • 0 • 1 • 5 • UN • NI
Physical Activity (Q2) - in a typical week have you had either 150 minutes moderate or 75 minutes vigorous activity	*C	ER	If physical activity <= 4 days Select one of: • Yes (adequate) • No (inadequate) • No information available	Local Local	X0223-1 • YES • NO • NI
Physical Activity Brief intervention	*C	ER	Required if questions 1 & 2 above report inadequate activity Multi-select: • GIVEN brief advice / brief intervention on benefits of physical activity • Signposted to "get active your way” • Patient declined / not interested • ~~No action documented~~	Local Local	X0224-0 • BI • SG • PD • ~~NA~~
Influenza vaccine	Yes	R &AR	• Yes • No • Declined by patient • Given elsewhere	Snomed Local	86198006 • YES • NO • PD • GE
Influenza vaccine date	*C	R &AR	Required if influenza vaccine is Y	Snomed	7241000122103
Pneumococcal Polysaccharide vaccine	Yes	R &AR	• Yes • No • Declined by patient • Given elsewhere	Snomed Local Snomed Local	571631000119106 • YES • NO • 401086001 • GE

Pneumococcal vaccine date	*C	R &AR	Required if pneumococcal vaccine is Y	Local	X0225-0
COVID Vaccine	Yes	R &AR	 • Yes • No • Declined by patient • Given elsewhere	Local Local	X0320-0 • YES • NO • PD • GE
COVID Vaccine Status up to date?	*C	R &AR	Required if COVID Vaccine is Y • Yes • No	Local Local	X0320-1 • YES • NO
QRisk3 Score	*C	ER	Not required for cardiovascular diagnoses Required for Full CDM but not for modified CDM Percentage, to 1 decimal place Calculator (https://www.qrisk.org/three/)	Snomed	135877001

Physical Exam Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Pulse Rate	*C	ER	Required for Full CDM but not for modified CDM Numeric, in bpm. Min 20 – Max 200 bpm	Snomed	162986007
Pulse Rhythm	*C	ER	Required for Full CDM but not for modified CDM Select one of: • Regular • Irregular	Snomed Snomed	364095004 • 162999005 • 275954009
Systolic blood pressure	*C	ER	Required for Full CDM but not for modified CDM Numeric, in mmHg Min 50 – Max 250 bpm	Snomed	271649006
Diastolic blood pressure	*C	ER	Required for Full CDM but not for modified CDM Numeric, in mmHg Min 30 – Max 180 bpm	Snomed	271650006

Diabetes Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Diabetes Related Amputation	Yes	DO ER	• Yes • No	Snomed Local	735199000 • YES • NO
Amputation Date	*C		Required when Amputation is Yes YYYY	Local	X0240-0
Foot and lower limb review	*CC	DO ER	Required for Full CDM but not for modified CDM Multi-select: • Posterior Tibial Present • Posterior Tibial Absent • Dorsalis Pedis Present • Dorsalis Pedis Absent • Vibration Sense Normal • Vibration Sense Abnormal • 10g Monofilament Test Normal • 10g Monofilament Test Abnormal • Foot Ulceration Present • Foot Ulceration Absent • Foot Deformity Present • Foot Deformity Absent	Snomed Snomed Local Snomed Local Snomed Local	401191002 • 301159004 • 301169005 • 301160009 • 301170006 • 299932007 • 274816000 • MN • MA • 95345008 • UA • 229844004 • FA
Retinal Screening – in last 13 months	~~*C~~ Yes	DO ER	Select one of: • Yes • No	Snomed Local	134395001 • YES • NO
Referred for Retinal Screening	*C	DO ER	~~Required for Full CDM but not for modified CDM~~ Required when Retinal Screening is N Select one of: • Yes • No • Patient Declined	Snomed Local	398852003 • YES • NO • PD

Diagnostic Investigations Segments

See Appendix Investigations Table for details of when specific tests are required

OBX Segment	Mand	When	Comment	Code Type	Value
ECG - since last review	Yes		Select one of: • Yes • No • Not Available	Snomed Local	268400002 • YES • NO • NA
ECG Result	*C		Required if ECG is Yes	Local	X0236-1

			Select one of: • Sinus Rhythm • Atrial Fibrillation • Pacemaker • Other Abnormal Rhythm • ~~Free Text~~	Snomed Local	• 426783006 • 164889003 • 426083000 • 102594003 • ~~FT~~
Last ECG Date	*C	ER	• YYYY	Local	• X0236-2
Echocardiography	*C		Generally, relevance to heart failure but may be used for other conditions. Select one of: • Yes • No • Not Available	Snomed Local	40701008 • YES • NO • NA
Echocardiography result	*C		Required if Echocardiography is Yes Select one of: • (EF<30%) Severely Reduced • (EF30-39%) Moderately Reduced • (EF40-49%) Mildly Reduced • (EF>50%) Normal • (EF>70%) Hyperdynamic	Local Local	X0237-1 • SR • MR • MD • NR • HY
Last Echocardiography Date	*C	ER	• YYYY	Local	• X0237-2
Spirometry	Yes		 Select one of: • Yes • No • Not Available	Snomed Local	171255006 • YES • NO • NA
Spirometry result	*C		Required when Spirometry is Y Select one of: • (FEV1 >= 80% predicted) Mild Gold 1 • (50% FEV1 <= 80% predicted) Moderate Gold 2 • (30% <= FEV1 <= 50% predicted) Severe Gold 3 • (FEV1<= 30% predicted) Very Severe Gold 4	Local Local	X0238-1 • G1 • G2 • G3 • G4

Laboratory Investigations Segments

See Appendix Investigations Table for details of when specific tests are required. Where a lab test is mandated for a particular diagnosis and review type the clinical message needs to include this result.

** These results are required/conditional for Full CDM but not for modified CDM*

OBX Segment	Mand	When	Comment	Code Type	Value
Haemoglobin	*C		Select Result	Snomed	26604007
Total Cholesterol (Lipids)	*C		Select Result	Snomed	121868005
HDL Cholesterol (Lipids)	*C		Select Result	Snomed	28036006
LDL Cholesterol (Lipids)	*C		Select Result OR Not Available	Snomed Local	113079009 • NA
Triglycerides (Lipids)	*C		Select Result	Snomed	104784006
HBA1c	*C		Select Result	Snomed	43396009
Fasting Glucose	*C		Select Result OR Not Available	Snomed	271062006
Serum Creatinine	*C		Select Result	Snomed	113075003
eGFR	*C		~~Select Result~~ Select Result OR Not Available	Snomed	80274001 • NA
Albumin/Creatinine Ratio (ACR)	*C		Select Result OR Not Available	Snomed Local	250745003 • NA
Creatinine Clearance	*C		Select Result Numeric, whole number (no decimal places allowed ("Original Cockcroft-Gault Formula" result from Creatinine Clearance Calculator)	Local	• X0328-0
B-type Natriuretic Test (BNP)	*C		Where B-type Natriuretic Test is mandated either BNP or NT Pro BNP can be provided Select Result OR Not Available	Local Local	X0239-0 • NA
B-type Natriuretic Test (NT Pro BNP)	*C		Where B-type Natriuretic Test is mandated either BNP or NT Pro BNP can be provided Select Result OR Not Available	Local Local	X0242-0 • NA
Thyroid Function Test TFT	*C		Select one of: • Yes • No	Snomed Local	35650009 • YES • NO
Liver Function Test LFT	*C		Select one of: • Yes • No	Snomed Local	26958001 • YES • NO

Disease Assessment Scores Segments

OBX Segment	Mand	When	Comment	Code Type	Value
COPD dyspnoea score	Yes	COPD R & AR	Numeric (0-4)	Local	X0234-0
CHA_2DS_2-VASc Score	Yes	AFIB R & AR	Numeric (0-9)	Local	X0235-0

Patient Education Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Education provided by GP / Practice team	Yes	ER	Select one of: • Yes • No • Declined	Snomed Local	171035004 • YES • NO • PD
Referred to appropriate structured education programme	Yes	ER	Select one of: • Yes • No • Declined • Not Available	Snomed Local	305931005 • YES • NO • PD • NA
Referral details	*C	ER	Required when referred is Y Select one of: • Referred previously • Referred today • Declined	Local Local	X0241-0 • RP • RT • PD
Agreed written Care Plan	Yes	ER	Select one of: • Yes • ~~No~~ • Declined	Snomed Local	722504006 • YES • ~~NO~~ • PD

Opportunistic Case Findings

The following tables define the list of clinical observations relevant to OCF returns:

Clinical Information Requirements

OBR Segment	Mand	Comment	Code Type	Value
Opportunistic Case Findings	Yes	Initial segment identifying programme	Local	X0330-0
Indications For OCF	Yes		Local	X0311-0
Risk Factors	Yes		Local	X0115-0
Physical exam section	Yes		Snomed	425044008
Laboratory report	Yes		Snomed	4241000179101
OCF Outcome	Yes		Local	X0321-0

Opportunistic Case Findings Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Vendor Version ID	Yes		Vendor implementation version	Local	X0243-0
Consultation Type	Yes		Consultation	Local Snomed	X0257-0 11429006
Visit Type	Yes		• OCF Initial Assessment • OCF Subsequent Assessment (after 5 years)	Local Local	X0318-0 • X0321-1 • X0321-2
Message Version No	Yes		Numeric value to identify message phase e.g. 1, 2, 3 Min 1, Max 9 (initial value 2 to indicate Phase 2 messages)	Local	X0335-0

Indications for OCF Segment *(One or more options must be selected from the list below)*

OBX Segment	Mand	When	Comment	Code Type	Value
Hypertension >=140/90mmHg	*C	ER	Radio Button • Yes • No	Local Local	X0312-0 • YES • NO
Current Smoking Status	*C	ER	Radio Button • Yes • No	Snomed Local	308512009 • YES • NO
BMI >=30kg/m2	*C	ER	Radio Button • Yes • No	Local Local	X0313-0 • YES • NO
Previous BNP >= 34pg/ml or NTproBNP >=125pg/ml	*C	ER	Radio Button • Yes • No – (if mapped previously, it may be possible display BNP/NT Pro BNP result)	Snomed Local	414798009 • YES • NO
Ethnicity – auto populate with Y – if PID.22 above is one of the following: (Irish Travellers,Roma, Black African, Black	*C	ER	Radio Button • Yes • No	Local Local	X0314-0 • YES • NO

Irish,Other Black, Other Asian)					
History of Gestational Diabetes	*C	ER	Radio Button • Yes • No	Snomed Local	472971004 • YES • NO
Dyslipidaemia(Previously recorded)	*C	ER	Radio Button • Yes • No (If mapped previously it may be possible to display HDL result)	Snomed Local	370992007 • YES • NO
Moderate or severe chronic Kidney disease (eGFR <60ml/min 1.73m2(previously recorded)	*C	ER	Radio Button • Yes • No (If mapped previously it may be possible to display eGFR result)	Snomed Local	709044004 • YES • NO
History of severe Mental illness	*C	ER	Radio Button • Yes • No	Snomed Local	128293007 • YES • NO
Other	*C	ER	Free text box – If other is Y GP must insert free text (Min no of characters required = 10, Max = 140)	Snomed Local	74964007 • FT

Risk Factors Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Smoking Status	Yes	ER	Select one of: • Current (daily or occasional) • Ex-Smoker (gave up 6 months +) • Never	Snomed Local	308512009 • CR • EX • NV
Vaping Status	Yes	ER	Select one of: • Current (daily or occasional) • Ex-user (gave up 6 months +) • Never	Snomed Local	722499006 • CR • EX • NV
Weight	Yes	ER	Numeric, in kg Min 20kg, Max 220kg	Snomed	107647005
Height	Yes	ER	Numeric, in cm Min 50cm, Max 250cm	Snomed	162755006
BMI	Yes	ER	Numeric, in kg/m2	Snomed	301331008
Waist Circumference	Yes	ER		Snomed	276361009

			Numeric, in cm Min 50cm, Max 250cm		
QRisk3 Score	Yes		Not required for patients with cardiovascular disease Percentage, to 1 decimal place	Snomed	135877001

Physical Exam Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Pulse Rate	Yes	ER	Numeric, in bpm. Min 20 – Max 200 bpm	Snomed	162986007
Pulse Rhythm	Yes	ER	Select one of: • Regular • Irregular	Snomed Snomed	364095004 • 162999005 • 275954009
Systolic blood pressure	Yes	ER	Numeric, in mmHg Min 50 – Max 250 bpm	Snomed	271649006
Diastolic blood pressure	Yes	ER	Numeric, in mmHg Min 30 – Max 180 bpm	Snomed	271650006

Laboratory Investigations Segments

See Appendix Investigations Table for details of when specific tests are required. Where a lab test is mandated for a particular review type the clinical message needs to include this result.

