Business Rules for Patient-level Data Extracts 2021/22

Lipid Management

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# 1. Amendment history

|  |  |  |
| --- | --- | --- |
| Version | Date | Amendment history |
| 1.0 | 01 March 2021 | First draft of business rules – includes specification of register of patients to be used for lipid management protocol. |
| 1.1 | 05 April 2021 | Second draft of business rules – includes complete routing for all cohorts included in lipid management protocol. |
| 2.0 | 15 November 2021 | Business rules updated following feedback and to incorporate new drugs. NEW STYLE BUSINESS RULES |
| 2.1 | 14 December 2021 | Update to business rules to incorporate STAT\_COD and accompanying field for use in cohort LMCX034. |
| 2.2 | 13 January 2022 | Update to rules 1 to 5 of cohort LMCX033 to explicitly set the BEMPACID\_FLAG to Null for rejected patients. |

# 2. Background

## Document purpose

The dataset and business rules documents produced by the NHS Digital General Practice Specification and Extraction Service are created primarily for the uses of GPES and GP system suppliers. These documents contain specifications to communicate technical details of extracts from Primary Care systems which may be used to provide Practice-level information regarding services and/or allocate rewards, such as payments or QOF points.

This document is **not** intended to be used in place of clinical guidelines, but may be referred to by any individual or organisation to aid understanding of which patients and/or activity are included in each population or output. Non-technical, textual descriptions of business rules can be found in the table columns highlighted in pale blue throughout the document.

These business rules, in conjunction with the accompanying flowchart, can be used to devise a clinical decision support system and patient lists to assist in the provision of primary care services to patients requiring lipid management therapy.

## Business rules supporting information

Further information regarding the setup of the business rules, terminology used and the calculation methods can be found in version 1.6 of the supporting information document which can be accessed here:

<http://content.digital.nhs.uk/qofesextractspecs>

## Clinical codes

The clinical code strings have been replaced by clinical reference sets (refsets). Both clinical refset and drug refset IDs are denoted by a ‘^’ prefix.

Please note the content of clinical and drug refsets are subject to change over the course of a year. Drug refsets have the scope to be updated every 4 weeks. The content of clinical refsets is dynamic and could be updated several times throughout the year. The latest content of refsets can be accessed using the files from [Technology Reference data Update Distribution (TRUD)](https://isd.digital.nhs.uk/trud3/user/guest/group/0/home) or [Primary Care Domain Reference Set Portal](https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-collections/quality-and-outcomes-framework-qof/quality-and-outcome-framework-qof-business-rules/primary-care-domain-reference-set-portal).

## Guidance

These business rules should be used in conjunction with the accompanying flowchart and cohort description reference file. These items are intended to support GP system suppliers in the development of a lipid management protocol.

# 3. Dataset specification

## Qualifying dates

The dataset and rules in this document refer to various dates, which may include any number of the dates from the table below.

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| Term | Description | Definition | Timeframe for this service |
| --- | --- | --- | --- |
| RRD | Report Run Date | The day upon which the GP practice runs the report | Value provided at runtime. |
| RRD – 6 months | Report Run Date minus 6 months | Calculation | Based on RRD |
| RRD – 12 months | Report Run Date minus 12 months | Calculation | Based on RRD |
| RRD – 1 year | Report Run Date minus 1 year | Calculation | Based on RRD |
| RRD – 2 years | Report Run Date minus 2 years | Calculation | Based on RRD |
| RRD – 3 years | Report Run Date minus 3 years | Calculation | Based on RRD |
| *End of dates* |

## Patient selection criteria

All [Populations](#_Populations) and [Outputs](#_4._Outputs) are to be returned at **Patient-level** for this service.

### GMS registration status

|  |  |  |  |
| --- | --- | --- | --- |
| Qualifying criteria | Action if true | Action if false | Non-technical Description |
| (If [REG\_DAT](#_REG_DAT) ≠ Null AND If [DEREG\_DAT](#_DEREG_DAT) = Null)OR(If [REG\_DAT](#_REG_DAT) ≠ Null AND If [DEREG\_DAT](#_DEREG_DAT) > [RRD](#_RRD)) | Select | Reject | Select patients who meet either of the criteria below:* Registered for GMS prior to or on the report run date and did not subsequently deregister from GMS (Currently registered for GMS).
* Registered for GMS prior to or on the report run date and subsequently deregistered from GMS **after** the report run date (Previously registered for GMS).

(i.e. patients who were registered for GMS on the report run date).Reject the remaining patients. |
| *End of rules* |

### Populations

#### Case registers

*Each patient can only be included once per register.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Register Name | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LM\_REG | Lipid management register of patients with cardiovascular disease | [GMS registration status](#_GMS_registration_status) | 101 | Z |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [LMR\_DAT](#_LMR_DAT) ≠ Null | Select | Reject | Select patients from the specified population who have a current cardiovascular disease diagnosis. Reject the remaining patients. |
| *End of rules* |

#### Cohorts

*Each patient can only be included once per cohort.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX001 | Request lipid profile | [LM\_REG](#_LM_REG) | 101 | Z |  |

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| --- | --- | --- | --- | --- |
| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [NONHDLCCHOLLAT\_DAT](#_NONHDLCCHOLLAT_DAT_1) = NullANDIf [LDLCCHOLLAT\_DAT](#_LDLCCHOLLAT_DAT) = NullANDIf [CHOL2LAT\_DAT](#_LDLCCHOLHIGH_VAL) = Null | Select | Rejectand pass to[LMCX002](#_LMCX002) Rule 1 | Select patients from the specified population who meet all of the criteria below:* Do not have a non-HDL-C cholesterol value recorded in the 12 months leading up to and including the report run date.
* Do not have an LDL cholesterol value recorded in the 12 months leading up to and including the report run date.
* Do not have a total cholesterol value recorded in the 12 months leading up to and including the report run date.

Reject the remaining patients and pass them to Cohort [LMCX002](#_LMCX002) Rule 1 |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX002 | Retest lipid profile in 12 months cohort  | Rejected from [LMCX001](#_LMCX001) | 101 | Z |  |

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| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [HIGHCHOL\_DAT](#_CHOL2HIGH_VAL) = Null | Select | Rejectand pass to[LMCX010](#_LMCX010) Rule 1 | Select patients from the specified population whose latest cholesterol value recorded in the 12 months leading up to and including the report run date is not one which indicates it is uncontrolled i.e. it is not a high cholesterol value. Reject the remaining patients and pass them to Cohort [LMCX010](#_LMCX010) Rule 1. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX010 | Lipid lowering therapy declined or Lipid disorder monitoring declined coded in each of last 3 years. Consider adding non-statin drugs. | Rejected from [LMCX002](#_LMCX002) | 101 | Z |  |

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| --- | --- | --- | --- | --- |
| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [MONDEC3\_DAT](#_CHOLMAX1_DAT) ≠ NullANDIf [MONDEC2\_DAT](#_MONDEC3_DAT) ≠ NullANDIf [MONDEC1\_DAT](#_MONDEC2_DAT) ≠ Null | Select | Next rule | Select patients from the specified population who have a code indicating that the patient has declined lipid disorder monitoring in each of the three years leading up to and including the report run date. Pass all remaining patients to the next rule. |
|  | If [THERDEC3\_DAT](#_MONDEC1_DAT) ≠ NullANDIf [THERDEC2\_DAT](#_THERDEC3_DAT) ≠ NullANDIf [THERDEC1\_DAT](#_THERDEC2_DAT) ≠ Null | Select | Rejectand pass to[LMCX011](#_LMCX011) Rule 1 | Select patients passed to this rule who have a code indicating that the patient has declined lipid lowering therapy in each of the three years up to and including the report run date. Reject the remaining patients and pass them to Cohort [LMCX011](#_LMCX011) Rule 1. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX011 | Max tolerated lipid lowering therapy coded in each of last 3 years. Consider adding non-statin drugs. | Rejected from [LMCX010](#_LMCX010) | 101 | Z |  |

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| --- | --- | --- | --- | --- |
| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [CHOLMAX3\_DAT](#_HIGHCHOL_DAT) ≠ NullANDIf [CHOLMAX2\_DAT](#_CHOLMAX3_DAT) ≠ NullANDIf [CHOLMAX1\_DAT](#_CHOLMAX2_DAT) ≠ Null | Select | Rejectand pass to[LMCX004](#_LMCX004) Rule 1 | Select patients from the specified population who have a code indicating maximal tolerated lipid lowering therapy in each of the three years leading up to and including the report run date. Reject remaining patient and pass them to Cohort [LMCX004](#_LMCX004) Rule 1. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX004 | Lipid lowering therapy declined or Lipid disorder monitoring declined in the last 6 months. Consider adding non-statin drugs.  | Rejected from [LMCX011](#_LMCX011) | 101 | Z |  |

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| --- | --- | --- | --- | --- |
| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [THERDEC6MTH\_DAT](#_MONDEC6MTH_DAT) ≠ NullORIf [MONDEC6MTH\_DAT](#_CHOLMAX6MTH_DAT) ≠ Null | Select | Rejectand pass to[LMCX017](#_LMCX017_1) Rule 1 | Select patients from the specified population who meet either of the criteria below:* Have a code indicating that the patient has declined lipid lowering therapy in the 6 months leading up to and including the report run date.
* Have a code indicating that the patient has declined lipid disorder monitoring in the 6 months leading up to and including the report run date.

Reject the remaining patients and pass them to Cohort [LMCX017](#_LMCX017_1) Rule 1. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX017 | Max tolerated lipid therapy coded in last 6 months. Consider adding non-statin drugs. | Rejected from [LMCX004](#_LMCX004) | 100 | Z |  |

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| --- | --- | --- | --- | --- |
| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [CHOLMAX6MTH\_DAT](#_THERDEC1_DAT) ≠ Null | Select | Rejectand pass to[LMCX012](#_LMCX012) Rule 1 | Select patients from the specified population who have a code indicating maximal tolerated lipid lowering therapy in the 6 months leading up to and including the report run date. Reject remaining patients and pass them to Cohort [LMCX012](#_LMCX012) Rule 1. |
| *End of rules* |

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| --- | --- | --- | --- | --- | --- |
| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX012 | Lipid lowering therapy contraindicated or not indicated. Consider adding non-statin drugs | Rejected from [LMCX017](#_LMCX017_1) | 101 | Z |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [LIPIDTHERCON\_DAT](#_EGFR_VAL) ≠ NullORIf [LIPIDTHERNIND\_DAT](#_LIPIDTHERNIND_DAT) ≠ NullORIf [LIPIDTHERADV\_DAT](#_LIPIDTHERADV_DAT) ≠ Null | Select | Rejectand pass to[LMCX003](#_LMCX003) | Select patients from the specified population who meet any of the criteria below:* Have a lipid lowering therapy contraindicated code up to and including the report run date.
* Have a lipid lowering therapy not indicated code up to and including the report run date.
* Have a lipid therapy adverse reaction code up to and including the report run date.

