

Observational and Pragmatic Research Institute Pte Ltd

## Final report

# *Hidden Severe Asthma in Primary Care versus ISAR Cohort*

*Describe the extent of hidden (not referred) patients with severe asthma in a primary care setting versus ISAR and compare their demographic and clinical characteristics*

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**List of abbreviations**

Abbreviation or special term	Explanation
ACQ	Asthma Control Questionnaire
ADEPT	Anonymous Data Ethics Protocols and Transparency committee
ATS	American Thoracic Society
BMI	Body Mass Index
CFC	Chlorofluocarbon propellant
DPI	Dry Powder Inhaler
EMR	Electronic Medical Record
ENCePP	European Network Centres for Pharmacoepidemiology and Pharmacovigilance
ERS	European Respiratory Society
FEV <sub>1</sub>	Forced expiratory volume in the first second
FeNO	Fractional exhaled nitric oxide test
FVC	Forced Vital Capacity
GINA	Global Initiative for asthma
ICS	Inhaled Corticosteroid
HFA	Hydrofluoroalkane propellant
ISAR	International Severe Asthma Registry
LABA	Long-Acting $\beta$ -adrenoreceptor
LAMA	Long-Acting Muscarinic Antagonist
LTRA	Leukotriene Receptor Antagonist
OPCRD	Optimum Patient Care Research Database
QOF	Quality Outcomes Framework
REG	Respiratory Effectiveness Group

## 1.0 Background

The prevalence of severe asthma varies greatly between studies. Expert opinion indicates that the prevalence of severe asthma is between 5 and 10% of patients with asthma; <sup>1</sup> however, more recent studies using observational data have been undertaken to measure the prevalence of severe asthma in primary care populations to determine a more accurate value reflective of real-world populations.

A Danish study which investigated 61,583 18-44 year olds with  $\geq 2$  respiratory prescriptions found that patients with severe asthma represented 8.1% of the asthma population.<sup>1</sup> A study of 18,724 patients with asthma over 18 years of age found that those with severe asthma represented 4.2% of the asthma population.<sup>2</sup> Another Dutch study which differentiated between patients with severe asthma and those who had difficult-to-control asthma due to poor medication compliance or poor inhaler technique found that patients with severe asthma represented 3.6% of the asthma population.<sup>3</sup>

A recent UK analysis investigated asthma patients with severe uncontrolled eosinophilic active asthma. This study included patients with (1) an asthma diagnosis and a prescription of at least 1 asthma medication, (2) two or more asthma attacks during the baseline period of 1 year, and (3) a baseline high blood eosinophil count ( $\geq 0.3 \times 10^9/L$ ). Severe uncontrolled eosinophilic asthma was identified in 0.8% of the population.<sup>4</sup>

Thus, the prevalence of severe asthma has been reported as being between 0.8-36% of patients with asthma. This range in prevalence rates is likely due to differing definitions of severe asthma, various study methodologies and patient population inclusion.<sup>1,2,3,4</sup>

### Specialist care for patients with severe asthma

GINA<sup>9</sup> and BTS/SIGN<sup>15</sup> guidelines recommend early and appropriate referral to specialist centres for patients with potentially severe asthma to a) assure diagnostic accuracy, b) identify and control comorbidities, poor adherence, and patient's inhaler techniques, c) determine specific asthma phenotypes, and d) diagnose severe asthma.

An analysis of 61,583 patients with asthma in Denmark found that 8.1% of patients were classified as severe according to their treatment with only 36.2% of these patients being managed in specialist care.<sup>1</sup>

An analysis of 18,724 patients with asthma in Sweden found that 4.2% had severe asthma. Severity was defined as undergoing treatment with high dose inhaled steroids and LTRAs and/or LABAs. Of this severe asthma population, only 20.3% of patients had visited an asthma specialist in the preceding year.<sup>2</sup>

Patients with severe asthma that are not referred to respiratory specialists remain hidden in primary care and can be exposed to frequent courses of oral corticosteroids<sup>2,5</sup> which places them at risk of experiencing multiple side effects.<sup>1,6</sup> Possible reasons for lack of referral include:

- **Clinical inertia:** Patients and physicians are complacent with a management strategy which has been shown to be effective, affordable and at least superficially safe i.e. inhaled corticosteroids (ICS) plus additional inhalers and repeated short courses of oral corticosteroids (OCS) in acute exacerbations.
- **Primary care disease:** Asthma is considered a non-critical disease that should be managed almost exclusively in primary care. Payors often discourage specialist referrals and referring patients to an asthma specialist might be considered as a failure by primary care physicians.
- **Lack of awareness:** Physicians may be unaware of the appropriate referral to improve patient outcomes, how to access therapeutic options available in specialist centres, and how to reduce side effects that result from frequent use of OCS.
- **Patients' expectations:** Patients often have low expectations, and many are resigned to poor asthma control.<sup>7</sup> Poor control of asthma is rife, and this is reflected in frequent exacerbations, emergency care visits in primary and secondary care and high symptom burden.

Patients with severe asthma have much to gain from a referral to appropriate services – including a comprehensive review of their diagnosis, triggers and treatable traits. This will enable them to optimise their medication according to the guideline recommendations for use of inhaled treatments, ensure appropriate use of oral steroids with self-management education and written action plans, and correct their device choice and technique of use. Additionally, use of specialist medications such as long acting muscarinic drugs, macrolides and new biologics may offer real benefits to carefully selected patients.<sup>8</sup>

There is a need to improve the identification of patients with severe asthma who have not been referred to specialist asthma care and who would benefit from an appropriate referral, assessment and personalised therapy. This could improve quality of life and reduce morbidity and/or mortality associated with difficult to manage and severe asthma.<sup>Error! Bookmark not defined.</sup>



By convening primary and secondary care asthma experts, this study constructed criteria to identify the extent of “hidden” patients with severe asthma in a primary care setting in the UK. This model can then be used to interrogate electronic medical records (EMRs) in other countries to better understand the global dispersion of hidden severe asthma in primary care. Upon identification of patients with severe asthma, the demographics and clinical characteristics of patients with “hidden” severe asthma were compared to patients with severe asthma who are managed in specialist care. This study will also enable the development of algorithms and/or clinical pathways to identify hidden severe asthma in primary care EMRs and promote earlier referral to specialists in the future.

## 2.0 Study aims and objectives

### 2.1 Aims

- To assess the prevalence of potential severe asthma in primary care.
- To describe and compare patient demographics, clinical outcomes and treatments for patients within four cohorts:
  - Potential severe asthma referred to specialist care (Optimum Patient Care Research Database [OPCRD])
  - Potential severe asthma not referred to specialist care (i.e. hidden) (OPCRD)
  - High maintenance therapy asthma (OPCRD) and
  - Confirmed severe asthma (i.e. patients who are registered in the UK Severe Asthma Network and National Registry on Difficult Asthma and included in International Severe Asthma Registry [ISAR]).

### 2.2 Objectives

#### Primary objectives:

- To construct criteria for identifying potentially severe asthma in primary-care EMR databases.
- To describe the prevalence of potential severe asthma that is “hidden” in primary care and patients with potential severe asthma who have been referred.

#### Secondary objectives:

- To describe the demographics and clinical profiles of patients with potential severe asthma managed exclusively in primary care.
- To compare the demographics and clinical profiles of patients with potential severe asthma referred and not referred to specialist care with patients managed in specialist care using the International Severe Asthma Registry (ISAR).
- To create a criteria-template for identifying “hidden” severe asthma in other countries’ EMRs.

### 3.0 Study design

This study was a descriptive historical cohort study to identify patients with potentially severe asthma in a primary care setting in UK.

Patients were categorised according to GINA (2018) step of treatment and the number of exacerbations. GINA defines severe asthma as “*asthma that requires GINA Step 4 or 5 treatment, e.g. high-dose ICS/LABA, to prevent it from becoming ‘uncontrolled’, or asthma that remains ‘uncontrolled’ despite this treatment.*”<sup>9</sup>

**Table 1 - GINA (2018) asthma treatment strategy**

	Step 1	Step 2	Step 3	Step 4	Step 5
<b>PREFERRED CONTROLLER CHOICE</b>		Low dose ICS	Low dose ICS/LABA	Med/high ICS/LABA	Refer for add-on treatment e.g. tiotropium, anti-IgE, anti-IL5
Other controller options	Consider low dose ICS	Leukotriene receptor antagonist (LTRA) Low dose theophylline	Med/high dose ICS Low dose ICS+LTRA (or + theoph)	Add tiotropium Med/high dose ICS+LTRA (or +theoph)	Add low dose OCS
<b>RELIEVER</b>	As needed short acting beta <sub>2</sub> agonist (SABA)		As needed SABA or low dose ICS/formoterol		

Inhaled corticosteroid	Adults and adolescents		
	Low	Medium	High
Beclometasone dipropionate (CFC)	200-500	>500-1000	>1000
Beclometasone dipropionate (HFA)	100-200	>200-400	>400
Budesonide (DPI)	200-400	>400-800	>800
Budesonide (nebules)			
Ciclesonide (HFA)	80-160	>160-320	>320
Fluticasone furoate (DPI)	100	n.a.	200
Fluticasone propionate (DPI)	100-250	>250-500	>500
Fluticasone propionate (HFA)	100-250	>250-500	>500
Mometasone furoate	110-220	>220-440	>440
Triamcinolone acetonide	400-1000	>1000-2000	>2000

CFC: chlorofluocarbon propellant; DPI: dry powder inhaler; HFA hydrofluoroalkane propellant

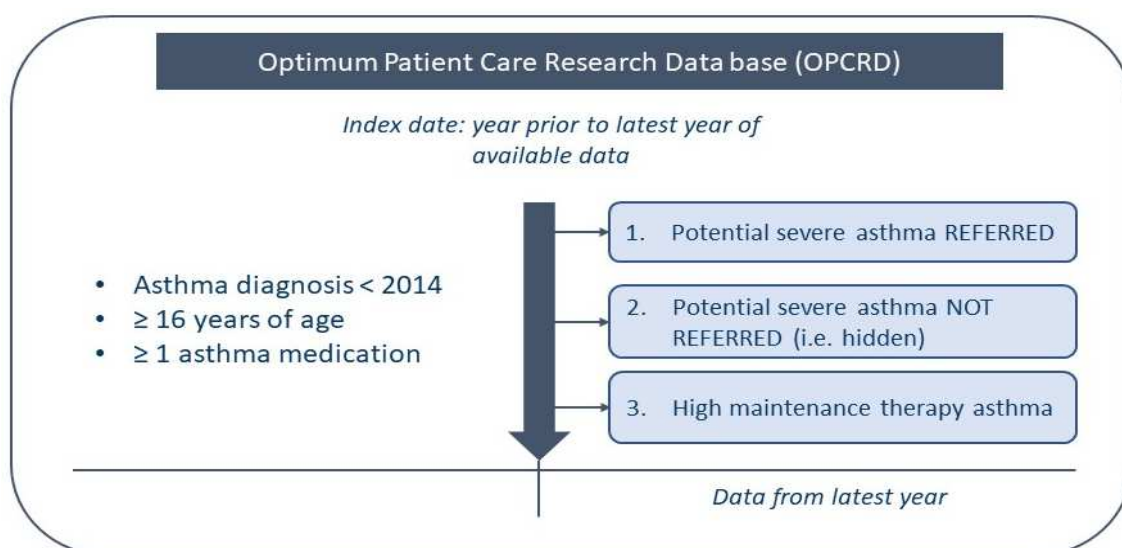
Patients were defined as having:

- **Potential Severe Asthma:**  
patients receiving treatment at GINA step 4 AND experiencing  $\geq 2$  exacerbations/year OR receiving treatment at GINA step 5, or
- **High maintenance therapy asthma:** patients receiving treatment at GINA Step 3 and experiencing  $\geq 2$  exacerbations/year OR receiving treatment at GINA step 4 and experiencing  $< 2$  exacerbations (i.e. 0 or 1 exacerbations).

The High maintenance therapy asthma patients at GINA step 3 had features of severe asthma and were possibly being treated sub-optimally.

Patients with potentially severe asthma were further categorised according to whether they have had a referral to specialist care within the last year.

**Figure 1 - Study Design**



This study compared the characteristics of these groups of patients (potentially severe referred, potentially severe not referred, high maintenance therapy asthma) to patients included in the UK Severe Asthma Network and National Registry on Difficult Asthma from the UK International Severe Asthma Registry (ISAR) (<http://isaregistries.org/>).

## 4.0 Study populations and data sources

This project utilised two data sources, the Optimum Patient Care Research Database (OPCRD) and the UK Severe Asthma Network and National Registry on Difficult Asthma, included in the UK International Severe Asthma Registry (ISAR).

### 4.1 Optimum Patient Care Research Database

This study used anonymised data from the Optimum Patient Care Research Database (OPCRD). The OPCR<sup>10</sup> is a large UK primary care data source which contains patients' electronic medical history. It contains anonymous, longitudinal records for over 7 million patients from over 700 primary care practices. It is approved by the Health Research Authority for clinical research use, governed by the Anonymised Data Ethics & Protocol Transparency (ADEPT) Committee, and offers a high-quality data source that is used regularly in clinical, epidemiological and pharmaceutical research. This study was approved by the ADEPT committee (approval reference ADEPT0319) and registered with the European Network of Centres for Pharmacoepidemiology and Pharmacovigilance (reference EUPAS28611).

Patients with Severe asthma were extracted from the OPCR<sup>10</sup> using the following criteria (Table 2).

**Table 2 - Inclusion and exclusion criteria**

Inclusion criteria
<ul style="list-style-type: none"> <li>Patients age <math>\geq 18</math> years old</li> <li>Patients with: <ul style="list-style-type: none"> <li>An active diagnostic Read Code for asthma (appendix 0) qualifying inclusion in the asthma QOF registry prior to 2014,</li> <li>No subsequent recorded asthma resolved Read Code after the last asthma diagnosis,</li> </ul> </li> </ul> <p>Patients with <math>\geq 1</math> year of data from 2014 onwards (including patients who died during this time) (</p> <ul style="list-style-type: none"> <li>)</li> <li>Receiving <math>\geq 1</math> GINA step 3 asthma medications (appendix 0) in the one-year follow-up period.</li> </ul>
Exclusion criteria
<ul style="list-style-type: none"> <li>Patients with physician-confirmed diagnosis of other respiratory conditions (appendix 0)</li> </ul>

## 4.2 International Severe Asthma Registry

Patients with potentially severe asthma from the OPCRCD were compared to the UK Severe Asthma Network and National Registry on Difficult Asthma, included in the ISAR UK International Severe Asthma Registry (ISAR).

The inclusion criteria for these patients are listed in Table 3.

*Table 3 - ISAR Inclusion and exclusion criteria*

Inclusion criteria
<ul style="list-style-type: none"><li>• Age ≥ 18 years old</li><li>• Patient on GINA Step 5 treatment</li></ul> <p>OR</p> <ul style="list-style-type: none"><li>• Patient on GINA Step 4 treatment with severe asthma symptoms</li><li>• Frequent exacerbations requiring systemic corticosteroids</li></ul>
Exclusion criteria
<ul style="list-style-type: none"><li>• Lack of consent to share de-identified medical information</li></ul>

## 5.0 Study outcomes

### 5.1 Study Groups

The study described the three patient populations defined above:

- Potentially severe asthma referred
- Potentially severe asthma not referred, and
- High maintenance therapy asthma) and compared them to patients registered in the UK ISAR.

Patients were categorised based on their prescribed medication in the last year of data.

- GINA (2018) Step 1: Patients receiving only beta agonist or muscarinic agonist.
- GINA (2018) Step 2: Patients receiving low dose inhaled corticosteroids (ICS) without other controllers, or leukotriene receptor agonist (LTRA) without other controllers, or low dose theophylline without other controllers.
- GINA (2018) Step 3: Patients receiving medium or high dose ICS without other controllers, or low dose ICS in combination with Long Acting Beta Agonist (LABA), or low dose ICS in combination with Long Acting Muscarinic Agonist (LAMA), or low dose ICS without LABA/LAMA plus LTRA and/or theophylline, or LABA and/or LAMA without ICS, or LTRA plus theophylline without ICS.
- GINA (2018) Step 4: Patients receiving medium or high dose ICS/LABA, or medium or high dose ICS/LAMA, or medium or high dose ICS plus LTRA and/or theophylline, or three or more controllers without ICS.
- GINA Step 5: Maintenance OCS plus any other treatments, or Anti-IgE therapy.

### 5.1 Study Outcomes

#### 5.1.1 Demographics

*Table 4 – Population demographic variables*

Variable Name	Description
Age	Age in years Defined at the start of the most recent year of data.
Gender	Female or Male
Ethnicity	Patients classified by ethnicity as categorised within clinical records as specified by the GLI 2012 <sup>11</sup> definitions categories: Caucasian,

	<p>Black, South East Asian, North East Asian, Not Specified.</p> <p>(appendix 0)</p>
Height	<p>Defined as the patient's most recent height data recorded in their clinical records.</p> <p>(appendix 0)</p>
Body Mass Index (BMI)	<p>The ratio of weight (kg) to height<sup>2</sup> (m<sup>2</sup>).</p> <p>Defined by either a BMI recorded as part of the patient's clinical record or calculated using the most recent height and weight data.</p> <p>Categorised as:</p> <ul style="list-style-type: none"> <li>underweight (&lt; 18.5 kg/m<sup>2</sup>),</li> <li>normal weight (≥ 18.5 kg/m<sup>2</sup> and &lt; 25 kg/m<sup>2</sup>),</li> <li>overweight (≥ 25 kg/m<sup>2</sup> and &lt; 30 kg/m<sup>2</sup>),</li> <li>obese (≥ 30 kg/m<sup>2</sup>).</li> </ul> <p>(appendix 0)</p>

Smoking Status	<p>Patient most recent smoking status.</p> <p>Defined by most recent patient's clinical smoking recording. Patients records with a "never" recording after ex or current will be disregarded.</p> <p>Categorised as:</p> <ul style="list-style-type: none"> <li>Non-smoker,</li> <li>Current smoker,</li> <li>Ex-smoker.</li> </ul> <p>(appendix 0)</p>
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## 5.1.2 Clinical characteristics

**Table 5 – Population clinical variables**

Variable Name	Description
Number of exacerbations	Number of asthma exacerbations requiring oral corticosteroids during the study period.  (appendix 0)
Exacerbation in the year	A count of exacerbations in the year the study was conducted.
Asthma control	<p><b>OPCRD Patients</b></p> <p>1. Royal College of Physicians (RCP) Asthma 3-Questions<sup>12,13</sup> Defined by clinical records of RCP control within the latest year of data. Patients are classified as having poor control if 2 or 3 of the measures denote poor control or if patients have trouble sleeping because of their asthma symptoms.  (appendix 08)</p> <p>2. Asthma Control Test (ACT)<sup>14</sup> Defined by clinical records using ACT questionnaire within the latest year of data.  ACT Score ≤ 19 – Not controlled ACT Score 20-24 – Reasonably controlled ACT Score 25 – Controlled  (appendix 0)</p> <p>3. Control measured by SABA use: Patients using &gt; 3.65 SABA canisters in a year indicates poor asthma control.<sup>15</sup>  (appendix 0)</p> <p>4 Risk Domain Asthma Control (RDAC): Uncontrolled if any of the following occur in a 12-month assessment period:</p> <ul style="list-style-type: none"> <li>○ Primary care exacerbation Read Code</li> <li>○ Acute use of OCS with evidence of lower respiratory consultation</li> <li>○ Antibiotics prescribed with evidence of lower respiratory consultation</li> </ul> <p>(appendices 0, and 9.2.2)</p>

	<p><b>ISAR patients</b></p> <p>Categorised according to the Asthma Control Questionnaire (ACQ). The 7-item Asthma Control Questionnaire (ACQ)<sup>16</sup> was developed to measure the primary goals of asthma management as identified by international guidelines.<sup>9,15,17,18</sup></p> <p>Categorised as:</p> <table> <tr> <td>ACQ Score <math>\leq 0.75</math></td><td>Controlled</td></tr> <tr> <td>ACQ Score <math>&gt; 0.75 - 1.25</math></td><td>Partial control</td></tr> <tr> <td>ACQ Score <math>&gt; 1.25</math></td><td>Not controlled</td></tr> </table>	ACQ Score $\leq 0.75$	Controlled	ACQ Score $> 0.75 - 1.25$	Partial control	ACQ Score $> 1.25$	Not controlled
ACQ Score $\leq 0.75$	Controlled						
ACQ Score $> 0.75 - 1.25$	Partial control						
ACQ Score $> 1.25$	Not controlled						
Blood eosinophil count	<p>Blood eosinophil count (average) measured in cells per litre (<math>10^9/L</math>) recorded within the last year of data, not within 14 days of an OCS prescription.</p> <p>Categorised as:</p> <p><math>\leq 0.15</math>, <math>&gt;0.15 - \leq 0.3</math>, <math>&gt;0.3 - \leq 0.45</math>, <math>&gt;0.45</math></p> <p>(appendix 0)</p>						
FEV <sub>1</sub> (Taken at the same time as an asthma review)	<p>Maximum Forced Expiratory Volume (FEV<sub>1</sub>) in the first second of expiration within the last 5 years of available data.</p> <p>(appendix 0)</p>						
% Predicted FEV <sub>1</sub>	<p>Predicted value of FEV<sub>1</sub> standardised according to ethnicity, age, gender, and height using GLI 2012<sup>11</sup>.</p>						
FVC (Taken at the same time as an asthma review)	<p>Maximum Forced Volume Capacity (FVC) within the last 5 years of available data.</p> <p>(appendix 0)</p>						
% Predicted FVC	<p>Predicted value of FVC standardised according to ethnicity, age, gender, and height using GLI 2012<sup>11</sup>.</p>						
FEV <sub>1</sub> /FVC Ratio (Taken at the same time as an asthma review)	<p>Measured FEV<sub>1</sub> as a ratio of measured FVC</p>						
PEF (Taken at the same time as an asthma review)	<p>Peak Expiratory Flow (PEF) (L/min) recorded using Read Code within the last year of available data</p> <p>(appendix 0)</p>						

% Predicted PEF	<p>Predicted value of PEF standardised according to ethnicity, age, gender, and height.<sup>19,20</sup></p> <p>Categorised as:</p> <p style="padding-left: 40px;">% Predicted PEF – 0 - 50%</p> <p style="padding-left: 40px;">% Predicted PEF – &gt;50 - 80%</p> <p style="padding-left: 40px;">% Predicted PEF – &gt;80%</p>
Fractional exhaled nitric oxide (FeNO) test	<p>Measurements of Fractional Nitric Oxide (FeNO) concentration in exhaled breath, measured in parts per billion (ppb) at a flow rate of 50mL/s within the last 5 years of available data.</p> <p style="padding-left: 40px;">low (&lt;25ppb), intermediate (25-50), high (&gt;50ppb)</p> <p style="text-align: right;">(appendix 0)</p>
Medication Possession Ratio (MPR) (Surrogate marker for adherence)	<p>Good adherence to treatment defined as a Medication Possession Ratio<sup>21</sup> (MPR) ≥70%, measure based on ICS prescription refills.</p>
Respiratory treatments	<p>ICS/LABA, ICS/LABA/LTRA, ICS/LABA/LAMA, ICS/LABA/LAMA/LTRA, SABA, Theophylline, Biologic Treatments</p> <p style="text-align: right;">(appendix 0)</p>

### 5.1.3 Comorbidities

Comorbidity prevalence rates were calculated using diagnostic Read Codes recorded either within the last year of data for anxiety/depression diagnoses or at any point in time for all other comorbidities.