** These results are required/conditional for OCF*

OBX Segment	Mand	When	Comment	Code Type	Value
Haemoglobin	Yes	ER	Select Result	Snomed	26604007
Total Cholesterol (Lipids)	Yes	ER	Select Result	Snomed	121868005
HDL Cholesterol (Lipids)	Yes	ER	Select Result	Snomed	28036006
LDL Cholesterol (Lipids)	Yes	ER	Select Result OR Not Available	Snomed Local	113079009 • NA
Triglycerides (Lipids)	Yes	ER	Select Result	Snomed	104784006
HBA1c	Yes	ER	Select Result	Snomed	43396009
Serum Creatinine	Yes	ER	Select Result	Snomed	113075003
eGFR	No	ER	Select Result OR Not Available	Snomed Local	80274001 • NA
Albumin/Creatinine Ratio (ACR)	No	ER	Select Result OR Not Available	Snomed Local	250745003 • NA
B-Type Natriuretic Test(BNP) (OCF)	No		Select Result OR Not Available	Local Local	X0239-0 • NA

B-Type Natruiretic test (NT Pro BNP) (OCF)	No		Select Result OR Not Available	Local Local	X0242-0 • NA

OCF Outcome Segments

OCF Outcome	Yes	ER	 Drop down box (a) Normal (b) Register on Prevention Programme (c) Diagnosed with a chronic Disease - register on Treatment Programme	Local Local Local Snomed	X0321-0 X0321-3 X0321-4 27624003
Prevention Programme Registration Reason	*C	ER	Required if Answer to Outcome for OCF is (b) Register on Prevention Programme Tick the appropriate reason for registration **(Select one or more**) • QRISK 3 greater or equal to 20% • Hypertension Stage 1 (BP 140/90 to 159/99mmHg) with target organ damage • Hypertension Stage 2 or 3 (BP>160/100mmHg) • Pre-Diabetes • Previous BNP greater or equal to 34 pg/ml or NT PRO BNP greater or equal to 125pg/ml, if previously recorded	Local Local Snomed	X0316-0 X0316-1 X0316-2 X0316-3 X0316-4 414798009
CDM Programme Registration Reason	*C	ER	Required if answer to Outcome for OCF is (c) Diagnosed with a Chronic Disease **Tick the appropriate diagnoses** • Diabetes Type 2 = E11 (ICD10) • Heart Failure = I50 • Ischaemic Heart Disease = I25 • Cerebrovascular Disease Stroke = I64 • Cerebrovascular Disease TIA = G45 • Atrial Fibrilliation = I48	Local Snomed	X0135-1 44054006 84114007 414545008 230690007 266257000 49436004

Prevention Programme

The following tables define the list of clinical observations relevant to PP returns:

Clinical Information Requirements

OBR Segment	Mand	Comment	Code Type	Value

Prevention Programme	Yes	Initial segment identifying programme	Local	X0329-0
Clinical Details	Yes	Collected at registration and submitted always	Local	X0322-0
Medication Review	Yes		Snomed	182836005
Risk Factors	Yes		Local	X0115-0
Physical exam section	Yes		Snomed	425044008
Diagnostic Investigations	No		Local	X0220-0
Laboratory report	Yes		Snomed	4241000179101
Patient Education	Yes		Snomed	171035004
PP Outcome	Yes		Local	X0323-0

Prevention Programme Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Vendor Version ID	Yes		Vendor implementation version	Local	X0243-0
Consultation Type	Yes		Consultation	Local Snomed	X0257-0 11429006
Message Version No	Yes		Numeric value to identify message phase e.g. 1, 2, 3 Min 1, Max 9 (initial value 2 to indicate Phase 2 messages)	Local	X0335-0

Clinical Details Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Reason for registration on PP	Yes	ER	Radio Button & Multi select • QRISK 3 greater or equal to 20% • Hypertension Stage 1 (BP 140/90 to 159/99mmHg) with target organ damage • Hypertension Stage 2 or 3 (BP>160/100mmHg) • Pre-Diabetes • Previous BNP greater or equal to 34 pg/ml or NT pro BNP greater or equal to 125pg/ml, if previously recorded Collected at registration and submitted always	Local Snomed	X0316-0 • X0316-1 • X0316-2 • X0316-3 • X0316-4 • 414798009
Year of Registration on PP	Yes	ER	Year Identified YYYY Collected at registration and submitted always	Local	X0317-0
Visit Type	Yes			Local	X0318-0

			• PP Registration • PP Annual Review		• X0324-0 • X0325-0

Medication Review Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Medication Review	Yes	ER	• Yes • No	Snomed Local	182836005 • YES • NO

Risk Factors Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Smoking Status	Yes	ER	Select one of: • Current (daily or occasional) • Ex-Smoker (gave up 6 months +) • Never	Snomed Local	308512009 • CR • EX • NV
Smoking intervention	*C	ER	Required if patient is a smoker i.e. current or quit within the last 6 months. Multi-select: • Brief Intervention • Signposted to HSE QUIT services • Referred to HSE QUIT service • Prescribed or referred for Stop Smoking medication • Patient declined / not interested	Local Local	X0231-0 • BI • SG • RF • PR • PD
Vaping Status	Yes	ER	Select one of: • Current (daily or occasional) • Ex-user (gave up 6 months +) • Never	Snomed Local	722499006 • CR • EX • NV
Alcohol AUDIT-C Risk Score	Yes	ER	Numeric	Local	X0331-0
Alcohol Brief Intervention Possible Dependence	*C	ER	Required if risk score is 20+ Multi-select: • Complete Full Audit Assessment • Referred to specialist substance misuse service • Patient declined / not interested	Local Local	X0332-0 • FA • RF • PD
Alcohol Brief Intervention Higher Risk	*C	ER	Required if risk score between 16-19 Multi-select: • Complete Full Audit Assessment	Local Local	X0333-0 • FA

			• Signposted to AskAboutAlcohol • Referral to HSE Drug and Alcohol confidential helpline • Patient declined / not interested		• SG • HL • PD
Alcohol Brief Intervention Increasing Risk	*C	ER	Required if risk score between 8-15 Multi-select: • Complete Full Audit Assessment • Brief Intervention • Signposted to AskAboutAlcohol • Patient declined / not interested		X0334-0 • FA • BI • SG • PD
Weight	M	ER	Numeric, in kg Min 20kg, Max 220kg	Snomed	107647005
Height	M	R	Numeric, in cm • Min 50cm, Max 250cm	Snomed	162755006
BMI	M	ER	• Numeric, in kg/m2	Snomed	301331008
Waist Circumference	M	ER	Numeric, in cm Min 50cm, Max 250cm	Snomed	276361009
Weight Brief intervention – high risk	*C	ER	Required if BMI <18.5 or >30 Multi-select: • Brief Intervention • Signposted to local weight management service. • REFERRED to Dietician • Patient declined / not interested	Local Local Snomed Local	X0139-1 • BI • 408289007 • 103699006 • PD
Weight Brief Intervention – increased risk	*C	ER	Required if BMI >= 25 & <=30 Multi-select: • GIVEN brief advice/brief intervention on benefits of weight reduction • Signposted to local weight loss programmes • Patient declined / not interested	Local Snomed Local	X0139-0 • 698471002 • 408289007 • PD
Weight Brief Intervention – normal	*C	ER	Required if BMI >= 18.5 & <=24.9 Multi-select: • GIVEN brief advice/brief intervention to maintain healthy weight • Signposted to healthy living programme • Patient declined / not interested • No Action Required	Local Snomed Local Snomed	X0139-2 • 698471002 • SG • PD 103316007

Physical Activity (Q1) – in a typical week how many days of physical activity 30+ mins	M	ER	Select one of: • 0 Days (Inadequate) • 1-4 days (Inadequate) • 5-7 days (Adequate) • Unable to be physically active • No information available	Local Local	X0223-0 • 0 • 1 • 5 • UN • NI
Physical Activity (Q2) - in a typical week have you had either 150 minutes moderate or 75 minutes vigorous activity	*C	ER	If physical activity <= 4 days Select one of: • Yes (adequate) • No (inadequate) • No information available	Local Local	X0223-1 • YES • NO • NI
Physical Activity Brief intervention	*C	ER	Required if questions 1 & 2 above report inadequate activity Multi-select: • GIVEN brief advice / brief intervention on benefits of physical activity • Signposted to "get active your way" • Patient declined / not interested	Local Local	X0224-0 • BI • SG • PD
QRisk3 Score	M	ER	• Calculator: https://www.qrisk.org/three/	Snomed	• 135877001

Physical Exam Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Pulse Rate	M	ER	Numeric, in bpm. Min 20 – Max 200 bpm	Snomed	162986007
Pulse Rhythm	M	ER	Select one of: • Regular • Irregular	Snomed Snomed	364095004 • 162999005 • 275954009
Systolic blood pressure	M	ER	Numeric, in mmHg Min 50 – Max 250 bpm	Snomed	271649006
Diastolic blood pressure	M	ER	Numeric, in mmHg Min 30 – Max 180 bpm	Snomed	271650006

Diagnostic Investigations Segments

OBX Segment	Mand	When	Comment	Code Type	Value
ECG - since last review	*C	ER	Select one of: • Yes • No	Snomed Local	268400002 • YES • NO

			• Not Available		• NA
ECG Result	*C		Required if ECG is Yes Select one of: • Sinus Rhythm • Atrial Fibrillation • Pacemaker • Other Abnormal Rhythm	Local Snomed	X0236-1 • 426783006 • 164889003 • 426083000 • 102594003
Last ECG Date	*C	ER	YYYY	Local	X0236-2
Echocardiography	*C		Generally relevance to heart failure but may be used for other conditions. Select one of: • Yes • No • Not Available	Snomed Local	40701008 • YES • NO • NA
Echocardiography result	*C		Required if Echocardiography is Yes Select one of: • (EF<30%) Severely Reduced • (EF30-39%) Moderately Reduced • (EF40-49%) Mildly Reduced • (EF>50%) Normal • (EF>70%) Hyperdynamic	Local Local	X0237-1 • SR • MR • MD • NR • HY
Last Echo Date	*C	ER	YYYY	Local	X0237-2

Laboratory Reports Segments

See Appendix Investigations Table for details of when specific tests are required. Where a lab test is mandated for a particular review type the clinical message needs to include this result.

OBX Segment	Mand	When	Comment	Code Type	Value
Haemoglobin	*C	ER	Select Result	Snomed	26604007
Total Cholesterol (Lipids)	M	ER	Select Result	Snomed	121868005
HDL Cholesterol (Lipids)	M	ER	Select Result	Snomed	28036006
LDL Cholesterol (Lipids)	M	ER	Select Result OR Not Available	Snomed Local	113079009 • NA
Triglycerides (Lipids)	M	ER	Select Result	Snomed	104784006
HBA1c	M	ER	Select Result	Snomed	43396009
Fasting Glucose	N	ER	Select Result OR Not Available	Snomed	271062006
Serum Creatinine	M	ER	Select Result	Snomed	113075003
eGFR	N	ER	Select Result	Snomed	80274001

			OR Not Available	Local	NA
Albumin/Creatinine Ratio (ACR)	N	ER	Select Result OR Not Available	Snomed Local	250745003 NA
B-type Natriuretic Test (BNP)	N		Where B-type Natriuretic Test is mandated either BNP or NT Pro BNP can be provided Select Result OR Not Available	 Local Local	 X0239-0 NA
B-type Natriuretic Test (NT Pro BNP)	N		Where B-type Natriuretic Test is mandated either BNP or NT Pro BNP can be provided Select Result OR Not Available	 Local Local	 X0242-0 NA
Thyroid Function Test TFT	M	R	Select one of: • Yes • No	Snomed Local	35650009 • YES • NO
Liver Function Test LFT	M	R	Select one of: • Yes • No	Snomed Local	26958001 • YES • NO

Patient Education Segments

OBX Segment	Mand	When	Comment	Code Type	Value
Education provided by GP / Practice team	Yes	ER	Select one of: • Yes • No • Declined	Snomed Local	171035004 • YES • NO • PD
Referred to Diabetes prevention programme	*C	ER	Mandatory if Pre-Diabetes has been selected Select one of: • Yes • No • Declined • Not Available	Local Local	X0326-0 • YES • NO • PD • NA
Referral details	*C	ER	Required when referred is Y Select one of: • Referred previously • Referred today • Declined	Local Local	X0241-0 • RP • RT • PD

Agreed written Care Plan	M	ER	Select one of: • Yes • Declined	Snomed Local	722504006 • YES • PD

PP Outcome Segments

Diagnosed with Chronic Disease	M	ER	Select one of: • Yes • No	Snomed Local	27624003 • YES • NO
CDM Diagnosis	*C	ER	Required if diagnosed with Chronic Disease is YES Tick the appropriate diagnoses • Diabetes Type 2 = E11 • Heart Failure = I50 • Ischaemic Heart Disease = I25 • Cerebrovascular Disease Stroke = I64 • Cerebrovascular Disease TIA = G45 • Atrial Fibrillation = I48	Snomed	416239002 • 44054006 • 84114007 • 414545008 • 230690007 • 266257000 • 49436004

6 Acknowledgement Message

When the GP vendor system sends an assessment reimbursement/clinical message to PCERS/ CDR via Healthlink, an application acknowledgement message must be sent back to the vendor by both recipients. If no acknowledgement is received within 24 hours then we can assume the reimbursement/clinical message has not been received. The GP needs to be aware that no acknowledgement means the submission has not been received.