Reject the remaining patients and pass them to Cohort [LMCX003](#_LMCX003). |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX003 | Lipid Management cohort  | Rejected from [LMCX012](#_LMCX012) | 101 | Z |  |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX006 | Atorvastatin 20mg candidate cohort | [LMCX003](#_LMCX003) | 101 | Z |  |

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| --- | --- | --- | --- | --- |
| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [HISTATLAT\_DAT](#_HISTATLAT_DAT) = Null | Pass to Rule 3 | Next rule | Pass to Rule 3 all patients from the specified population who are not currently (in the last 6 months) being treated with a high intensity statin.Pass the remaining patients to the next rule |
| 1.
 | If [[HISIMVASTAT\_DAT](#_HIROSUVASTAT_DAT)](#_HIROSUVASTAT_DAT) ≠ Null | Pass to Rule 7 | Rejectand pass to[LMCX015](#_LMCX015) | Pass to the Rule 7 all patients passed to this rule who are currently (in the last 6 months) being treated with a high intensity simvastatin.Reject the remaining patients and pass them to Cohort [LMCX015](#_LMCX015). |
| 1.
 | If [STATINDEC1\_DAT](#_STATINDEC1_DAT) = NullORIf [STATINDEC2\_DAT](#_STATINDEC2_DAT) = NullORIf [STATINDEC3\_DAT](#_STATINDEC3_DAT) = Null | Next rule | Rejectand pass to[LMCX015](#_LMCX015) | Pass to the next rule all patients passed to this rule who have not declined statin therapy in at least one of the last 3 years up to and including the report run date.Reject the remaining patients and pass them to Cohort [LMCX015](#_LMCX015). |
| 1.
 | If [STATINDEC6MTH\_DAT](#_STATINDEC6MTH_DAT) = Null | Next rule | Rejectand pass to[LMCX015](#_LMCX015) | Pass to the next rule all patients passed to this rule who have not declined statin therapy in the last 6 months leading up to and including the report run date.Reject the remaining patients and pass them to Cohort [LMCX015](#_LMCX015). |
| 1.
 | If [STATALL\_DAT](#_STATALL_DAT) = Null | Next rule | Rejectand pass to[LMCX015](#_LMCX015) | Pass to the next rule all patients passed to this rule who have no statin allergy codes in their record up to and including the report run date.Reject the remaining patients and pass them to Cohort [LMCX015](#_LMCX015). |
| 1.
 | If [STATCON\_DAT](#_STATCON_DAT) = NullANDIf [STATNIND\_DAT](#_STATNIND_DAT) = Null | Next rule | Rejectand pass to[LMCX015](#_LMCX015) | Pass to the next rule all patients passed to this rule who have no statin therapy contraindicated and no statin therapy not indicated codes on their record up to and including the report run date.Reject the remaining patients and pass them to Cohort [LMCX015](#_LMCX015). |
| 1.
 | (If [STATINTOL\_DAT](#_STATINTOL_DAT) = NullAND If [ARSTAT\_DAT](#_ARSTAT_DAT) = Null)ORIf [ARATORVASTAT\_DAT](#_ARATORVASTAT_DAT) = Null | Next rule | Rejectand pass to[LMCX007](#_LMCX007) Rule 1 | Pass to the next rule all patients passed to this rule who meet any of the criteria below:* Do not have a statin intolerance record up to and including the report run date, and do not have an adverse reaction to statins up to and including the report run date.
* Do not have an adverse reaction to atorvastatin up to and including the report run date.

Reject the remaining patients and pass them to Cohort [LMCX007](#_LMCX007) Rule 1. |
| 1.
 | If [EGFR\_VAL](#_EGFR_DAT) < 60 | Select | Rejectand pass to[LMCX005](#_LMCX005) | Select patients passed to this rule who have an estimated glomerular filtration rate (eGFR) of less than 60ml per minute as their latest eGFR recording up to and including the report run date.Reject the remaining patients and pass them to Cohort [LMCX005](#_LMCX005). |
| *End of rules* |

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| --- | --- | --- | --- | --- | --- |
| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX005 | Atorvastatin 80mg (or highest dose permissible given other medication) candidate cohort | Rejected from [LMCX006 Rule 8](#LMCX006R8) | 101 | Z |  |

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| --- | --- | --- | --- | --- | --- |
| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX007 | Rosuvastatin 80mg (or highest dose permissible given other medication) candidate cohort  | Rejected from [LMCX006 Rule 7](#LMCX006R7) | 101 | Z |  |

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| --- | --- | --- | --- | --- |
| Rule number | Rule | Action if true | Action if false | Rule description or comments |
| 1.
 | If [ARROSUVASTAT\_DAT](#_ARROSUVASTAT_DAT) = Null | Next rule | Rejectand pass to[LMCX015](#_LMCX015) | Pass to the next rule all patients from the specified population who do not have an adverse reaction to rosuvastatin.Reject the remaining patients and pass them to Cohort [LMCX015](#_LMCX015). |
| 1.
 | If [EGFR\_VAL](#_EGFR_DAT) > 60 | Select | Rejectand pass to[LMCX018](#_LMCX018) Rule 1 | Select patients passed to this rule who have an estimated glomerular filtration rate (eGFR) of greater than 60ml per minute as their latest eGFR recording up to and including the report run date.Reject the remaining patients and pass them to Cohort [LMCX018](#_LMCX018) Rule 1. |
| *End of rules* |

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| --- | --- | --- | --- | --- | --- |
| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX018 | Rosuvastatin 5mg candidate cohort | Rejected from [LMCX007 Rule 2](#LMCX007R2) | 100 | Z |  |

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| --- | --- | --- | --- | --- |
| Rule number | Rule | Action if true | Action if false | Rule description or comments |
| 1.
 | If [EGFR\_VAL](#_EGFR_DAT) >= 30ANDIf [EGFR\_VAL](#_EGFR_DAT) <= 60 | Select | Rejectand pass to[LMCX015](#_LMCX015) | Select patients passed to this rule who have an estimated glomerular filtration rate (eGFR) of greater or equal to 30ml per minute and less than or equal to 60ml per minute as their latest eGFR recording up to and including the report run date.Reject the remaining patients and pass them to Cohort [LMCX015](#_LMCX015). |
| *End of rules* |

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| --- | --- | --- | --- | --- | --- |
| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX015 | Non-statin treatment cohort | Rejected from the following rules:[LMCX006 Rule 2](#LMCX006R2)[LMCX006 Rule 3](#LMCX006R3)[LMCX006 Rule 4](#LMCX006R4)[LMCX006 Rule 5](#LMCX006R5)[LMCX006 Rule 6](#LMCX006R6)[LMCX007 Rule 1](#LMCX007R1)[LMCX018 Rule 1](#LMCX018R1) | 101 | Z |  |

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| --- | --- | --- | --- | --- | --- |
| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX033 | Ezetimibe indicated | [LMCX015](#_LMCX015) | 101 | Z |  |

Please note that this cohort does not need to be returned. It is used to minimise the need to repeat the logic required to populate cohorts LMCX008 and LMCX019-32.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [EZETIMIBEDEC1\_DAT](#_EZETIMIBEDEC1_DAT) = NullORIf [EZETIMIBEDEC2\_DAT](#_EZETIMIBEDEC2_DAT) = NullORIf [EZETIMIBEDEC3\_DAT](#_EZETIMIBEDEC3_DAT) = Null | Next rule | [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = FALSE[BEMPACID\_FLAG](#_BEMPACID_FLAG) = NULLReject | Pass to the next rule all patients from the specified population who have **not** declined Ezetimibe therapy in at least one of the last 3 years up to and including the report run date.Reject the remaining patients and set [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = FALSE and [BEMPACID\_FLAG](#_BEMPACID_FLAG) = NULL. |
|  | If [EZETIMIBEDEC6MTH\_DAT](#_EZETIMIBEDEC6MTH_DAT) = Null | Next rule | [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = FALSE[BEMPACID\_FLAG](#_BEMPACID_FLAG) = NULLReject | Pass to the next rule all patients passed to this rule who have not declined Ezetimibe therapy in the last 6 months leading up to and including the report run date.Reject the remaining patients and set [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = FALSE and [BEMPACID\_FLAG](#_BEMPACID_FLAG) = NULL. |
|  | If [EZETIMIBEALL\_DAT](#_EZETIMIBEALL_DAT) = Null | Next rule | [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = FALSE[BEMPACID\_FLAG](#_BEMPACID_FLAG) = NULLReject | Pass to the next rule all patients passed to this rule who do not have an allergy to Ezetimibe recorded at any point up to and including the report run date.Reject the remaining patients and set [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = FALSE and [BEMPACID\_FLAG](#_BEMPACID_FLAG) = NULL. |
|  | If [EZETIMIBECON\_DAT](#_EZETIMIBECON_DAT) = NullANDIf [EZETIMIBENIND\_DAT](#_EZETIMIBENIND_DAT) = Null | Next rule | [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = FALSE[BEMPACID\_FLAG](#_BEMPACID_FLAG) = NULLReject | Pass to the next rule all patients passed to this rule who have no Ezetimibe therapy contraindicated and no Ezetimibe therapy not indicated codes on their record.Reject the remaining patients and set [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = FALSE and [BEMPACID\_FLAG](#_BEMPACID_FLAG) = NULL. |
|  | If [EZETIMIBEADV\_DAT](#_EZETIMIBEADV_DAT) = Null | Next rule | [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = FALSE[BEMPACID\_FLAG](#_BEMPACID_FLAG) = NULLReject | Pass to the next rule all patients passed to this rule who do not have an adverse reaction to Ezetimibe.Reject the remaining patients and set [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = FALSE and [BEMPACID\_FLAG](#_BEMPACID_FLAG) = NULL. |
|  | If [EZETIMIBE\_DAT](#_THERDEC6MTH_DAT) = Null | [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = TRUESelectand also pass to[LMCX034](#_LMCX034) Rule 1 | [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = NULLSelectand also pass to[LMCX034](#_LMCX034) Rule 1 | Select all patients passed to this rule and pass them to Cohort [LMCX034](#_LMCX034) Rule 1.For the patients who are **not** currently (in the last 6 months) being treated with Ezetimibe set [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = TRUE.For the remaining patients (i.e. those already on Ezetimibe) set [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = NULL. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX034 | Bempedoic acid + Ezetimibe indicated | [LMCX033](#_LMCX033) | 100 | Z |  |

Please note that this cohort does not need to be returned. It is used to minimise the need to repeat the logic required to populate cohorts LMCX008 and LMCX019-32.

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| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [NONHISTAT\_DAT](#_NONHISTAT_DAT) = Null | Next rule | [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSEReject | Pass to the next rule all patients from the specified population who meet any of the criteria below:* Are not currently (in the last 6 months) being treated with a non-high intensity statin.
* Their latest statin treatment in the last 6 months was a high intensity statin.