**Table 6 – Population comorbidity variables**

Comorbidities (all comorbidities are considered at any point in time except for anxiety/depression which is only considered if within the last year)	Allergic rhinitis, (appendix 0) Eczema, (appendix 0) Nasal Polyps, (appendix 0) Anxiety/Depression, (appendix 0) Diabetes, (appendix 0) Osteoporosis, (appendix 0) Heart Failure, (appendix 0)
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## 5.2 Statistical analysis

- The number of hidden patients with potentially severe asthma were reported.
- Descriptive statistics on demographic and clinical characteristics were provided for continuous and categorical variables accordingly:
  - For variables measured on the interval or ratio scale, summary statistics produced were:
    - Sample size (n)
    - Percentage non-missing
    - Mean
    - Variance/standard deviation
    - Range (minimum – maximum)
    - Median
    - Inter-quartile range (25<sup>th</sup> and 75<sup>th</sup> percentile)
  - For categorical variables the summary statistics included:
    - Sample size (n)
    - Range (if applicable)
    - Count and percentage by category (distribution)

Additional analysis was undertaken to determine whether patients classified as not having a referral or receiving specialist care may have done so before the 1-year study period.

### Software

Data were prepared and analysed using Stata MP/6 version 15.1 (StataCorp, College Station, TX).

## 6.0 Results

### 6.1 Eligible Patients

The study population contained 202,429 patients aged  $\geq 18$  years with a current asthma diagnosis prior to 2014 who were receiving at least 1 type of treatment and had at least one year of data.

The selection of patients that met the inclusion and exclusion criteria is shown in [Table 7](#)**Error!**

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*Table 7 – Selection of eligible patients*

A diagnosis of asthma < 2014 and no other respiratory diagnosis	900,785
Patients with at least 1 year of follow up data post 2014	494,085
Patients aged $\geq 18$	404,268
Patients receiving at least 1 asthma medication	202,429

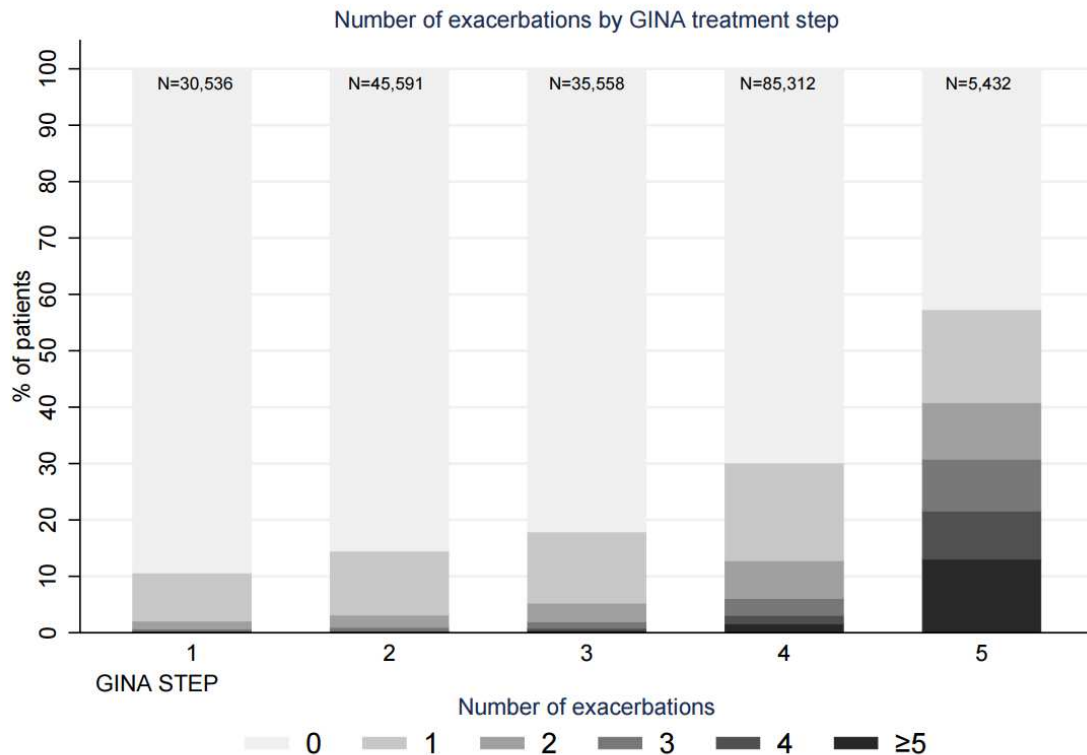
### 6.2 Categorisation by GINA (2018) treatment, exacerbations and by referral

The average number of prescriptions for ICS/LABA combinations for GINA (2018) steps 3, 4 and 5 were 4.4, 6.0 and 8.2 prescriptions per year respectively (Table 8).

*Table 8 - Average number of ICS/LABA scripts by GINA Step of treatment*

GINA (2018) Step	Mean	Standard Error	95% Confidence Interval	
3	4.4	0.04	4.31	4.46
4	6.0	0.01	6.00	6.05
5	8.2	0.11	8.01	8.44

Patients were categorised according to their treatments using GINA (2018) treatment steps and the number of exacerbations experienced in the one-year study period. 85,312 (42.1%) of patients were categorised as having received treatment at step 4. Exacerbations increased with treatment step (Figure 2).

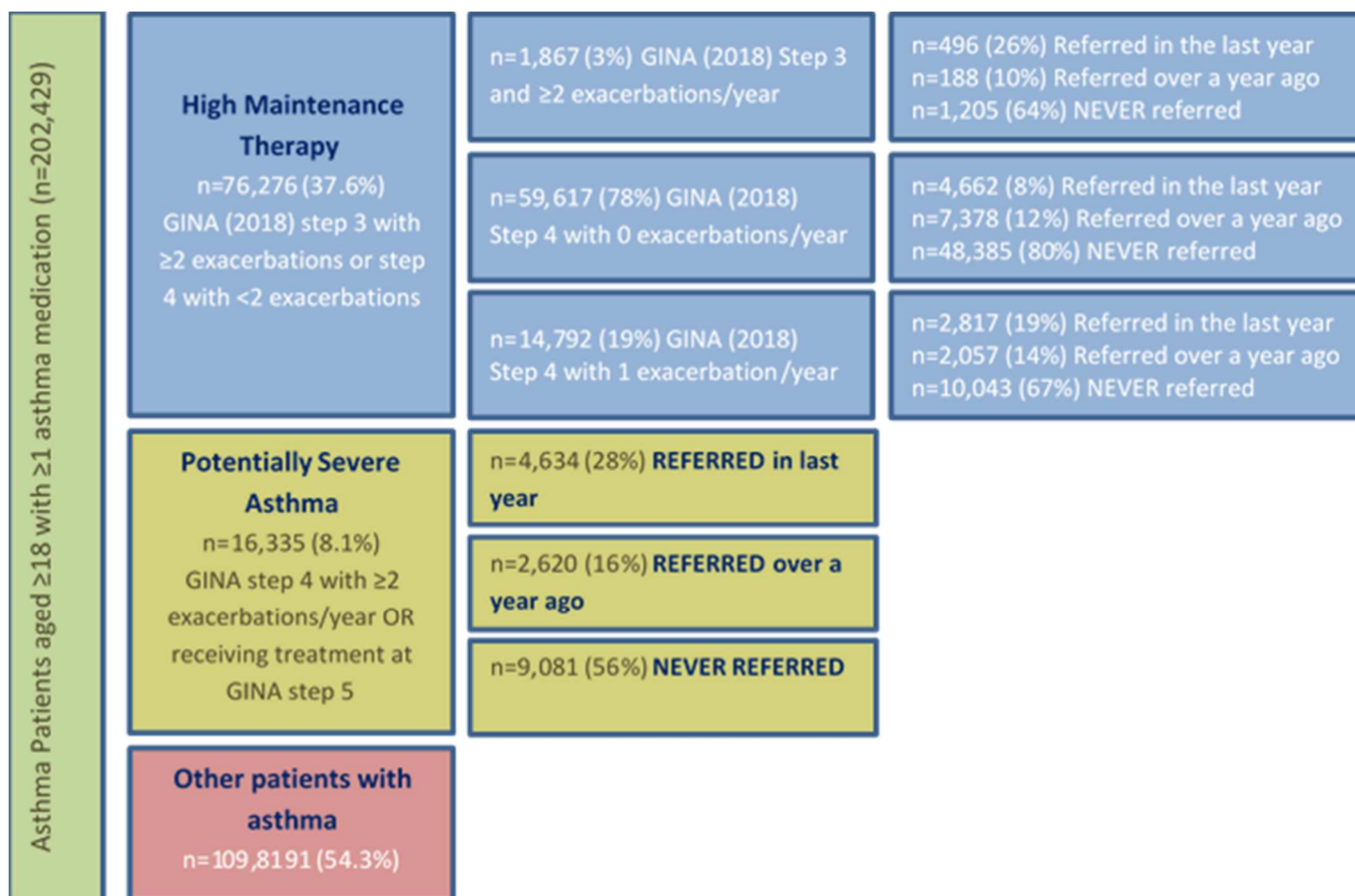
**Figure 2 - Number of patients by GINA (2018) treatment step**

Patients with potentially severe asthma were also classified according to whether they had a record of referral to specialist care.

16,335 (8.0%) patients were found to have potential severe asthma (i.e. GINA 2018 step 4 and  $\geq 2$  exacerbations OR at step 5). Of these, 11,701 (71.6%) were not referred (hidden) and 4,634 (28.4%) were referred to specialist care.

76,276 patients were found to be receiving “high maintenance therapy” (i.e. GINA (2018) at Step 3 and experiencing  $\geq 2$  exacerbations/year OR receiving treatment at GINA step 4 and experiencing  $< 2$  exacerbations). The majority of these patients 59,617 were at GINA step 4 and had 0 exacerbations, 14,792 patients were at GINA step 4 with 1 exacerbation and 1,867 patients were at GINA step 3 with  $\geq 2$  exacerbations (Figure 3).

**Figure 3 - Proportion of patients in primary care with (a) high maintenance therapy asthma and potential severe asthma and (b) proportion of those with potential severe asthma who were not managed in specialist care, i.e. “hidden patients”.**

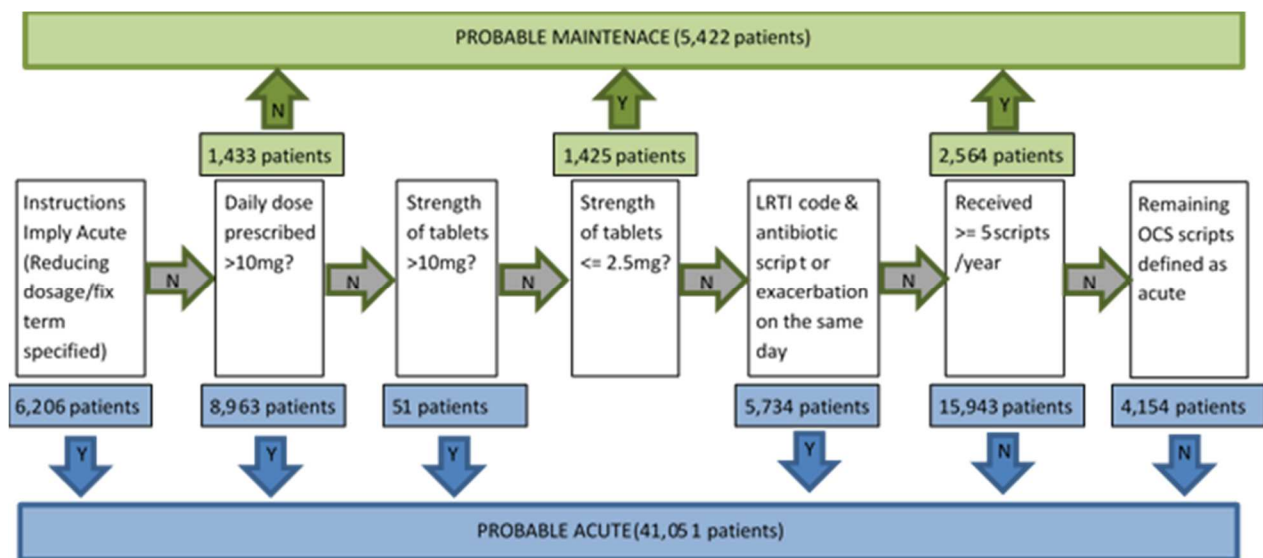


\* REFERRED/NOT REFERRED – refers to specialist care or ongoing specialist care

### 6.3 Categorisation according to maintenance and acute OCS use

OCS use by patients were categorised as either probable maintenance or acute use based upon the number of scripts, the dose and strength of the prescriptions and same day clinical diagnoses. Out of the study population of 202,429 patients 46,473 received an OCS prescription. 5,422 (11.7%) were classified as probable maintenance OCS users, and 41,051 (88.3%) were classified as probable acute users (Figure 4).

Figure 4 - Categorisation of patients as either probable maintenance or acute OCS users





## 6.4 Demographics by patient groups

	OPCRD High maintenance therapy asthma*	OPCRD Potential Severe asthma NOT REFERRED to specialist care*	OPCRD Potential Severe asthma REFERRED to specialist care*	CONFIRMED severe asthma (ISAR)*
	n=76,276	n=11,701	n=4,634	n=714
<b>Age</b>				
Mean (95% CI)	54 (54.4-54.6)	62 (62.2-62.8)	63 (62.4-63.4)	50 (48.8-50.8)
SD (min-max)	18.3 (18-105)	17.4 (1-103)	17.5 (18-99)	14.3 (18-139)
Median	55	65	65	51
25 <sup>th</sup> and 75 <sup>th</sup> percentile	41, 68	51, 76	51, 76	40, 60
<b>Gender</b>				
Male, n (%)	31,489 (41%)	4,056 (35%)	1,615 (35%)	256 (36%)
Female, n (%)	44,787 (59%)	7,645 (65%)	3,019 (65%)	458 (64%)
<b>Ethnicity</b>				
White, n (% non-missing)	22,386 (60.7%)	3,145 (61.8%)	1,806 (61.0%)	488 (68.4%)
Black, n (%)	533 (1.5%)	46 (0.9%)	46 (1.6%)	50 (7.0%)
Asian, n (%)	37 (0.1%)	1 (0.0%)	2 (0.1%)	82 (11.5%)
Mixed/Other, n (%)	254 (0.7%)	22 (0.4%)	14 (0.5%)	94 (13.2%)
Unknown, n (%)	13,644 (37.0%)	1,873 (36.9%)	1,093 (37.0%)	0 (0.0%)
Missing, n (% all records)	39,422 (51.7%)	6,614 (56.6%)	1,673 (36.1%)	0 (0.0%)
<b>Height (m)</b>				
Mean (95% CI)	1.670 (1.669-1.670)	1.647 (1.645-1.648)	1.642 (1.639-1.645)	1.65 (1.64-1.66)
SD (min-max)	0.103 (0.430-2.108)	0.100 (0.860-2.134)	0.099 (0.903-1.981)	0.10 (1.24-1.97)
Median	1.670	1.640	1.640	1.65
25 <sup>th</sup> and 75 <sup>th</sup> percentile	1.6, 1.74	1.57, 1.72	1.57, 1.71	1.58, 1.72
<b>Body Mass Index (BMI kg/m<sup>2</sup>)</b>				
Mean (95% CI)	28.7 (28.7-28.8)	29.2 (29.1-29.4)	29.5 (29.2-29.7)	30.7 (30.2-31.3)
SD (min-max)	6.80 (10.02-80.00)	7.20 (10.32-79.72)	7.62 (11.56-74.00)	7.07 (17.2-81.2)
Median	27.70	28.20	28.30	29.5
25 <sup>th</sup> and 75 <sup>th</sup> percentile	24.15, 32.3	24.3, 33.1	24.2, 33.4	25.8, 34.6
<b>Body Mass Index categories</b>				
underweight (< 18.5), n (% non-missing)	1,492 (2.2%)	315 (3.0%)	130 (3.3%)	5 (0.7%)
normal weight (≥ 18.5 & < 25), n (% non-missing)	19,164 (28.5%)	2,725 (26.3%)	1,026 (26.1%)	144 (20.2%)
overweight (≥ 25 & < 30), n (% non-missing)	22,368 (33.3%)	3,243 (31.2%)	1,186 (30.1%)	226 (31.7%)
obese (≥ 30), n (% non-missing)	24,248 (36.0%)	4,099 (39.5%)	1,591 (40.5%)	339 (47.5%)
Missing, n (% all records)	9,004 (11.8%)	1,319 (11.3%)	701 (15.1%)	0 (0.0%)

\* see section 3.0 for full definitions

	OPCRD High maintenance therapy asthma*	OPCRD Potential Severe asthma NOT REFERRED to specialist care*	OPCRD Potential Severe asthma REFERRED to specialist care*	CONFIRMED severe asthma (ISAR)*
	n=76,276	n=11,701	n=4,634	n=714
<b>Smoking Status</b>				
Never, n (% non-missing)	23,732 (31.3%)	2,910 (25.0%)	1,001 (21.7%)	492 (69.1%)
Current, n (% non-missing)	15,093 (19.9%)	2,455 (21.1%)	910 (19.8%)	29 (4.1%)
Ex-smoker, n (% non-missing)	37,034 (48.8%)	6,270 (53.9%)	2,692 (58.5%)	191 (26.8%)
Missing, n (% all records)	417 (0.6%)	66 (0.6%)	31 (0.7%)	2 (0.3%)