ACK	**General Acknowledgment**	**Chapter**
MSH	Message Header	2
MSA	Message Acknowledgment	2
[ERR]	Error	2

Message Acknowledgement Segment (MSA)

Field	Mand	Value	Comment	HL7
Acknowledgement Code	Yes	• AA • AE • AR		<MSA.1>
Message Control ID	Yes		The message control ID of the message sent by the sending system	<MSA.2>
Text Message	No	PCERS Claim No.	Phase 1 solution to facilitate return of Claim No by PCERS	<MSA.3>

* Use of *MSA-3-text message* and *MSA-6-error condition* are deprecated in favor of *ERR-1-Error code and location*.

Error Segment (ERR)

Field	Mand	Value	Comment	HL7
Error code and location	Yes			<ERR.1>

Sample Acknowledgement Message

Below is an XML sample of how an ACK message type is formatted. Values in blue are taken from the originating Vendor message segments.

```
<?xml version="1.0" encoding="UTF-8"?>
<ACK xmlns="urn:hl7-org:v2xml">
  <MSH>
    <MSH.1>|</MSH.1>
    <MSH.2>^~\&amp;</MSH.2>
    <MSH.3>
      <HD.1>PCERS.HEALTHLINK.13 [FacilityName.HEALTHLINK.13]</HD.1>
    </MSH.3>
    <MSH.4>
      <HD.1>PCERS [Facility Name MSH.6/HD.1]</HD.1>
      <HD.2>99990 [Facility Code MSH.6/HD.2] </HD.2>
      <HD.3>L</HD.3>
    </MSH.4>
    <MSH.5>
      <HD.1>HELIXPM</HD.1>
      <HD.2></HD.2>
      <HD.3></HD.3>
    </MSH.5>
    <MSH.6>
      <HD.1>Dr. Smith, John [GP Name MSH.4/HD.1]</HD.1>
      <HD.2>123564.1234 [GP MCN MSH.4/HD.2]</HD.2>
      <HD.3>MCN.HLPracticeID [MSH.4/HD.3]</HD.3>
    </MSH.6>
    <MSH.7>
      <TS.1>201909141622</TS.1>
    </MSH.7>
    <MSH.9>
      <MSG.1>ACK</MSG.1>
      <MSG.2>R01 [MessageType MSH.9/MSG.2]</MSG.2>
    </MSH.9>
    <MSH.10>ACK201509141622353564</MSH.10>
    <MSH.11>
      <PT.1>P</PT.1>
    </MSH.11>
    <MSH.12>
      <VID.1>2.4</VID.1>
    </MSH.12>
  </MSH>
  <MSA>
    <MSA.1>AA</MSA.1>
    <MSA.2>ORU20190823162054003564</MSA.2>
    <MSA.3>12345678</MSA.3>
  </MSA>
</ACK>
```

The values for sending application and sending facility in the acknowledgement message are the same as the values for receiving application and receiving facility in the initiating assessment message and vice versa.

MSH.10 is the unique message control ID of the acknowledgement message and is not related to MSA.2, the message control ID of the assessment message that is being

acknowledged. MSH.10 is generated using the format of the current date and time, up to the milliseconds. `Ex: ACKyyyyMMddHHmmssfff`

The three possible values for MSA.1, Acknowledgement Code are:

- AA Application Acknowledgement
- AE Application Error
- AR Application Reject

This tells you whether the original assessment message, as identified in MSA.2, has been accepted by PCERS/CDR.

An Application Reject acknowledgement may mean one of two things:

- There is a major problem with the message and it cannot be validated by the receiving system;
- There is a problem with the receiving system and it is unable to process the message, though the message itself is fine;

An Application Error message means there is a problem with the content of the message. This should be diagnosed and corrected by the sending system before resending the message.

The Message Error Segment (ERR) is required where an error is found in a HL7 message. The ERR Segment is used to add error information to acknowledgement messages. Healthlink have added codes to the HL7 Table 0357 - Message Error Condition Codes, included in this document. If an error is not included in this table, the unknown code can be used and new errors can be added to this table accordingly as they occur.

SEQ	LEN	DT	OPT	RP/#	TBL#	ITEM #	ELEMENT NAME
1	80	CM	R	**Y**		00024	Error Code and Location

Table 1 Message Error (ERR) Segment

Notes:

- The ERR segment is optional in an ACK message, but where it does appear the ERR.1 field is required.
- The ERR.1 field is repeatable, allowing for information on multiple errors to be displayed.
- The components of the ERR.1 field are:
    - segment ID, the three letter identifier of the segment in which the error occurred;
    - sequence, the Set ID of the segment if there is more than one segment with the same segment ID in the message;
    - field position, the field number within the segment where the error occurred;
    - code identifying error, taken from HL7 table 0357 Message Error Condition Codes and shown in Section 14 of this document.

Consider an example where an ORU_R01 message is missing the required fields PID.3 Patient Identifier and PID.5 Patient Name in the MSH Segment. In this case the ERR segment

of the acknowledgment message, which would have AE in the MSA.1 field, would look as follows:

```
<ERR>
        <ERR.1>
                <ELD.1>PID</ELD.1>
                <ELD.3>3</ELD.3>
                <ELD.4>
                        <CE.1>101</CE.1>
                        <CE.2>Required field missing</CE.2>
                        <CE.3>HL70357</CE.3>
                </ELD.4>
        </ERR.1>
        <ERR.1>
                <ELD.1>PID</ELD.1>
                <ELD.3>5</ELD.3>
                <ELD.4>
                        <CE.1>101</CE.1>
                        <CE.2>Required field missing</CE.2>
                        <CE.3>HL70357</CE.3>
                </ELD.4>
        </ERR.1>
</ERR>
```

For the current list of error codes see HL7 Table 0357 in Code Tables section below.

7 Validation of Data

Healthlink will validate the MSH and PID segments of the assessment message to ensure that the sender, receiver and patient details are valid. The overall structure of the message will also be validated prior to forwarding on to the PCERS & CDM Clinical Data Repository. However, the onus is on the vendor to ensure correct OBR & OBX segments and codes are used for each type of reimbursement and clinical message. The PCERS and Health Intelligence Unit must ensure appropriate validation is also carried out on receipt of all messages.

8 Message Transportation

See “WS HealthlinkOnline Tech GP Vendor v1.15.pdf” for the latest version of the vendor web service documentation.

Vendors submit messages to Healthlink via the normal SubmitMessage API web service.

1. Each submitted message will return an Ack/Nack from Healthlink indicating the message has been received.
2. Where messages are integrated into other systems, as in the case of PCERS & the CDR, an Ack/Nack will be generated by PCERS/CDR. Therefore the processing of these ack messages may be somewhat slower. Vendors will need to retrieve the acks using the RetrieveACKbyMessageID or GetAllUnprocessedMessages(ByMsgtype) web service methods. When GetAllUnprocessedMessages(ByMsgtype) is invoked it will be necessary to flag messages as processed using the SetMessagesProcessed method. This step will not be required for the RetrieveACKbyMessageID API.

The same transport mechanism will be used for ACKs that is used to send the originating message to the PCERS/CDR:

- The assessment messages will be placed on an MSMQ on the Healthlink Central Bridge and sent to the PCERS/CDR

TCP Service:

- Acknowledgments are an integral part of Healthlink Online V3 TCP/IP version. It works as a mandatory audit/confirmation of message successful delivery and processing for both Healthlink and the CDR.

FTP Service:

- The PCRS Bridge will use FTP to place the reimbursement messages in a dedicated folder on the PCRS FTP server. E.g. folder 71
    - FTPHealthlinkFolder/Live/71 or FTPHealthlinkFolder/Test/71
- ACKs and NACKS will be placed by PCRS/Clinical Repository in folder '13/sub-folder' for pickup by Healthlink
    - e.g. FTPHealthlinkFolder/Test/13/71

Appendix 1

Appendix Code Tables

Codes for Observation Request Segments (OBR.4)

Text	Code
Chronic Disease Management (CDM)	X0135-0

Codes for Diagnosis Segments

Text	ICD-10 code	Snomed
Diabetes Type 2	E11	44054006
Asthma	J45	195967001
COPD	J44	13645005
Heart Failure	I50	84114007
Ischaemic Heart Disease	I25	414545008
Cerebrovascular Disease Stroke	I64	230690007
Cerebrovascular Disease TIA	G45	266257000
Atrial Fibrillation	I48	49436004

SNOMED Codes for Assessment Observation Result Segments (OBX)

Text	SNOMED code
Chronic long term disease management required (finding)	416239002
Chronic disease (disorder)	27624003
Physical exam section (record artefact)	425044008
Laboratory report (record artefact)	4241000179101
Diabetes mellitus type 2 (disorder)	44054006
Asthma (disorder)	195967001

Chronic obstructive lung disease (disorder)	13645005
Heart failure (disorder)	84114007
Ischemic heart disease (disorder)	414545008
Cerebrovascular accident (disorder)	230690007
Transient ischemic attack (disorder)	266257000
Atrial fibrillation (disorder)	49436004
Year of diagnosis (observable entity)	231000220104
Myocardial Infarction (disorder)	22298006
Dementia (disorder)	52448006
Chronic Kidney Disease (disorder)	709044004
Chronic mental disorder (disorder)	128293007
Smoking monitoring status (finding)	308512009
Weight	107647005
Height	162755006
BMI	301331008
Waist Circumference	276361009
Refer to weight management program (procedure)	408289007
Patient referral to dietitian (procedure)	103699006
Referral to dietician declined (situation)	134385008
Patient advised about weight management (situation)	698471002
Influenza vaccine	86198006
Date of vaccination	7241000122103
Administration of pneumococcal polysaccharide 23 valent vaccine (procedure)	571631000119106
Pneumococcal vaccination declined (situation)	401086001
CVD Risk Score	135877001
Review of medication (procedure)	182836005
On examination - pulse rate (finding)	162986007
Pulse rhythm (observable entity)	364095004
On examination - pulse rhythm regular (finding)	162999005
On examination - irregular pulse (finding)	275954009
Systolic blood pressure	271649006
Diastolic blood pressure	271650006
Proteinuria	29738008
(Haematuria) Blood in urine	34436003
History of diabetes related lower limb amputation (situation)	735199000
Diabetic foot examination (regime/therapy)	401191002
Posterior tibial pulse present	301159004
Posterior tibial pulse absent (finding)	301169005
Dorsalis pulse present (finding)	301160009
Dorsalis pulse absent (finding)	301170006
Finding of vibration sense (finding)	299932007
Vibration sense absent (finding)	274816000