Reject all remaining patients and set [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSE. |
|  | If [BEMPACID\_DAT](#_BEMPACID_DAT) = Null | Next rule | [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSEReject | Pass to the next rule all patients passed to this rule who are not currently (in the last 6 months) being treated with Bempedoic acid.Reject all remaining patients and set [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSE. |
|  | If [BEMPACIDDEC1\_DAT](#_BEMPACIDDEC1_DAT) = NullORIf [BEMPACIDDEC2\_DAT](#_BEMPACIDDEC2_DAT) = NullORIf [BEMPACIDDEC3\_DAT](#_BEMPACIDDEC3_DAT) = Null | Next rule | [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSEReject | Pass to the next rule all patients passed to this rule who have not declined Bempedoic acid therapy in at least one of the last 3 years up to and including the report run date.Reject all remaining patients and set [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSE. |
|  | If [BEMPACIDDEC6MTH\_DAT](#_BEMPACIDDEC6MTH_DAT) = Null | Next rule | [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSEReject | Pass to the next rule all patients passed to this rule who have not declined Bempedoic acid therapy in the last 6 months leading up to and including the report run date.Reject all remaining patients and set [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSE. |
|  | If [BEMPACIDALL\_DAT](#_BEMPACIDALL_DAT) = Null | Next rule | [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSEReject | Pass to the next rule all patients passed to this rule who do not have an allergy to Bempedoic acid recorded at any point up to and including the report run date.Reject all remaining patients and set [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSE. |
|  | If [BEMPACIDCON\_DAT](#_BEMPACIDCON_DAT) = NullANDIf [BEMPACIDNIND\_DAT](#_BEMPACIDNIND_DAT) = Null | Next rule | [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSEReject | Pass to the next rule all patients passed to this rule who have no Bempedoic acid therapy contraindicated and no Bempedoic acid therapy not indicated codes on their record.Reject all remaining patients and set [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSE. |
|  | If [BEMPACIDADV\_DAT](#_BEMPACIDADV_DAT) = Null | [BEMPACID\_FLAG](#_BEMPACID_FLAG) = TRUESelect | [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSEReject | Select all patients passed to this rule who do not have an adverse reaction to Bempedoic acid up to and including the report run date.For these patients set [BEMPACID\_FLAG](#_BEMPACID_FLAG) = TRUE Reject the remaining patients and set [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSE. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX035 | Inclisiran indicated | [LMCX015](#_LMCX015) | 100 | Z |  |

Please note that this cohort does not need to be returned. It is used to minimise the need to repeat the logic required to populate cohorts LMCX008 and LMCX019-40.

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| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [INCLISIRAN\_DAT](#_INCLISIRAN_DAT) = Null | Next rule | [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSEReject | Pass to the next rule all patients from the specified population who are not currently (in the last 6 months) being treated with Inclisiran.Reject all remaining patients and set [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSE. |
|  | If [LDLCCHOL\_VAL](#_LDLCCHOL_VAL) >= 2.6 | Next rule | [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSEReject | Pass to the next rule all patients passed to this rule whose last low density lipoprotein (LDL) cholesterol test result was greater than or equal to 2.6 mmol/L.Reject all remaining patients and set [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSE. |
|  | If [INCLISIRANDEC1\_DAT](#_INCLISIRANDEC1_DAT) = NullORIf [INCLISIRANDEC2\_DAT](#_INCLISIRANDEC2_DAT) = NullORIf [INCLISIRANDEC3\_DAT](#_INCLISIRANDEC3_DAT) = Null | Next rule | [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSEReject | Pass to the next rule all patients passed to this rule who have not declined Inclisiran therapy in at least one of the last 3 years up to and including the report run date.Reject all remaining patients and set [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSE. |
|  | If [INCLISIRANDEC6MTH\_DAT](#_INCLISIRANDEC6MTH_DAT) = Null | Next rule | [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSEReject | Pass to the next rule all patients passed to this rule who have not declined Inclisiran therapy in the last 6 months leading up to and including the report run date.Reject all remaining patients and set [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSE. |
|  | If [INCLISIRANALL\_DAT](#_INCLISIRANALL_DAT) = Null | Next rule | [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSEReject | Pass to the next rule all patients passed to this rule who do not have an allergy to Inclisiran recorded at any point up to and including the report run date.Reject all remaining patients and set [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSE. |
|  | If [INCLISIRANCON\_DAT](#_INCLISIRANCON_DAT) = NullANDIf [INCLISIRANNIND\_DAT](#_INCLISIRANNIND_DAT) = Null | Next rule | [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSEReject | Pass to the next rule all patients passed to this rule who have no Inclisiran therapy contraindicated and no Inclisiran therapy not indicated codes on their record.Reject all remaining patients and set [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSE. |
|  | If [INCLISIRANADV\_DAT](#_INCLISIRANADV_DAT) = Null | [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = TRUESelect | [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSEReject | Select all patients passed to this rule who do not have an adverse reaction to Inclisiran up to and including the report run date.For these patients set [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = TRUE Reject the remaining patients and set [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSE. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX036 | Alirocumab or Evolocumab candidate cohort | [LMCX015](#_LMCX015) | 100 | Z |  |

Please note that this cohort does not need to be returned. It is used to minimise the need to repeat the logic required to populate cohorts LMCX008 and LMCX019-32.

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| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [PCSK9I\_DAT](#_PCSK9I_DAT) = Null | Next rule | [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSEReject | Pass to the next rule all patients from the specified population who are not currently (in the last 6 months) being treated with Alirocumab or Evolocumab.Reject all remaining patients and set [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSE. |
|  | If [LDLCCHOL\_VAL](#_LDLCCHOL_VAL) > 3.5 | Next rule | [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSEReject | Pass to the next rule all patients passed to this rule whose last low density lipoprotein (LDL) cholesterol test result was greater than 3.5 mmol/L.Reject all remaining patients and set [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSE. |
|  | If [PCSK9IDEC1\_DAT](#_PCSK9IDEC1_DAT) = NullORIf [PCSK9IDEC2\_DAT](#_PCSK9IDEC2_DAT) = NullORIf [PCSK9IDEC3\_DAT](#_PCSK9IDEC3_DAT) = Null | Next rule | [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSEReject | Pass to the next rule all patients passed to this rule who have not declined Alirocumab or Evolocumab therapy in at least one of the last 3 years up to and including the report run date.Reject all remaining patients and set [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSE. |
|  | If [PCSK9IDEC6MTH\_DAT](#_PCSK9IDEC6MTH_DAT) = Null | Next rule | [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSEReject | Pass to the next rule all patients passed to this rule who have not declined Alirocumab or Evolocumab therapy in the last 6 months leading up to and including the report run date.Reject all remaining patients and set [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSE. |
|  | If [PCSK9IALL\_DAT](#_PCSK9IALL_DAT) = Null | Next rule | [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSEReject | Pass to the next rule all patients passed to this rule who do not have an allergy to Alirocumab or Evolocumab recorded at any point up to and including the report run date.Reject all remaining patients and set [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSE. |
|  | If [PCSK9ICON\_DAT](#_PCSK9ICON_DAT) = NullANDIf [PCSK9ININD\_DAT](#_PCSK9ININD_DAT) = Null | Next rule | [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSEReject | Pass to the next rule all patients passed to this rule who have no Alirocumab or Evolocumab therapy contraindicated, and no Alirocumab or Evolocumab therapy not indicated codes on their record.Reject all remaining patients and set [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSE. |
|  | If [PCSK9IADV\_DAT](#_PCSK9IADV_DAT) = Null | [PCSK9I\_FLAG](#_PCSK9I_FLAG) = TRUESelect | [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSEReject | Select all patients passed to this rule who do not have an adverse reaction to Alirocumab or Evolocumab.For these patients set [PCSK9I\_FLAG](#_PCSK9I_FLAG) = TRUE Reject the remaining patients and set [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSE. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX008 | Ezetimibe candidate cohort | [LMCX015](#_LMCX015) | 101 | Z |  |

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| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = TRUE ANDIf [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSEANDIf [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSEANDIf [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSE | Select | Rejectand pass to[LMCX019](#_LMCX019) Rule 1 | Select patients from the specified population who meet all of the criteria below:* Patient can be considered for Ezetimibe.
* Patient **cannot** be considered for Bempedoic acid + Ezetimibe.
* Patient **cannot** be considered for Inclisiran.
* Patient **cannot** be considered for Alirocumab or Evolocumab.

Reject the remaining patients and pass them to Cohort [LMCX019](#_LMCX019) Rule 1. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX019 | Inclisiran candidate cohort | Rejected from [LMCX008](#_LMCX008) | 100 | Z |  |

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| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | (If [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = NullORIf [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = FALSE)AND(If [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSEORIf [BEMPACID\_FLAG](#_BEMPACID_FLAG) = Null)ANDIf [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = TRUEANDIf [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSE | Select | Rejectand pass to[LMCX020](#_LMCX020) Rule 1 | Select patients from the specified population who meet all of the criteria below:* Patient is already on Ezetimibe or **cannot** be considered for Ezetimibe.
* Patient **cannot** be considered for Bempedoic acid + Ezetimibe.
* Patient can be considered for Inclisiran.
* Patient **cannot** be considered for Alirocumab or Evolocumab.

Reject the remaining patients and pass them to Cohort [LMCX020](#_LMCX020) Rule 1. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX020 | Bempedoic acid + Ezetimibe candidate | Rejected from [LMCX019](#_LMCX019) | 100 | Z |  |

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| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = NullANDIf [BEMPACID\_FLAG](#_BEMPACID_FLAG) = TRUEANDIf [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSEANDIf [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSE | Select | Rejectand pass to[LMCX021](#_LMCX021) Rule 1 | Select patients from the specified population who meet all of the criteria below:* Patient is already on Ezetimibe.
* Patient can be considered for Bempedoic acid + Ezetimibe.
* Patient **cannot** be considered for Inclisiran.
* Patient **cannot** be considered for Alirocumab or Evolocumab.

Reject the remaining patients and pass them to Cohort [LMCX021](#_LMCX021) Rule 1. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX021 | Ezetimibe or Bempedoic acid + Ezetimibe or Inclisiran candidate cohort | Rejected from [LMCX020](#_LMCX020) | 100 | Z |  |

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| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = TRUE ANDIf [BEMPACID\_FLAG](#_BEMPACID_FLAG) = TRUEANDIf [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = TRUEANDIf [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSE | Select | Rejectand pass to[LMCX022](#_LMCX022) Rule 1 | Select patients from the specified population who meet all of the criteria below:* Patient can be considered for Ezetimibe.
* Patient can be considered for Bempedoic acid + Ezetimibe.
* Patient can be considered for Inclisiran.
* Patient **cannot** be considered for Alirocumab or Evolocumab.