#### 6.4.1 Demographic graphs by patient groups

Figure 5 - Patient Group: Age

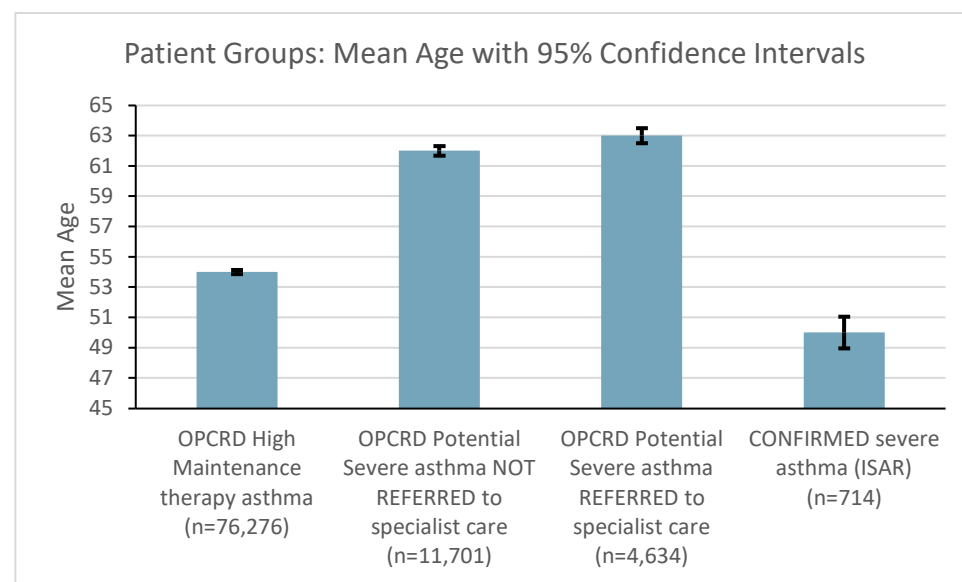
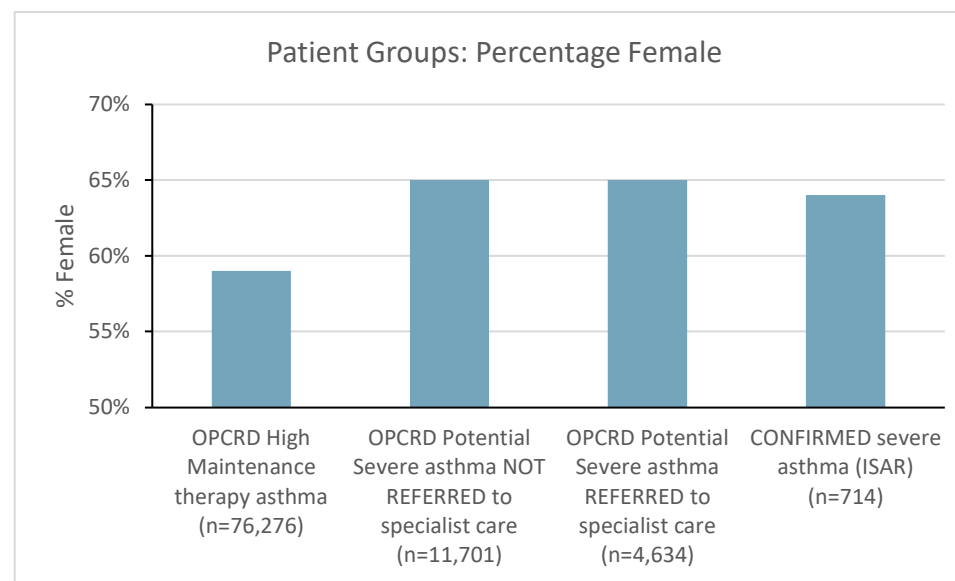
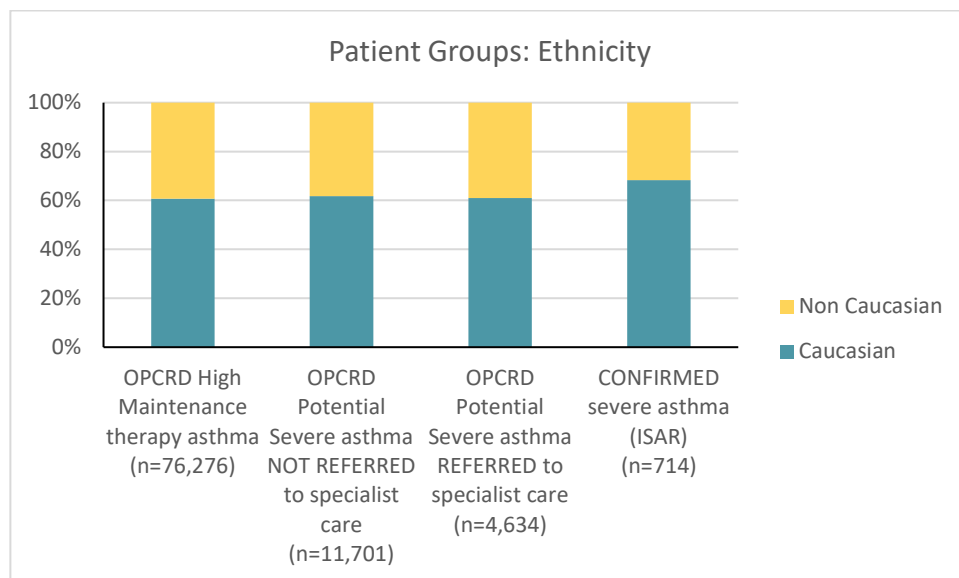
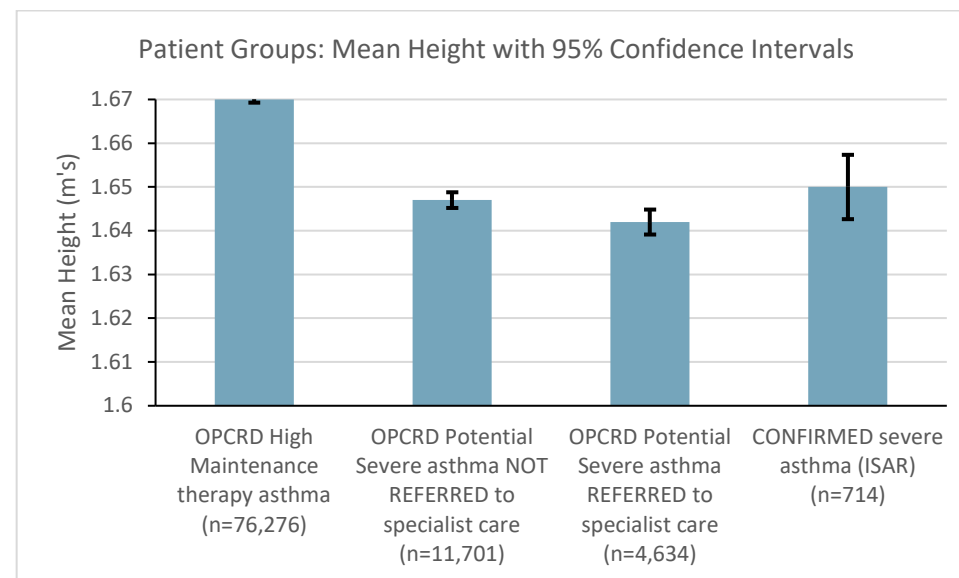
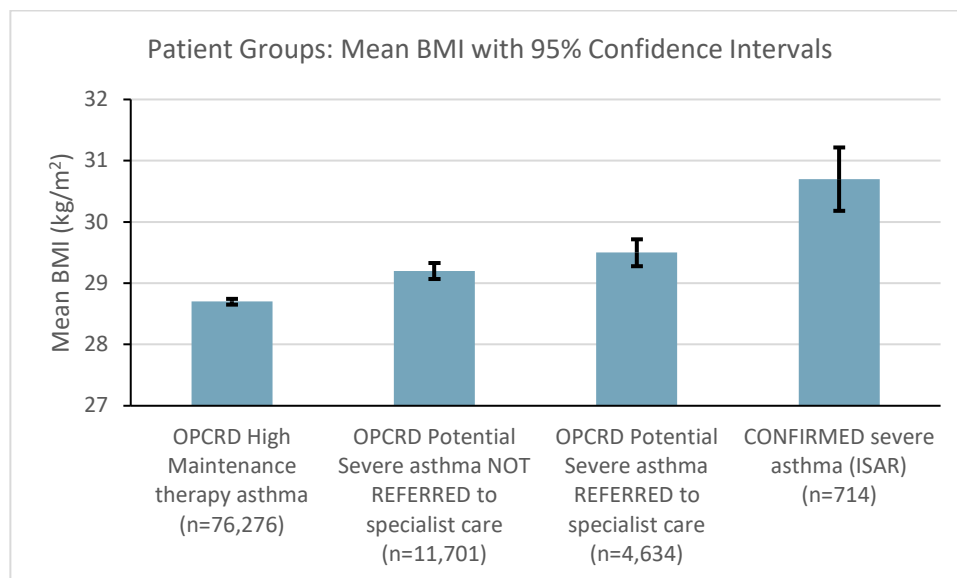
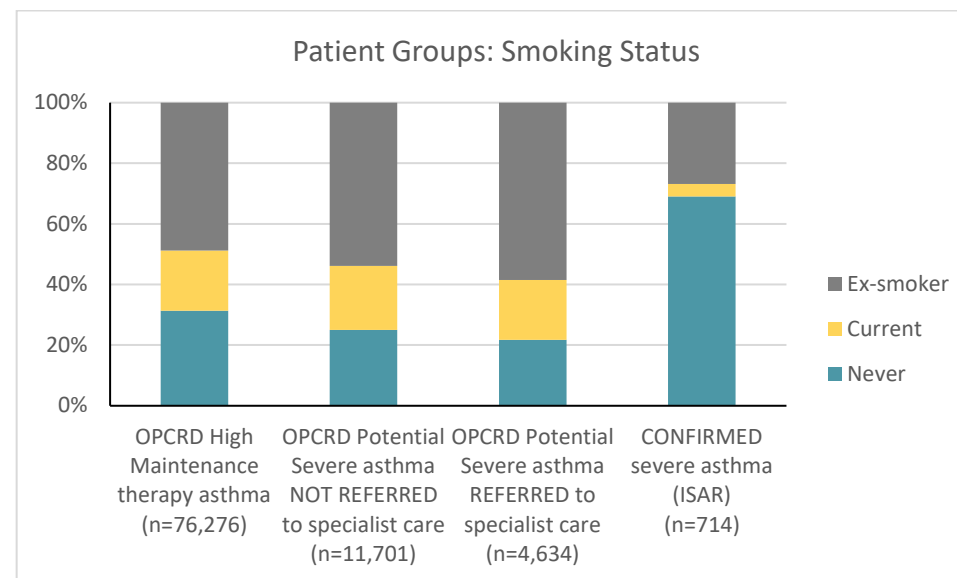


Figure 6 - Patient Group: Gender



**Figure 7 - Patient Group: Ethnicity****Figure 8 - Patient Group: Height**

**Figure 9 - Patient Group: BMI****Figure 10 - Patient Group: Smoking Status**

ISAR patients with confirmed severe asthma are more likely to be younger (Figure 5), Caucasian (Figure 7), have a higher BMI (Figure 9) and most likely to have never smoked (Figure 10).

Patients with potentially severe asthma are older patients, with those being referred to specialist care being the oldest (Figure 5). All groups of patients with asthma have a greater proportion of females than males; patients with potentially severe asthma have the highest proportion of females (Figure 6).

Patients with potentially severe asthma who were referred to specialist care have the highest percentage of smokers (either current or ex) (Figure 10).

## 6.5 Clinical characteristics by patient groups

	OPCRD High maintenance therapy asthma*	OPCRD Potential Severe asthma NOT REFERRED to specialist care*	OPCRD Potential Severe asthma REFERRED to specialist care*	CONFIRMED severe asthma (ISAR)*
	n=76,276	n=11,701	n=4,634	n=714
<b>Number of exacerbations</b>				
Mean (95% CI)	0.26 (0.255-0.263)	2.36 (2.33-2.39)	3.22 (3.15-3.28)	5.13 (4.83-5.44)
SD (min-max)	0.59 (0-16)	1.75 (0-23)	2.21 (0-25)	4.12 (0-24)
Median	0	2	3	4
25 <sup>th</sup> and 75 <sup>th</sup> percentile	0, 0	2, 3	2, 4	2, 7
<b>Exacerbation per year</b>				
0 (n, %)	59,617 (78.2%)	2,039 (17.4%)	280 (6.1%)	74 (10.4%)
1 (n, %)	14,792 (19.4%)	633 (5.4%)	264 (5.7%)	69 (9.7%)
2 (n, %)	1,180 (1.6%)	4,658 (39.8%)	1,608 (34.8%)	53 (7.5%)
3 (n, %)	404 (0.5%)	2,100 (17.9%)	952 (20.5%)	74 (10.4%)
4 (n, %)	148 (0.2%)	1,168 (10.0%)	588 (12.6%)	109 (15.4%)
≥5 (n, %)	135 (0.2%)	1,103 (9.4%)	942 (20.3%)	331 (46.6%)
<b>Asthma Control<sup>(a)</sup> - RCP Questionnaire</b>				
Controlled, n (% non-missing)	23,915 (61.1%)	2,305 (46.3%)	1,008 (34.5%)	33 (4.8%)
Partial Control, n (% non-missing)	-	-	-	26 (3.8%)
Not Controlled, n (% non-missing)	15,237 (39.9%)	2,677 (53.7%)	1,912 (65.5%)	631 (91.4%)
Missing, n (% all records)	37,124 (48.7%)	6,719 (57.4%)	1,714 (37.0%)	24 (3.4%)
<b>Asthma Control<sup>(b)</sup> – ACT</b>				
Well Controlled, n (% non-missing)	872 (13.5%)	57 (8.7%)	19 (4.3%)	33 (4.8%)
Reasonably Control, n (% non-missing)	3,259 (50.5%)	260 (39.5%)	148 (33.3%)	26 (3.8%)
Not Controlled, n (% non-missing)	2,325 (36.0%)	341 (51.8%)	278 (62.5%)	631 (91.4%)
Missing, n (% all records)	69,820 (91.5%)	11,043 (94.3%)	4,211 (90.4%)	24 (3.4%)
<b>Control measured by SABA use, n (%)</b>				
<4 Inhalers – No evidence of lack of control	40,165 (52.7%)	4,239 (36.2%)	1,424 (30.6%)	-
≥4 Inhalers – Not controlled	36,111 (47.3%)	7,462 (63.8%)	3,210 (69.4%)	-
<b>Risk Domain Asthma Control (RDAC), n (%)</b>				
Controlled	49,782 (65.3%)	1,589 (13.6%)	330 (7.1%)	-
Not Controlled	26,494 (34.7%)	10,112 (86.4%)	4,304 (92.9%)	-

\* see section 3.0 for full definitions

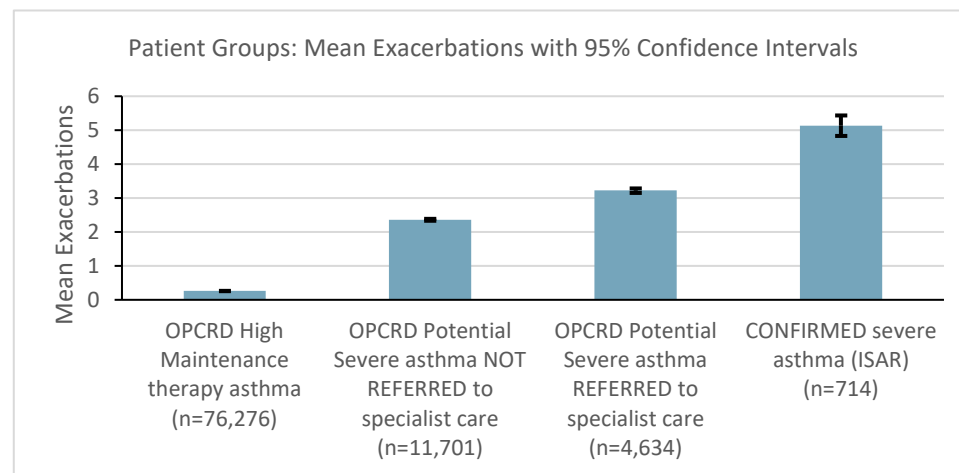
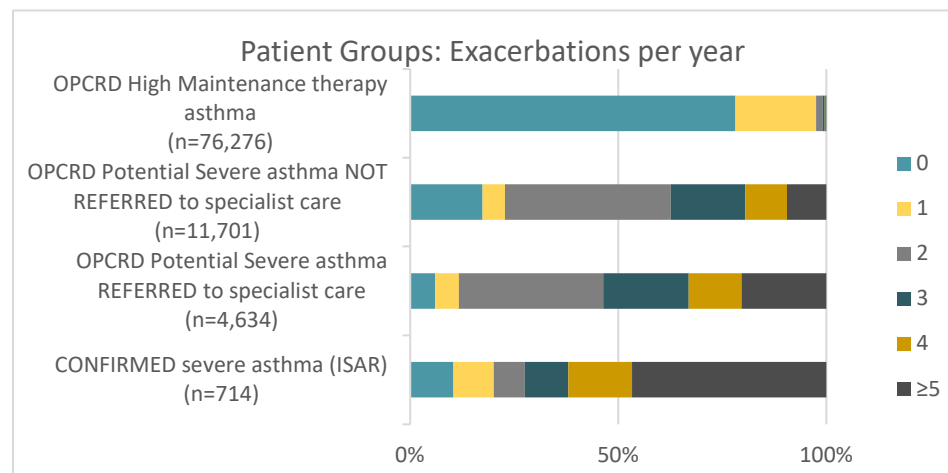
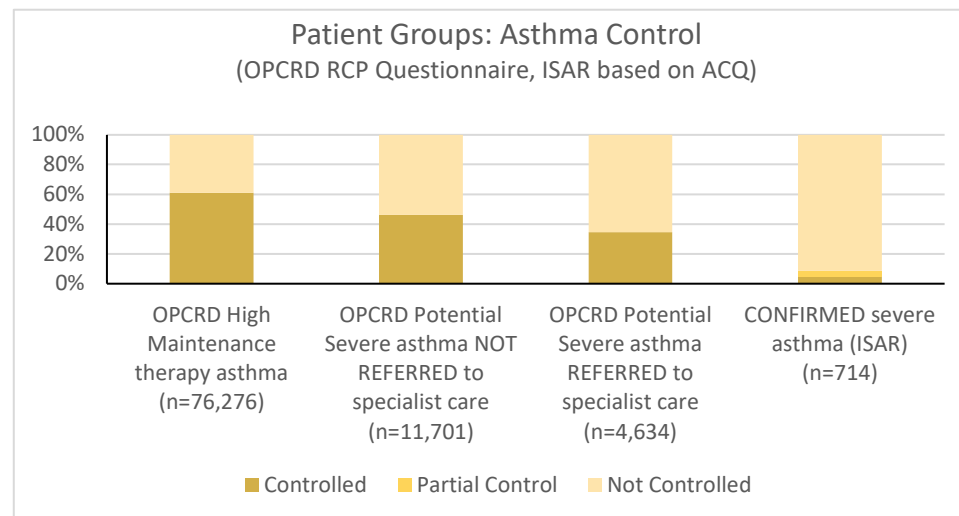
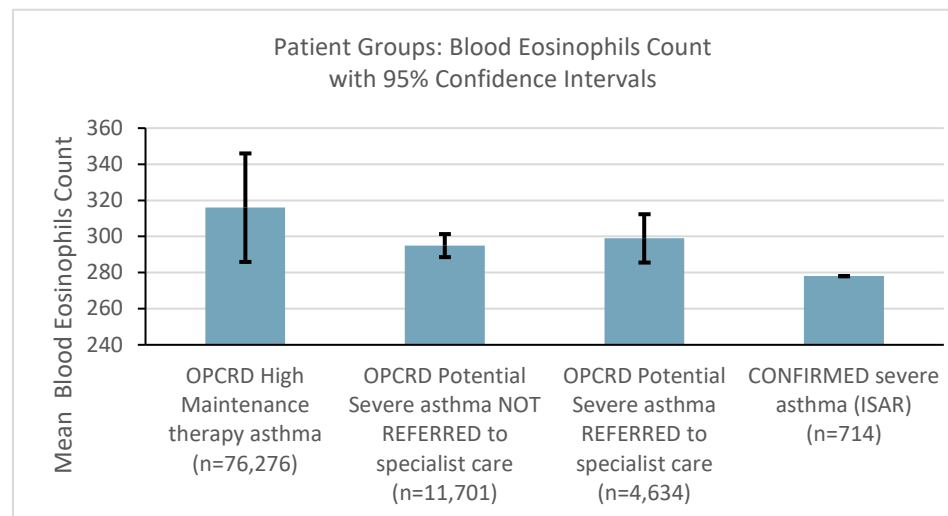
	OPCRD High maintenance therapy asthma*	OPCRD Potential Severe asthma NOT REFERRED to specialist care*	OPCRD Potential Severe asthma REFERRED to specialist care*	CONFIRMED severe asthma (ISAR)*
	n=76,276	n=11,701	n=4,634	n=714
<b>Blood Eosinophils Count</b>				
Mean (95% CI)	316 (281-350)	295 (289-301)	299 (285-312)	278 (269-287)
SD (min-max)	4233 (0-1,000,000)	350 (0-12,987)	464 (0-15,689)	1.19 (1-4)
Median	236	230	231	3
25 <sup>th</sup> and 75 <sup>th</sup> percentile	157, 353	152, 350	153, 343	2, 4
≤0.15, n (% non-missing)	13,061 (22.0%)	2,595 (23.3%)	1,021 (23.0%)	168 (23.6%)
>0.15 - ≤0.3, n (% non-missing)	24,927 (41.9%)	4,660 (41.9%)	1,929 (43.4%)	94 (13.2%)
>0.3 - ≤0.45, n (% non-missing)	12,941 (21.8%)	2,238 (20.1%)	879 (19.8%)	176 (24.7%)
>0.45, n (% non-missing)	8,474 (14.3%)	1,630 (14.7%)	613 (13.8%)	274 (38.5%)
Missing, n (% all records)	16,873 (22.12%)	578 (4.9%)	192 (4.1%)	2 (0.3%)
<b>FEV<sub>1</sub></b>				
Mean (95% CI)	2.23 (2.22-2.24)	1.85 (1.83-1.87)	1.77 (1.74-1.80)	2.06 (2.00-2.12)
SD (min-max)	0.84 (0.2-5.79)	0.74 (0.31-5.00)	0.77 (0.26-5.64)	0.80 (0.47- 4.90)
Median	2.14	1.75	1.66	1.97
25 <sup>th</sup> and 75 <sup>th</sup> percentile	1.61, 2.76	1.3, 2.30	1.17-2.23	1.50, 2.60
Missing, n (% all records)	55,36 (72.6%)	6,564 (56.1%)	2,236 (48.3%)	9 (1.26%)
<b>% Predicted FEV<sub>1</sub><sup>(c)</sup></b>				
Mean (95% CI)	0.79 (0.790-0.796)	0.715 (0.709-0.721)	0.685 (0.675-0.694)	0.872 (0.856-0.888)
SD (min-max)	0.207 (0.064-6.227)	0.222 (0.120-2.140)	0.241 (0.100-2.607)	0.70 (0.16-1.63)
Median	0.801	0.723	0.683	0.68
25 <sup>th</sup> and 75 <sup>th</sup> percentile	0.660, 0.929	0.555, 0.866	0.511, 0.845	0.54, 0.85
Missing, n (% all records)	55,336 (72.5%)	6,564 (56.1%)	2,236 (48.3%)	61 (8.5%)
<b>FVC</b>				
Mean (95% CI)	3.18 (3.16-3.19)	2.81 (2.78-2.84)	2.73 (2.69-2.78)	3.18 (3.10-3.26)
SD (min-max)	1.06 (0.52-7.23)	0.95 (0.5-7.23)	0.99 (0.6-7.22)	1.05 (0.67-7.0)
Median	3.07	2.70	2.61	3.08
25 <sup>th</sup> and 75 <sup>th</sup> percentile	2.40, 3.85	2.13, 3.39	2, 3.34	2.41, 3.82
Missing, n (% all records)	59,588 (78.1%)	7,690 (65.7%)	2,708 (58.4%)	17 (2.38%)
<b>% Predicted FVC<sup>(c)</sup></b>				
Mean (95% CI)	0.88 (0.88-0.89)	0.85 (0.84-0.85)	0.82 (0.81-0.83)	0.87 (0.85-0.88)
SD (min-max)	0.19 (0.18-2.55)	0.20 (0.13-2.30)	0.22 (0.15-2.72)	0.20 (0.13-2.01)
Median	0.89	0.85	0.82	0.86
25 <sup>th</sup> and 75 <sup>th</sup> percentile	0.76, 1.00	0.72, 0.97	0.68, 0.95	0.73, 100
Missing, n (% all records)	59,588 (78.1%)	7,690 (65.7%)	2,708 (58.4%)	71 (9.9%)