Finding of vibration sense (finding)	299932007
Ulcer of foot (disorder)	95345008
Deformity of foot (finding)	229844004
Diabetic retinopathy screening (procedure)	134395001
Referral to community retinal screening service (procedure)	398852003
12 lead ECG (procedure)	268400002
Electrocardiogram: sinus rhythm (finding)	426783006
Electrocardiographic atrial fibrillation (finding)	164889003
Electrocardiogram: pacemaker active (finding)	426083000
Electrocardiogram abnormal (finding)	102594003
Echocardiography (procedure)	40701008
Spirometry screening (procedure)	171255006
(Haemoglobin) Complete blood count (procedure)	26604007
Total cholesterol measurement (procedure)	121868005
High density lipoprotein cholesterol measurement (procedure)	28036006
Low density lipoprotein cholesterol measurement (procedure)	113079009
Lipids, triglycerides measurement (procedure)	104784006
Hemoglobin A1c measurement (procedure)	43396009
Fasting blood glucose measurement (procedure)	271062006
Creatinine measurement, serum (procedure)	113075003
Glomerular filtration rate (observable entity)	80274001
Albumin/creatinine ratio measurement (procedure)	250745003
Thyroid panel (procedure)	35650009
Hepatic function panel (procedure)	26958001
~~Modified Medical Research Council Dyspnoea scale score (observable entity)~~	~~221000220102~~
Health education given (situation)	171035004
Referral by general practitioner (procedure)	305931005
Care plan goal agreed (finding)	722504006
Telephone Consultation	386472008
Consultation	11429006
N-terminal pro-B-type natriuretic peptide (substance)	414798009
History of gestational diabetes mellitus (situation)	472971004
Dyslipidemia (disorder)	370992007
Chronic kidney disease (disorder)	709044004
Chronic mental disorder (disorder)	128293007
Other (qualifier value)	74964007
Patient action not required (contextual qualifier) (qualifier value)	103316007
Electronic cigarette user (finding)	722499006
Chronic disease (disorder)	27624003

Local Codes for Data Items for which a Snomed Code is not available

Text	Local code
Risk Factors	X0115-0
Other Investigations	X0220-0
Disease Assessment	X0221-0
Smoking Intervention	X0231-0
Alcohol Risk Score	X0232-0
Alcohol Brief Intervention High Risk	X0233-0
Alcohol Brief Intervention Increased Risk	X0233-1
Weight brief intervention – High Risk	X0139-1
Weight brief intervention – Increased Risk	X0139-0
Weight brief intervention – Normal Risk	X0139-2
Physical Activity 30+ mins	X0223-0
Physical Activity 150 mins moderate/75 mins vigorous	X0223-1
Physical Activity Brief intervention	X0224-0
Pneumococcal vaccine date	X0225-0
ECG Result	X0236-1
Echocardiography result	X0237-1
Spirometry result	X0238-1
B-type Natriuretic Test (BNP)	X0239-0
B-type Natriuretic Test (NT Pro BNP)	X0242-0
Amputation date	X0240-0
Referral details	X0241-0
COPD dyspnoea score	X0234-0
Chad score	X0235-0
Vendor Version Number	X0243-0
Consultation Type	X0257-0
Cancer (stage 2 or higher)	X0249-0
Serious Mobility Issues	X0248-0
Reason for Registration on PP	X0316-0
Indications for OCF	X0311-0
Consultation Type	X0257-0
Hypertension	X0312-0
BMI >=30kg/m2	X0313-0
Ethnicity	X0314-0
QRISK 3 >= 20%	X0316-1
Hypertension Stage 1 with target organ damage	X0316-2
Hypertension Stage 2 or 3	X0316-3
Pre-Diabetes	X0316-4
Year of Registration on PP	X0317-0
CDM Registration	X0318-1
CDM Interim Review	X0318-2
CDM Annual Review	X0318-3
Hypertension (On Treatment)	X0319-1
Inflammatory Arthritis	X0319-2
COVID Vaccine	X0320-0

COVID Vaccine Status up to date	X0320-1
Last ECG Date	X0236-2
Last Echocardiography Date	X0237-2
OCF Outcome	X0321-0
OCF Initial Assessment	X0321-1
OCF Subsequent Assessment (after 5 years)	X0321-2
Normal	X0321-3
Register on Prevention Programme	X0321-4
CDM Programme Registration Reason	X0135-1
Clinical Details	X0322-0
PP Outcome	X0323-0
PP Registration	X0324-0
PP Annual Review	X0325-0
Referred to Diabetes prevention programme	X0326-0
CDM Diagnosis	X0327-0
Message Version No	X0335-0
Alcohol AUDIT-C Risk Score	X0331-0
Alcohol Brief Intervention Possible Dependence	X0332-0
Alcohol Brief Intervention Higher Risk	X0333-0
Alcohol Brief Intervention Increasing Risk	X0334-0

Sending Application (MSH.3)

The format is the name of the GP practice software system, Healthlink, Healthlink Message Type ID e.g. HELIXPM.HEALTHLINK.70

GP Practice Software System	***Code***
CompleteGP	COMPLETEGP
HealthOne	HEALTHONE
Helix Practice Manager (HPM)	HELIXPM
Socrates	SOCRATES

Healthlink Message Type	**Message Type ID**
Chronic Disease Management	70
PCERS Reimbursement	71
Acknowledgement	13

Receiving Facility (MSH.6)

Description	**Code**
PCERS	99990
CDM Clinical Data Repository	99991

Processing ID (MSH.11)

Description	**Code**

Debugging	D
Production	P
Training	T

HL7 Table 0010: Physician ID

Description	Code
General Medical Services	GMS
Medical Council Registration Number	MCN
Individual Health Professionals Identifier	IHPI
An Bord Altranis Registration Number	ABARN

HL7 Table 0189: Ethnic Group (PID.22)

Description	Code
White Irish	01
Irish Traveller	02
Other White	03
Black Irish	04
Black African	05
Other Black	11
Chinese	06
Other Asian	07
Roma	121
Other	10

HL7 Table 0125: Value Type (OBX.2)

Description	Code
Coded Entry	CE
Date	DT
Formatted Text	FT
Numeric	NM
Time	TM
Telephone Number	TN
Time Stamp (Date & Time)	TS
Text Data (Display)	TX

HL7 Table 0123: Result status (OBR.25)

Description	Code
Correction	C
Final	F

HL7 Table 008, Acknowledgement Code (for original mode acknowledgements)

Value	Description

AA	Application Accept
AE	Application Error
AR	Application Reject

HL7 Table 0357, Message Error Condition Codes (for the fourth component of the ERR.1 field)

Error Code	Error Condition Text	Description/Comment
Success		
0	**Message accepted**	Success. Optional, as the AA conveys success. Used for systems that must always return a status code.
Errors		
100	**Segment sequence error**	The message segments were not in the proper order, or required segments are missing.
101	**Required field missing**	A required field is missing from a segment
102	**Data type error**	The field contained data of the wrong data type, e.g. an NM field contained "FOO".
103	**Table value not found**	A field of data type ID or IS was compared against the corresponding table, and no match was found.
Rejection		
200	**Unsupported message type**	The Message Type is not supported.
201	**Unsupported event code**	The Event Code is not supported.
202	**Unsupported processing id**	The Processing ID is not supported.
203	**Unsupported version id**	The Version ID is not supported.
204	**Unknown key identifier**	The ID of the patient, order, etc., was not found. Used for transactions other than additions, e.g. transfer of a non-existent patient.
205	**Duplicate key identifier**	The ID of the patient, order, etc., already exists. Used in response to addition transactions (Admit, New Order, etc.).
206	**Application record locked**	The transaction could not be performed at the application storage level, e.g. database locked.
207	**Application internal error**	A catchall for internal errors not explicitly covered by other codes.

208	**Duplicate Message Filename**	The Filename of the message already exists.
Healthlink Codes		
300	**Invalid XML**	Message is not valid xml document
301	**XML Namespace Issue**	Unknown xml namespace
302	**Schema Validation error**	Message cannot be validated against schema
303	**Invalid data format – MSH.3**	Invalid data format, segment 'MSH.3/HD.1', expected format '[GeneratingSystem].[Middleware].[MessageType]'
304	**MSH.9 Message Type Mismatch**	Xml root (Ex: <ORU_R01>) Messagetype doesn't match with MSH.9 Values.
305	**Invalid REF/RRI Message Type**	Invalid data format, segment 'MSH.10', expected format 'REF/RRI[YYYYMMDDHHMMSS][MedicalCouncilNumber]'
306	**Invalid Hospital Data Format MSH.4 or MSH.6**	Invalid data format, segment 'MSH.4-MSH.6/HD.2', expected format '[HospitalCode]' and not '[HospitalCode].[SomeOtherCode]'
307	**Invalid Agency Data Format MSH.4 or MSH.6**	Invalid data format, segment 'MSH.4-MSH.6/HD.2', expected format '[GPCode/AgencyCode/MCNcode]' and not '[GPCode/AgencyCode/MCNcode].[SomeOtherCode]'
308	**Invalid MCN.HLPracticeID Data Format MSH.4 or MSH.6**	Invalid data format, segment 'MSH.4-MSH.6/HD.2', expected format '[MCN.HLPracticeID]'
Receiving System Codes		
400	**General Message Exception**	Detailed error description returned by receiving system. This can contain any exception not captured by codes listed above. e.g. Message cannot be accepted Message was previously submitted

Appendix 2

Table3 Investigations Table & CDM Investigations Matrix

	First/Registration Year		All Future Years
Chronic Diseases	**First Visit (Registration)**	**Interim Review**	**Annual Review**
Diabetes (T2DM)	ECG (If Clinically Indicated) Urine ACR HbA1c Lipids FPG Not mandatory Urea & Electrolytes (To include Urea, Creatinine & eGFR) Full Blood Count (FBC) Thyroid Function Test (TFT) Liver Function Test (LFT) BP-type Natriuretic BNP or NT Pro BNP at registration only	HbA1c Lipids (If Clinically Indicated) Urea & Electrolytes (To include Urea, Creatinine & eGFR	ECG (If Clinically Indicated) Urine ACR HbA1c Lipids Urea & Electrolytes (To include Urea, Creatinine & eGFR
Asthma	ECG (If Clinically Indicated) Full Blood Count (FBC) Spirometry (if available)	/	/
COPD	Spirometry (If available) ECG (If Clinically Indicated) HbA1c Lipids Full Blood Count (FBC) Thyroid Function Test (TFT) Liver Function Test (LFT) Urea & Electrolytes (To include Urea, Creatinine & eGFR	/	ECG (If Clinically Indicated) HbA1c Lipids
Heart Failure	ECG ECHO HbA1c Lipids Urea & Electrolytes (To include Urea, Creatinine & eGFR Thyroid Function Test (TFT) Liver Function Test (LFT) Full Blood Count (FBC) BP-type Natriuretic BNP or NT Pro BNP at registration visit only	/	ECG ECHO HbA1c Lipids Urea & Electrolytes (To include Urea, Creatinine & eGFR Full Blood Count (FBC) BP-type Natriuretic BNP or NT Pro BNP for investigation of deterioration of clinical condition, if clinically indicated (should not appear on screen as prompt)

	First/Registration Year		All Future Years
Chronic Diseases	**First Visit (Registration)**	**Interim Review**	**Annual Review**
A Fib	ECG (If Clinically Indicated) ECHO (If Clinically Indicated) HbA1c Lipids Urea & Electrolytes (To include Urea, Creatinine, eGFR & Creatinine Clearance*) Thyroid Function Test (TFT) Liver Function Test (LFT) Full Blood Count (FBC) BP-type Natriuretic BNP or NT Pro BNP at registration visit only	Urea & Electrolytes (To include Urea, Creatinine, eGFR & Creatinine Clearance*)	ECG (If Clinically Indicated) HbA1c Lipids Urea & Electrolytes (To include Urea, Creatinine, eGFR & Creatinine Clearance*) Full Blood Count (FBC)
IHD	ECG (If Clinically Indicated) HbA1c Lipids Urea & Electrolytes (To include Urea, Creatinine & eGFR Full Blood Count (FBC) BP-type Natriuretic BNP or NT Pro BNP at registration visit only	/	ECG (If Clinically Indicated) HbA1c Lipids Urea & Electrolytes (To include Urea, Creatinine & eGFR
CVD TIA/Stroke	ECG (If Clinically Indicated) HbA1c Lipids Urea & Electrolytes (To include Urea, Creatinine & eGFR Full Blood Count (FBC)	/	ECG (If Clinically Indicated) HbA1c Lipids Urea & Electrolytes (To include Urea, Creatinine & eGFR