Reject the remaining patients and pass them to Cohort [LMCX022](#_LMCX022) Rule 1. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX022 | Ezetimibe or Inclisiran candidate cohort | Rejected from [LMCX021](#_LMCX021) | 100 | Z |  |

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| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = TRUE ANDIf [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSEANDIf [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = TRUEANDIf [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSE | Select | Rejectand pass to[LMCX023](#_LMCX023) Rule 1 | Select patients from the specified population who meet all of the criteria below:* Patient can be considered for Ezetimibe.
* Patient **cannot** be considered for Bempedoic acid + Ezetimibe.
* Patient can be considered for Inclisiran.
* Patient **cannot** be considered for Alirocumab or Evolocumab.

Reject the remaining patients and pass them to Cohort [LMCX023](#_LMCX023) Rule 1. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX023 | Ezetimibe or Bempedoic acid + Ezetimibe candidate cohort | Rejected from [LMCX022](#_LMCX022) | 100 | Z |  |

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| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = TRUE ANDIf [BEMPACID\_FLAG](#_BEMPACID_FLAG) = TRUEANDIf [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSEANDIf [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSE | Select | Rejectand pass to[LMCX024](#_LMCX024) Rule 1 | Select patients from the specified population who meet all of the criteria below:* Patient can be considered for Ezetimibe.
* Patient can be considered for Bempedoic acid + Ezetimibe.
* Patient **cannot** be considered for Inclisiran.
* Patient **cannot** be considered for Alirocumab or Evolocumab.

Reject the remaining patients and pass them to Cohort [LMCX024](#_LMCX024) Rule 1. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX024 | Bempedoic acid + Ezetimibe or Inclisiran candidate cohort | Rejected from [LMCX023](#_LMCX023) | 100 | Z |  |

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| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = NullANDIf [BEMPACID\_FLAG](#_BEMPACID_FLAG) = TRUEANDIf [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = TRUEANDIf [PCSK9I\_FLAG](#_PCSK9I_FLAG) = FALSE | Select | Rejectand pass to[LMCX025](#_LMCX025) Rule 1 | Select patients from the specified population who meet all of the criteria below:* Patient is already on Ezetimibe.
* Patient can be considered for Bempedoic acid + Ezetimibe.
* Patient can be considered for Inclisiran.
* Patient **cannot** be considered for Alirocumab or Evolocumab.

Reject the remaining patients and pass them to Cohort [LMCX025](#_LMCX025) Rule 1. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX025 | [Alirocumab or Evolocumab] candidate cohort | Rejected from [LMCX024](#_LMCX024) | 100 | Z |  |

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| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | (If [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = NullORIf [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = FALSE)AND(If [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSEORIf [BEMPACID\_FLAG](#_BEMPACID_FLAG) = Null)ANDIf [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSEANDIf [PCSK9I\_FLAG](#_PCSK9I_FLAG) = TRUE | Select | Rejectand pass to[LMCX026](#_LMCX026) Rule 1 | Select patients from the specified population who meet all of the criteria below:* Patient is already on Ezetimibe or **cannot** be considered for Ezetimibe.
* Patient **cannot** be considered for Bempedoic acid + Ezetimibe.
* Patient **cannot** be considered for Inclisiran.
* Patient can be considered for Alirocumab or Evolocumab.

Reject the remaining patients and pass them to Cohort [LMCX026](#_LMCX026) Rule 1. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX026 | Ezetimibe or [Alirocumab or Evolocumab] candidate cohort | Rejected from [LMCX025](#_LMCX025) | 100 | Z |  |

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| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = TRUE ANDIf [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSEANDIf [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSEANDIf [PCSK9I\_FLAG](#_PCSK9I_FLAG) = TRUE | Select | Rejectand pass to[LMCX027](#_LMCX027) Rule 1 | Select patients from the specified population who meet all of the criteria below:* Patient can be considered for Ezetimibe.
* Patient **cannot** be considered for Bempedoic acid + Ezetimibe.
* Patient **cannot** be considered for Inclisiran.
* Patient can be considered for Alirocumab or Evolocumab.

Reject the remaining patients and pass them to Cohort [LMCX027](#_LMCX027) Rule 1. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX027 | Inclisiran or [Alirocumab or Evolocumab] candidate cohort | Rejected from [LMCX026](#_LMCX026) | 100 | Z |  |

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| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | (If [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = NullORIf [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = FALSE)AND(If [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSEORIf [BEMPACID\_FLAG](#_BEMPACID_FLAG) = Null)ANDIf [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = TRUEANDIf [PCSK9I\_FLAG](#_PCSK9I_FLAG) = TRUE | Select | Rejectand pass to[LMCX028](#_LMCX028) Rule 1 | Select patients from the specified population who meet all of the criteria below:* Patient is already on Ezetimibe or **cannot** be considered for Ezetimibe.
* Patient **cannot** be considered for Bempedoic acid + Ezetimibe.
* Patient can be considered for Inclisiran.
* Patient can be considered for Alirocumab or Evolocumab.

Reject the remaining patients and pass them to Cohort [LMCX028](#_LMCX028) Rule 1. |
| *End of rules* |

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| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX028 | Bempedoic acid + Ezetimibe or [Alirocumab or Evolocumab] candidate cohort | Rejected from [LMCX027](#_LMCX027) | 100 | Z |  |

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| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = NullANDIf [BEMPACID\_FLAG](#_BEMPACID_FLAG) = TRUEANDIf [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSEANDIf [PCSK9I\_FLAG](#_PCSK9I_FLAG) = TRUE | Select | Rejectand pass to[LMCX029](#_LMCX029) Rule 1 | Select patients from the specified population who meet all of the criteria below:* Patient is already on Ezetimibe.
* Patient can be considered for Bempedoic acid + Ezetimibe.
* Patient **cannot** be considered for Inclisiran.
* Patient can be considered for Alirocumab or Evolocumab.

Reject the remaining patients and pass them to Cohort [LMCX029](#_LMCX029) Rule 1. |
| *End of rules* |

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| --- | --- | --- | --- | --- | --- |
| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX029 | Ezetimibe or Inclisiran or [Alirocumab or Evolocumab] candidate cohort | Rejected from [LMCX028](#_LMCX028) | 100 | Z |  |

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| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = TRUE ANDIf [BEMPACID\_FLAG](#_BEMPACID_FLAG) = FALSEANDIf [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = TRUEANDIf [PCSK9I\_FLAG](#_PCSK9I_FLAG) = TRUE | Select | Rejectand pass to[LMCX030](#_LMCX030) Rule 1 | Select patients from the specified population who meet all of the criteria below:* Patient can be considered for Ezetimibe.
* Patient **cannot** be considered for Bempedoic acid + Ezetimibe.
* Patient can be considered for Inclisiran.
* Patient can be considered for Alirocumab or Evolocumab.

Reject the remaining patients and pass them to Cohort [LMCX030](#_LMCX030) Rule 1. |
| *End of rules* |

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| --- | --- | --- | --- | --- | --- |
| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX030 | Ezetimibe or Bempedoic acid + Ezetimibe or [Alirocumab or Evolocumab] candidate cohort | Rejected from [LMCX029](#_LMCX029) | 100 | Z |  |

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| --- | --- | --- | --- | --- |
| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = TRUEANDIf [BEMPACID\_FLAG](#_BEMPACID_FLAG) = TRUEANDIf [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = FALSEANDIf [PCSK9I\_FLAG](#_PCSK9I_FLAG) = TRUE | Select | Rejectand pass to[LMCX031](#_LMCX031) Rule 1 | Select patients from the specified population who meet all of the criteria below:* Patient can be considered for Ezetimibe.
* Patient can be considered for Bempedoic acid + Ezetimibe.
* Patient **cannot** be considered for Inclisiran.
* Patient can be considered for Alirocumab or Evolocumab.

Reject the remaining patients and pass them to Cohort [LMCX031](#_LMCX031) Rule 1. |
| *End of rules* |

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| --- | --- | --- | --- | --- | --- |
| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX031 | Bempedoic acid + Ezetimibe or Inclisiran or [Alirocumab or Evolocumab] candidate cohort | Rejected from [LMCX030](#_LMCX030) | 100 | Z |  |

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| --- | --- | --- | --- | --- |
| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = NullANDIf [BEMPACID\_FLAG](#_BEMPACID_FLAG) = TRUEANDIf [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = TRUEANDIf [PCSK9I\_FLAG](#_PCSK9I_FLAG) = TRUE | Select | Rejectand pass to[LMCX032](#_LMCX032) Rule 1 | Select patients from the specified population who meet all of the criteria below:* Patient is already on Ezetimibe.
* Patient can be considered for Bempedoic acid + Ezetimibe.
* Patient can be considered for Inclisiran.
* Patient can be considered for Alirocumab or Evolocumab.

Reject the remaining patients and pass them to Cohort [LMCX032](#_LMCX032) Rule 1. |
| *End of rules* |

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| --- | --- | --- | --- | --- | --- |
| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX032 | Ezetimibe or Bempedoic acid + Ezetimibe or Inclisiran or [Alirocumab or Evolocumab] candidate cohort | Rejected from [LMCX031](#_LMCX031) | 100 | Z |  |

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| --- | --- | --- | --- | --- |
| Rule number | Rule | Action if true | Action if false | Rule description or comments |
|  | If [EZETIMIBE\_FLAG](#_EZETIMIBE_FLAG) = TRUE ANDIf [BEMPACID\_FLAG](#_BEMPACID_FLAG) = TRUEANDIf [INCLISIRAN\_FLAG](#_INCLISIRAN_FLAG) = TRUEANDIf [PCSK9I\_FLAG](#_PCSK9I_FLAG) = TRUE | Select | Rejectand pass to[LMCX040](#_LMCX040) | Select patients from the specified population who meet all of the criteria below:* Patient can be considered for Ezetimibe.
* Patient can be considered for Bempedoic acid + Ezetimibe.
* Patient can be considered for Inclisiran.
* Patient can be considered for Alirocumab or Evolocumab.