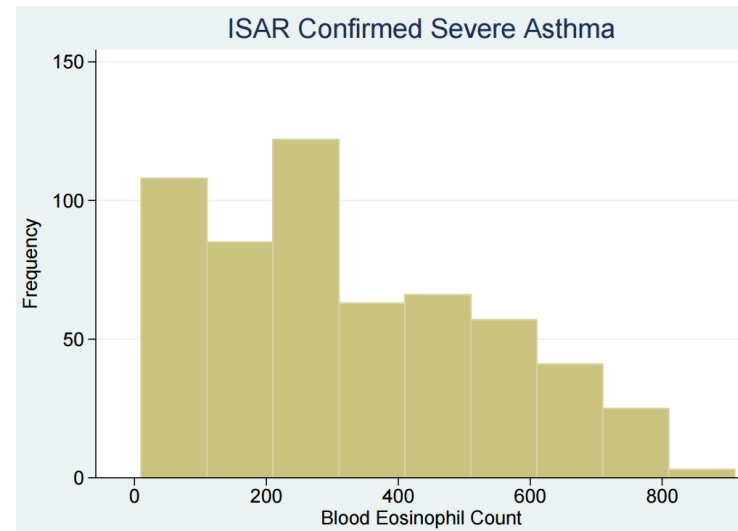
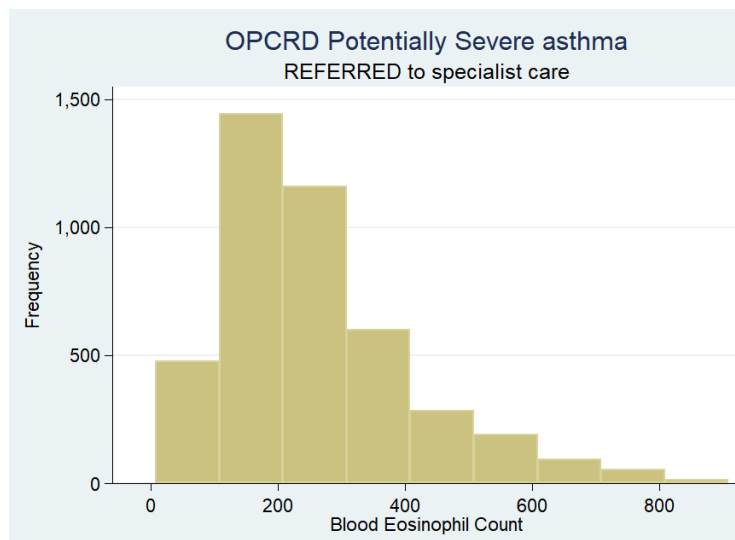
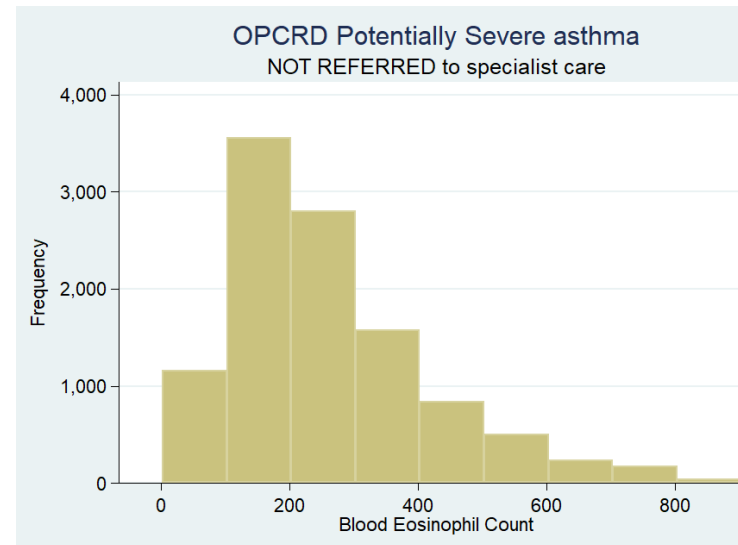
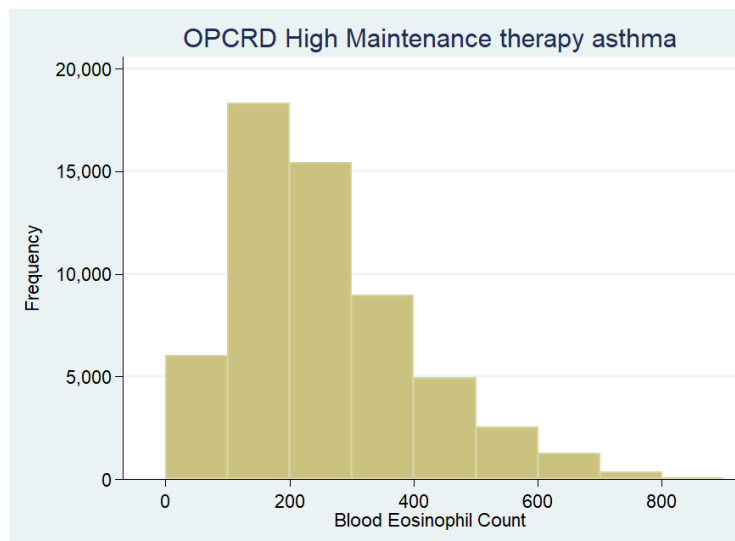
	OPCRD High maintenance therapy asthma*	OPCRD Potential Severe asthma NOT REFERRED to specialist care*	OPCRD Potential Severe asthma REFERRED to specialist care*	CONFIRMED severe asthma (ISAR)*
	n=76,276	n=11,701	n=4,634	n=714
<b>FEV<sub>1</sub>/FVC Ratio</b>				
Mean (95% CI)	0.71 (0.712-0.716)	0.67 (0.666-0.676)	0.66 (0.651-0.667)	0.66 (0.65-0.68)
SD (min-max)	0.14 (0.06-1.00)	0.15 (0.16-1.00)	0.16 (0.17-1.00)	0.21 (0.21-4.88)
Median	0.73	0.69	0.68	0.67
25 <sup>th</sup> and 75 <sup>th</sup> percentile	0.63, 0.81	0.57, 0.78	0.54, 0.78	0.57, 0.75
<b>% Patients FEV<sub>1</sub>/FVC Ratio &lt;70%</b>	40.50%	52.51%	53.42%	56.44%
Missing, n (% all records)	60,074 (78.8%)	7,991 (68.3%)	2,925 (63.1%)	17 (2.38%)
<b>Peak Expiratory Flow (PEF)</b>				
Mean (95% CI)	386 (384-387)	321 (318-325)	313 (308-318)	-
SD (min-max)	120 (150-900)	104 (150-760)	103 (150-845)	-
Median	375	306	302	-
25 <sup>th</sup> and 75 <sup>th</sup> percentile	300, 458	248, 382	150, 380	-
Missing, n (% all records)	54,777 (71.8%)	8,840 (75.6%)	2,758 (59.5%)	
<b>Percent Predicted Peak Expiratory Flow (% PPEF)</b>				
<50%, n (% non-missing)	814 (4.0%)	261 (10.5%)	228 (13.6%)	-
≥50% - <80%, n (% non-missing)	6,786 (34.0%)	1,282 (51.3%)	821 (48.9%)	-
≥80%, n (% non-missing)	12,341 (61.9%)	955 (38.2%)	629 (37.5%)	-
Missing, n (% all records)	56,335 (73.9%)	9,203 (78.7%)	2,956 (63.8%)	-
<b>Fractional exhaled Nitric Oxide (FeNO)</b>				
low (<25ppb), n (% non-missing)	22 (45.1%)	1 (33.3%)	1 (100%)	171 (28.1%)
intermediate (25-50), n (% non-missing)	21 (41.2%)	2 (66.7%)	0 (-%)	185 (58.5%)
high (>50ppb), n (% non-missing)	7 (13.7%)	0 (-%)	0 (-%)	253 (41.5%)
Missing, n (% all records)	76,226 (99.9%)	11,698 (99.9%)	4,633 (99.9%)	105 (14.7%)
<b>Adherence measured using medication possession ratio (MPR) of ICS<sup>(d)</sup></b>				
Less than 70% MPR	45,593 (61.6%)	4,838 (48.4%)	1,876 (43.8%)	188 (26.6%)
70% or greater MPR	28,389 (38.4%)	5,156 (51.6%)	2,403 (56.2%)	520 (73.4%)

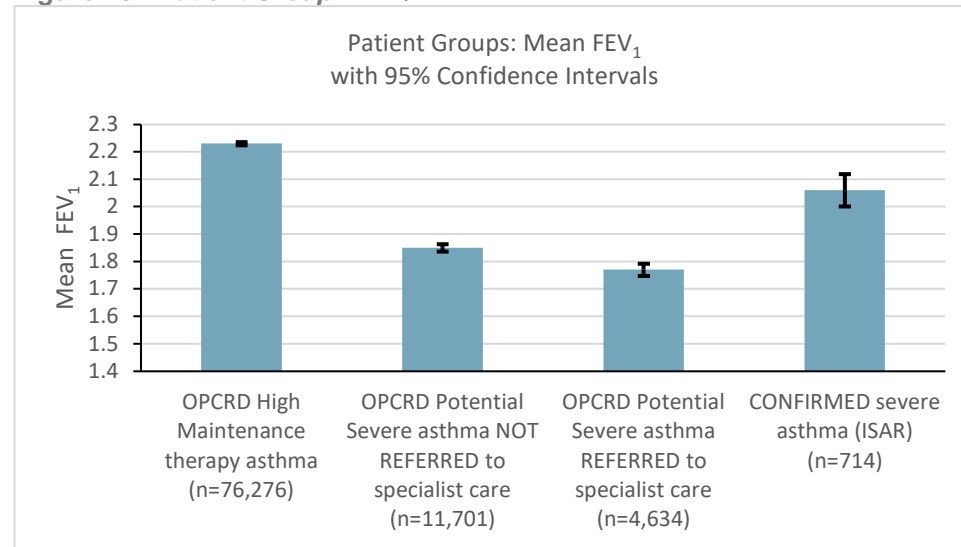
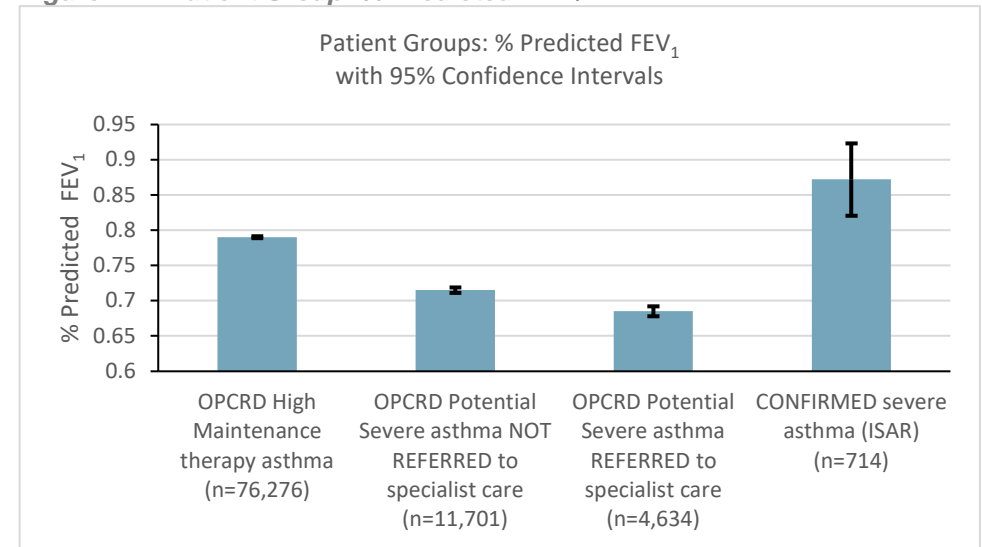
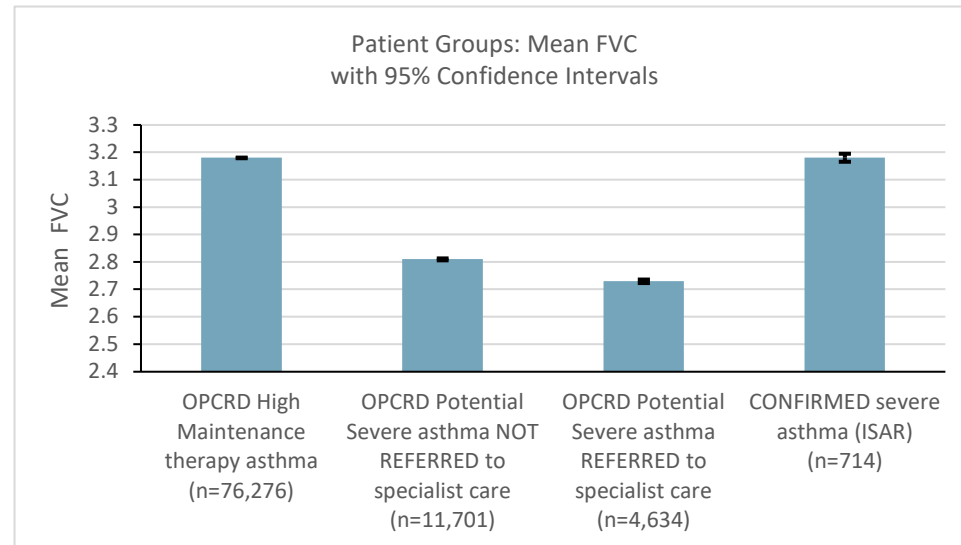
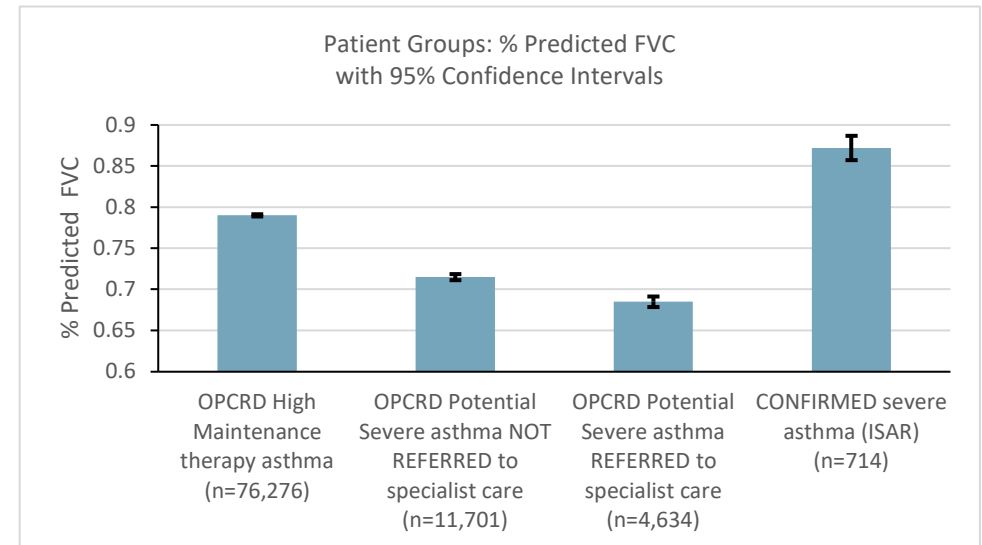


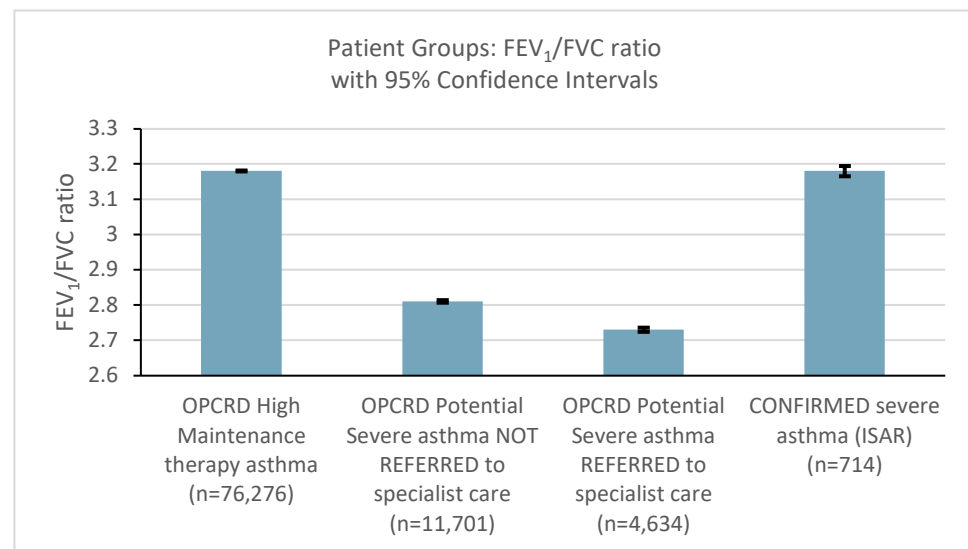
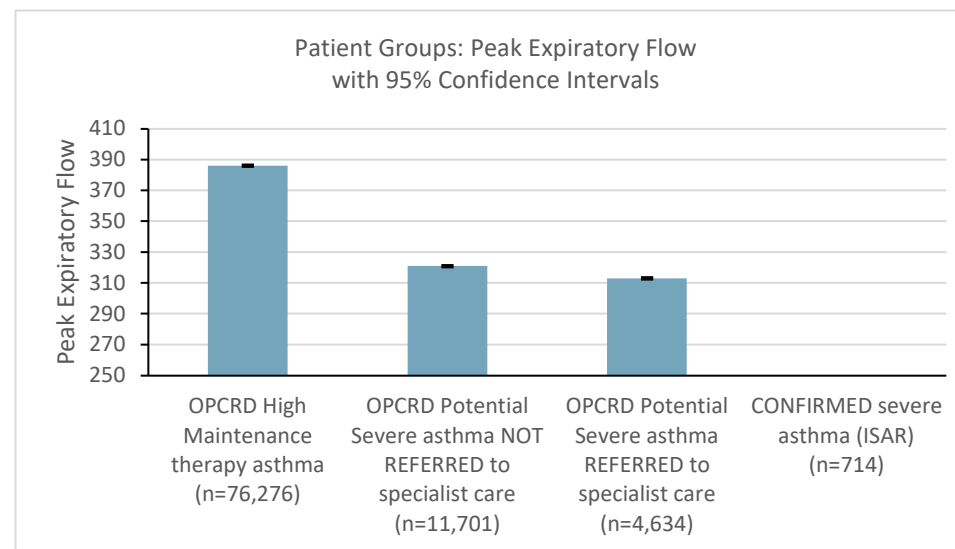
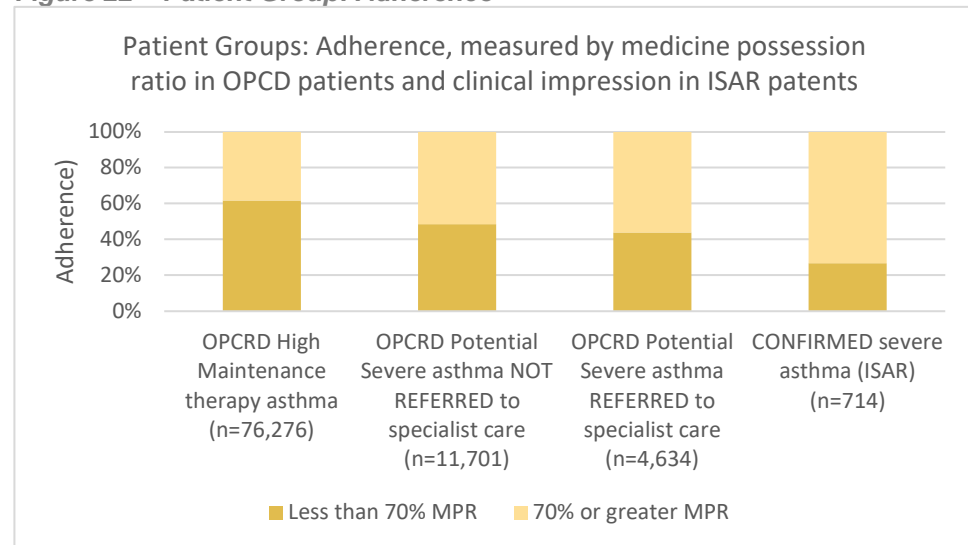
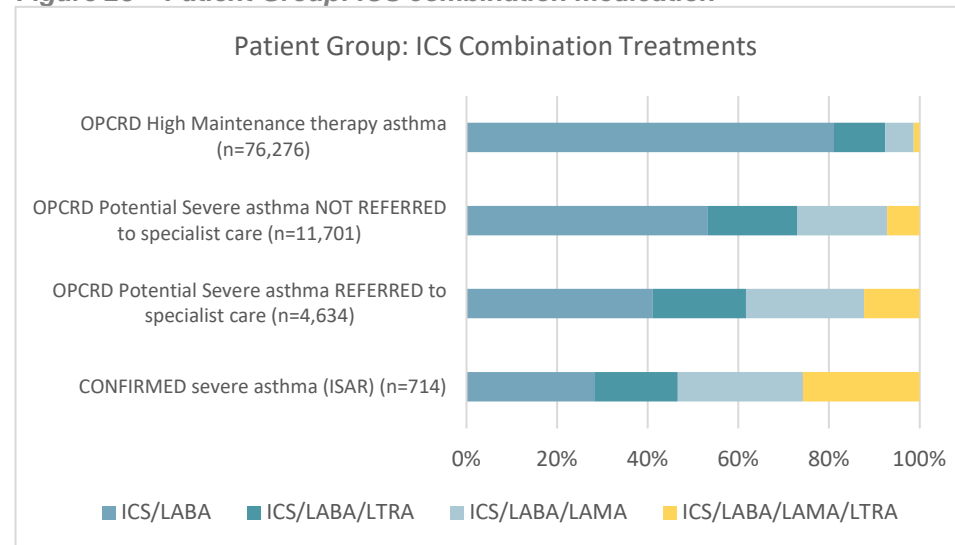
Medication, n (%)								
ICS/LABA	59,944	(78.5%)	5,314	(45.4%)	1,751	(37.8%)	190	(26.6%)
ICS/LABA/LTRA	8,354	(11.1%)	1,959	(16.8%)	869	(18.9%)	124	(17.4%)
ICS/LABA/LAMA	4,654	(6.0%)	1,982	(16.9%)	1,117	(24.0)	186	(26.1%)
ICS/LABA/LAMA/LTRA	950	(1.2%)	716	(6.1%)	523	(11.2%)	173	(24.2%)
SABA	61,639	(80.8%)	10,157	(86.9%)	4,179	(90.3%)	-	
Theophylline	1,334	(1.7%)	932	(8.0%)	636	(13.7%)	173	(24.2%)
Biologic treatments	0	(0.0%)	9	(0.1%)	10	(0.2%)	393	(55.0%)

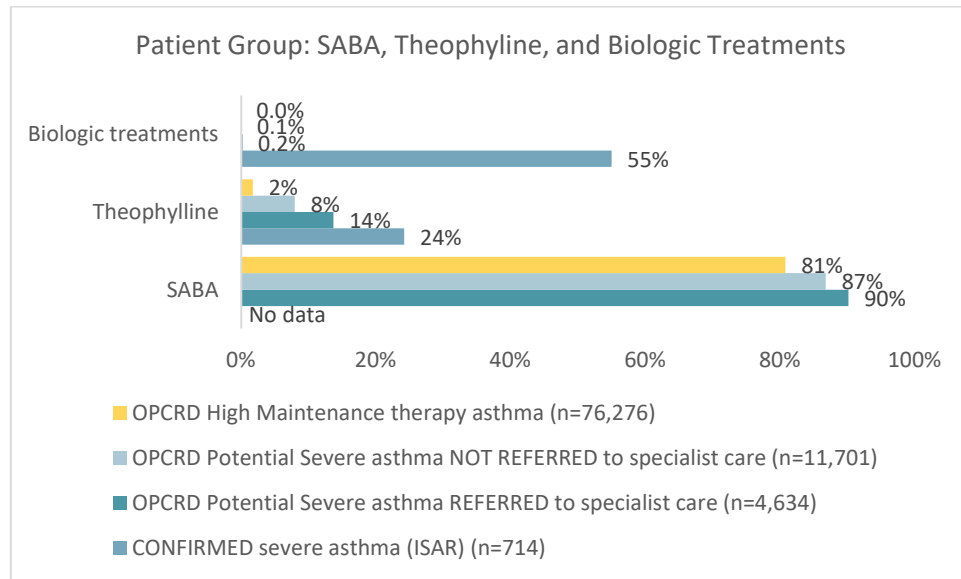
- (a) OPCRDR Population Control Scores based upon RCP Questionnaire, ISAR Population Control Scores based on ACQ.
- (b) OPCRDR Population Control Scores based upon ACT, ISAR Population Control Scores based on ACQ.
- (c) OPCRDR & ISAR Predicted FEV<sub>1</sub> & FVC calculated using GLI 2012<sup>11</sup>.
- (d) OPCRDR adherence measured by Medication Possession Ratio (MPR). Poor adherence indicated by <70% days prescribed. ISAR poor adherence indicated by prescription records and clinical impression.