	First/Registration Year		All Future Years
Chronic Diseases	**First Visit (Registration)**	**Interim Review**	**Annual Review**
HTN BP Preventive Programme Annual Visit	ECG (If Clinically Indicated) ECHO (If Clinically Indicated) HbA1c FPG not mandatory Lipids Urea & Electrolytes (To include Urea, Creatinine & eGFR) Thyroid Function Test (TFT)-Registration only Liver Function Test (LFT) – Registration only Full Blood Count (FBC) Albumin/Creatinine Ratio (ACR) (If Clinically Indicated)	/	ECG (If Clinically Indicated) ECHO (If Clinically Indicated) HbA1c FPG not mandatory Lipids Urea & Electrolytes (To include Urea, Creatinine & eGFR) Albumin/Creatinine Ratio (ACR) (If Clinically Indicated)
OCF Review **(Repeat in 5 years)**	HbA1c Lipids Urea & Electrolytes (To include Urea, Creatinine, eGFR) Full Blood Count (FBC) Albumin/Creatinine Ratio (ACR) (If Clinically Indicated)		

CDM Investigations Matrix

Appendix 3

SOC_ID	Investigation	Not Available	Default Value	Carry Forward	Diabetes			Asthma			COPD			Heart Failure			AFib			IHD			CVD (Stroke / TIA)			OCF	PP	
					Reg	1st (Annual)	2nd (Interim)	Reg	1st (Annual)	2nd (Interim)	Reg	1st (Annual)	2nd (Interim)	Reg	1st (Annual)	2nd (Interim)	Reg	1st (Annual)	2nd (Interim)	Reg	1st (Annual)	2nd (Interim)	Reg	1st (Annual)	2nd (Interim)	Every Visit	Reg	1st (Annual)
6	Haemoglobin (FBC)				Yes			Yes			Yes			Yes	Yes		Yes	Yes		Yes			Yes			Yes	Yes	
14	Total Cholesterol (Lipids)				Yes	Yes	Yes*				Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
8	HDL Cholesterol (Lipids)				Yes	Yes	Yes*				Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
9	LDL Cholesterol (Lipids)	Yes			Yes	Yes	Yes*				Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
15	Triglycerides (Lipids)				Yes	Yes	Yes*				Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
7	HbA1c				Yes	Yes	Yes				Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
5	Fasting Glucose (FPG)	Yes			Yes*																						Yes*	Yes*
11	Serum Creatinine (Urea & Electolytes)				Yes	Yes	Yes				Yes			Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
4	eGFR (Urea & Electrolytes)	Yes			Yes*	Yes*	Yes*				Yes*			Yes*	Yes*		Yes*	Yes*	Yes*	Yes*	Yes*		Yes*	Yes*		Yes*	Yes*	Yes*
16	Urine ACR	Yes			Yes*	Yes*																				Yes*	Yes*	Yes*
1	BP-type Natriuretic BNP OR	Yes			Yes									Yes			Yes			Yes						Yes*	Yes*	
23	BP-type Natriuretic NT Pro BNP	Yes			Yes									Yes			Yes			Yes						Yes*	Yes*	
13	Thyroid Function Test (TFT) - y/n radio button				Yes						Yes			Yes			Yes										Yes	
10	Liver Function Test (LFT) - y/n radio button				Yes						Yes			Yes			Yes										Yes	
2	ECG			See Note	Yes*	Yes*		Yes*			Yes*	Yes*		Yes	Yes		Yes*	Yes*		Yes*	Yes*		Yes*	Yes*			Yes*	Yes*
3	Echocardiography			See Note										Yes	Yes		Yes*										Yes*	Yes*
12	Spirometry			See Note				Yes*			Yes*																	
17	Diabetes related amputation				Yes	Yes	Yes																					
18	Foot and lower limb review				Yes	Yes	Yes																					
19	Retinal Screening - in the last 13 months				Yes	Yes	Yes																					
20	CVD Risk Score (Qrisk 3)				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes													Yes	Yes	Yes
21	COPD dyspnoea score										Yes	Yes	Yes															
22	~~Chad score~~ CHA2DS2-VAScScore																Yes	Yes	Yes									
	Creatinine Clearance (Calculator)																Yes	Yes	Yes									
	~~Proteinuria - Present / Absent~~																											
	~~Haematuria - Present / Absent~~																											
	Spirometry, ECHO & ECG - Default Value of No ?																											
	Spirometry is only at Registration; ECHO & ECG are not at Interim Review so won't be carried forward																											
	Yes* - If clinically indicated or available																											

Colour Key	
Yes	Mandatory
Yes*	If clinically indicated or available
Yes*	Hidden Button
Yes	Optional for Interim review

If Either BNP or NT Pro BNP IS MANDATORY then its 1 or other

OCF & PP - BNP/NRPro BNP can this be added as a hidden fields until lab capacity is increased

ACR - ACR to be listed as an optional field on OCF and PP datasets. We would need to insert an information button to say: "For investigation of HTN/chronic kidney disease at OCF or PP registration visit. If result is abnormal, this test can be repeated in 12 months time at follow up PP review, if clinically indicated."OCF

Info button FOR DISCUSSION

Explain Carry forward if user moves from PP to CDM	
Confirm OCF & PP registration can be same day	YES
Confirm PP & CDM registration can be same day	YES

CDM Programme Calendars and Review Periods

CDM Treatment Programme

Using 4 calendar months to calculate interim review date

	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of First Visit/Registration	January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Interim Review (on or after this date)	May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Next Annual Review (on or after this date)	January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of First Visit/Registration	February	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29		
Earliest Date of Interim Review (on or after this date)	June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29		
Earliest Date of Next Annual Review (on or after this date)	February	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	28		
Date of First Visit/Registration	March	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Interim Review (on or after this date)	July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Next Annual Review (on or after this date)	March	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of First Visit/Registration	April	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Earliest Date of Interim Review (on or after this date)	August	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Earliest Date of Next Annual Review (on or after this date)	April	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Date of First Visit/Registration	May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Interim Review (on or after this date)	September	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	30
Earliest Date of Next Annual Review (on or after this date)	May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of First Visit/Registration	June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Earliest Date of Interim Review (on or after this date)	October	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Earliest Date of Next Annual Review (on or after this date)	June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Date of First Visit/Registration	July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Interim Review (on or after this date)	November	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	30
Earliest Date of Next Annual Review (on or after this date)	July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of First Visit/Registration	August	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Interim Review (on or after this date)	December	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Next Annual Review (on or after this date)	August	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of First Visit/Registration	September	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Earliest Date of Interim Review (on or after this date)	January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Earliest Date of Next Annual Review (on or after this date)	September	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Date of First Visit/Registration	October	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Interim Review (on or after this date)	February	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	28/29	28/29	28/29
Earliest Date of Next Annual Review (on or after this date)	October	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of First Visit/Registration	November	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Earliest Date of Interim Review (on or after this date)	March	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Earliest Date of Next Annual Review (on or after this date)	November	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Date of First Visit/Registration	December	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Interim Review (on or after this date)	April	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	30
Earliest Date of Next Annual Review (on or after this date)	December	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

CDM Scenario 1

Follows 12 month and 4 month rule. All interim reviews conducted between 5th and 8th month from registration/annual review).

CDM	Date	Gap	Notes
Year 1			
Registration Review Date	**01.02.2021**		
Earliest Date Interim Review can happen	01.06.2021	4 months	
Actual Interim Review Date	01.10.2021	8 months	Interim review delayed, took place 8 months after registration date.
Year 2			
Earliest Date of Annual Review	01.02.2022		Patient attended and A/R took place on 1.2.22
Earliest Date Interim Review can happen	01.06.2022	4 months	
Actual Interim Review Date	01.07.2022	5 months	Interim review delayed, took place 5 months after registration date.
Year 3			
Earliest Date of Annual Review	01.02.2023		Patient attended and A/R took place on 1.2.23
Earliest Date Interim Review can happen	01.06.2023	4 months	
Actual Interim Review Date	01.09.2023	7 months	Interim review delayed, took place 5 months after registration date.
Year 4			
Earliest Date of Annual Review	01.02.2024		Patient attended and A/R took place on 1.2.24
Earliest Date Interim Review can happen	01.06.2024	4 months	
Actual Interim Review Date	01.06.2024	4 months	

In this scenario the minimum gap between reviews has been followed throughout. There is flexibility as to when the interim review dates take place and the earliest date for the annual review each year is consistent across all the years.

CDM Scenario 2

Follows 12 month rule but interim reviews are conducted between 7 and 10 months from registration/annual review).

CDM	Date	Gap	Notes
Year 1			
Registration Review Date	01.02.2021		
Earliest Date Interim Review can happen	01.06.2021		
Actual Interim Review Date	01.11.2021	9 months	Interim review delayed, took place 9 months after registration date. Therefore, next annual review will be delayed.
Year 2			
Annual Review Date	01.02.2022		
Earliest Date Annual Review can happen	01.03.2022		(earliest it can take place based on 4 month rule)
Earliest Date Interim Review can happen	01.07.2022		(earliest it can take place based on 4 month rule) if A/R took place on 1.3.22
Actual Interim Review Date	31.12.2022	9 months	Interim review delayed, took place 9 months after the Y2 annual review. Therefore, next annual review will be delayed.
Year 3			
Annual Review Date	01.02.2023		
Earliest Date Annual Review can happen	30.04.2023		(earliest it can take place based on 4 month rule). The 31st April doesn't exist so earliest date for A/R can be 30th April, which is the last day of the month. Patient attended and A/R took place on 30.04.2023.
Earliest Date Interim Review can happen	30.08.2023		(earliest it can take place based on 4 month rule) if A/R took place on 30.04.23.
Actual Interim Review Date	01.12.2023	7 months	Interim review delayed. Therefore, next annual review will be delayed.
Year 4			
Annual Review Date	01.02.2024		
Earliest Date Annual Review can happen	01.04.2024		(earliest it can take place based on 4 month rule). Patient attended and A/R took place on 1.4.24
Earliest Date Interim Review can happen	01.08.2024		(earliest it can take place based on 4 month rule)
Actual Interim Review Date	01.08.2024	4 months	Patient attended and interim review took place on 1.8.24
Year 5			
Annual Review Date	01.02.2025		
Earliest Date Annual Review can happen	01.02.2025		

Notes/Key Points

1. The first interim review didn't happen until the 1st November 2021, so it was 9 months after the 1st February (first visit/registration). Therefore, the next annual review will have to be delayed, as the 4 month rule between reviews needs to be followed.

2. After the annual review in Year 2 on the 1st March 2022, the next interim review doesn't happen for 10 months, until the 31st December 2022.
3. The next annual review which would have been expected on or after the 1st February 2023 can't happen as following the 4-month rule, the earliest it can now take place is on or after the 30th April 2023 (last day of the month).
4. There is then another 7 months until the next interim review which takes place on the 1st December 2023. This will delay the annual review again in Year 4.
5. In Year 4, because the interim review was so late in Year 3, the annual review can't happen until the 1st April 2024. The patient attended their A/R on the 1st April 2024.
6. The interim review with the patient then takes place on the 1st August 2024.
7. The annual review in Year 5 can now be on or after the 1st February 2025. The 1st February is the anniversary of the first visit/registration date.

You can see in this scenario that while the review dates can drift out considerably, they can return to the intended schedule over time. This does allow flexibility for GPs and patients who may not be able to attend reviews on the expected date.

CDM Scenario 3

Follows 4 month and 12 month rule and the rule around only 2 reviews in a 12 month review period.

CDM	Date	Gap	Notes
Year 1			
Registration Review Date	**01.02.2021**		
Earliest Date Interim Review can happen	01.06.2021	4 months	
Actual Interim Review Date	01.06.2021	4 months	Interim review is carried out exactly 4 calendar months from annual review.
Year 2			
Earliest Date of Annual Review	01.02.2022		
Earliest Date Interim Review can happen	01.06.2022	4 months	
Actual Interim Review Date	01.06.2022	4 months	Interim review is carried out exactly 4 calendar months from annual review.
Year 3			
Earliest Date of Annual Review	01.02.2023		
Earliest Date Interim Review can happen	01.06.2023	4 months	
Actual Interim Review Date	01.06.2023	4 months	Interim review is carried out exactly 4 calendar months from annual review.
Year 4			
Earliest Date of Annual Review	01.02.2024		
Earliest Date Interim Review can happen	01.06.2024	4 months	
Actual Interim Review Date	01.06.2024	4 months	4 months is allowed by GP system Would be rejected by PCRS as their 4-month rule is ***4 months + 1 day.***

This scenario shows that while the interim reviews are happening at 4 months after the annual review, the earliest the next review can take place (which in this scenario is the next annual

review) is on or after the 1st February each year. This is because only 2 reviews are permitted within a 12-month review period.