Reject the remaining patients and pass them to Cohort [LMCX040](#_LMCX040). |
| *End of rules* |

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| --- | --- | --- | --- | --- | --- |
| Cohort Count ID | Description | Applied to patients defined in: | GPSES use only: Version | Config style | CQRS short name |
| LMCX040 | No suitable options available cohort | Rejected from[LMCX032](#_LMCX032)  | 100 | Z |  |

### Clinical code clusters

The dataset may include dates and values associated with the presence of clinical codes in a patient’s record. All clinical code clusters referred to in the clinical data extraction criteria are detailed below. The expanded cluster lists for each cluster can be found on the NHS Digital website (see section 2.2).

| Cluster name | Description | SNOMED CT |
| --- | --- | --- |
| ARATORVASTAT\_COD | Codes indicating adverse reaction to atorvastatin | ^999026931000230104 |
| ARROSUVASTAT\_COD | Codes indicating adverse reaction to rosuvastatin | ^999026971000230102 |
| ARSTAT\_COD | Codes indicating adverse reaction to statins | ^999027011000230108 |
| BEMPACID\_COD | Bempedoic acid drug codes | ^175571000001107 |
| BEMPACIDADV\_COD | Codes indicating adverse reaction to bempedoic acid | ^999028611000230103 |
| BEMPACIDALL\_COD | Codes indicating allergy to bempedoic acid | ^999028651000230104 |
| BEMPACIDCON\_COD | Bempedoic acid contraindicated codes | ^999028691000230109 |
| BEMPACIDDEC\_COD | Codes indicating the patient has chosen not to receive bempedoic acid | ^999028731000230101 |
| BEMPACIDNIND\_COD | Bempedoic acid not indicated codes | ^999028811000230104 |
| CHD\_COD | Coronary heart disease (CHD) codes | ^999000771000230107 |
| CHOL2\_COD | Total cholesterol codes with a value | ^999003971000230103 |
| CHOLDEC\_COD | Codes indicating a patient has chosen not to have a cholesterol test | ^999023851000230107 |
| CHOLMAX\_COD | Codes indicating the patient is on maximum tolerated cholesterol lowering treatment | ^999011451000230100 |
| EGFR\_COD | Estimated glomerular filtration rate | ^999017131000230107 |
| EZETIMIBE\_COD | Ezetimibe drug codes | ^115131000001105 |
| EZETIMIBEADV\_COD | Codes indicating adverse reaction to ezetimibe | ^999027491000230106 |
| EZETIMIBEALL\_COD | Codes indicating allergy to ezetimibe | ^999027571000230108 |
| EZETIMIBECON\_COD | Ezetimibe contraindicated codes | ^999028851000230100 |
| EZETIMIBEDEC\_COD | Codes indicating the patient has chosen not to receive ezetimibe | ^999028891000230105 |
| EZETIMIBENIND\_COD | Ezetimibe not indicated codes | ^999028971000230101 |
| HIATORVASTAT\_COD | Atorvastatin high intensity drug codes | ^71681000001104 |
| HIROSUVASTAT\_COD | Rosuvastatin high intensity drug codes | ^71691000001102 |
| HISIMVASTAT\_COD | Simvastatin high intensity drug codes | ^61441000001104 |
| INCLISIRAN\_COD | Inclisiran drug codes | ^175591000001106 |
| INCLISIRANADV\_COD | Codes indicating adverse reaction to inclisiran | ^999029011000230100 |
| INCLISIRANALL\_COD | Codes indicating allergy to inclisiran | ^999029051000230101 |
| INCLISIRANCON\_COD | Inclisiran contraindicated codes | ^999029091000230106 |
| INCLISIRANDEC\_COD | Codes indicating the patient has chosen not to receive inclisiran | ^999029131000230109 |
| INCLISIRANNIND\_COD | Inclisiran not indicated codes | ^999029211000230109 |
| LDLCCHOL\_COD | Low density lipoprotein (LDL) cholesterol test results | ^999018771000230107 |
| LIPIDTHERADV\_COD | Adverse reaction to lipid lowering drug codes | ^999029531000230102 |
| LIPIDTHERCON\_COD | Lipid therapy contraindicated codes | ^999027051000230107 |
| LIPIDTHERDEC\_COD | Lipid therapy declined codes | ^999026251000230102 |
| LIPIDTHERNIND\_COD | Lipid therapy not indicated codes | ^999027131000230104 |
| NONHDLCCHOL\_COD | Non-high density lipoprotein (Non-HDL) cholesterol test result codes | ^999017731000230106 |
| OSTR\_COD | Non-haemorrhagic stroke codes | ^999005971000230104 |
| PAD\_COD | Peripheral arterial disease (PAD) diagnostic codes | ^999005931000230101 |
| PCSK9I\_COD | PCSK9 Inhibitors | ^115171000001107 |
| PCSK9IADV\_COD | Codes indicating adverse reaction to proprotein convertase subtilisin kexin type 9 inhibitor | ^999027651000230103 |
| PCSK9IALL\_COD | Codes indicating allergy to proprotein convertase subtilisin kexin type 9 inhibitor | ^999027691000230108 |
| PCSK9ICON\_COD | Proprotein convertase subtilisin kexin type inhibitor drug contraindicated codes | ^999029251000230108 |
| PCSK9IDEC\_COD | Codes indicating the patient has chosen not to receive proprotein convertase subtilisin kexin type inhibitor drug | ^999029291000230103 |
| PCSK9ININD\_COD | Proprotein convertase subtilisin kexin type inhibitor drug not indicated codes | ^999029371000230109 |
| REVASCULAR\_COD | Arterial revascularisation procedures on legs, heart and brain codes | ^999029411000230108 |
| STAT\_COD | Statin codes | ^12464001000001103 |
| STATALL\_COD | Codes indicating allergy to any statin | ^999029451000230107 |
| STATCONTR\_COD | Codes indicating contraindication to any statin | ^999029491000230102 |
| STATINDEC\_COD | Codes indicating the patient has chosen not to receive a statin prescription | ^999008051000230101 |
| STATINTOL\_COD | Codes for intolerance to statins | ^999027211000230104 |
| STATNIND\_COD | Statin not indicated codes | ^999027251000230100 |
| TIA\_COD | Transient ischaemic attack (TIA) codes | ^999005291000230109 |
| *End of clusters* |