**Figure 11 - Patient Group: Exacerbations****Figure 12 – Patient Group: Exacerbation Count Per Year****Figure 13 – Patient Group: Asthma Control****Figure 14 – Patient Group: Blood Eosinophil Count**

**Figure 15 – Patient Group: BEC Histogram**

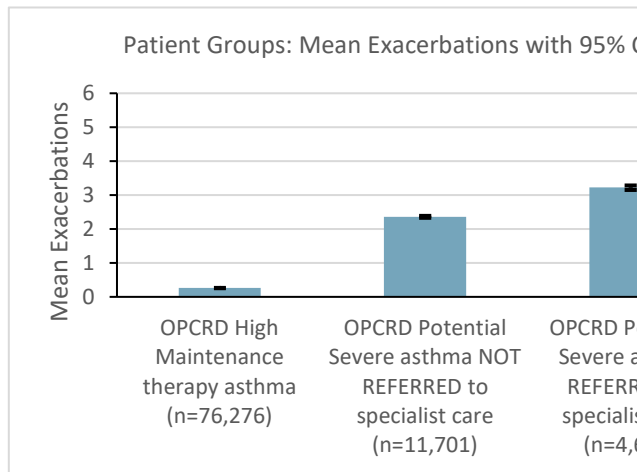
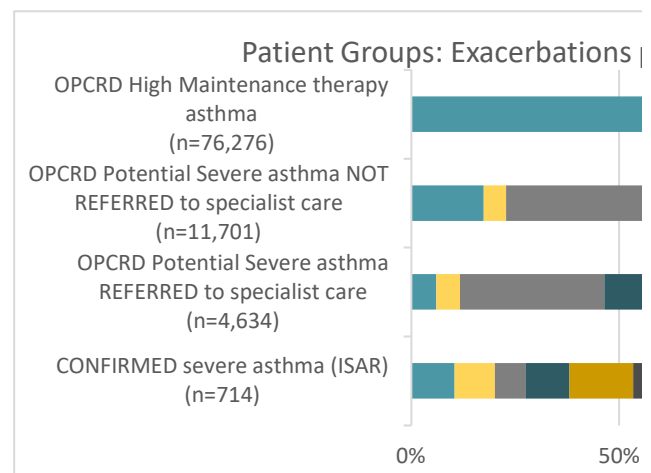
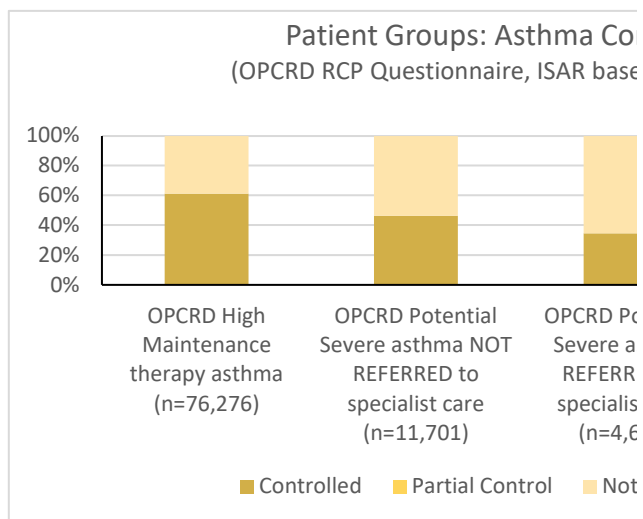
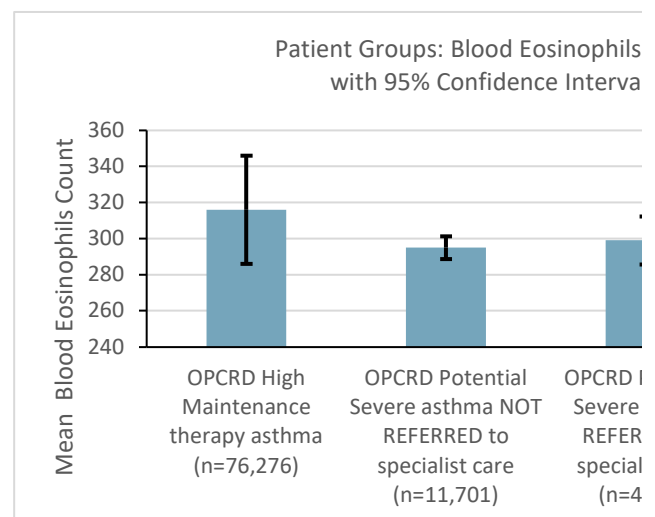
**Figure 16 - Patient Group: FEV<sub>1</sub>****Figure 17 – Patient Group: % Predicted FEV<sub>1</sub>****Figure 18 – Patient Group: FVC****Figure 19 – Patient Group: % Predicted FVC**

**Figure 20 – Patient Group: FEV<sub>1</sub>/FVC ratio****Figure 21 – Patient Group: Peak Expiratory Flow****Figure 22 – Patient Group: Adherence****Figure 23 – Patient Group: ICS combination medication**

**Figure 24 – Patient Group: SABA, Theophylline and Biologic Medication**

Patients with confirmed severe asthma had the highest average number of exacerbations.

OPCRD patients with potentially severe asthma who were referred had a higher average number of exacerbations than those who were not referred (

**Figure 11 - Patient Group: Exacerbations****Figure 12 – Patient Group: Exacerbation Count Per Year****Figure 13 – Patient Group: Asthma Control****Figure 14 – Patient Group: Blood Eosinophil Count**

**Error! Reference source not found.**). Patients with confirmed severe asthma had the greatest proportion of individuals who experienced exacerbations 5 or more exacerbations during the study period (Figure 12).

Mean exacerbation results are, in part, affected by the selection criteria. Potentially severe patients at GINA step 4 were required to have 2 or more exacerbations per year and confirmed severe patients receiving Reslizumab would have had  $\geq 3$  exacerbations whilst Benralizumab and mepolizumab require  $\geq 4$  exacerbations per year prior to treatment initiation.<sup>22,23,24</sup>

Differences in exacerbation rates between the potentially severe asthma referred and not referred patients would not be affected by this selection criteria.

Patients with the least severe asthma, i.e. those on high maintenance therapy, had the greatest proportion of patients classed as being controlled in all the measures of control (RCP and ACT questionnaire, the Overall Asthma Control measure using SABA prescribing and the Risk Domain Asthma Control (RDAC) combination measure. The proportion of patients classed as not controlled increased with asthma severity across all measures (**Error! Reference source not found.**).

There was no difference between the groups in terms of average blood eosinophil count between the high maintenance therapy asthma patients and the potentially severe groups (both referred and not referred). Patients with confirmed severe asthma had lowest blood eosinophil counts (**Error! Reference source not found.**).

Spirometry measurements varied significantly between the patient groups. FEV<sub>1</sub> measurements were highest in patients receiving high maintenance therapy and lowest in potentially severe patients who were referred to specialist care. FEV<sub>1</sub> measurements were higher for patients confirmed as having severe asthma as compared to those who had potentially severe asthma (Figures 16-20).

Patients with confirmed severe asthma had the highest % predicted FEV<sub>1</sub> and % predicted FVC. Patients in the potentially severe asthma group had the lowest FEV<sub>1</sub>, % predicted FEV, FVC, and % predicted FVC. In all cases those who were referred had lower spirometry measurements than those who were not referred.



There was no data on Peak Expiratory Flow for patients with confirmed severe asthma. Patients with potentially severe asthma had a lower PEF reading than those on high therapy maintenance (Figure 21).

There were very few recordings of FeNO measurements within the OPCR data with over 99% of patients having no data.

Poor adherence measured by a Medicine Possession Ratio (MPR) of <70% for ICS in the OPCR populations and indicated by prescription records and clinical impression for the patients in the confirmed severe asthma group increased with asthma severity. Adherence was lowest in the patients with high maintenance therapy, higher in patients with potential severe asthma and highest in patients with confirmed severe asthma (**Error! Reference source not found.**).

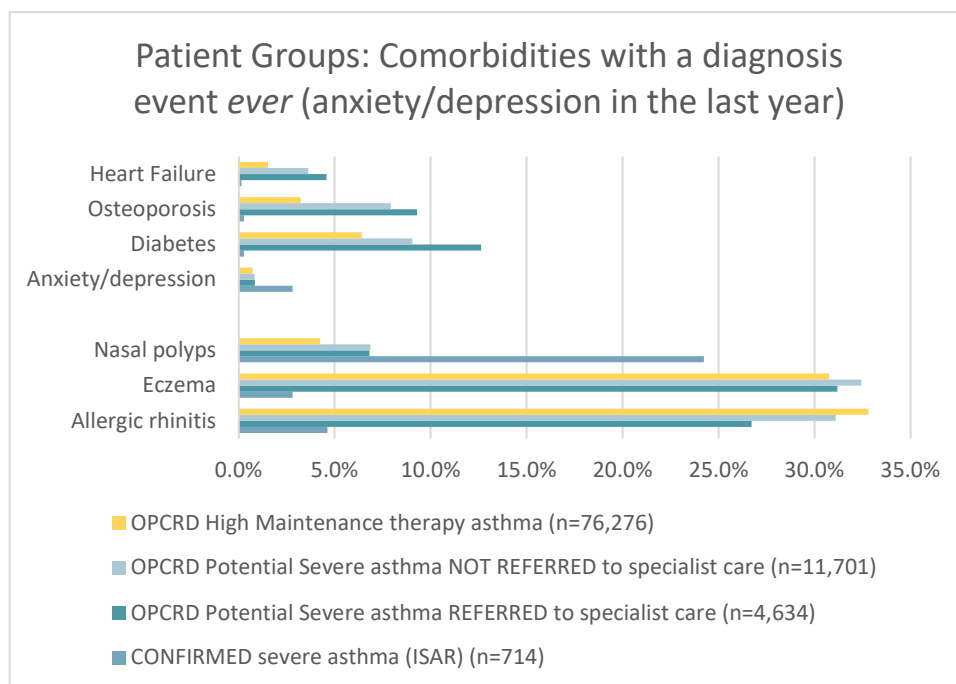
## 6.6 Comorbidity characteristics by patient groups

	OPCRD High maintenance therapy asthma*	OPCRD Potential Severe asthma NOT REFERRED to specialist care*	OPCRD Potential Severe asthma REFERRED to specialist care*	CONFIRMED severe asthma (ISAR)*
	n=76,276	n=11,701	n=4,634	n=714
<b>Comorbidities, <sup>(a)</sup> n (%)</b>				
Allergic rhinitis	25,023 (32.8%)	3,640 (31.1%)	1,238 (26.7%)	33 (4.6%)
Eczema	23,460 (30.8%)	3,796 (32.4%)	1,445 (31.2%)	20 (2.8%)
Nasal polyps	3,240 (4.2%)	802 (6.9%)	316 (6.8%)	173 (24.2%)
Anxiety/depression	551 (0.7%)	97 (0.8%)	39 (0.8%)	20 (2.8%)
Diabetes	4,884 (6.4%)	1,058 (9.0%)	585 (12.6%)	2 (0.3%)
Osteoporosis	2,458 (3.2%)	928 (7.9%)	431 (9.3%)	2 (0.3%)
Heart Failure	1,159 (1.5%)	424 (3.6%)	212 (4.6%)	1 (0.1%)

(a) OPCRD co-morbidities based on having a diagnosis at any point in time apart from anxiety/depression in the last year, ISAR comorbidity data based on patient self-reporting.

### 6.6.1 Comorbidity graphs by patient groups

**Figure 25 – Patient Group: Comorbidities**



Heart failure, osteoporosis and diabetes prevalence rates increased in the OPCRD populations as asthma severity increased. Potentially severe asthma patients who were referred had higher rates than those that were not. Patients with confirmed severe asthma had far lower prevalence rates. Anxiety/depression were lowest for patients on high maintenance therapy and highest for patients with confirmed severe asthma (Figure 25).

The prevalence rate of nasal polyps was lowest in patients with high maintenance therapy and higher in patients with confirmed severe asthma. Eczema and allergic rhinitis were much lower in patients with confirmed severe asthma than the other groups.

Differences between the rates of comorbidities between the OPCRD patient groups and the patients with confirmed severe asthma (ISAR data) are likely due to self-reporting data capture within the ISAR data collection (Figure 25).

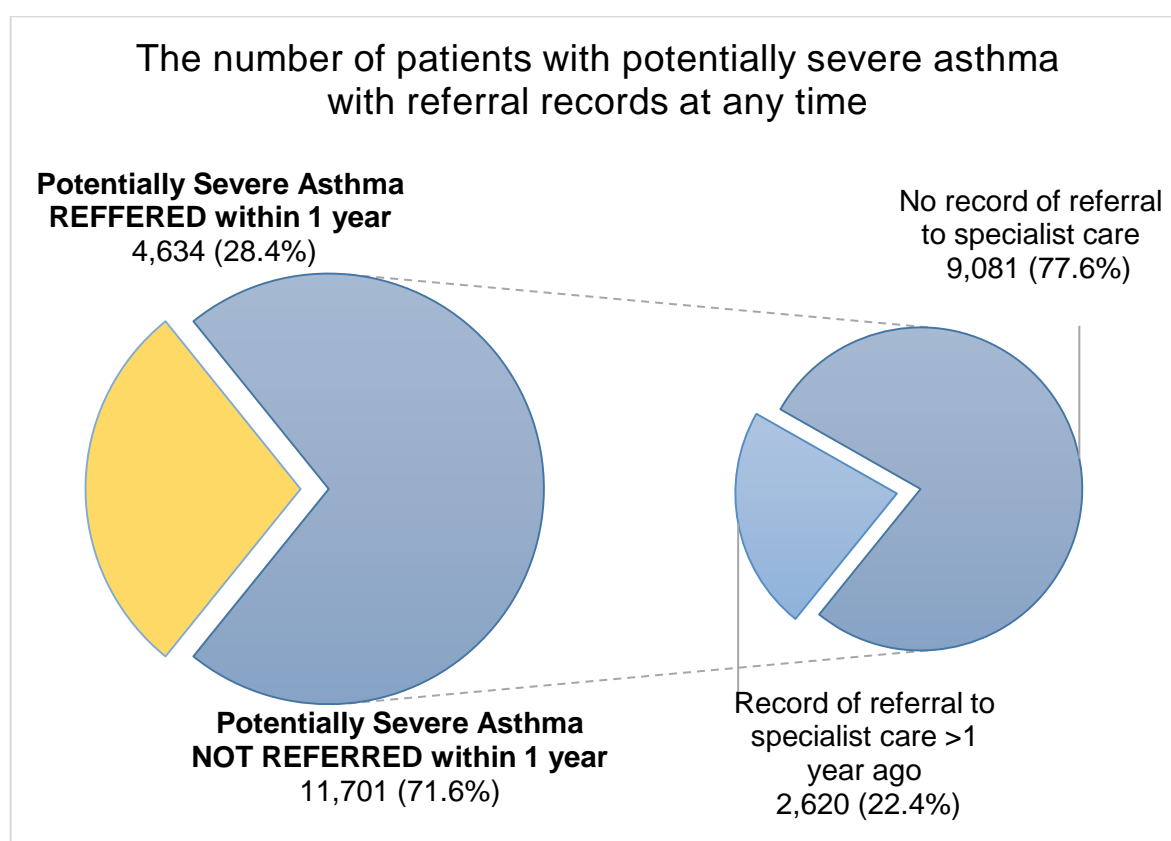
## 6.7 Additional follow-up analysis

Additional analysis was undertaken to determine whether patients that are currently classified as not having a referral or receiving specialist care may have done so in the past, i.e. further back than the 1-year study period.

### *Patients with Potentially Severe Asthma*

Analysis of referrals was undertaken for patients who had potentially severe asthma with no referral record in the last year. When no restriction on the period of investigation was undertaken, the study found that of the 11,701 patients classified as being hidden and not having a referral to specialist care, 2,620 (22.4%) had a referral sometime in the past. 9,081 patients (77.6%) had no record of a referral to specialist care at any time (Figure 26).

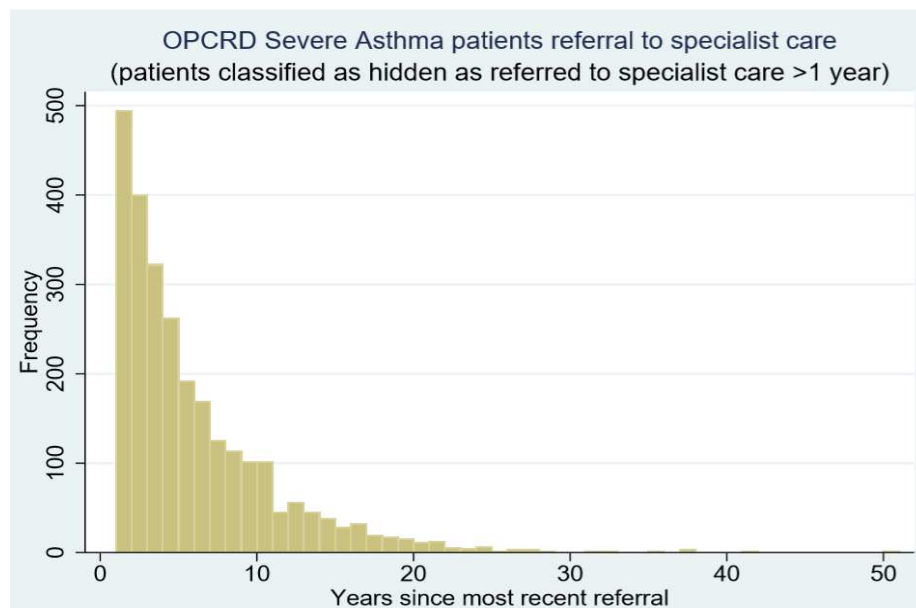
**Figure 26 – The number of patients with potentially severe asthma with referral records at any time**



Of the 16,337 patients with potentially severe asthma, 4,634 (28.4%) had a referral within the last year, 2,620 (16.0%) had a referral at some point in time, and 9,083 (55.6%) had no record of a referral at any time.

Patients with potentially severe asthma with a referral to specialist care that occurred over a year ago had a referral recorded, on average (median) 1.89 years prior to study period. A histogram depicting the distribution of referrals occurring in terms of years is shown below (Figure 27).

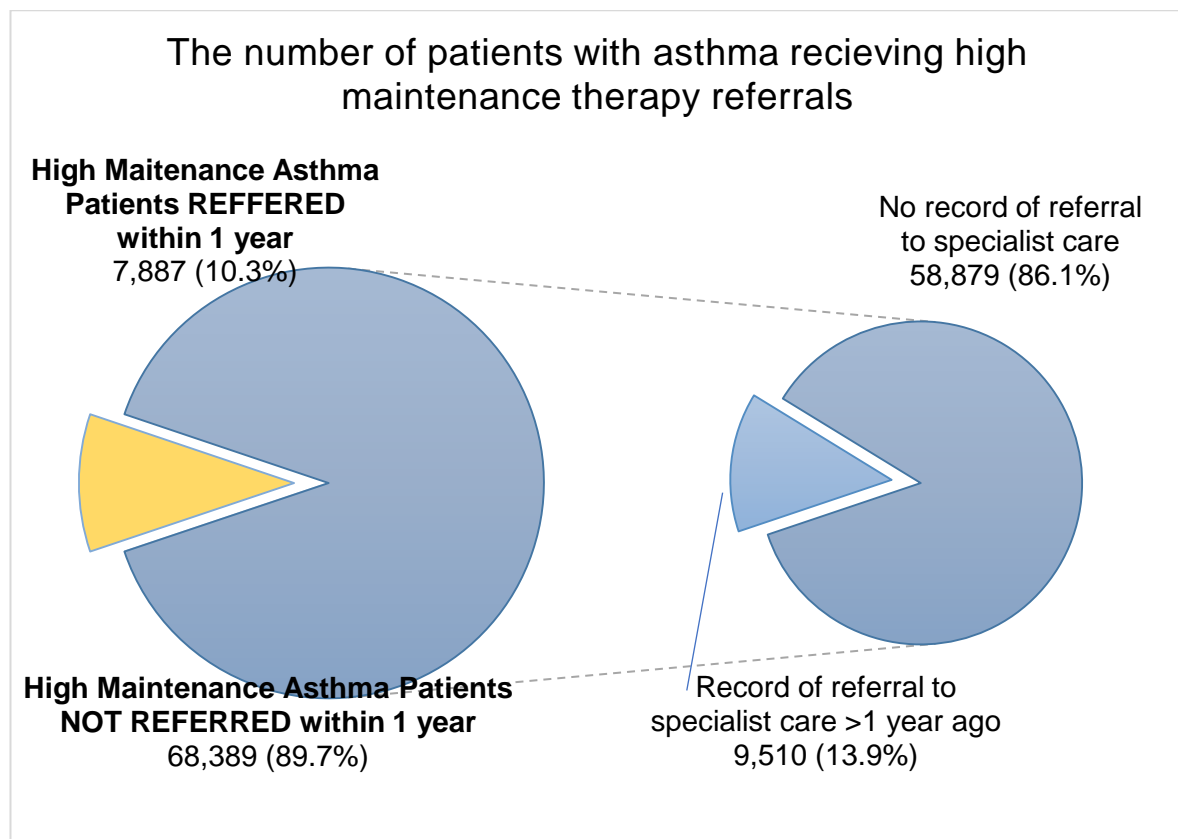
**Figure 27 - Histogram showing the time a referral to specialist care was made for patients with potentially severe asthma but no referral record in the last year**



### *Patients receiving High Maintenance Therapy*

Analysis of referral for the high maintenance patients (patients receiving treatment at GINA Step 3 and experiencing  $\geq 2$  exacerbations/year OR receiving treatment at GINA step 4 and experiencing  $< 2$  exacerbations (i.e. 0 or 1 exacerbations) found that of the 68,389 patients did not have a referral to specialist care within the last year. Of these 9,510 (13.9%) had a referral sometime in the past, and 58,879 (86.16%) had no record of a referral to specialist care at any time (Figure 28).

**Figure 28 - The number of patients receiving high maintenance therapy with referral records at any time**



## 7.0 Summary

This study has successfully categorised patients into those that have potentially severe asthma based on their diagnosis, treatments, and measures of control. The authors recognise that other modifiable factors that may explain exacerbations and medication choice, such as adherence and inhaler technique, have not been considered in this analysis.

It is also of note that the findings in this study are similar to those of a recent publication which analysed the patient characteristics of 1,502 French patients with severe asthma within a specialist care population.<sup>25</sup> Like the results presented above, it found that most (63%) patients were female, and a similar number of patients were overweight (32%).

The patients from the French study had an average age of 54 years which is similar to the confirmed severe asthma ISAR population of 50 years. The proportion of current smokers reported in the French study were also similar to the confirmed severe asthma ISAR population (12%, 29% and 60% as compared to 4%, 26% and 69% of smokers, ex-smokers and non-smokers respectively).

The percentage of patients in the French study classified by the physician as being well controlled (37%) were similar to the percentage of patients reported as being well controlled using the RCP questionnaire in the UK potentially severe asthma population (35%).

The percentage of patients in the French study who had more than 2 exacerbations were higher than the UK potentially severe asthma population (65% versus 52%) however, this value was lower than the confirmed severe asthma population (71%).<sup>25</sup>

The French study did not report the numbers of patients who had severe asthma in primary care who had not been managed by a specialist.

The analysis in this report found that patients with potentially severe asthma who had been referred to specialist care differed from those who had not in terms of levels of control measured using the RCP questionnaire and FEV<sub>1</sub> and FVC spirometry results.