Opportunistic Case Finding

Earliest Date of Next Review is 5 full calendar years		Leap Year																														
	Month																															
Date of OCF Initial Assessment	January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of OCF Subsequent Assessment (on or after this date)	January (+ 5 years)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of OCF Initial Assessment	February	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29		
Earliest Date of OCF Subsequent Assessment (on or after this date)	February (+ 5 years)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	28		
Date of OCF Initial Assessment	March	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of OCF Subsequent Assessment (on or after this date)	March (+5 years)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of OCF Initial Assessment	April	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Earliest Date of OCF Subsequent Assessment (on or after this date)	April (+5 years)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Date of OCF Initial Assessment	May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of OCF Subsequent Assessment (on or after this date)	May (+5 years)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of OCF Initial Assessment	June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Earliest Date of OCF Subsequent Assessment (on or after this date)	June (+5 years)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Date of OCF Initial Assessment	July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of OCF Subsequent Assessment (on or after this date)	July (+5 years)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of OCF Initial Assessment	August	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of OCF Subsequent Assessment (on or after this date)	August (+5 years)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of OCF Initial Assessment	September	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Earliest Date of OCF Subsequent Assessment (on or after this date)	September (+5 years)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Date of OCF Initial Assessment	October	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of OCF Subsequent Assessment (on or after this date)	October (+5 years)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of OCF Initial Assessment	November	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Earliest Date of OCF Subsequent Assessment (on or after this date)	November (+5 years)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Date of OCF Initial Assessment	December	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of OCF Subsequent Assessment (on or after this date)	December (+5 Years)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

OCF Scenarios

Scenario 1

- Patient is registered on OCF on the 1st February 2022.
- First review and registration data is sent.
- Patient returns for OCF follow up assessment on 31st March 2027 and data is submitted.
- Patient returns for next OCF follow up assessment on 13th April 2032 and data is submitted.

OCF	Date	Gap	Notes
Year 1			
Date of OCF Initial Assessment	01.02.2022		
Year 5			
Earliest Date of OCF Subsequent Assessment	01.02.2027		
Actual Date of OCF Subsequent Assessment	31.03.2027	5 years & 2 months	The OCF Subsequent Assessment is delayed slightly.
Year 10			
Earliest Date of OCF Subsequent Assessment	31.03.2032		
Actual Date of OCF Subsequent Assessment	13.04.2032	5 years & 2 weeks	

Scenario 2

- Patient is registered on OCF on the 29th February 2024 (leap year).
- First review and registration data is sent.
- Patient returns for OCF follow up assessment on 10th April 2029 and data is submitted.
- Patient returns for next OCF follow up assessment on 10th April 2034 and data is submitted.

OCF	Date	Gap	Notes
Year 1			
Date of OCF Initial Assessment	29.02.2024		
Year 5			
Earliest Date of OCF Subsequent Assessment	28.02.2029		Needs to be last day of month, 5 years later.
Actual Date of OCF Subsequent Assessment	10.04.2029	5 years & 1 ½ months	The OCF Subsequent Assessment is delayed slightly.
Year 10			
Earliest Date of OCF Subsequent Assessment	10.04.2034		
Actual Date of OCF Subsequent Assessment	10.04.2034	5 years	

Prevention Programme

Earliest Date of Next Annual Review is 9 full calendar months		Leap Year																													
	Month																														
Date of First PP Registration Visit	January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Next PP Annual Review (on or after this date)	October	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of First PP Registration Visit	February	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29		
Earliest Date of Next PP Annual Review (on or after this date)	November	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29		
Date of First PP Registration Visit	March	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Next PP Annual Review (on or after this date)	December	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of First PP Registration Visit	April	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Earliest Date of Next PP Annual Review (on or after this date)	January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Date of First PP Registration Visit	May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Next PP Annual Review (on or after this date)	February	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	28/29	28/29	28/29
Date of First PP Registration Visit	June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Earliest Date of Next PP Annual Review (on or after this date)	March	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Date of First PP Registration Visit	July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Next PP Annual Review (on or after this date)	April	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	30
Date of First PP Registration Visit	August	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Next PP Annual Review (on or after this date)	May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of First PP Registration Visit	September	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Earliest Date of Next PP Annual Review (on or after this date)	June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Date of First PP Registration Visit	October	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Next PP Annual Review (on or after this date)	July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Date of First PP Registration Visit	November	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Earliest Date of Next PP Annual Review (on or after this date)	August	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Date of First PP Registration Visit	December	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Earliest Date of Next PP Annual Review (on or after this date)	September	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	30

PP Scenarios

Scenario 1 – annual reviews are less then 12 months apart but rule that there is a minimum of 9 months gap is followed

- Patient is registered on PP on the 16th January 2022.
- First review and registration data is sent.
- Patient returns for PP annual review on 20th October 2022 and data is submitted.
- Patient returns for PP annual review on 31st July 2023 and data submitted.
- Patient returns for PP annual review on 30th April 2024 (30th April is the last day of the month so this review is permitted) and data submitted.
- Patient returns for PP annual review on 5th February 2025 and on 10th November 2025. 9 month rule followed so reviews permitted and data submitted.

PP	Date	Gap	Notes
Year 1			
Date of OCF Initial Assessment	**16.01.2022**		
Earliest Date of Next PP Annual Review	16.10.2022		
Actual Date of Next PP Annual Review	20.10.2022	9 months & 4 days	
Year 2			
Earliest Date of Next PP Annual Review	20.07.2023		
Actual Date of Next PP Annual Review	31.07.2023	9 months & 11 days	
Year 3			
Earliest Date of Next PP Annual Review	30.04.2024		The 31st April doesn't exist so it's on the last day of April.
Actual Date of Next PP Annual Review	30.04.2024	9 months	
Year 4			
Earliest Date of Next PP Annual Review	30.01.2025		
Actual Date of Next PP Annual Review	05.02.2025	9 months & 6 days	
Earliest Date of Next PP Annual Review	05.11.2025		
Actual Date of Next PP Annual Review	10.11.2025	9 months & 5 days	

Scenario 2 – some of the annual reviews are more than 12 months apart and rule that there is a minimum of 9 months gap is followed.

- Patient is registered on PP on the 31st January 2022.
- First review and registration data is sent.
- Patient returns for PP annual review on 10th February 2023 and data is submitted.
- Patient returns for PP annual review on 9th January 2024 and again on 11th October 2024. 9 month rule followed so permitted and data submitted.
- Patient returns for PP annual review on 31st July 2025.
- Earliest data patient can attend the next PP annual review in 2026 is on or from 30th April (no, 31st April so the 30th April is allowed as it's the last day of the month).

PP	Date	Gap	Notes
Year 1			

Date of OCF Initial Assessment	**31.01.2022**		
Earliest Date of Next PP Annual Review	31.10.2022		
Actual Date of Next PP Annual Review	10.02.2023	12 months & 10 days	PP annual review delayed slightly
Year 2			
Earliest Date of Next PP Annual Review	10.11.2023		
Actual Date of Next PP Annual Review	09.01.2024	14 months	PP annual review delayed slightly
Year 3			
Earliest Date of Next PP Annual Review	09.10.2024		
Actual Date of Next PP Annual Review	11.10.2024	9 months	
Year 4			
Earliest Date of Next PP Annual Review	11.07.2025		
Actual Date of Next PP Annual Review	31.07.2025	9 ½ months	
Year 5			
Earliest Date of Next PP Annual Review	30.04.2026		The 31st April doesn't exist so it's on the last day of April.
Actual Date of Next PP Annual Review	05.05.2026		

All Programmes Calendar

Programme	Visit Type	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
All	**Date of First Visit/Registration**	**January (Year 1)**																															
CDM	Earliest Date Interim Review can be completed on	May (Year 1)																															
CDM	Date of Next Annual Review (on or after this date)	January (Year 2)																															
PP	Earliest Date of Next PP Annual Review (on or after this date)	October																															
OCF	Earliest Date of OCF Subsequent Assessment (on or after this date)	January (+ 5 years)																															

Programme	Visit Type	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
All	**Date of First Visit/Registration**	**February (Year 1)**																													
CDM	Earliest Date Interim Review can be completed on	June (Year 1)																													
CDM	Date of Next Annual Review (on or after this date)	February (Year 2)																													
PP	Earliest Date of Next PP Annual Review (on or after this date)	November																													
OCF	Earliest Date of OCF Subsequent Assessment (on or after this date)	February (+ 5 years)																													

Programme	Visit Type	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
All	**Date of First Visit/Registration**	**March (Year 1)**																															
CDM	Earliest Date Interim Review can be completed on	July (Year 1)																															
CDM	Date of Next Annual Review (on or after this date)	March (Year 2)																															
PP	Earliest Date of Next PP Annual Review (on or after this date)	December																															
OCF	Earliest Date of OCF Subsequent Assessment (on or after this date)	March (+ 5 years)																															

Programme	Visit Type	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
All	**Date of First Visit/Registration**	**April (Year 1)**																														
CDM	Earliest Date Interim Review can be completed on	August (Year 1)																														
CDM	Date of Next Annual Review (on or after this date)	April (Year 2)																														
PP	Earliest Date of Next PP Annual Review (on or after this date)	January																														
OCF	Earliest Date of OCF Subsequent Assessment (on or after this date)	April (+ 5 years)																														

Programme	Visit Type	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
All	**Date of First Visit/Registration**	**May (Year 1)**																															
CDM	Earliest Date Interim Review can be completed on	September (Year 1)																															
CDM	Date of Next Annual Review (on or after this date)	May (Year 2)																															
PP	Earliest Date of Next PP Annual Review (on or after this date)	February																												28/2	28/2	28/2	
OCF	Earliest Date of OCF Subsequent Assessment (on or after this date)	May (+ 5 years)																															

Programme	Visit Type	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
All	**Date of First Visit/Registration**	**June (Year 1)**																														
CDM	Earliest Date Interim Review can be completed on	October (Year 1)																														
CDM	Date of Next Annual Review (on or after this date)	June (Year 2)																														
PP	Earliest Date of Next PP Annual Review (on or after this date)	March																														
OCF	Earliest Date of OCF Subsequent Assessment (on or after this date)	June (+ 5 years)																														

Programme	Visit Type	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
All	**Date of First Visit/Registration**	**July (Year 1)**																															
CDM	Earliest Date Interim Review can be completed on	November (Year 1)																															
CDM	Date of Next Annual Review (on or after this date)	July (Year 2)																															
PP	Earliest Date of Next PP Annual Review (on or after this date)	April																															
OCF	Earliest Date of OCF Subsequent Assessment (on or after this date)	July (+ 5 years)																															

Programme	Visit Type	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
All	**Date of First Visit/Registration**	**August (Year 1)**																															
CDM	Earliest Date Interim Review can be completed on	December (Year 1)																															
CDM	Date of Next Annual Review (on or after this date)	August (Year 2)																															
PP	Earliest Date of Next PP Annual Review (on or after this date)	May																															
OCF	Earliest Date of OCF Subsequent Assessment (on or after this date)	August (+ 5 years)																															

Programme	Visit Type	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
All	**Date of First Visit/Registration**	**September (Year 1)**																														
CDM	Earliest Date Interim Review can be completed on	January (Year 1)																														
CDM	Date of Next Annual Review (on or after this date)	September (Year 2)																														
PP	Earliest Date of Next PP Annual Review (on or after this date)	June																														
OCF	Earliest Date of OCF Subsequent Assessment (on or after this date)	September (+ 5 years)																														