### Clinical data extraction criteria

| Field number | Field name | Code cluster (if applicable) | Qualifying criteria | Non-technical description |
| --- | --- | --- | --- | --- |
|  | PAT\_ID | n/a | Unconditional | *The patient’s unique ID number for the practice in question.* |
|  | NHS\_NUMBER | n/a | Unconditional | *The patient’s NHS number.* |
|  | REG\_DAT | n/a | Latest <= [RRD](#_RRD) | *The most recent date that the patient registered for GMS, where this registration occurred on or before the report run date.* |
|  | DEREG\_DAT | n/a | Earliest > [REG\_DAT](#_REG_DAT) | *The first occurrence of the patient deregistering from GMS following the latest GMS registration.* |
|  | TITLE | n/a | Unconditional | *The patient’s title.* |
|  | FORENAME | n/a | Unconditional | *The patient’s first name.* |
|  | SURNAME | n/a | Unconditional | *The patient’s surname.* |
|  | DATE\_OF\_BIRTH | n/a | Unconditional | *The patient’s date of birth.* |
|  | CHD\_DAT | [CHD\_COD](#_CHD_COD_1) | Earliest <= [RRD](#_RRD) | *Date of the first coronary heart disease diagnosis recorded up to and including the report run date.* |
|  | PAD\_DAT | [PAD\_COD](#_PAD_COD_1) | Earliest <= [RRD](#_RRD) | *Date of the first peripheral arterial disease diagnosis recorded up to and including the report run date.* |
|  | OSTR\_DAT | [OSTR\_COD](#_OSTR_COD) | Earliest <= [RRD](#_RRD) | *Date of the first non-haemorrhagic stroke code up to and including the report run date.* |
|  | TIA\_DAT | [TIA\_COD](#_STRK_COD) | Earliest <= [RRD](#_RRD) | *Date of the first TIA diagnosis recorded up to and including the report run date.* |
|  | REVASCULAR\_DAT | [REVASCULAR\_COD](#_REVASCULAR_COD) | Earliest <= [RRD](#_RRD) | *Date of the first arterial revascularisation procedure on legs, heart or brain recorded up to and including the report run date.* |
|  | LMR\_DAT | n/a | Latest of ([CHD\_DAT](#_CHD_DAT),[PAD\_DAT](#_PAD_DAT),[OSTR\_DAT](#_OSTR_DAT),[TIA\_DAT](#_TIA_DAT),[REVASCULAR\_DAT](#_REVASCULAR_DAT)) | *Date of the latest diagnosis of a condition indicating that the patient has cardiovascular disease and is therefore eligible for consideration in the lipid management protocol, up to and including the report run date.* |
|  | NONHDLCCHOLLAT\_DAT | [NONHDLCCHOL\_COD](#_NONHDLCCHOL_COD_1) | Latest > ([RRD](#_RRD) – 12 months)AND <= [RRD](#_RRD)Where associated value ≠ Null | *Date of the most recent non-HDL-C cholesterol with an associated value recorded in the 12 months up to and including the report run date.* |
|  | NONHDLCCHOLLAT\_VAL | [NONHDLCCHOL\_COD](#_NONHDLCCHOL_COD_1) | Recorded on [NONHDLCCHOLLAT\_DAT](#_NONHDLCCHOLLAT_DAT_1) | *The value of the most recent non-HDL-C cholesterol recorded in the 12 months up to and including the report run date.* |
|  | NONHDLCCHOLHIGH\_DAT | n/a | If [NONHDLCCHOLLAT\_VAL](#_NONHDLCCHOLLAT_VAL) >= 2.5Return [NONHDLCCHOLLAT\_DAT](#_NONHDLCCHOLLAT_DAT_1)Otherwise Return Null | *Date of the most recent non-HDL-C cholesterol indicating that cholesterol levels are uncontrolled where this was the latest non-HDL-C cholesterol in the 12 months leading up to and including the report run date.**i.e. where associated value is greater than or equal to 2.5mmol/L on* [*NONHDLCCHOLLAT\_DAT*](#_NONHDLCCHOLLAT_DAT_1)*.* |
|  | LDLCCHOLLAT\_DAT | [LDLCCHOL\_COD](#_LDLCCHOL_COD_1) | Latest > ([RRD](#_RRD) – 12 months)AND <= [RRD](#_RRD)Where associated value ≠ Null | *Date of the most recent low density lipoprotein (LDL) cholesterol with an associated value recorded in the 12 months up to and including the report run date.* |
|  | LDLCCHOLLAT\_VAL | [LDLCCHOL\_COD](#_LDLCCHOL_COD_1) | Recorded on [LDLCCHOLLAT\_DAT](#_LDLCCHOLLAT_DAT) | *The value of the most recent low density lipoprotein (LDL) cholesterol recorded in the 12 months up to and including the report run date.* |
|  | LDLCCHOLHIGH\_DAT | n/a | If [LDLCCHOLLAT\_VAL](#_LDLCCHOLLAT_VAL) >= 1.8Return[LDLCCHOLLAT\_DAT](#_LDLCCHOLLAT_DAT)Otherwise Return Null | *Date of the most recent low density lipoprotein (LDL) cholesterol indicating that cholesterol levels are uncontrolled where this was the latest LDL cholesterol in the 12 months leading up to and including the report run date.**i.e. where the associated value is greater than or equal to 1.8 mmol/L on* [*LDLCCHOLLAT\_DAT*](#_LDLCCHOLLAT_DAT)*.* |
|  | CHOL2LAT\_DAT | [CHOL2\_COD](#_CHOL2_COD) | Latest > ([RRD](#_RRD) – 12 months)AND <= [RRD](#_RRD)Where associated value ≠ Null | *Date of the most recent total cholesterol with an associated value recorded in the 12 months up to and including the report run date.* |
|  | CHOL2LAT\_VAL | [CHOL2\_COD](#_CHOL2_COD) | Recorded on [CHOL2LAT\_DAT](#_LDLCCHOLHIGH_VAL) | *The value of the most recent total cholesterol value recorded in the 12 months up to and including the report run date.* |
|  | CHOL2HIGH\_DAT | n/a | If [CHOL2LAT\_VAL](#_CHOL2LAT_VAL) >= 4.0Return [CHOL2LAT\_DAT](#_LDLCCHOLHIGH_VAL)Otherwise Return Null | *Date of the most recent cholesterol value indicating that cholesterol levels are uncontrolled where this was the latest cholesterol value in the 12 months leading up to and including the report run date.**i.e. where the associated value is greater than or equal to 4.0 mmol/L on* [*CHOL2LAT\_DAT*](#_LDLCCHOLHIGH_VAL)*.* |
|  | HIGHCHOL\_DAT | n/a | Latest of([NONHDLCCHOLHIGH\_DAT](#_NONHDLCCHOLHIGH_DAT),[LDLCCHOLHIGH\_DAT](#_LDLCCHOLHIGH_DAT),[CHOL2HIGH\_DAT](#_CHOL2HIGH_DAT)) | *Date of the most recent blood lipid profile indicating that cholesterol levels are uncontrolled recorded in the 12 months up to and including the report run date.* |
|  | CHOLMAX3\_DAT | [CHOLMAX\_COD](#_CHOLMAX_COD) | Latest < ([RRD](#_RRD) – 2 years)AND >= ([RRD](#_RRD) – 3 years) | *Date of the most recent code indicating the patient is on maximum tolerated cholesterol lowering treatment recorded more than two years before and up to and including three years before the report run date.* |
|  | CHOLMAX2\_DAT | [CHOLMAX\_COD](#_CHOLMAX_COD) | Latest < ([RRD](#_RRD) – 1 year)AND >= ([RRD](#_RRD) – 2 years) | *Date of the most recent code indicating the patient is on maximum tolerated cholesterol lowering treatment recorded more than one year before and up to and including two years before the report run date.* |
|  | CHOLMAX1\_DAT | [CHOLMAX\_COD](#_CHOLMAX_COD) | Latest > ([RRD](#_RRD) – 12 months)AND <= [RRD](#_RRD) | *Date of the most recent code indicating the patient is on maximum tolerated cholesterol lowering treatment recorded in the 12 months up to and including the report run date.* |
|  | MONDEC3\_DAT | [CHOLDEC\_COD](#_CHOLDEC_COD) | Latest < ([RRD](#_RRD) – 2 years)AND >= ([RRD](#_RRD) – 3 years) | *Date of the most recent code indicating the patient has declined lipid disorder monitoring recorded more than two years before and up to and including three years before the report run date.* |
|  | MONDEC2\_DAT | [CHOLDEC\_COD](#_CHOLDEC_COD) | Latest < ([RRD](#_RRD) – 1 year)AND >= ([RRD](#_RRD) – 2 years) | *Date of the most recent code indicating the patient has declined lipid disorder monitoring recorded more than one year before and up to and including two years before the report run date.* |
|  | MONDEC1\_DAT | [CHOLDEC\_COD](#_CHOLDEC_COD) | Latest > ([RRD](#_RRD) – 12 months)AND <= [RRD](#_RRD) | *Date of the most recent code indicating the patient has declined lipid disorder monitoring in the 12 months leading up to and including the report run date.* |
|  | THERDEC3\_DAT | [LIPIDTHERDEC\_COD](#_LIPIDTHERDEC_COD) | Latest < ([RRD](#_RRD) – 2 years)AND >= ([RRD](#_RRD) – 3 years) | *Date of the most recent code indicating the patient has declined lipid lowering therapy recorded more than two years before and up to and including three years before the report run date.* |
|  | THERDEC2\_DAT | [LIPIDTHERDEC\_COD](#_LIPIDTHERDEC_COD) | Latest < ([RRD](#_RRD) – 1 year)AND >= ([RRD](#_RRD) – 2 years) | *Date of the most recent code indicating the patient has declined lipid lowering therapy recorded more than one year before and up to and including two years before the report run date.* |
|  | THERDEC1\_DAT | [LIPIDTHERDEC\_COD](#_LIPIDTHERDEC_COD) | Latest > ([RRD](#_RRD) – 12 months)AND <= [RRD](#_RRD) | *Date of the most recent code indicating the patient has declined lipid lowering therapy recorded in the 12 months up to and including the report run date.* |
|  | CHOLMAX6MTH\_DAT | [CHOLMAX\_COD](#_CHOLMAX_COD) | Latest > ([RRD](#_RRD) – 6 months)AND <= [RRD](#_RRD) | *Date of the most recent code indicating the patient is on maximum tolerated cholesterol lowering treatment recorded in the 6 months up to and including the report run date.* |
|  | MONDEC6MTH\_DAT | [CHOLDEC\_COD](#_CHOLDEC_COD) | Latest > ([RRD](#_RRD) – 6 months)AND <= [RRD](#_RRD) | *Date of the most recent code indicating the patient has declined lipid disorder monitoring in the 6 months leading up to and including the report run date.* |
|  | THERDEC6MTH\_DAT | [LIPIDTHERDEC\_COD](#_LIPIDTHERDEC_COD) | Latest > ([RRD](#_RRD) – 6 months)AND <= [RRD](#_RRD) | *Date of the most recent code indicating the patient has declined lipid lowering therapy recorded in the 6 months up to and including the report run date.* |
|  | EZETIMIBE\_DAT | [EZETIMIBE\_COD](#_EZETIMIBE_COD_1) | Latest > ([RRD](#_RRD) – 6 months)AND <= [RRD](#_RRD) | *Date of the most recent ezetimibe treatment code in the 6 months leading up to and including the report run date.* |
|  | HIATORVASTATREC\_DAT | [HIATORVASTAT\_COD](#_HIATORVASTAT_COD) | Latest > ([RRD](#_RRD) – 6 months)AND <= [RRD](#_RRD) | *Date of the most recent high intensity dose atorvastatin treatment code in the 6 months leading up to and including the report run date.*  |
|  | HIROSUVASTATREC\_DAT | [HIROSUVASTAT\_COD](#_HIROSUVASTAT_COD) | Latest > ([RRD](#_RRD) – 6 months)AND <= [RRD](#_RRD) | *Date of the most recent high intensity dose rosuvastatin treatment code in the 6 months leading up to and including the report run date.* |
|  | HISIMVASTATREC\_DAT | [HISIMVASTAT\_COD](#_HISIMVASTAT_COD) | Latest > ([RRD](#_RRD) – 6 months)AND <= [RRD](#_RRD) | *Date of the most recent high intensity dose simvastatin treatment code in the 6 months leading up to and including the report run date.* |
|  | HISTATLAT\_DAT | n/a | Latest of([HIATORVASTATREC\_DAT](#_HIATORVASTATREC_DAT),[HIROSUVASTATREC\_DAT](#_HIROSUVASTATREC_DAT),[HISIMVASTATREC\_DAT](#_HISIMVASTATREC_DAT)) | *Date of the most recent high intensity dose statin treatment code in the 6 months leading up to and including the report run date.* |
|  | HISIMVASTAT\_DAT | [HISIMVASTAT\_COD](#_HISIMVASTAT_COD) | If [HISIMVASTATREC\_DAT](#_HISIMVASTATREC_DAT) = [HISTATLAT\_DAT](#_HISTATLAT_DAT)Return [HISIMVASTATREC\_DAT](#_HISIMVASTATREC_DAT)OtherwiseReturn Null | *Date of the most recent high intensity dose simvastatin treatment code, where this was the latest high intensity dose statin treatment code recorded in the 6 months leading up to and including the report run date.* |
|  | STAT\_DAT | [STAT\_COD](#_STAT_COD) | Latest > ([RRD](#_RRD) – 6 months)AND <= [RRD](#_RRD) | *Date of the most recent statin treatment code in the 6 months leading up to and including the report run date.* |
|  | NONHISTAT\_DAT | n/a | If [STAT\_DAT](#_STAT_DAT) ≠ NullAND(If [HISTATLAT\_DAT](#_HISTATLAT_DAT) = NullORIf [STAT\_DAT](#_STAT_DAT) > [HISTATLAT\_DAT](#_HISTATLAT_DAT))Return [STAT\_DAT](#_STAT_DAT)OtherwiseReturn Null | *Date of the most recent non-high intensity statin treatment code, where this was the latest statin treatment code recorded in the 6 months leading up to and including the report run date.* |
|  | STATALL\_DAT | [STATALL\_COD](#_STATALL_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent statin allergy code up to and including the report run date.* |
|  | STATINTOL\_DAT | [STATINTOL\_COD](#_STATINTOL_COD_1) | Latest <= [RRD](#_RRD) | *Date of the most recent intolerant to statins code up to and including the report run date.* |
|  | ARSTAT\_DAT | [ARSTAT\_COD](#_ARSTAT_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent adverse reaction to statins code up to and including the report run date.* |
|  | EGFR\_DAT | [EGFR\_COD](#_EGFR_COD) | Latest <= [RRD](#_RRD)Where associated value ≠ Null | *Date of the most recent estimated glomerular filtration rate (eGFR) recorded up to and including the report run date.* |
|  | EGFR\_VAL | [EGFR\_COD](#_EGFR_COD) | Recorded on [EGFR\_DAT](#_EGFR_DAT_1) | *The value of the most recent eGFR reading recorded up to and including the report run date.**i.e. recorded on* [*EGFR\_DAT*](#_EGFR_DAT_1)*.* |
|  | LIPIDTHERCON\_DAT | [LIPIDTHERCON\_COD](#_LIPIDTHERCON_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent lipid lowering therapy contraindicated code in the patient’s record up to and including the report run date.* |