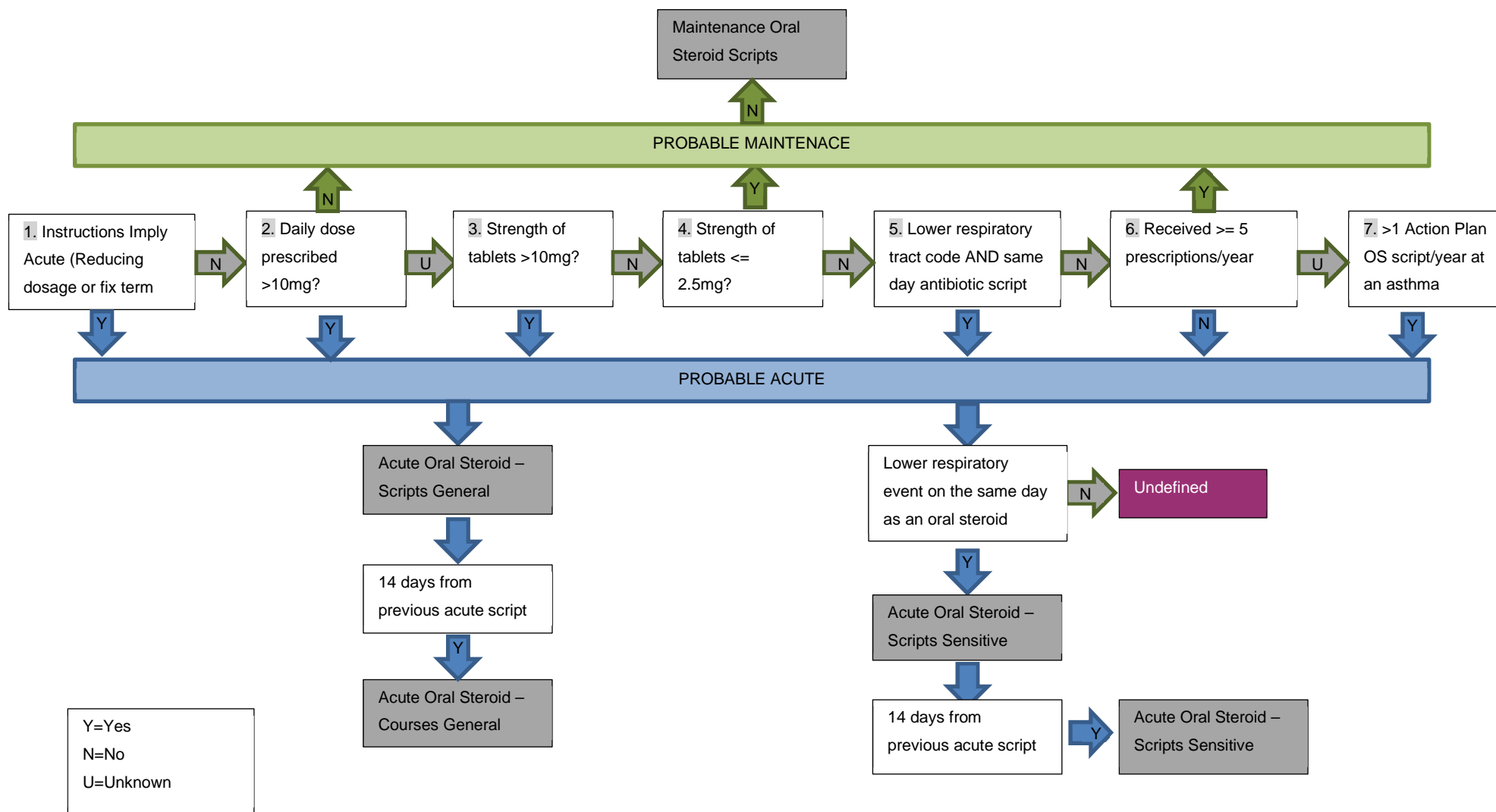
Patients with confirmed severe asthma managed in specialist centres differed from those with potentially severe asthma. Confirmed severe asthma patients were younger, had a higher BMI, were more likely to have never smoked and were less likely to be controlled. Their spirometry measurements of FEV<sub>1</sub> and FVC were better than potentially severe asthma patients and they were more likely to be adherent. They were also prescribed more combination medicines and were more likely to receive a biologic treatment.

This study also revealed that there are large numbers of patients in primary care with potential severe asthma who have no record of a referral to a specialist respiratory centre, either within the last year or at any time at all. Of the 16,337 patients who were found to have potentially severe asthma 9,081 (55%) had no record of a referral to specialist care, and 11,701 (72%) had no record of a referral within the last year. These patients with potentially severe asthma would likely benefit from a range of services, including access to biologics, which may ameliorate their asthma.



## 8.0 Appendix

### 8.1 Algorithm to separate acute and maintenance OCS use



## 8.2 Code lists

### 8.2.1 Diagnostic QOF codes for asthma

Read code	Read term
173A.	Exercise induced asthma
H3120	Chronic asthmatic bronchitis
H33..	Asthma
H330.	Extrinsic (atopic) asthma
H3300	Extrinsic asthma without status asthmaticus
H3301	Extrinsic asthma with status asthmaticus
H330z	Extrinsic asthma NOS
H331.	Intrinsic asthma
H3310	Intrinsic asthma without status asthmaticus
H3311	Intrinsic asthma with status asthmaticus
H331z	Intrinsic asthma NOS
H332.	Mixed asthma
H334.	Brittle asthma
H335.	Chronic asthma with fixed airflow obstruction
H33z.	Asthma unspecified
H33z0	Status asthmaticus NOS
H33z1	Asthma attack
H33z2	Late-onset asthma
H33zz	Asthma NOS
H3B..	Asthma-chronic obstructive pulmonary disease overlap syndrom
Ua1AX	Brittle asthma
X101t	Childhood asthma
X101u	Late onset asthma
X101x	Allergic asthma
X101y	Extrinsic asthma with asthma attack
X101z	Allergic asthma NEC
X1020	Hay fever with asthma
X1021	Allergic non-atopic asthma
X1022	Intrinsic asthma with asthma attack
X1024	Aspirin-sensitive asthma with nasal polyps
X102D	Status asthmaticus
XE0YQ	Allergic atopic asthma
XE0YR	Extrinsic asthma without status asthmaticus
XE0YS	Extrinsic asthma with status asthmaticus
XE0YT	Non-allergic asthma
XE0YU	Intrinsic asthma with status asthmaticus
XE0YV	Status asthmaticus NOS
XE0YW	Asthma attack
XE0YX	Asthma NOS
XE0ZP	Extrinsic asthma - atopy (& pollen)
XE0ZR	Asthma: [intrinsic] or [late onset]
XE0ZT	Asthma: [NOS] or [attack]
XM0s2	Asthma attack NOS
Xa0IZ	Asthmatic bronchitis
Xa9zf	Acute asthma
XaLPE	Nocturnal asthma
Xaa7B	Chronic asthma with fixed airflow obstruction
Xac33	Asthma-chronic obstructive pulmonary disease overlap syndrom
Xafdj	Acute severe exacerbation of asthma
Xafdy	Moderate acute exacerbation of asthma
Xafdz	Life threatening acute exacerbation of asthma

## 8.2.2 Codes for respiratory medications

### Codes for SABA

Read code	Read term
c12w.	SALBUTAMOL inh 100micrograms/inhalation
c131.	ASMAVEN inh 100micrograms
c133.	SALBULIN inh
c134.	VENTOLIN inh 100micrograms/inhalation
c136.	VENTOLIN rcap 200micrograms
c137.	VENTOLIN rcap 400micrograms
c13C.	SALBUTAMOL disc 200micrograms
c13D.	SALBUTAMOL disc 400micrograms
c13E.	VENTODISKS disc 400micrograms/blister
c13F.	VENTODISKS disc 200micrograms/blister
c13G.	VENTODISKS disc 400micrograms/blister
c13H.	SALAMOL inh 100micrograms/actuation
c13I.	AIROMIR cfc free inh 100micrograms/inhalation
c13J.	VENTOLIN inh 100micrograms/inhalation
c13K.	SALAMOL EASI-BREATHE breath act inh 100micrograms/actuation
c13L.	VENTOLIN ACCUHALER 200micrograms/actuation
c13M.	VENTOLIN ACCUHALER 200micrograms/actuation
c13N.	SALBUTAMOL vortex inh 100micrograms/inhalation
c13P.	SALBUTAMOL spacehaler 100micrograms/inhalation
c13Q.	SALBUTAMOL CYCLOCAPS inh caps 200micrograms [APS]
c13R.	SALBUTAMOL breath act pwdr inh 200micrograms/actuation
c13S.	SALBUTAMOL breath act pwdr inh 95micrograms
c13T.	VENTOLIN inh 100micrograms/inhalation
c13U.	SALBUTAMOL breath act inh 100micrograms/actuation
c13V.	SALBUTAMOL inh 100micrograms/inhalation
c13Y.	SALAMOL inh 100micrograms/actuation
c13c.	AEROLIN AUTOHALER breath act inh 100micrograms/actuation
c13d.	VENTODISKS disc 200micrograms/blister
c13e.	VENTODISKS disc 400micrograms/blister
c13f.	VENTODISKS disc 200micrograms/blister
c13g.	VENTODISKS disc 400micrograms/blister
c13h.	SALBUVENT inh 100micrograms/actuation
c13l.	AEROLIN AUTOHALER breath act inh 100micrograms/actuation
c13n.	AEROLIN AUTOHALER breath act inh 10micrograms/actuation
c13p.	MAXIVENT inh 100micrograms/inhalation
c13q.	SALBUTAMOL inh caps 200micrograms
c13r.	SALBUTAMOL inh caps 400micrograms
c13v.	SALBUTAMOL inh 100micrograms/inhalation
c13x.	SALBUTAMOL inh caps 200micrograms
c13y.	SALBUTAMOL inh caps 400micrograms
c144.	BRICANYL inh
c145.	BRICANYL refill canister

c146.	BRICANYL spacer inh
c14f.	BRICANYL TURBOHALER 500micrograms
c14g.	BRICANYL TURBOHALER 500micrograms
c14j.	BRICANYL TURBOHALER 500micrograms
c14t.	TERBUTALINE inh 250micrograms/actuation
c14u.	TERBUTALINE inh 250micrograms/actuation
c14v.	TERBUTALINE inh 250micrograms/actuation
c151.	BEROTEC inh 200micrograms/actuation
c153.	BEROTEC inh 100micrograms/actuation
c154.	FENOTEROL inh 100micrograms/actuation
c15y.	FENOTEROL inh 200micrograms/actuation
c173.	BRONCHODIL inh 500micrograms/dose
c17y.	REPROTEROL inh 500micrograms/dose
c181.	PULMADIL inh
c182.	PULMADIL inh
c183.	PULMADIL AUTO inh
c18z.	RIMITEROL inh
c1E1.	SALAMOL EASI-BREATHE breath act inh 100micrograms/actuation
c1E2.	PULVINAL SALBUTAMOL breath act pwdr inh 200micrograms/actuation
c1E3.	VENTODISKS disc 200micrograms/blister
c1E4.	VENTODISKS disc 400micrograms/blister
c1E5.	VENTODISKS disc 200micrograms/blister
c1E6.	VENTODISKS disc 400micrograms/blister
c1E7.	EASYHALER SALBUTAMOL breath act pwdr inh 100micrograms/actuation
c1E8.	EASYHALER SALBUTAMOL breath act pwdr inh 200micrograms/actuation
c1E9.	SALBULIN inh
c1EA.	SALBUTAMOL breath act pwdr inh 100micrograms/actuation
c1EC.	SALBUTAMOL disc 400micrograms
c51A.	DUOVENT inh 40micrograms + 100micrograms/actuation
c51B.	FENOTEROL + IPRATROPIUM BROMIDE breath act inh 100micrograms + 40micrograms/actuation
c51C.	IPRATROPIUM BROMIDE + SALBUTAMOL inh 20mcg + 100mcg
c51D.	COMBIVENT inh 20mcg + 100mcg
c51i.	DUOVENT inh 40micrograms + 100micrograms/actuation
c51x.	DUOVENT AUTOHALER breath act inh
c621.	VENTIDE inh
c622.	VENTOLIN rcap 200micrograms
c623.	VENTIDE paed rcap
c722.	AEROCROM inh
c72y.	SODIUM CROMOGLICATE + SALBUTAMOL inh & spacer
c72z.	SODIUM CROMOGLICATE + SALBUTAMOL inh
i966.	VENTOLIN inh 100micrograms/inhalation
x00Af	SALBUTAMOL inh 100micrograms/inhalation
x02Xr	COMBIVENT inh 20mcg + 100mcg
x02ql	SALAMOL inh 100micrograms/actuation
x02uD	VENTOLIN ACCUHALER 200micrograms/actuation



Read code	Read term
c51A.	DUOVENT inh 40micrograms + 100micrograms/actuation
c51B.	FENOTEROL + IPRATROPIUM BROMIDE breath act inh 100micrograms + 40micrograms/actuation
c51C.	IPRATROPIUM BROMIDE + SALBUTAMOL inh 20mcg + 100mcg
c51D.	COMBIVENT inh 20mcg + 100mcg
c51E.	COMBIVENT UDV's neb soln 2.5ml
c51F.	IPRATROPIUM BROMIDE + SALBUTAMOL unit dose neb soln 500micrograms + 2.5mg/2.5ml
c51G.	SALIPRANEB nebuliser solution 2.5mL
c51H.	SALBUTAMOL + IPRATROPIUM BROMIDE unit dose neb soln 2.5mg + 500micrograms/2.5ml
c51i.	DUOVENT inh 40micrograms + 100micrograms/actuation
c51v.	DUOVENT UDV nebuliser solution 4mL
c51w.	IPRATROPIUM BROMIDE + SALBUTAMOL unit dose neb soln 500micrograms + 2.5mg/2.5ml
c51x.	DUOVENT AUTOHALER breath act inh
c531.	IPRAMOL STERI-NEB unit dose neb soln 500micrograms + 2.5mg/2.5ml
x00zz	DUOVENT UDV nebuliser solution 4mL
x0100	DUOVENT UDV nebuliser solution 4mL

#### Codes for ICS

Read code	Read term
c611.	BECLOFORTE inh 250micrograms/actuation
c612.	BECOTIDE 50 inh 50micrograms/actuation
c613.	BECOTIDE rcap 100micrograms
c614.	BECOTIDE rcap 200micrograms
c617.	BECOTIDE 100 inh 100micrograms/actuation
c619.	BECODISKS disc 100micrograms
c61A.	BECODISKS disc 200micrograms
c61B.	BECOTIDE rcap 400micrograms
c61C.	BECODISKS disc 100micrograms
c61D.	BECODISKS disc 200micrograms
c61E.	BECLOMETASONE breath act inh 250micrograms/actuation
c61F.	BECLOMETASONE breath act inh 100micrograms/actuation
c61G.	FILAIR inh 50micrograms/actuation
c61H.	FILAIR inh 100micrograms/actuation
c61J.	FILAIR FORTE inh 250micrograms/actuation
c61K.	BECLAZONE inh 50micrograms/actuation
c61L.	BECLAZONE inh 100micrograms/actuation
c61M.	BECLAZONE inh 250micrograms/actuation
c61N.	BECLOFORTE disks (refill pack) 400micrograms/actuation
c61O.	BECLOMETASONE breath act inh 100micrograms/actuation
c61P.	BECLOMETASONE disc 100micrograms
c61Q.	BECLOFORTE INTEGRA inh/compt spacer 250micrograms/actuation
c61R.	BECLOFORTE INTEGRA inh/compt spacer 250micrograms/actuation

c61S.	BECLOMETASONE inh/compt spacer 250micrograms/actuation
c61T.	BECLOMETHASONE breath act inh 250micrograms/actuation [APS]
c61V.	BECLOMETASONE vortex inh 50micrograms/actuation
c61W.	BECLOMETASONE inh caps 100micrograms
c61X.	BECLOMETASONE inh 100micrograms/actuation
c61Y.	BDP spacehaler 100micrograms/actuation
c61Z.	BECLOMETASONE vortex inh 250micrograms/actuation
c61a.	BECODISKS disc 200micrograms
c61b.	BECOTIDE rcap 400micrograms
c61c.	BECODISKS disc 100micrograms
c61d.	BECODISKS disc 200micrograms
c61e.	BECODISKS disc 400micrograms
c61f.	BECODISKS disc 400micrograms
c61g.	FILAIR inh 50micrograms/actuation
c61h.	FILAIR inh 100micrograms/actuation
c61i.	BECOTIDE 200 inh 200micrograms/actuation
c61j.	AEROBEC AUTOHALER 50micrograms/actuation
c61k.	AEROBEC forte AUTOHALER 250micrograms/actuation
c61l.	AEROBEC AUTOHALER 100micrograms/actuation
c61m.	BECLOFORTE DISKHALER 400micrograms/actuation
c61n.	BECLOFORTE disks (refill pack) 400micrograms/actuation
c61p.	BECLOMETASONE disc 100micrograms
c61q.	BECLOMETASONE disc 200micrograms
c61r.	BECLOMETASONE inh 100micrograms/actuation
c61s.	BECLOMETASONE disc 200micrograms
c61t.	BECLOMETASONE inh 250micrograms/actuation
c61u.	BECLOMETASONE inh 200micrograms/actuation
c61v.	BECOTIDE 50 inh 50micrograms/actuation
c61w.	BECLOMETASONE inh caps 100micrograms
c61x.	BECLOMETASONE inh caps 200micrograms
c61z.	BECOTIDE 100 inh 100micrograms/actuation
c621.	VENTIDE inh
c641.	PULMICORT inh 200micrograms
c643.	PULMICORT refill canister 200micrograms
c644.	PULMICORT LS inh 50micrograms
c645.	PULMICORT LS refill canister 50micrograms
c647.	PULMICORT inh 200micrograms
c648.	PULMICORT TURBOHALER breath act pwdr inh 200micrograms/actuation
c649.	PULMICORT TURBOHALER breath act pwdr inh 400micrograms/actuation
c64A.	BUDESONIDE inh 200micrograms/actuation
c64B.	BUDESONIDE inh 50micrograms/actuation
c64C.	PULMICORT inh 200micrograms
c64D.	PULMICORT LS inh 50micrograms
c64E.	PULMICORT inh 200micrograms
c64F.	BUDESONIDE dry pdr inh cart ref 200micrograms
c64G.	NOVOLIZER BUDESONIDE inh pdr (refill) 200micrograms
c64H.	EASYHALER BUDESONIDE breath act pwdr inh 100micrograms/actuation

c64I.	EASYHALER BUDESONIDE breath act pwdr inh 200micrograms/actuation
c64J.	EASYHALER BUDESONIDE breath act pwdr inh 400micrograms/actuation
c64K.	BUDESONIDE inh 100micrograms/actuation
c64L.	BUDESONIDE inh 100micrograms/actuation
c64M.	PULMICORT inh 200micrograms
c64N.	BUDESONIDE inh 200micrograms/actuation
c64c.	PULMICORT TURBOHALER breath act pwdr inh 100micrograms/actuation
c64d.	BUDESONIDE breath act pwdr inh 100micrograms/actuation
c64e.	PULMICORT inh 200micrograms
c64g.	BUDESONIDE breath act pwdr inh 200micrograms/actuation
c64h.	BUDESONIDE breath act pwdr inh 400micrograms/actuation
c64m.	BUDESONIDE inh caps 200micrograms
c64n.	BUDESONIDE inh caps 400micrograms
c64o.	BUDESONIDE inh 200micrograms/actuation
c64p.	NOVOLIZER BUDESONIDE inh pdr + device 200micrograms
c64u.	BUDESONIDE dry pdr inh cart+dev 200micrograms
c64v.	BUDESONIDE inh 200micrograms/actuation
c64x.	BUDESONIDE inh 200micrograms/actuation
c64y.	BUDESONIDE inh 50micrograms/actuation
c64z.	BUDESONIDE inh 200micrograms/actuation
c651.	FLIXOTIDE disc 50micrograms
c652.	FLIXOTIDE disc 100micrograms
c653.	FLIXOTIDE disc 250micrograms
c654.	FLUTICASONONE disc 500micrograms
c655.	FLUTICASONONE disc 100micrograms
c656.	FLUTICASONONE disc 250micrograms
c657.	FLIXOTIDE disc 50micrograms
c658.	FLIXOTIDE disc 100micrograms
c65A.	FLUTICASONONE disc 50micrograms
c65B.	FLIXOTIDE disc 100micrograms
c65C.	FLIXOTIDE disc 250micrograms
c65D.	FLIXOTIDE inh 25micrograms/actuation
c65E.	FLIXOTIDE inh 50micrograms/actuation
c65F.	FLIXOTIDE inh 125micrograms/actuation
c65G.	FLUTICASONONE inh 25micrograms/actuation
c65H.	FLUTICASONONE inh 50micrograms/actuation
c65I.	FLUTICASONONE inh 50micrograms/actuation
c65J.	FLUTICASONONE inh 250micrograms/actuation
c65K.	FLIXOTIDE inh 250micrograms/actuation
c65L.	FLIXOTIDE disc 500micrograms
c65M.	FLIXOTIDE disc 500micrograms
c65N.	FLUTICASONONE disc 500micrograms
c65O.	FLUTICASONONE disc 500micrograms
c65P.	FLUTICASONONE breath act pwdr inh 50micrograms/inhalation
c65Q.	FLUTICASONONE breath act pwdr inh 100micrograms/inhalation
c65R.	FLIXOTIDE ACCUHALER 250micrograms/inhalation
c65S.	FLUTICASONONE breath act pwdr inh 500micrograms/inhalation