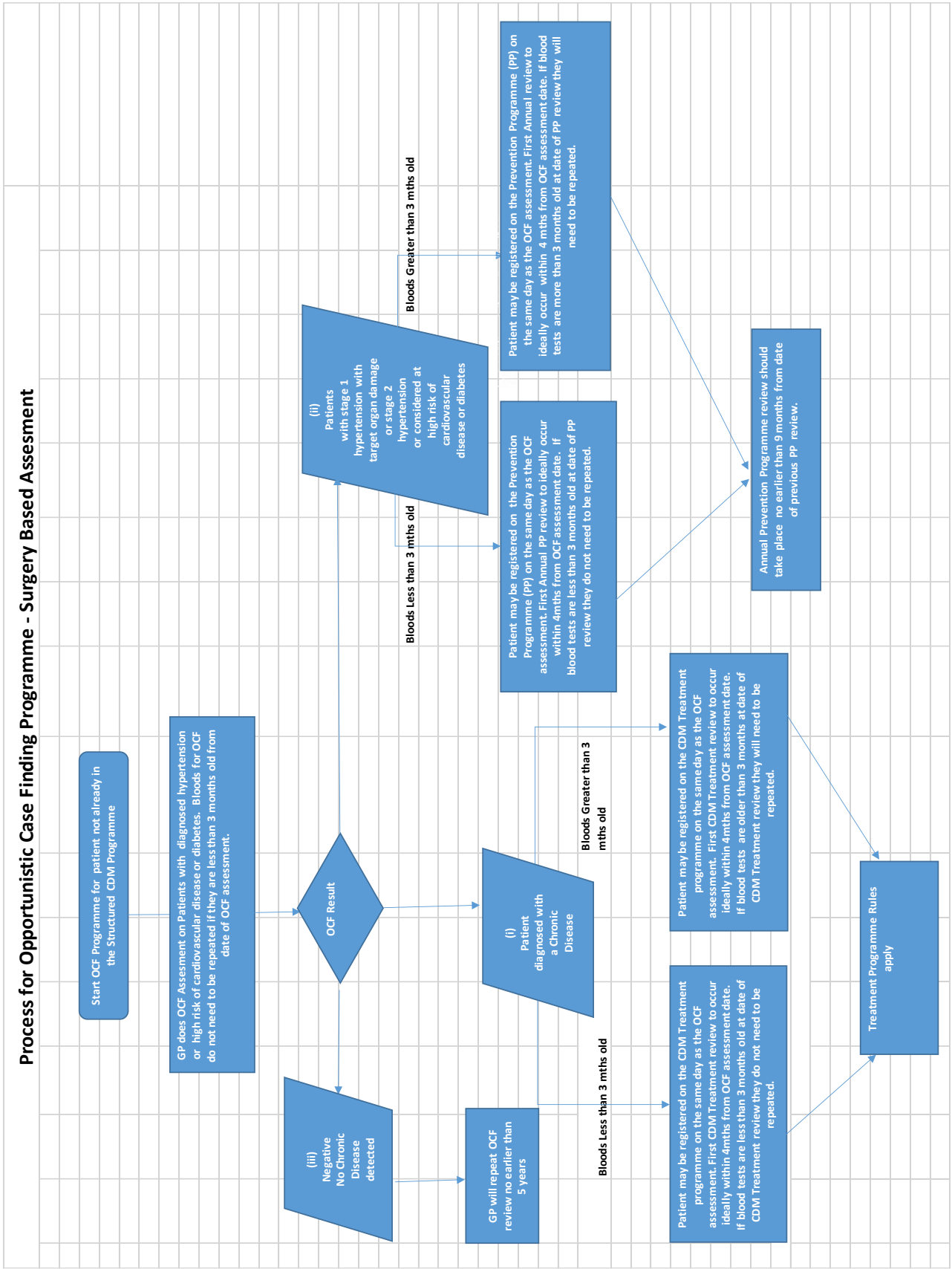
Programme	Visit Type	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
All	**Date of First Visit/Registration**	**October (Year 1)**																															
CDM	Earliest Date Interim Review can be completed on	February (Year 1)																												28/2	28/2	28/2	
CDM	Date of Next Annual Review (on or after this date)	October (Year 2)																															
PP	Earliest Date of Next PP Annual Review (on or after this date)	July																															
OCF	Earliest Date of OCF Subsequent Assessment (on or after this date)	October (+ 5 years)																															

Programme	Visit Type	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
All	**Date of First Visit/Registration**	**November (Year 1)**																														
CDM	Earliest Date Interim Review can be completed on	March (Year 1)																														
CDM	Date of Next Annual Review (on or after this date)	November (Year 2)																														
PP	Earliest Date of Next PP Annual Review (on or after this date)	August																														
OCF	Earliest Date of OCF Subsequent Assessment (on or after this date)	November (+ 5 years)																														

Programme	Visit Type	Month	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
All	**Date of First Visit/Registration**	**December (Year 1)**																															
CDM	Earliest Date Interim Review can be completed on	April (Year 1)																															
CDM	Date of Next Annual Review (on or after this date)	December (Year 2)																															
PP	Earliest Date of Next PP Annual Review (on or after this date)	September																															
OCF	Earliest Date of OCF Subsequent Assessment (on or after this date)	December (+ 5 years)																															

Appendix 4

Appendix CDM Programme Flowchart



Appendix 5

12 Appendix PCERS Requirements

Message Header Segment (MSH)

PCERS only validate and record the MSH.3, MSH.7 and MSH.10 from the MSH segment. PCERS trust that all other fields have been validated by 3rd party.

Patient Identification Segment (PID)

PCERS validates and records the Patients GMS number from the PID segment. The Patient's GMS card is found in CX.1 where CX.5 = "GMS" in the PID.3 repeated segment. The Patient's IHI Number is also recorded at PCERS but it is not validated against the GMS number or any other patient data and PCERS trust that it has been validated by 3rd party. The Patient's IHI Number is found in CX.1 where CX.5 = "IHINumber" in the PID.3 repeated segment. PCERS trust all other fields have been validated by 3rd party and do not check them as they have no impact on message content for PCERS.
The Patient's GMS number alone will be used to determine patient identity and the DoB on PCERS record will be used to determine age based eligibility. If there is a discrepancy between the PCERS patient DoB and the GP PM software DoB that results in an age based validation error, it will require checking with the patient which system is correct and updating the appropriate system before resubmitting a reclaim (correction) claim.

Patient Visit Segment (PV1)

PCERS validates and records the GP's GMS number from the PV1 segment. The GP's GMS number is found in XCN.1 where XCN.13 = "GMS" in the PV1.7 repeated segment. PCERS will trust all other GP identification data including MCN and IHPI have been validated by 3rd party.

Observation Request Segment (OBR)

PCERS only validate and record the OBR.2, OBR.4/CX.1, OBR.7 and (conditionally) OBR.25 from the first OBR segment. For all other OBR segments PCERS only validate and record the OBR.4/CX.1 segment.
In the first OBR segment, PCERS will validate and record that the OBR.4 CE.1 segment is "X0135-0" to ensure this is a CDM Claim.
PCERS will use the OBR.7 from the first OBR as the exam date and that will be used to determine patient eligibility. PCERS trust that all other OBR.7 segments have been validated by 3rd party and do not check them for consistency with the first OBR segment.

There are two modes of message for CDM:

- an original message that could result in a new exam (claim) identified where the OBR.25 of the first OBR segment is "F"
- a reclaim (correction) message that could result in an update to an existing exam (claim) where the OBR.25 of the first OBR segment is "C"

A reclaim is an update to an existing claim before it has been paid. This is only permitted for claims that have not already been set to pay. A reclaim replaces the entire content of the original claim, except doctor GMS number and retains the original claim number. Doctor GMS number cannot be changed.

PCERS will only use the OBR.25 of the first OBR (the one where the OBR.4 CE.1 is X0135-0) to determine if this is a correction (reclaim) message.

Acknowledgement Message

If an Application Reject occurs, PCERS will not have been able to create an exam record (claim) and so no claim number will be returned.

If an Application Error occurs, PCERS will have been able to create an exam record (claim) and so a claim number will be returned as well as the validation errors that indicate why that exam will not pay

Draft PCERS Integrated Reimbursement Claim Message Data Items

These are the original data items proposed by the PCERS, and are included for information purposes only (i.e. the pertinent items are included in the Messaging Spec).

Message Name	In/Out	Datatype	Description	Validation	Segment
--- MESSAGE ---					
MESSAGE_CONTROL_ID	In	Text (50)	the HL7 message control ID	Required Must be unique	MSH.10
MESSAGE_SUBMISSION_DT	In	Text (20)	the date-time the vendor sent message to PCERS. Format: YYYYMMDDHHmm	Required	MSH.7
MESSAGE_TYPE	In	Text (30)	the type of message	Required Must be STCSS for CDM	STCSS
VENDOR	In	Text (100)	the vendor implementation	Required	Everything up to the first dot (“.”) in the MSH.3 Eg HEALIXPM
VENDOR_VERSION_NUM	In	Text (30)	the vendor implementation version	Required	OBX.5 where OBX.3 = “X0243-0”
CONTRACTOR_NUM	In	Text (30)	the contractor number (eg doctor number)	Required	PV1.7 XCN.1 where XCN.13 = “GMS”
CONTRACTOR_TYPE	In	Text (30)	the contractor type (eg doctor)	Required Must be DOC for CDM	DOC
TREATMENT_DT	In	Text (30)	the treatment date (according to contractor). Format: YYYYMMDDHHmmss	Required	OBR.7 of the OBR segment where OBR.4 CE.1 = “X0135-0”
PATIENT_ID	In	Text (30)	the patient identifier (eg GMS Card number)	Required Must be on doctor’s panel Must be active card	PID.3 CX1 where CX.5 = “GMS”

Draft PCERS Integrated Reimbursement Claim Message Data Items

These are the original data items proposed by the PCERS, and are included for information purposes only (i.e. the pertinent items are included in the Messaging Spec).

Message Name	In/Out	Datatype	Description	Validation	Segment
				Must be within the age limits of the disease type	
PATIENT_ID_TYPE	In	Text (30)	the patient identifier type (eg GMS)	Required Must be GMS for CDM	GMS
PATIENT_IHI	In	Text (30)	the patient Irish Health Identifier	None	PID.3 CX1 where CX.5 = "IHINumber"
--- ERROR MESSAGE --- [0 TO MANY ERRORS FOR EACH CDM MESSAGE]					
ERROR_CODE	Out	Text (30)	the error code for the HL7 message segment	N/A	ERR.1
--- MESSAGE - CLAIM LINK --- [0 TO MANY CLAIMS FOR EACH CDM MESSAGE]					
CLAIM_NUM	Out	Text (10)	the claim number or numbers for split claims	N/A	MSA.3
--- CLAIM --- [0 TO MANY CLAIMS FOR EACH CDM MESSAGE]					
FORM_NUM	In	Text (7)	the hardcopy claim form number	To Be Defined in Subsequent Project	
LOCATION_CLASS	In	Text (1)	the location classifier	To Be Defined in Subsequent Project	
SERVICE_TYPE	In	Text (2)	the special service code	Required Must be CDM for CDM claims	CDM
CONSULTATION_TYPE	In	Text (1)	the type of STC	To Be Defined in Subsequent Project	OBX
PATIENT_SIGNATURE	In	Text (1)	the patient signature present flag	To Be Defined in Subsequent Project	OBX
REFERRING_DOCTOR_SIGNED	In	Text (1)	The referring doctor signature flag	To Be Defined in Subsequent Project	OBX
TREATMENT_DOCTOR_SIGNED	In	Text (1)	The treating doctor signature flag	To Be Defined in Subsequent Project	OBX

Draft PCERS Integrated Reimbursement Claim Message Data Items

These are the original data items proposed by the PCERS, and are included for information purposes only (i.e. the pertinent items are included in the Messaging Spec).

Message Name	In/Out	Datatype	Description	Validation	Segment
CONFIRM_OUT_HOURS	In	Text (1)	The confirm out of hours flag	To Be Defined in Subsequent Project	OBX
PATIENT_SIGNED_OUT_HOURS	In	Text (1)	The patient out of hours signature flag	To Be Defined in Subsequent Project	OBX
DOCTOR_SIGNED_OUT_HOURS	In	Text (1)	The doctor out of hours signature flag	To Be Defined in Subsequent Project	OBX
SOCIAL_WORKER_SIGNED	In	Text (1)	The social worker signature flag	To Be Defined in Subsequent Project	OBX
CO_OP_OUT_HOURS	In	Text (1)	The co-op out of hours flag	To Be Defined in Subsequent Project	OBX
COUNTRY_CODE	In	Text (3)	The country code	To Be Defined in Subsequent Project	OBX
FORENAME	In	Text (25)	the patient forename	To Be Defined in Subsequent Project	PID.3
SURNAME	In	Text (25)	the patient surname	To Be Defined in Subsequent Project	PID.3
PATIENT_ID_EXPIRY_DATE	In	Date	Expiry date of the EHIC or UK ID Card. Format: YYYYMMDD	To Be Defined in Subsequent Project	PID.29
DATE_OF_BIRTH	In	Date	The patient date of birth. Format: YYYYMMDD	To Be Defined in Subsequent Project	PID.7
PRESCRIPTION_SERIAL_NUM	In	Text (10)	The prescription serial number	To Be Defined in Subsequent Project	OBX
NO_PRESCRIPTION_ACK	In	Text (1)	Acknowledge no perscription was written for an EHIC claim flag	To Be Defined in Subsequent Project	OBX
GENERIC_CARD_NUM	In	Text (11)	the generic card number for social inclusion claims	To Be Defined in Subsequent Project	OBX
--- CLAIM - DISEASE LINK --- [1 TO MANY DISEASE FOR EACH CLAIM]					

Draft PCERS Integrated Reimbursement Claim Message Data Items

These are the original data items proposed by the PCERS, and are included for information purposes only (i.e. the pertinent items are included in the Messaging Spec).