|  | LIPIDTHERNIND\_DAT | [LIPIDTHERNIND\_COD](#_LIPIDTHERNIND_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent lipid lowering therapy not indicated code in the patient’s record up to and including the report run date.* |
|  | LIPIDTHERADV\_DAT | [LIPIDTHERADV\_COD](#_LIPIDTHERADV_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent lipid therapy adverse reaction code in the patient’s record up to and including the report run date.* |
|  | STATCON\_DAT | [STATCONTR\_COD](#_STATCONTR_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent statin therapy contraindicated code in the patient’s record up to and including the report run date.* |
|  | STATNIND\_DAT | [STATNIND\_COD](#_STATNIND_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent statin therapy not indicated code in the patient’s record up to and including the report run date.* |
|  | ARATORVASTAT\_DAT | [ARATORVASTAT\_COD](#_ARATORVASTAT_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent atorvastatin adverse reaction code in the patient’s record up to and including the report run date.* |
|  | ARROSUVASTAT\_DAT | [ARROSUVASTAT\_COD](#_ARROSUVASTAT_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent rosuvastatin adverse reaction code in the patient’s record up to and including the report run date.* |
|  | STATINDEC1\_DAT | [STATINDEC\_COD](#_STATINDEC_COD) | Latest > ([RRD](#_RRD) – 12 months)AND <= [RRD](#_RRD) | *Date of the most recent code indicating the patient has declined statin therapy in the 12 months leading up to and including the report run date.* |
|  | STATINDEC2\_DAT | [STATINDEC\_COD](#_STATINDEC_COD) | Latest < ([RRD](#_RRD) – 1 year)AND >= ([RRD](#_RRD) – 2 years) | *Date of the most recent code indicating the patient has declined statin therapy recorded more than one year before and up to and including two years before the report run date.* |
|  | STATINDEC3\_DAT | [STATINDEC\_COD](#_STATINDEC_COD) | Latest < ([RRD](#_RRD) – 2 years)AND >= ([RRD](#_RRD) – 3 years) | *Date of the most recent code indicating the patient has declined statin therapy recorded more than two years before and up to and including three years before the report run date.* |
|  | STATINDEC6MTH\_DAT | [STATINDEC\_COD](#_STATINDEC_COD) | Latest > ([RRD](#_RRD) – 6 months)AND <= [RRD](#_RRD) | *Date of the most recent code indicating the patient has declined statin therapy recorded in the 6 months up to and including the report run date.* |
|  | EZETIMIBEALL\_DAT | [EZETIMIBEALL\_COD](#_EZETIMIBEALL_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent ezetimibe allergy code in the patient’s record up to and including the report run date.* |
|  | EZETIMIBEADV\_DAT | [EZETIMIBEADV\_COD](#_EZETIMIBEADV_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent ezetimibe adverse reaction code in the patient’s record up to and including the report run date.* |
|  | EZETIMIBECON\_DAT | [EZETIMIBECON\_COD](#_EZETIMIBECON_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent ezetimibe therapy contraindicated code in the patient’s record up to and including the report run date.* |
|  | EZETIMIBENIND\_DAT | [EZETIMIBENIND\_COD](#_EZETIMIBENIND_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent ezetimibe therapy not indicated code in the patient’s record up to and including the report run date.* |
|  | EZETIMIBEDEC1\_DAT | [EZETIMIBEDEC\_COD](#_EZETIMIBEDEC_COD) | Latest > ([RRD](#_RRD) – 12 months)AND <= [RRD](#_RRD) | *Date of the most recent code indicating the patient has declined ezetimibe therapy in the 12 months leading up to and including the report run date.* |
|  | EZETIMIBEDEC2\_DAT | [EZETIMIBEDEC\_COD](#_EZETIMIBEDEC_COD) | Latest < ([RRD](#_RRD) – 1 year)AND >= ([RRD](#_RRD) – 2 years) | *Date of the most recent code indicating the patient has declined ezetimibe therapy recorded more than one year before and up to and including two years before the report run date.* |
|  | EZETIMIBEDEC3\_DAT | [EZETIMIBEDEC\_COD](#_EZETIMIBEDEC_COD) | Latest < ([RRD](#_RRD) – 2 years)AND >= ([RRD](#_RRD) – 3 years) | *Date of the most recent code indicating the patient has declined ezetimibe therapy recorded more than two years before and up to and including three years before the report run date.* |
|  | EZETIMIBEDEC6MTH\_DAT | [EZETIMIBEDEC\_COD](#_EZETIMIBEDEC_COD) | Latest > ([RRD](#_RRD) – 6 months)AND <= [RRD](#_RRD) | *Date of the most recent code indicating the patient has declined ezetimibe therapy recorded in the 6 months up to and including the report run date.* |
|  | INCLISIRAN\_DAT | [INCLISIRAN\_COD](#_INCLISIRAN_COD) | Latest > ([RRD](#_RRD) – 6 months)AND <= [RRD](#_RRD) | *Date of the most recent inclisiran treatment code in the 6 months leading up to and including the report run date.* |
|  | INCLISIRANALL\_DAT | [INCLISIRANALL\_COD](#_INCLISIRANALL_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent inclisiran allergy code in the patient’s record up to and including the report run date.* |
|  | INCLISIRANADV\_DAT | [INCLISIRANADV\_COD](#_INCLISIRANADV_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent inclisiran adverse reaction code in the patient’s record up to and including the report run date.* |
|  | INCLISIRANCON\_DAT | [INCLISIRANCON\_COD](#_INCLISIRANCON_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent inclisiran therapy contraindicated code in the patient’s record up to and including the report run date.* |
|  | INCLISIRANNIND\_DAT | [INCLISIRANNIND\_COD](#_INCLISIRANNIND_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent inclisiran therapy not indicated code in the patient’s record up to and including the report run date.* |
|  | INCLISIRANDEC1\_DAT | [INCLISIRANDEC\_COD](#_INCLISIRANDEC_COD) | Latest > ([RRD](#_RRD) – 12 months)AND <= [RRD](#_RRD) | *Date of the most recent code indicating the patient has declined inclisiran therapy in the 12 months leading up to and including the report run date.* |
|  | INCLISIRANDEC2\_DAT | [INCLISIRANDEC\_COD](#_INCLISIRANDEC_COD) | Latest < ([RRD](#_RRD) – 1 year)AND >= ([RRD](#_RRD) – 2 years) | *Date of the most recent code indicating the patient has declined inclisiran therapy recorded more than one year before and up to and including two years before the report run date.* |
|  | INCLISIRANDEC3\_DAT | [INCLISIRANDEC\_COD](#_INCLISIRANDEC_COD) | Latest < ([RRD](#_RRD) – 2 years)AND >= ([RRD](#_RRD) – 3 years) | *Date of the most recent code indicating the patient has declined inclisiran therapy recorded more than two years before and up to and including three years before the report run date.* |
|  | INCLISIRANDEC6MTH\_DAT | [INCLISIRANDEC\_COD](#_INCLISIRANDEC_COD) | Latest > ([RRD](#_RRD) – 6 months)AND <= [RRD](#_RRD) | *Date of the most recent code indicating the patient has declined inclisiran therapy recorded in the 6 months up to and including the report run date.* |
|  | BEMPACID\_DAT | [BEMPACID\_COD](#_BEMPACID_COD) | Latest > ([RRD](#_RRD) – 6 months)AND <= [RRD](#_RRD) | *Date of the most recent bempedoic acid treatment code in the 6 months leading up to and including the report run date.* |
|  | BEMPACIDALL\_DAT | [BEMPACIDALL\_COD](#_BEMPACIDALL_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent bempedoic acid allergy code in the patient’s record up to and including the report run date.* |
|  | BEMPACIDADV\_DAT | [BEMPACIDADV\_COD](#_BEMPACIDADV_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent bempedoic acid adverse reaction code in the patient’s record up to and including the report run date.* |
|  | BEMPACIDCON\_DAT | [BEMPACIDCON\_COD](#_BEMPACIDCON_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent bempedoic acid therapy contraindicated code in the patient’s record up to and including the report run date.* |
|  | BEMPACIDNIND\_DAT | [BEMPACIDNIND\_COD](#_BEMPACIDNIND_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent bempedoic acid therapy not indicated code in the patient’s record up to and including the report run date.* |
|  | BEMPACIDDEC1\_DAT | [BEMPACIDDEC\_COD](#_BEMPACIDDEC_COD) | Latest > ([RRD](#_RRD) – 12 months)AND <= [RRD](#_RRD) | *Date of the most recent code indicating the patient has declined bempedoic acid therapy in the 12 months leading up to and including the report run date.* |
|  | BEMPACIDDEC2\_DAT | [BEMPACIDDEC\_COD](#_BEMPACIDDEC_COD) | Latest < ([RRD](#_RRD) – 1 year)AND >= ([RRD](#_RRD) – 2 years) | *Date of the most recent code indicating the patient has declined bempedoic acid therapy recorded more than one year before and up to and including two years before the report run date.* |
|  | BEMPACIDDEC3\_DAT | [BEMPACIDDEC\_COD](#_BEMPACIDDEC_COD) | Latest < ([RRD](#_RRD) – 2 years)AND >= ([RRD](#_RRD) – 3 years) | *Date of the most recent code indicating the patient has declined bempedoic acid therapy recorded more than two years before and up to and including three years before the report run date.* |
|  | BEMPACIDDEC6MTH\_DAT | [BEMPACIDDEC\_COD](#_BEMPACIDDEC_COD) | Latest > ([RRD](#_RRD) – 6 months)AND <= [RRD](#_RRD) | *Date of the most recent code indicating the patient has declined bempedoic acid therapy recorded in the 6 months up to and including the report run date.* |
|  | PCSK9IALL\_DAT | [PCSK9IALL\_COD](#_PCSK9IALL_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent PCSK9i, alirocumab or evolocumab allergy code in the patient’s record up to and including the report run date.* |
|  | PCSK9IADV\_DAT | [PCSK9IADV\_COD](#_PCSK9IADV_COD_1) | Latest <= [RRD](#_RRD) | *Date of the most recent PCSK9i, alirocumab or evolocumab adverse reaction code in the patient’s record up to and including the report run date.* |
|  | PCSK9I\_DAT | [PCSK9I\_COD](#_PCSK9I_COD) | Latest > ([RRD](#_RRD) – 6 months)AND <= [RRD](#_RRD) | *Date of the most recent PCSK9i, alirocumab or evolocumab treatment code in the 6 months leading up to and including the report run date.* |
|  | PCSK9ICON\_DAT | [PCSK9ICON\_COD](#_PCSK9ICON_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent PCSK9i, alirocumab or evolocumab therapy contraindicated code in the patient’s record up to and including the report run date.* |
|  | PCSK9ININD\_DAT | [PCSK9ININD\_COD](#_PCSK9ININD_COD) | Latest <= [RRD](#_RRD) | *Date of the most recent PCSK9i, alirocumab or evolocumab therapy not indicated code in the patient’s record up to and including the report run date.* |
|  | PCSK9IDEC1\_DAT | [PCSK9IDEC\_COD](#_PCSK9IDEC_COD) | Latest > ([RRD](#_RRD) – 12 months)AND <= [RRD](#_RRD) | *Date of the most recent code indicating the patient has declined PCSK9i, alirocumab or evolocumab therapy in the 12 months leading up to and including the report run date.* |
|  | PCSK9IDEC2\_DAT | [PCSK9IDEC\_COD](#_PCSK9IDEC_COD) | Latest < ([RRD](#_RRD) – 1 year)AND >= ([RRD](#_RRD) – 2 years) | *Date of the most recent code indicating the patient has declined PCSK9i, alirocumab or evolocumab therapy recorded more than one year before and up to and including two years before the report run date.* |
|  | PCSK9IDEC3\_DAT | [PCSK9IDEC\_COD](#_PCSK9IDEC_COD) | Latest < ([RRD](#_RRD) – 2 years)AND >= ([RRD](#_RRD) – 3 years) | *Date of the most recent code indicating the patient has declined PCSK9i, alirocumab or evolocumab therapy recorded more than two years before and up to and including three years before the report run date.* |
|  | PCSK9IDEC6MTH\_DAT | [PCSK9IDEC\_COD](#_PCSK9IDEC_COD) | Latest > ([RRD](#_RRD) – 6 months)AND <= [RRD](#_RRD) | *Date of the most recent code indicating the patient has declined PCSK9i, alirocumab or evolocumab therapy recorded in the 6 months up to and including the report run date.* |
|  | LDLCCHOL\_DAT | [LDLCCHOL\_COD](#_LDLCCHOL_COD_1) | Latest <= [RRD](#_RRD)Where associated value ≠ Null | *Date of the most recent low density lipoprotein (LDL) cholesterol with an associated value recorded up to and including the report run date* |
|  | LDLCCHOL\_VAL | [LDLCCHOL\_COD](#_LDLCCHOL_COD_1) | Recorded on [LDLCCHOL\_DAT](#_LDLCCHOL_DAT) | *The value of the most recent low density lipoprotein (LDL) cholesterol recorded up to and including the report run date.* |
|  | EZETIMIBE\_FLAG | n/a | Populated from [LMCX033](#_LMCX033) | *Flag indicating whether the patient can be considered for Ezetimibe. This will be populated via cohort* [LMCX033](#_LMCX033). |
|  | BEMPACID\_FLAG | n/a | Populated from [LMCX034](#_LMCX034) | *Flag indicating whether the patient can be considered for Bempedoic acid. This will be populated via cohort* [LMCX034](#_LMCX034). |
|  | INCLISIRAN\_FLAG | n/a | Populated from [LMCX035](#_LMCX035) | *Flag indicating whether the patient can be considered for Inclisiran. This will be populated via cohort* [LMCX035](#_LMCX035). |
|  | PCSK9I\_FLAG | n/a | Populated from [LMCX036](#_LMCX036) | *Flag indicating whether the patient can be considered for alirocumab or evolocumab. This will be populated via cohort* [LMCX036](#_LMCX036). |
| *End of fields* |