c65T.	FLIXOTIDE ACCUHALER 50micrograms/inhalation
c65U.	FLIXOTIDE ACCUHALER 100micrograms/inhalation
c65V.	FLIXOTIDE ACCUHALER 250micrograms/inhalation
c65W.	FLIXOTIDE ACCUHALER 500micrograms/inhalation
c65b.	FLUTICASONE cfc free inh 125micrograms/actuation
c65c.	FLUTICASONE cfc free inh 250micrograms/actuation
c65d.	FLIXOTIDE EVOHALER 125micrograms/actuation
c65e.	FLIXOTIDE EVOHALER 250micrograms/actuation
c65f.	FLUTICASONE cfc free inh 50micrograms/actuation
c65g.	FLUTICASONE inh 25micrograms/actuation
c661.	ASMABEC spacehaler 250micrograms/actuation
c662.	BECOTIDE EASI-BREATHE breath act inh 50micrograms/actuation
c663.	BECOTIDE EASI-BREATHE breath act inh 100micrograms/actuation
c664.	BECLOFORTE EASI-BREATHE breath act inh 250micrograms/actuation
c665.	QVAR cfc free inh 50micrograms/actuation
c666.	QVAR cfc free inh 100micrograms/actuation
c667.	QVAR AUTOHALER cfc/free b/act inh 50micrograms/actuation
c668.	QVAR AUTOHALER cfc/free b/act inh 100micrograms/actuation
c669.	BECLAZONE inh 200micrograms/actuation
c66A.	BECLOMETASONE breath act inh 50micrograms/actuation
c66B.	BECLOMETASONE breath act pwdr inh 100micrograms/actuation
c66C.	BECLOMETASONE breath act inh 250micrograms/actuation
c66D.	ASMABEC CLICKHALER dry pdr inh 50micrograms
c66E.	ASMABEC CLICKHALER dry pdr inh 100micrograms
c66F.	BECLOMETASONE breath act pwdr inh 250micrograms/actuation
c66G.	BECLOMETASONE breath act pwdr inh 400micrograms/actuation
c66H.	BECLOMETASONE breath act pwdr inh 200micrograms/actuation
c66I.	PULVINAL BECLOMETASONE DIPROPIONATE breath act pwdr inh 100micrograms/actuation
c66J.	PULVINAL BECLOMETASONE DIPROPIONATE breath act pwdr inh 200micrograms/actuation
c66K.	PULVINAL BECLOMETASONE DIPROPIONATE breath act pwdr inh 400micrograms/actuation
c66L.	BECLOMETASONE CYCLOCAPS inh caps 100micrograms [APS]
c66M.	BECLOMETASONE CYCLOCAPS inh caps 200micrograms [APS]
c66N.	BECLOMETASONE CYCLOCAPS inh caps 400micrograms [APS]
c66P.	BECODISKS disc 100micrograms
c66Q.	BECODISKS disc 200micrograms
c66R.	BECODISKS disc 400micrograms
c66S.	BECODISKS disc 100micrograms
c66T.	BECOTIDE 200 inh 200micrograms/actuation
c66U.	BECODISKS disc 400micrograms
c66V.	BECLOMETASONE EXTRAFINE PARTICLE cfc free inh 50micrograms/actuation
c66W.	BECLOMETASONE EXTRAFINE PARTICLE cfc free inh 100micrograms/actuation
c66X.	BECLOMETASONE breath act inh 50micrograms/actuation
c66Y.	BECLOMETASONE breath act inh 100micrograms/actuation
c66Z.	QVAR EASI-BREATHE cfc/free b/act inh 50micrograms/actuation
c66a.	QVAR EASI-BREATHE cfc/free b/act inh 100micrograms/actuation
c66b.	EASYHALER BECLOMETASONE breath act pwdr inh 200micrograms/actuation

c66c.	CLENIL MODULITE cfc free inh 50micrograms/actuation
c66d.	CLENIL MODULITE cfc free inh 100micrograms/actuation
c66e.	CLENIL MODULITE cfc free inh 200micrograms/actuation
c66f.	CLENIL MODULITE cfc free inh 250micrograms/actuation
c66g.	BECLOMETASONE cfc free inh 200micrograms/actuation
c66h.	BECLOMETASONE cfc free inh 250micrograms/actuation
c681.	MOMETASONE FUROATE dry pdr inh 200micrograms/actuation
c682.	MOMETASONE FUROATE dry pdr inh 400micrograms/actuation
c683.	ASMANEX TWISTHALER dry pdr inh 200micrograms/actuation
c684.	ASMANEX TWISTHALER dry pdr inh 400micrograms/actuation
c691.	ALVESCO cfc free inh 160micrograms/actuation
c692.	ALVESCO cfc free inh 80micrograms/actuation
c69y.	CICLESONIDE cfc free inh 80micrograms/actuation
c69z.	CICLESONIDE cfc free inh 160micrograms/actuation
p436.	BECLOFORTE VM pack 250micrograms/actuation
x00Hz	BECODISKS disc 200micrograms
x00I0	BECODISKS disc 400micrograms
x00QU	PULMICORT inh 200micrograms
x00gE	PULMICORT TURBOHALER breath act pwdr inh 100micrograms/actuation
x00gF	PULMICORT TURBOHALER breath act pwdr inh 200micrograms/actuation
x00gG	PULMICORT TURBOHALER breath act pwdr inh 400micrograms/actuation
x01MQ	BECLOMETASONE inh 100micrograms/actuation
x02Mk	BUDESONIDE inh 200micrograms/actuation
x02ct	FLIXOTIDE ACCUHALER 100micrograms/inhalation
x03d9	PULMICORT inh 200micrograms

### Codes for ICS/LABA

Read code	Read term
c1c1.	Flutiform Cfc-free inhaler 50 micrograms + 5 micrograms/dose 120 doses
c1c2.	Flutiform Cfc-free inhaler 125 micrograms + 5 micrograms/dose 120 doses
c1c3.	Flutiform Cfc-free inhaler 250 micrograms + 10 micrograms/dose 120 doses
c1cx.	Flutiform Cfc-free inhaler 250 micrograms + 10 micrograms/dose 120 doses
c1cy.	Flutiform Cfc-free inhaler 125 micrograms + 5 micrograms/dose 120 doses
c1cz.	Flutiform Cfc-free inhaler 50 micrograms + 5 micrograms/dose 120 doses
c1D1.	SERETIDE 100 ACCUHALER
c1D2.	SERETIDE 250 ACCUHALER
c1D3.	SERETIDE 500 ACCUHALER
c1D4.	SERETIDE 50 EVOHALER 25micrograms + 50micrograms/actuation
c1D5.	SERETIDE 125 EVOHALER 25micrograms + 125micrograms/actuation
c1D6.	SERETIDE 250 EVOHALER 25micrograms + 250micrograms/actuation
c1D7.	SIRDUPLA 25micrograms/125micrograms inhaler
c1D8.	SIRDUPLA 25micrograms/250micrograms inhaler
c1D9.	AIRFLUSAL FORSPIRO 50micrograms/500micrograms pdr inhaler
c1Du.	FLUTICASONE + SALMETEROL cfc free inh 50micrograms + 25micrograms/actuation
c1Dv.	FLUTICASONE + SALMETEROL cfc free inh 125micrograms + 25micrograms/actuation
c1Dw.	FLUTICASONE + SALMETEROL cfc free inh 250micrograms + 25micrograms/actuation

c1Dx.	FLUTICASONE + SALMETEROL dry pdr inh 100micrograms + 50micrograms/inhalation
c1Dy.	FLUTICASONE + SALMETEROL dry pdr inh 250micrograms + 50micrograms/inhalation
c1Dz.	FLUTICASONE + SALMETEROL dry pdr inh 500micrograms + 50micrograms/inhalation
c671.	SYMBICORT TURBOHALER 100micrograms + 6micrograms/actuation
c672.	SYMBICORT TURBOHALER 200micrograms + 6micrograms/actuation
c673.	SYMBICORT TURBOHALER 400micrograms + 12micrograms/actuation
c674.	DUORESP SPIROMAX 160mcg/4.5mcg breath-act dry powder inhaler
c675.	DUORESP SPIROMAX 320mcg/9mcg breath-act dry powder inhaler
c67x.	BUDESONIDE + FORMOTEROL breath act pwdr inh 400micrograms + 12micrograms/actuation
c67y.	BUDESONIDE + FORMOTEROL breath act pwdr inh 200micrograms + 6micrograms/actuation
c67z.	SYMBICORT TURBOHALER 100micrograms + 6micrograms/actuation
c6A1.	FOSTAIR cfc free inh 100micrograms + 6micrograms/actuation
c6A2.	FOSTAIR NEXTHALER 100micrograms + 6micrograms powder inhaler
c6A3.	FOSTAIR 200micrograms/6micrograms inhaler
c6A4.	FOSTAIR NEXTHALER 200micrograms/6micrograms powder inhaler
c6Aw.	BECLOMET DIPROP+FORMOTERL FUMARATE DIHYD 200mcg/6mcg pdr inh
c6Ax.	BECLOMET DIPROP+FORMOTERL FUMARATE DIHYD 200mcg/6mcg inhaler
c6Ay.	BECLOMET DIPROP+FORMOTERL FUMARATE DIHYD 100mcg/6mcg pdr inh
c6Az.	BECLOMETASONE + FORMOTEROL 100 micrograms + 6 micrograms/dose
c6B1.	RELVAR ELLIPTA 184micrograms/22micrograms inhaler
c6B2.	FLUTICASONE FUROATE+VILANTEROL 184mcg/22mcg dry pdr inhaler
c6B3.	RELVAR ELLIPTA 92micrograms/22micrograms inhaler
c6B4.	FLUTICASONE FUROATE+VILANTEROL 92mcg/22mcg dry pdr inhaler
x04xm	SERETIDE 100 ACCUHALER
x0594	SERETIDE 125 EVOHALER 25micrograms + 125micrograms/actuation
x05J2	SYMBICORT TURBOHALER 100micrograms + 6micrograms/actuation

### Codes for LABA

Read code	Read term
c19..	SALMETEROL inh 25micrograms/actuation
c191.	SALMETEROL inh 25micrograms/actuation
c192.	SEREVENT inh 25micrograms/actuation
c193.	SEREVENT DISKHALER 50micrograms
c194.	SEREVENT DISKHALER 50micrograms
c195.	SALMETEROL disc 50micrograms
c196.	SALMETEROL disc 50micrograms
c197.	SALMETEROL disc 50micrograms
c198.	SEREVENT ACCUHALER 50micrograms/actuation
c199.	SEREVENT inh 25micrograms/actuation
c19A.	SALMETEROL inh 25micrograms/actuation
c19B.	SALMETEROL inh 25micrograms/actuation
c19z.	SALMETEROL disc 50micrograms
c1b1.	ONBREZ BREEZHALER capsules for inhalation + inhaler 150micrograms [NOVARTIS]
c1b2.	ONBREZ BREEZHALER capsules for inhalation + inhaler 150micrograms [NOVARTIS]
c1b3.	ONBREZ BREEZHALER capsules for inhalation + inhaler 300micrograms [NOVARTIS]

c1b4.	ONBREZ BREEZHALER capsules for inhalation + inhaler 300micrograms [NOVARTIS]
c1C1.	FORMOTEROL FUMARATE inh caps 12mcg
c1C2.	FORADIL inh caps 12mcg
c1C3.	FORMOTEROL FUMARATE breath act inh 6 micrograms/actuation
c1C4.	FORMOTEROL FUMARATE breath act inh 12micrograms/actuation
c1C5.	OXIS 6 TURBOHALER 6 micrograms/actuation
c1C6.	OXIS 12 TURBOHALER 12micrograms/actuation
c1C7.	ATIMOS MODULITE cfc free inh 12micrograms/actuation
c1C8.	FORMOTEROL FUMARATE breath act inh 12micrograms/actuation
c1Cz.	FORMOTEROL FUMARATE breath act inh 12micrograms/actuation
c1d1.	STRIVERDI RESPIMAT 2.5micrograms inhaler
c1d2.	OLODATEROL 2.5micrograms inhaler
x02qr	SEREVENT ACCUHALER 50micrograms/actuation

### Codes for LAMA

Read code	Read term
c33..	TIOTROPIUM inh caps 18 micrograms
c331.	TIOTROPIUM inh pdr cap (refill) 18 micrograms
c332.	TIOTROPIUM inh caps 18 micrograms
c333.	Spiriva Respimat Solution For Inhalation 2.5 micrograms/puff 60 puffs
c33x.	Spiriva Respimat Solution For Inhalation 2.5 micrograms/puff 60 puffs
c33y.	SPIRIVA inh pdr caps+dev 18 micrograms
c33z.	SPIRIVA inh caps 18 micrograms
c341.	EKLIRA GENUAIR inhalation powder 322micrograms
c342.	Aclidinium Bromide Dry Powder Inhaler 375 micrograms/dose
c351.	Incruse Ellipta 55micrograms/dose dry powder inhaler
c352.	UMECLIDINIUM 55micrograms/dose dry powder inhaler
o323.	SEEBRI BREEZHALER 44micrograms inhalation capsules
o324.	GLYCOPYRRONIUM 44micrograms inhalation capsules
x05gG	SPIRIVA inh pdr cap (refill) 18 micrograms

### Codes for LABA/LAMA

Read code	Read term
c1e..	INDACATEROL+GLYCOPYRRONIUM
c1e1.	ULTIBRO BREEZHALER 85mcg/43mcg inh powder capsules+inhaler
c1e2.	INDACATEROL+GLYCOPYRRONIUM 85mcg/43mcg inh powder caps+inh
c51I.	ANORO ELLIPTA 55micrograms/22micrograms dry powder inhaler
c51J.	UMECLIDINIUM+VILANTEROL 55mcg/22mcg dry powder inhaler
c51K.	DUAKLIR GENUAIR 340micrograms/12micrograms powder inhaler
c51L.	ACLIDINIUM+FORMOTEROL FUMARATE DIHYD 340mcg/12mcg pdr inh
c51M.	SPIOLTO RESPIMAT 2.5micrograms/2.5micrograms inhaler
c51N.	TIOTROPIUM+OLODATEROL 2.5micrograms/2.5micrograms inhaler

Read code	Read term
c411.	AMINOPHYLLINE tabs 100mg
c412.	AMINOPHYLLINE inj 250mg/10ml
c413.	AMINOPHYLLINE inj 250mg/ml
c419.	THEODROX tabs
c41B.	NORPHYLLIN SR tablets 225mg
c41a.	PHYLLOCONTIN CONTINUS tabs 225mg
c41b.	PHYLLOCONTIN CONTINUS forte tabs 350mg
c41c.	PHYLLOCONTIN CONTINUS paed tab 100mg
c41d.	AMINOPHYLLINE SR tablets 225mg [IVAX]
c41f.	AMINOPHYLLINE HYDRATE mr tab 350mg
c41g.	AMINOPHYLLINE mr tab 100mg
c41h.	AMNIVENT sr tab 225mg
c41k.	AMINOPHYLLINE inj 25mg/ml [CELLTECH]
c41m.	AMINOPHYLLINE HYDRATE mr tab 225mg
c421.	CHOLEDYL tabs 100mg
c422.	CHOLEDYL tabs 200mg
c423.	CHOLEDYL syrp 62.5mg/5ml
c42w.	CHOLINE THEOPHYLLINATE tabs 100mg
c42x.	CHOLINE THEOPHYLLINATE tabs 200mg
c431.	BIOPHYLLINE syrp 125mg/5ml
c432.	NUELIN tabs 125mg
c433.	NUELIN liq 60mg/5ml
c434.	LASMA tabs 300mg
c435.	NUELIN SA tabs 175mg
c436.	NUELIN SA-250 tabs
c437.	PRO-VENT caps 300mg
c438.	SLO-PHYLLIN caps 60mg
c439.	SLO-PHYLLIN caps 125mg
c43a.	SLO-PHYLLIN caps 250mg
c43b.	THEO-DUR tabs 200mg
c43c.	THEO-DUR tabs 300mg
c43e.	UNIPHYLLIN CONTINUS tabs 400mg
c43f.	UNIPHYLLIN CONTINUS tabs 200mg
c43h.	UNIPHYLLIN CONTINUS tabs 300mg
c43m.	THEOPHYLLINE syrp 125mg/5ml
c43n.	THEOPHYLLINE tabs 125mg
c43o.	THEOPHYLLINE liq 60mg/5ml
c43p.	THEOPHYLLINE mr tab 175mg
c43q.	THEOPHYLLINE mr tab 250mg
c43r.	THEOPHYLLINE mr tab 300mg
c43s.	THEOPHYLLINE mr cap 60mg
c43t.	THEOPHYLLINE mr cap 125mg
c43u.	THEOPHYLLINE mr cap 250mg
c43v.	THEOPHYLLINE mr tab 200mg

c43w.	THEOPHYLLINE mr tab 300mg
c43x.	THEOPHYLLINE mr tab 350mg
c43y.	THEOPHYLLINE mr tab 400mg
c43z.	THEOPHYLLINE mr tab 200mg
c51t.	FRANOL tabs
c51u.	FRANOL PLUS tabs
x02IT	NUELIN tabs 125mg
x02tm	UNIPHYLLIN CONTINUS tabs 200mg

### Codes for LTRA

Read code	Read term
cA11.	MONTELUKAST (AS SODIUM SALT) tabs 10mg
cA12.	SINGULAIR paed chewable tab 5mg
cA13.	SINGULAIR tabs 10mg
cA14.	SINGULAIR paed chewable tab 5mg
cA15.	SINGULAIR paed chewable tab 4mg
cA16.	SINGULAIR paed grans 4mg/sachet
cA1y.	MONTELUKAST (AS SODIUM SALT) grans 4mg/sachet
cA1z.	MONTELUKAST (AS SODIUM SALT) chewable tab 4mg
cA21.	ZAFIRLUKAST tabs 20mg
cA22.	ACCOLATE tabs 20mg
x04cV	SINGULAIR paed chewable tab 4mg

### Codes for OCS

Read code	Read term
fe3..	DEXAMETHASONE [ENDOCRINE]
fe31.	DEXAMETHASONE 500micrograms tablets
fe32.	DEXAMETHASONE 2mg tablets
fe33.	DECADRON 500micrograms tablets
fe36.	*ORADEXON 500microgram tablets
fe37.	*ORADEXON 2mg tablets
fe3A.	DEXSOL 2mg/5mL oral solution
fe3B.	DEXAMETHASONE 10mg/5mL oral solution
fe3C.	MARTAPAN 2mg/5mL oral solution
fe3r.	DEXAMETHASONE 500micrograms/5mL solution
fe3s.	DEXAMETHASONE 2mg/5mL sugar free solution
fe3u.	DEXAMETHASONE 2mg/5mL liquid
fe4..	HYDROCORTISONE
fe41.	HYDROCORTISONE 10mg tablets
fe42.	HYDROCORTISONE 20mg tablets
fe43.	*HYDROCORTISTAB 20mg tablets

fe44.	*HYDROCORTONE 10mg tablets
fe45.	*HYDROCORTONE 20mg tablets
fe4e.	PLENADREN 5mg m/r tablets
fe4f.	HYDROCORTISONE 5mg m/r tablets
fe4g.	PLENADREN 20mg m/r tablets
fe4h.	HYDROCORTISONE 20mg m/r tablets
fe5..	METHYLPREDNISOLONE [ENDOCRINE]
fe51.	MEDRONE 2mg tablets
fe52.	MEDRONE 4mg tablets
fe53.	MEDRONE 16mg tablets
fe5f.	MEDRONE 100mg tablets
fe5m.	METHYLPREDNISOLONE 100mg tablets
fe5n.	METHYLPREDNISOLONE 2mg tablets
fe5o.	METHYLPREDNISOLONE 4mg tablets
fe5p.	METHYLPREDNISOLONE 16mg tablets
fe6..	PREDNISOLONE [ENDOCRINE]
fe61.	PREDNISOLONE 1mg tablets
fe62.	PREDNISOLONE 5mg tablets
fe64.	*DELTA-PHORICOL 5mg tablets
fe65.	DELTACORTRIL ENTERIC 2.5mg tablets
fe66.	DELTACORTRIL ENTERIC 5mg tablets
fe67.	*DELTALONE 1mg tablets
fe68.	*DELTALONE 5mg tablets
fe69.	*DELTASTAB 1mg tablets
fe6a.	*DELTASTAB 5mg tablets
fe6c.	*PRECORTISYL 1mg tablets
fe6d.	*PRECORTISYL 5mg tablets
fe6e.	PRECORTISYL FORTE 25mg tablets
fe6f.	*PREDNESOL 5mg tablets
fe6g.	*SINTISONE 5mg tablets
fe6h.	PREDNISOLONE 2.5mg e/c tablets
fe6i.	PREDNISOLONE 5mg e/c tablets
fe6j.	PREDNISOLONE 5mg soluble tablets
fe6k.	PREDNISOLONE 50mg tablets
fe6l.	DILACORT 5mg gastro-resistant tablets
fe6m.	DILACORT 2.5mg gastro-resistant tablets
fe6t.	PREDNISOLONE 10mg tablets
fe6v.	*PREDNISOLONE 2.5mg tablets
fe6w.	*PREDNISOLONE 2.5mg tablets
fe6z.	PREDNISOLONE 25mg tablets
fe7..	PREDNISONE
fe71.	*PREDNISONE 1mg tablets
fe72.	*PREDNISONE 5mg tablets
fe73.	*DECORTISYL 5mg tablets
fe74.	*ECONOSONE 1mg tablets
fe75.	*ECONOSONE 5mg tablets
fe76.	Prednisone 20mg tablet

fe77.	LODOTRA 2mg m/r tablets
fe78.	LODOTRA 5mg m/r tablets
fe79.	LODOTRA 1mg m/r tablets
fe7x.	PREDNISONONE 5mg m/r tablets
fe7y.	PREDNISONONE 2mg m/r tablets
fe7z.	PREDNISONONE 1mg m/r tablets
x00yP	Oral prednisolone
x01Mh	Oral dexamethasone
x01Na	Oral hydrocortisone
x01Nb	Oral methylprednisolone