Message Name			In/Out	Datatype	Description	Validation	Segment
DISEASE_CODE	In	Text (10)	The disease code			Required Must be one of the approved diseases	OBR.4 CE.1 from all OBR segments except the first one.

Appendix 6 Sample Messages

Appendix A – Phase 1 Samples

Sample XML code:

Sample Reimbursement Message Segments (move to new schedule at the end of document)

Please note sample xml is for **illustration purposes only. Please refer to appropriate segments and code tables for relevant data values.*

MSH Segment

```
<ORU_R01 xmlns="urn:hl7-org:v2xml">
  <MSH>
    <MSH.1>|</MSH.1>
    <MSH.2>^~\&amp;</MSH.2>
    <MSH.3>
      <HD.1>HELIXPM.HEALTHLINK.71</HD.1>
      <HD.2/>
      <HD.3/>
    </MSH.3>
    <MSH.4>
      <HD.1>Dr. Smith, John</HD.1>
      <HD.2>123564.4444</HD.2>
      <HD.3>MCN.HLPracticeID</HD.3>
    </MSH.4>
    <MSH.5>
      <HD.1>PCERS</HD.1>
      <HD.2/>
      <HD.3/>
    </MSH.5>
    <MSH.6>
      <HD.1>PCERS</HD.1>
      <HD.2>99990</HD.2>
      <HD.3>L</HD.3>
    </MSH.6>
    <MSH.7>
      <TS.1>201909151031</TS.1>
    </MSH.7>
    <MSH.9>
      <MSG.1>ORU</MSG.1>
      <MSG.2>R01</MSG.2>
```

```
    </MSH.9>
    <MSH.10>ORU20190823162054003564</MSH.10>
    <MSH.11>
      <PT.1>P</PT.1>
    </MSH.11>
    <MSH.12>
      <VID.1>2.4</VID.1>
    </MSH.12>
    <MSH.15>AL</MSH.15>
  </MSH>
```

Patient Identification Segment

The practice software system must send the patient demographics containing the patient's GMS number. If an Individual Health Identifier is available for the patient then this should be sent as a repeating PID.3 field. PCERS will make a match based on the patient's GMS number.

```
<ORU_R01.PATIENT_RESULT>
  <ORU_R01.PATIENT>
    <PID>
      <PID.3>
        <CX.1>12345A</CX.1>
        <CX.4>
          <HD.1>PCERS</HD.1>
          <HD.2/>
          <HD.3/>
        </CX.4>
        <CX.5>GMS</CX.5>
      </PID.3>
      <PID.3>
        <CX.1>5393014123456789</CX.1>
        <CX.4>
          <HD.1>HSE</HD.1>
          <HD.2/>
          <HD.3/>
        </CX.4>
        <CX.5>IHINumber</CX.5>
      </PID.3>
      <PID.5>
        <XPN.1>
          <FN.1>abc123</FN.1>
        </XPN.1>
        <XPN.2>xyz987</XPN.2>
        <XPN.7>S</XPN.7>
      </PID.5>
      <PID.7>
```

```
      <TS.1>20130505</TS.1>
    </PID.7>
    <PID.8>M</PID.8>
    <PID.11>
      <XAD.1>
        <SAD.1> </SAD.1>
      </XAD.1>
      <XAD.2> </XAD.2>
      <XAD.3></XAD.3>
      <XAD.4></XAD.4>
      <XAD.5></XAD.5>
    </PID.11>
  </PID>
```

Patient Visit Segment

This segment contains the GMS number of the patient's registered doctor.

```
  <ORU_R01.PATIENT_VISIT>
    <PV1>
      <PV1.2>G</PV1.2>
      <PV1.7>
        <XCN.1>12345</XCN.1>
        <XCN.13>GMS</XCN.13>
      </PV1.7>
      <PV1.7>
        <XCN.1>99992222112332145 45</XCN.1>
        <XCN.13>IHPI</XCN.13>
      </PV1.7>
    </PV1>
  </ORU_R01.PATIENT_VISIT>
```

Observation Request Segment

```
<ORU_R01.ORDER_OBSERVATION>
  <OBR>
    <OBR.1>1</OBR.1>
    <OBR.2>
      <EI.1>ORU20200108153704560121121</EI.1>
    </OBR.2>
    <OBR.4>
      <CE.1>X0135-0</CE.1>
      <CE.2>Chronic Disease Management</CE.2>
      <CE.3>L</CE.3>
    </OBR.4>
```

```
    <OBR.7>
      <TS.1>20190823</TS.1>
    </OBR.7>
    <OBR.25>F</OBR.25>
  </OBR>
  <ORU_R01.OBSERVATION>
    <OBX>
      <OBX.1>1</OBX.1>
      <OBX.2>TX</OBX.2>
      <OBX.3>
        <CE.1>X0243-0</CE.1>
        <CE.2>Vendor Version Number</CE.2>
        <CE.3>L</CE.3>
      </OBX.3>
      <OBX.5>1</OBX.5>
      <OBX.11>F</OBX.11>
      <OBX.14>
        <TS.1>20190823</TS.1>
      </OBX.14>
    </OBX>
  </ORU_R01.OBSERVATION>
  <ORU_R01.OBSERVATION>
    <OBX>
      <OBX.1>2</OBX.1>
      <OBX.2>TX</OBX.2>
      <OBX.3>
        <CE.1>X0257-0</CE.1>
        <CE.2>Consultation Type</CE.2>
        <CE.3>L</CE.3>
      </OBX.3>
      <OBX.5>
        <CE.1>386472008</CE.1>
        <CE.2>Telephone Consultation</CE.2>
        <CE.3>SCT</CE.3>
      </OBX.5>
      <OBX.11>F</OBX.11>
      <OBX.14>
        <TS.1>20190823</TS.1>
      </OBX.14>
    </OBX>
  </ORU_R01.OBSERVATION>
</ORU_R01.ORDER_OBSERVATION>
<ORU_R01.ORDER_OBSERVATION>
  <OBR>
    <OBR.1>2</OBR.1>
    <OBR.2>
      <EI.1>ORU20200108153704560121121</EI.1>
```

```
    </OBR.2>
    <OBR.4>
      <CE.1>416239002</CE.1>
      <CE.2>Diagnosis</CE.2>
      <CE.3>SCT</CE.3>
    </OBR.4>
    <OBR.7>
      <TS.1>20190823</TS.1>
    </OBR.7>
    <OBR.25>F</OBR.25>
  </OBR>
  <ORU_R01.OBSERVATION>
    <OBX>
      <OBX.1>1</OBX.1>
      <OBX.2>CE</OBX.2>
      <OBX.3>
        <CE.1>416239002</CE.1>
        <CE.2>Diagnosis</CE.2>
        <CE.3>SCT</CE.3>
      </OBX.3>
      <OBX.5>
        <CE.1>J44</CE.1>
        <CE.2>COPD</CE.2>
        <CE.3>ICD-10</CE.3>
        <CE.4>13645005</CE.4>
        <CE.5>COPD</CE.5>
        <CE.6>SCT</CE.6>
      </OBX.5>
      <OBX.11>F</OBX.11>
      <OBX.14>
        <TS.1>20190823</TS.1>
      </OBX.14>
    </OBX>
  </ORU_R01.OBSERVATION>
  <ORU_R01.OBSERVATION>
    <OBX>
      <OBX.1>2</OBX.1>
      <OBX.2>DT</OBX.2>
      <OBX.3>
        <CE.1>231000220104</CE.1>
        <CE.2>Year of Diagnosis</CE.2>
        <CE.3>SCT</CE.3>
      </OBX.3>
      <OBX.5>2010</OBX.5>
      <OBX.11>F</OBX.11>
      <OBX.14>
        <TS.1>20190823</TS.1>
      </OBX.14>
```

```
      </OBX>
    </ORU_R01.OBSERVATION>
    <ORU_R01.OBSERVATION>
      <OBX>
        <OBX.1>3</OBX.1>
        <OBX.2>FT</OBX.2>
        <OBX.3>
          <CE.1>268529002</CE.1>
          <CE.2>Attending Hospital</CE.2>
          <CE.3>SCT</CE.3>
        </OBX.3>
        <OBX.5>YES</OBX.5>
        <OBX.11>F</OBX.11>
        <OBX.14>
          <TS.1>20190823</TS.1>
        </OBX.14>
      </OBX>
    </ORU_R01.OBSERVATION>
  </ORU_R01.ORDER_OBSERVATION>
```

This indicates the nature of the reimbursement message along with the diseases and year of diagnosis.

For Corrected messages:

- Each OBR.2 will contain the MSH.10 value of the original reimbursement message.
- Each OBR.25 will contain the value ‘C’.

```
  <ORU_R01.ORDER_OBSERVATION>
    <OBR>
      <OBR.1>1</OBR.1>
      <OBR.2>
        <EI.1>ORU20190823162054003564</EI.1>
      </OBR.2>
      <OBR.4>
        <CE.1>X0135-0</CE.1>
        <CE.2>Chronic Disease Management</CE.2>
        <CE.3>L</CE.3>
      </OBR.4>
      <OBR.7>
        <TS.1>20190823</TS.1>
      </OBR.7>
      <OBR.25>C</OBR.25>
    </OBR>
```

Observation Request Segment Sample

**Please note sample xml is for illustration purposes only. Please refer to appropriate segments and code tables for relevant data values.*

```
<ORU_R01.ORDER_OBSERVATION>
  <OBR>
    <OBR.1>1</OBR.1>
    <OBR.2>
      <EI.1>ORU20190823162054003564</EI.1>
    </OBR.2>
    <OBR.4>
      <CE.1>X0135-0</CE.1>
      <CE.2>Chronic Disease Management</CE.2>
      <CE.3>L</CE.3>
    </OBR.4>
    <OBR.7>
      <TS.1>20190823</TS.1>
    </OBR.7>
    <OBR.25>F</OBR.25>
  </OBR>
  <ORU_R01.OBSERVATION>
    <OBX>
      <OBX.1>1</OBX.1>
      <OBX.2>TX</OBX.2>
      <OBX.3>
        <CE.1>X0243-0</CE.1>
        <CE.2>Vendor Version Number</CE.2>
        <CE.3>L</CE.3>
      </OBX.3>
      <OBX.5>1.123.1a</OBX.5>
      <OBX.11>F</OBX.11>
    </OBX>
  </ORU_R01.OBSERVATION>
</ORU_R01.ORDER_OBSERVATION>
<ORU_R01.OBSERVATION>
    <OBX>
      <OBX.1>2</OBX.1>
      <OBX.2>TX</OBX.2>
      <OBX.3>
        <CE.1>X0257-0</CE.1>
        <CE.2>Consultation Type</CE.2>
        <CE.3>L</CE.3>
      </OBX.3>
      <OBX.5>
        <CE.1>386472008</CE.1>
```

```
        <CE.2>Telephone Consultation</CE.2>
        <CE.3>SCT</CE.3>
      </OBX.5>
      <OBX.11>F</OBX.11>
      <OBX.14>
        <TS.1>20190823</TS.1>
      </OBX.14>
    </OBX>
  </ORU_R01.OBSERVATION>
</ORU_R01.ORDER_OBSERVATION>
<ORU_R01.ORDER_OBSERVATION>
  <OBR>
    <OBR.1>2</OBR.1>
    <OBR.2>
      <EI.1>ORU201908231620540035 64</EI.1>
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Appendix B – Phase 2 Sample Messages

OCF Payment Message Sample

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OCF Clinical Message Sample

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PP Payment Message Sample

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PP Clinical Message Sample

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