# 4. Outputs

## Indicator(s)

N/A - there are no indicators for this service.

## Payment count(s)

N/A - there are no payment counts for this service.

## Management information count(s)

N/A - there are no management information counts for this service.

## Patient-level extracts

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM100 | CVD register for lipid management | [LM\_REG](#_LM_REG) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
|  | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
|  | Patient Table | NHS\_NUMBER | Patient's NHS number |
|  | Patient Table | TITLE | Patient’s title |
|  | Patient Table | FORENAME | Patient’s first name |
|  | Patient Table | SURNAME | Patient’s surname |
|  | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM010 | Lipid lowering therapy declined or Lipid disorder monitoring declined coded in each of last 3 years. Consider adding non-statin drugs. | [LMCX010](#_LMCX010) | 101 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
|  | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
|  | Patient Table | NHS\_NUMBER | Patient's NHS number |
|  | Patient Table | TITLE | Patient’s title |
|  | Patient Table | FORENAME | Patient’s first name |
|  | Patient Table | SURNAME | Patient’s surname |
|  | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM011 | Max tolerated lipid lowering therapy coded in each of last 3 years. Consider adding non-statin drugs. | [LMCX011](#_LMCX011) | 101 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
|  | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
|  | Patient Table | NHS\_NUMBER | Patient's NHS number |
|  | Patient Table | TITLE | Patient’s title |
|  | Patient Table | FORENAME | Patient’s first name |
|  | Patient Table | SURNAME | Patient’s surname |
|  | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM001 | Request lipid profile | [LMCX001](#_LMCX001) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
|  | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
|  | Patient Table | NHS\_NUMBER | Patient's NHS number |
|  | Patient Table | TITLE | Patient’s title |
|  | Patient Table | FORENAME | Patient’s first name |
|  | Patient Table | SURNAME | Patient’s surname |
|  | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM002 | Retest lipid profile in 12 months cohort | [LMCX002](#_LMCX002) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
|  | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
|  | Patient Table | NHS\_NUMBER | Patient's NHS number |
|  | Patient Table | TITLE | Patient’s title |
|  | Patient Table | FORENAME | Patient’s first name |
|  | Patient Table | SURNAME | Patient’s surname |
|  | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM012 | Lipid lowering therapy contraindicated or not indicated. Consider adding non-statin drugs. | [LMCX012](#_LMCX012) | 101 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
|  | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
|  | Patient Table | NHS\_NUMBER | Patient's NHS number |
|  | Patient Table | TITLE | Patient’s title |
|  | Patient Table | FORENAME | Patient’s first name |
|  | Patient Table | SURNAME | Patient’s surname |
|  | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM003 | Lipid management cohort | [LMCX003](#_LMCX003) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
|  | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
|  | Patient Table | NHS\_NUMBER | Patient's NHS number |
|  | Patient Table | TITLE | Patient’s title |
|  | Patient Table | FORENAME | Patient’s first name |
|  | Patient Table | SURNAME | Patient’s surname |
|  | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM004 | Lipid lowering therapy declined or Lipid disorder monitoring declined in the last 6 months. Consider adding non-statin drugs. | [LMCX004](#_LMCX004) | 101 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
|  | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
|  | Patient Table | NHS\_NUMBER | Patient's NHS number |
|  | Patient Table | TITLE | Patient’s title |
|  | Patient Table | FORENAME | Patient’s first name |
|  | Patient Table | SURNAME | Patient’s surname |
|  | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM017 | Max tolerated lipid therapy coded in the last 6 months. Consider adding non-statin drugs. | [LMCX017](#_LMCX017_1) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
|  | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
|  | Patient Table | NHS\_NUMBER | Patient's NHS number |
|  | Patient Table | TITLE | Patient’s title |
|  | Patient Table | FORENAME | Patient’s first name |
|  | Patient Table | SURNAME | Patient’s surname |
|  | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM005 | Atorvastatin 80mg (or highest dose permissible given other medication) candidate cohort | [LMCX005](#_LMCX005) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM006 | Atorvastatin 20mg candidate cohort | [LMCX006](#_LMCX006) | 101 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
|  | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
|  | Patient Table | NHS\_NUMBER | Patient's NHS number |
|  | Patient Table | TITLE | Patient’s title |
|  | Patient Table | FORENAME | Patient’s first name |
|  | Patient Table | SURNAME | Patient’s surname |
|  | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM007 | Rosuvastatin 80mg (or highest dose permissible given other medication) candidate cohort | [LMCX007](#_LMCX007) | 101 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
|  | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
|  | Patient Table | NHS\_NUMBER | Patient's NHS number |
|  | Patient Table | TITLE | Patient’s title |
|  | Patient Table | FORENAME | Patient’s first name |
|  | Patient Table | SURNAME | Patient’s surname |
|  | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM018 | Rosuvastatin 5mg candidate cohort | [LMCX018](#_LMCX018) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM015 | Non-statin treatment cohort | [LMCX015](#_LMCX015) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
|  | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
|  | Patient Table | NHS\_NUMBER | Patient's NHS number |
|  | Patient Table | TITLE | Patient’s title |
|  | Patient Table | FORENAME | Patient’s first name |
|  | Patient Table | SURNAME | Patient’s surname |
|  | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM008 | Ezetimibe candidate cohort | [LMCX008](#_LMCX008) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM019 | Inclisiran candidate cohort | [LMCX019](#_LMCX019) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM020 | Bempedoic acid + Ezetimibe candidate cohort | [LMCX020](#_LMCX020) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM021 | Ezetimibe or Bempedoic acid + Ezetimibe or Inclisiran candidate cohort | [LMCX021](#_LMCX021) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM022 | Ezetimibe or Inclisiran candidate cohort | [LMCX022](#_LMCX022) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM023 | Ezetimibe or Bempedoic acid + Ezetimibe candidate cohort | [LMCX023](#_LMCX023) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM024 | Bempedoic acid + Ezetimibe or Inclisiran candidate cohort | [LMCX024](#_LMCX024) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM025 | [Alirocumab or Evolocumab] candidate cohort | [LMCX025](#_LMCX025) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM026 | Ezetimibe or [Alirocumab or Evolocumab] candidate cohort | [LMCX026](#_LMCX026) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM027 | Inclisiran or [Alirocumab or Evolocumab] candidate cohort | [LMCX027](#_LMCX027) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM028 | Bempedoic acid + Ezetimibe or [Alirocumab or Evolocumab] candidate cohort | [LMCX028](#_LMCX028) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM029 | Ezetimibe or Inclisiran or [Alirocumab or Evolocumab] candidate cohort | [LMCX029](#_LMCX029) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM030 | Ezetimibe or Bempedoic acid + Ezetimibe or [Alirocumab or Evolocumab] candidate cohort | [LMCX030](#_LMCX030) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM031 | Bempedoic acid + Ezetimibe or Inclisiran or [Alirocumab or Evolocumab] candidate cohort | [LMCX031](#_LMCX031) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM032 | Ezetimibe or Bempedoic acid + Ezetimibe or Inclisiran or [Alirocumab or Evolocumab] candidate cohort | [LMCX032](#_LMCX032) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

|  |  |  |  |
| --- | --- | --- | --- |
| Extract ID | Description | Applied to population: | SDS use only: Version |
| LM040 | No suitable options available cohort | [LMCX040](#_LMCX040) | 100 |

| *Item Number* | *Table name* | *Data item* | *Description* |
| --- | --- | --- | --- |
| 1 | Patient Table | ACTIVE\_STATUS | Patient's active status at the point of RRD  |
| 2 | Patient Table | NHS\_NUMBER | Patient's NHS number |
| 3 | Patient Table | TITLE | Patient’s title |
| 4 | Patient Table | FORENAME | Patient’s first name |
| 5 | Patient Table | SURNAME | Patient’s surname |
| 6 | Patient Table | DATE\_OF\_BIRTH | Patient’s date of birth |
| *End of items* |

# 5. Appendix - supporting data for NHS Digital GPSES

|  |  |
| --- | --- |
| Category | Database value |
| Document version | 2.2 |
| Ruleset Database ID | Lipid management |
| Database Service ID | PLE |
| SR Reference if applicable | N/A |
| CQRS service short name | N/A |
| CQRS service name | N/A |
| Configuration level | Ruleset |
| Configure list size | N |