### *Codes for Non oral corticosteroids*

Read code	Read term
aa4..	PREDNISOLONE [for preparations see rectal prednisolone]
ai1..	RECTAL HYDROCORTISONE
ai11.	HYDROCORTISONE 25mg suppositories
ai12.	COLIFOAM 10% foam 20.8g
ai13.	*CORTENEMA 100mg/60mL enema
ai14.	HYDROCORTISONE 10% foam aerosol
ai15.	Hydrocortisone acetate 25mg suppository
ai2..	RECTAL PREDNISOLONE
ai21.	PREDENEMA standard tube enema 20mg/100mL
ai22.	PREDENEMA long tube enema 20mg/100mL
ai23.	PREDSOL 20mg/100mL enema
ai24.	*PREDSOL 5mg suppositories
ai25.	*PREDFOAM 20mg foam 25g
ai26.	PREDNISOLONE 20mg/100mL enema
ai27.	*PREDNISOLONE 5mg suppository
ai28.	PREDNISOLONE 20mg/dose foam aerosol 20g
ai29.	PREDNISOLONE 20mg/100mL long tube retention enema
ai2a.	PREDNISOLONE 20mg/100mL standard tube retention enema
ai2b.	PREDNISOLONE 20mg/dose rectal foam 25g
aj1m.	PERINAL spray
aj1n.	Hydrocortisone+lidocaine 0.2%/1% spray
c63..	*BETAMETHASONE VALERATE
fe13.	BETNESOL 4mg/1mL injection
fe1z.	BETAMETHASONE 4mg/1mL injection
fe34.	*DECADRON 8mg/2mL injection
fe35.	DECADRON SHOCK-PAK 100mg/5mL injection
fe38.	*ORADEXON 5mg/1mL injection
fe39.	*ORADEXON 10mg/2mL injection
fe3D.	DEXAMETHASONE 3.8mg/1mL solution for injection
fe3p.	DEXAMETHASONE 6.6mg/2mL solution for injection
fe3q.	DEXAMETHASONE 3.3mg/1mL solution for injection
fe3t.	Dexamethasone sodium phosphate 10mg/2mL injection



fe3v. Dexamethasone phosphate 120mg/5mL injection  
fe3w. DEXAMETHASONE 8mg/2mL injection  
fe3x. DEXAMETHASONE 100mg/5mL injection  
fe3z. DEXAMETHASONE 4mg/1mL injection  
fe4.. HYDROCORTISONE  
fe46. HYDROCORTISONE 100mg injection  
fe47. HYDROCORTISONE 500mg injection  
fe48. EFCORTELAN SOLUBLE 100mg injection  
fe49. EFCORTESOL 100mg/1mL injection  
fe4a. EFCORTESOL 500mg/5mL injection  
fe4b. SOLU-CORTEF+WATER 100mg injection  
fe4c. SOLU-CORTEF 100mg injection  
fe4d. HYDROCORTISONE 100mg/1mL injection  
fe4z. Hydrocortisone 100mg/2mL injection (pdr for recon)+diluent  
fe54. MIN-I-MIX METHYLPREDNIS. 500mg injection  
fe55. MIN-I-MIX METHYLPREDNISOLONE 1g injection  
fe56. SOLU-MEDRONE 40mg injection powder+diluent  
fe57. SOLU-MEDRONE 125mg injection powder+diluent  
fe58. SOLU-MEDRONE 500mg injection powder+diluent  
fe59. SOLU-MEDRONE 1g injection powder+diluent  
fe5V. Methylprednisolone acetate+lidocaine HCl 80/20mg/2mL inj  
fe5W. Methylprednisolone acetate+lidocaine HCl 40/10mg/1mL inj  
fe5X. Methylprednisolone acetate 120mg/3mL injection  
fe5Y. Methylprednisolone 500mg/10mL injection  
fe5Z. Methylprednisolone 1g/20mL injection  
fe5a. SOLU-MEDRONE 2g injection  
fe5b. DEPO-MEDRONE 40mg/1mL injection  
fe5c. DEPO-MEDRONE 80mg/2mL injection  
fe5d. \*DEPO-MEDRONE 80mg syringe  
fe5e. DEPO-MEDRONE 120mg/3mL injection  
fe5g. METHYLPREDNISOLONE 500mg injection (pdr for recon)  
fe5h. METHYLPREDNISOLONE 1g injection (pdr for recon)  
fe5q. METHYLPREDNISOLONE 500mg injection  
fe5r. METHYLPREDNISOLONE 1g injection  
fe5s. METHYLPREDNISOLONE 40mg injection powder+diluent  
fe5t. METHYLPREDNISOLONE 125mg injection powder+diluent  
fe5u. METHYLPREDNISOLONE 500mg injection powder+diluent  
fe5v. METHYLPREDNISOLONE 1g injection powder+diluent  
fe5w. METHYLPREDNISOLONE 2g injection powder+diluent  
fe5x. METHYLPREDNISOLONE 40mg/1mL injection  
fe5y. METHYLPREDNISOLONE 80mg/2mL injection  
fe5z. METHYLPREDNISOLONE 200mg/5mL injection  
fe63. \*CODELSOL 32mg/2mL injection  
fe6b. DELTASTAB 25mg/1mL injection  
fe6u. PREDNISOLONE 32mg/2mL injection  
fe6y. PREDNISOLONE 125mg/5mL injection  
j41.. DEXAMETHASONE SODIUM PHOSPHATE [MUSCULOSKELETAL USE]

j411. \*DECADRON 8mg/2mL injection  
j412. \*ORADEXON 5mg/1mL injection  
j413. \*ORADEXON 8mg/2mL injection  
j41y. DEXAMETHASONE SOD PHOS 8mg/2mL injection  
j41z. DEXAMETHASONE SOD PHOS 5mg/1mL injection  
j42.. HYDROCORTISONE ACETATE [MUSCULOSKELETAL USE]  
j421. HYDROCORTISONE 25mg/1mL injection  
j422. HYDROCORTISTAB 125mg injection  
j423. HYDROCORTISTAB 25mg/1mL injection  
j43.. METHYLPREDNIS. ACETATE [MUSCULOSKELETAL USE]  
j431. DEPO-MEDRONE 40mg/1mL injection  
j432. DEPO-MEDRONE 80mg/2mL injection  
j433. \*DEPO-MEDRONE 80mg/2mL syringe  
j434. DEPO-MEDRONE 120mg/3mL injection  
j435. DEPO-MEDRONE+LIDOCAINE 80mg/20mg injection  
j436. DEPO-MEDRONE+LIDOCAINE 40mg/10mg injection  
j43w. METHYLPREDNISOLONE ACET 40mg/1mL injection  
j43x. METHYLPREDNIS AC 80mg/2mL syringe  
j43y. METHYLPREDNISOLONE ACET 120mg/3mL injection  
j43z. METHYLPREDNISOLONE ACETATE 80mg/2mL vials  
j44.. PREDNISOLONE ACETATE [MUSCULOSKELETAL USE]  
j441. DELTASTAB 25mg/1mL injection  
j44z. PREDNISOLONE ACETATE 25mg/1mL injection  
j45.. PREDNISOLONE SOD PHOS [MUSC-SK]  
j451. \*CODELSON 32mg/2mL injection  
k62.. BETAMETHASONE SODIUM PHOSPHATE [EYE]  
k621. BETNESOL 0.1% eye drops 10mL  
k622. BETNESOL 0.1% eye ointment 3g  
k623. BETNESOL-N eye ointment 3g  
k624. VISTA-METHASONE 0.1% eye drops 5mL  
k625. VISTA-METHASONE 0.1% eye drops 10mL  
k626. BETNESOL-N eye drops  
k627. BETNESOL-N eye drops 10mL  
k628. BETAMETHASONE SODIUM PHOS+NEOMYCIN SULPH 0.1%/0.5% eye drops  
k629. VISTA-METHASONE N eye drops 5mL  
k62A. VISTA-METHASONE N eye drops 10mL  
k62x. Betamethasone sodium phos+neomycin sulph 0.1/0.5% eye oint  
k62y. BETAMETHASONE 0.1% eye drops  
k62z. BETAMETHASONE 0.1% eye ointment  
k64.. DEXAMETHASONE [EYE]  
k641. MAXIDEX eye drops 5mL  
k642. MAXIDEX eye drops 10mL  
k643. MAXITROL eye drops 5mL  
k644. MAXITROL eye ointment 3.5g  
k645. DEXAMETHASONE SODIUM PHOSPHATE 0.1% single-use eye drops  
k646. MINIMS DEXAMETHASONE NA PHOSPHATE 0.1% s-d eye drops 0.5mL  
k647. DEXAMETHASONE+HYPROMELLOSE 0.1%/0.5% eye drops

- k648. DEXAMETHASONE+TOBRAMYCIN 0.1%/0.3% eye drops
- k649. TOBRADEX eye drops 5mL
- k64A. DEXAMETHASONE 700micrograms intravitreal implant+applicator
- k64B. OZURDEX 700micrograms intravitreal implant in applicator
- k64C. DROPODEX 0.1% single-use eye drops 0.4mL
- k64D. DEXAFREE 1mg/mL single-use eye drops 0.4mL
- k64x. DEXAMETHASONE COMPOUND eye ointment
- k64y. \*DEXAMETHASONE eye drops
- k64z. \*DEXAMETHASONE eye ointment
- k66.. HYDROCORTISONE ACETATE [EYE]
- k661. CHLOROMYCETIN HYDROCORT. eye ointment 4g
- k662. \*CORTUCID eye ointment
- k663. \*FRAMYCORT eye drops 5mL
- k664. \*FRAMYGEN eye ointment
- k665. \*FRAMYCORT eye ointment 3.5g
- k666. \*NEO-CORTEF eye drops
- k667. HYDROCORTISONE ACETATE 0.5% eye ointment
- k668. HYDROCORTISONE ACETATE 1% eye ointment
- k669. HYDROCORTISONE ACETATE 2.5% eye ointment
- k66A. \*NEO-CORTEF eye ointment
- k66B. HYDROCORTISONE ACET+NEOMYCIN SULPH 1.5%/0.5% eye drops 10mL
- k66w. Hydrocortisone acetate+chloramphenicol 0.5%/1% eye ointment
- k66x. HYDROCORTISONE ACETATE eye ointment
- k66y. HYDROCORTISONE ACETATE eye ointment
- k66z. HYDROCORTISONE ACETATE 1% eye drops
- k68.. PREDNISOLONE SOD PHOS [EYE]
- k681. MINIMS PREDNISOLONE 0.5% single-use eye drops 0.5mL
- k682. \*PREDSOL 0.5% eye drops 5mL
- k683. PREDSOL 0.5% eye drops 10mL
- k684. \*PREDSOL N eye drops 10mL
- k68x. Prednisolone sodium phosphate 0.5% single-use eye drops
- k68y. \*PREDNISOLONE eye drops
- k68z. PREDNISOLONE 0.5% eye drops
- k6a.. PREDNISOLONE ACETATE [EYE]
- k6a1. PREDNISOLONE ACET 1% eye drops 5mL
- k6a2. PREDNISOLONE ACET 1% eye drops 10mL
- k6a3. PRED FORTE 1% eye drops 5mL
- k6a4. PRED FORTE 1% eye drops 10mL
- I21.. BETAMETHASONE SODIUM PHOSPHATE [EAR]
- I211. \*BETNESOL ear drops 5mL
- I212. BETNESOL 0.1% ear drops 10mL
- I213. VISTA-METHASONE 0.1% ear drops 5mL
- I214. VISTA-METHASONE 0.1% ear drops 10mL
- I215. BETAMETHASONE 0.1% ear drops
- I22.. PREDNISOLONE SODIUM PHOSPHATE [EAR]
- I221. \*PREDSOL ear drops 5mL
- I222. PREDSOL 0.5% ear drops 10mL

l22y. PREDNISOLONE 0.5% ear drops  
l22z. \*PREDNISOLONE 0.5% ear drops  
l361. \*BETNESOL-N ear drops 5mL  
l362. BETNESOL-N ear drops 10mL  
l365. \*PREDSOL N ear drops 5mL  
l366. \*PREDSOL N ear drops 10mL  
l367. VISTA-METHASONE N ear drops 5mL  
l368. VISTA-METHASONE N ear drops 10mL  
l36t. Prednisolone Na phos+neomycin sulph 0.5%/0.5% eye/ear drops  
l36w. BETAMETHASONE SODIUM PHOS+NEOMYCIN SULF 0.1%/0.5% drops  
l412. \*OTOSPORIN ear drops 5mL  
l413. \*OTOSPORIN ear drops 10mL  
l415. SOFRADEX EYE/EAR drops 10mL  
l416. \*SOFRADEX EYE/EAR 5g ointment  
l419. \*TERRA-CORTIL ear drops 5mL  
l41b. OTOMIZE ear spray 5mL  
l82.. BETAMETHASONE SOD PHOSPHATE [NOSE]  
l821. \*BETNESOL nose drops 5mL  
l822. BETNESOL 0.1% nose drops 10mL  
l823. VISTA-METHASONE 0.1% nose drops 5mL  
l824. VISTA-METHASONE 0.1% nose drops 10mL  
l825. BETNESOL-N nose drops 10mL  
l826. BETAMETHASONE SODIUM PHOS+NEOMYCIN SULF 0.1%/0.5% nose drops  
l827. VISTA-METHASONE N nose drops 5mL  
l828. VISTA-METHASONE N nose drops 10mL  
l82z. BETAMETHASONE 0.1% nose drops  
l8C.. TRAMAZOLINE HYDROCHLORIDE+DEXAMETHASONE ISONICOTINATE  
l8C1. DEXA-RHINASPRAY DUO nasal spray  
lb42. \*CORLAN 2.5mg lozenges  
lb4z. HYDROCORTISONE 2.5mg lozenges  
m41.. HYDROCORTISONE CREAMS  
m411. HYDROCORTISONE 1% cream 15g  
m412. HYDROCORTISONE 1% cream 30g  
m413. HYDROCORTISONE 1% cream 50g  
m414. HYDROCORTISONE 1% cream 100g  
m415. HYDROCORTISONE 0.1% cream 30g  
m416. \*HYDROCORTISONE 0.125% cream  
m417. HYDROCORTISONE 0.5% cream 15g  
m418. \*HYDROCORTISONE 0.5% cream 30g  
m419. \*HYDROCORTISONE 0.5% cream 50g  
m41A. HYDROCORTISONE 2.5% cream 15g  
m41B. \*HYDROCORTISONE 2.5% cream 30g  
m41C. HYDROCORTISONE 2.5% cream 50g  
m41D. HYDROCORTISONE 1% aqueous cream  
m41a. HYDROCORTISONE 0.5% cream 100g  
m41b. HYDROCORTISONE 2.5% cream  
m41c. \*COBADEX 0.5% cream 20g

- m41d. \*COBADEX 1% cream 20g
- m41e. DIODERM 0.1% cream 30g
- m41f. \*DOME-CORT 0.125% cream
- m41g. \*EFCORTELAN 0.5% cream 15g
- m41h. \*EFCORTELAN P 1% cream 15g
- m41i. \*EFCORTELAN 1% cream 50g
- m41j. \*EFCORTELAN 2.5% cream 15g
- m41k. \*HYDROCORTISTAB 1% cream 15g
- m41l. \*HYDROCORTISYL 1% cream 15g
- m41m. MILDISON LIPOCREAM 1% cream 30g
- m41n. \*EFCORTELAN 0.5% cream 30g
- m41o. \*EFCORTELAN 1% cream 30g
- m41p. \*EFCORTELAN 2.5% cream 30g
- m41q. DERMACORT cream
- m41r. HC45 cream
- m41s. Kerfoot hydrocortisone cream
- m41t. \*DAYLEVE 0.1% cream 15g
- m41u. HYDROCORTISONE 0.1% cream
- m41v. ZENOXONE 1% aqueous cream
- m41w. EXE-CORT HYDROCORTISONE 1% cream 15g
- m42.. HYDROCORTISONE OINTMENTS
- m421. HYDROCORTISONE 0.5% ointment 15g
- m422. HYDROCORTISONE 1% ointment 15g
- m423. HYDROCORTISONE 1% ointment 30g
- m424. HYDROCORTISONE 1% ointment 100g
- m425. \*EFCORTELAN 0.5% ointment 15g
- m426. \*EFCORTELAN P 1% ointment 15g
- m427. \*EFCORTELAN 1% ointment 50g
- m428. \*EFCORTELAN 2.5% ointment 15g
- m429. HYDROCORTISTAB 1% ointment 15g
- m42A. HYDROCORTISONE 2.5% ointment 15g
- m42B. HYDROCORTISONE 2.5% ointment 30g
- m42C. HYDROCORTISONE 2.5% ointment 50g
- m42D. HYDROCORTISONE 1% ointment 50g
- m42a. \*HYDROCORTISYL 1% ointment 15g
- m42b. HYDROCORTISONE 2.5% ointment
- m42c. \*EFCORTELAN 0.5% ointment 30g
- m42d. \*EFCORTELAN 1% ointment 30g
- m42e. \*EFCORTELAN 2.5% ointment 30g
- m42f. Lanacort ointment
- m42g. Hydrocortisone acetate 1% ointment
- m43.. HYDROCORTISONE LOTIONS/DRESSNG
- m431. \*HYDROCORTISONE 1% lotion
- m432. \*EFCORTELAN 1% lotion 20mL
- m433. \*CORTACREAM 1% imp band
- m44.. HYDROCORTISONE COMPOUND PREPARATIONS
- m441. ALPHADERM cream 30g

- m442. ALPHADERM cream 100g
- m443. CALMURID-HC cream 30g
- m444. CALMURID-HC cream 100g
- m445. \*ECZEDERM+HYDROCORT cream 25g
- m446. \*EPIFOAM foam 10.6g
- m447. EURAX-HYDROCORTISONE cream 30g
- m448. \*SENTIAL cream 30g
- m449. \*SENTIAL cream 100g
- m44a. \*TRI-CICATRIN ointment 15g
- m44b. \*TRI-CICATRIN ointment 30g
- m44c. EURAX-HC cream 15g
- m44d. \*CALMURID HC cream 50g
- m44e. HYDROMOL HC INTENSIVE cream 30g
- m44f. HYDROMOL HC INTENSIVE cream 100g
- m44v. Sential HC cream
- m44w. Hydrocortisone+crotamiton 0.25%/10% cream
- m44x. Hydrocortisone acetate+pramoxine hydrochloride 1.0/1.0% foam
- m44z. HYDROCORTISONE+UREA 1.0%/10% cream
- m45.. HYDROCORTISONE+ANTIMICROBIALS
- m451. \*HYDROCORTISONE/NEOMYCIN cream
- m452. \*BARQUINOL-HC cream 15g
- m453. CANESTEN-HC cream 30g
- m454. DAKTACORT cream 30g
- m455. \*ECONACORT cream 30g
- m456. \*FRAMYCORT ointment 15g
- m457. \*FUCIDIN-H cream 15g
- m458. FUCIDIN-H cream 30g
- m459. \*FUCIDIN-H gel 15g
- m45A. FUCIDIN-H cream 60g
- m45B. \*FUCIDIN-H ointment 60g
- m45C. DAKTACORT HC cream 15g
- m45H. Hydrocortisone+clioquinol 1%/3% ointment
- m45J. Hydrocortisone+clioquinol 1%/3% cream
- m45M. Hydrocortisone+oxytetracycline 50/150mg spray
- m45N. Hydrocortisone+oxytetracycline 1.0/3% ointment
- m45S. Hydrocortisone acetate+gentamicin 1%/0.3% cream
- m45T. HYDROCORTISONE ACETATE+FUSIDIC ACID 1%/2% ointment
- m45U. Hydrocortisone acetate+fusidic acid 1%/2% gel
- m45V. HYDROCORTISONE ACETATE+FUSIDIC ACID 1%/2% cream
- m45W. HYDROCORTISONE+ECONAZOLE NITRATE 1%/1% cream
- m45X. HYDROCORTISONE+MICONAZOLE NITRATE 1%/2% ointment
- m45Y. HYDROCORTISONE+MICONAZOLE NITRATE 1%/2% cream
- m45Z. HYDROCORTISONE+CLOTRIMAZOLE 1%/1% cream
- m45a. \*FUCIDIN-H gel 30g
- m45b. \*FUCIDIN-H ointment 15g
- m45c. \*FUCIDIN-H ointment 30g
- m45d. \*GENTISONE HC cream 15g

- m45e. \*GENTISONE HC ointment 15g
- m45f. \*GREGODERM ointment 4g
- m45g. \*GREGODERM ointment 15g
- m45h. \*HYDRODERM ointment
- m45i. \*NYBADEX ointment
- m45j. \*NYSTAFORM-HC 0.5% cream 15g
- m45k. NYSTAFORM-HC 0.5% cream 30g
- m45l. NYSTAFORM-HC 1% ointment 30g
- m45m. \*QUINOCORT cream 30g
- m45n. \*TERRA-CORTRIL ointment 15g
- m45o. TERRA-CORTRIL ointment 30g
- m45p. \*TERRA-CORTRIL spray 30mL
- m45q. \*TERRA-CORTRIL spray 60mL
- m45r. TERRA-CORTRIL NYSTATIN cream 30g
- m45s. TIMODINE cream 30g
- m45t. VIOFORM-HYDROCORTISONE cream 30g
- m45u. VIOFORM-HYDROCORTISONE ointment 30g
- m45v. DAKTACORT ointment 30g
- m45w. CANESTEN HYDROCORTISONE cream 15g
- m45x. HYDROCORTISONE+NEOMYCIN 1%/0.5% ointment
- m45y. HYDROCORTISONE+NEOMYCIN 1%/0.5% cream
- m48.. BETAMETHASONE ESTERS
- m481. \*BETNOVATE 0.1% cream 15g
- m482. BETNOVATE 0.1% cream 30g
- m483. BETNOVATE 0.1% cream 100g
- m484. \*BETNOVATE 0.1% ointment 15g
- m485. BETNOVATE 0.1% ointment 30g
- m486. BETNOVATE 0.1% ointment 100g
- m487. BETNOVATE 0.1% lotion 100mL
- m488. BETNOVATE 0.1% scalp application 30mL
- m489. BETNOVATE 0.1% scalp application 100mL
- m48A. BETACAP scalp application
- m48B. BETAMETHASONE VALERATE 0.12% foam
- m48C. BETTAMOUSSE 0.12% foam 100g
- m48D. BETESIL 2.25mg medicated plasters
- m48E. BETAMETHASONE VALERATE 2.25mg medicated plasters
- m48F. AUDAVATE RD 0.025% cream 100g
- m48G. AUDAVATE RD 0.025% ointment 100g
- m48a. BETNOVATE RD 0.025% cream 100g
- m48b. BETNOVATE RD 0.025% ointment 100g
- m48c. DIPROSALIC 0.05% ointment 30g
- m48d. DIPROSALIC 0.05% ointment 100g
- m48e. DIPROSALIC 0.05% scalp application 30mL
- m48f. DIPROSALIC 0.05% scalp application 100mL
- m48g. DIPROSONE 0.05% cream 30g
- m48h. DIPROSONE 0.05% cream 100g
- m48i. DIPROSONE 0.05% ointment 30g

m48j.	DIPROSONE 0.05% ointment 100g
m48k.	DIPROSONE 0.05% lotion 30mL
m48l.	DIPROSONE 0.05% lotion 100mL
m48m.	BETAMETHASONE 0.025% cream
m48n.	BETAMETHASONE 0.025% ointment
m48o.	BETAMETHASONE 0.1% scalp application
m48p.	BETNOVATE 0.1% pump cream 100g
m48q.	BETAMETHASONE 0.1% cream
m48r.	BETAMETHASONE 0.1% ointment
m48s.	BETAMETHASONE 0.1% lotion
m48t.	BETNOVATE 0.1% pump ointment 100g
m48u.	Betamethasone+salicylic acid 0.05/3% ointment
m48v.	Betamethasone+salicylic acid 0.05/3% scalp application
m48w.	Betamethasone 0.05% cream
m48x.	Betamethasone 0.05% ointment
m48y.	Betamethasone 0.05% lotion
m48z.	VIPSOGAL ointment
m49..	BETAMETHASONE + ANTIMICROBIALS
m491.	*BETNOVATE C 0.1% cream 15g
m492.	*BETNOVATE-C 0.1% cream 30g
m493.	*BETNOVATE C 0.1% ointment 15g
m494.	*BETNOVATE-C 0.1% ointment 30g
m495.	*BETNOVATE N 0.1% cream 15g
m496.	*BETNOVATE-N 0.1% cream 30g
m497.	*BETNOVATE-N 0.1% cream 100g
m498.	*BETNOVATE N 0.1% ointment 15g
m499.	*BETNOVATE-N 0.1% ointment 30g
m49a.	BETNOVATE-N 0.1% ointment 100g
m49b.	*BETNOVATE-N 0.1% lotion
m49c.	*FUCIBET cream 15g
m49d.	FUCIBET cream 30g
m49e.	FUCIBET cream 60g
m49f.	FUCIBET LIPID cream 30g
m49r.	BETAMETHASONE+NEOMYCIN 0.1%/0.5% ointment
m49s.	BETAMETHASONE+NEOMYCIN 0.1%/0.5% cream
m49t.	BETAMETHASONE+CLIOQUINOL 0.1%/3% cream
m49u.	BETAMETHASONE+CLIOQUINOL 0.1%/3% ointment
m49v.	BETAMETHASONE+FUCIDIC ACID 0.1%/2% cream
m49w.	BETAMETHASONE+NEOMYCIN SULPHATE 0.1%/0.5% ointment
m49x.	BETAMETHASONE+NEOMYCIN SULPHATE 0.1%/0.5% cream
m49y.	BETAMETHASONE+CLIOQUINOL 0.1%/3% ointment
m49z.	BETAMETHASONE+CLIOQUINOL 0.1%/3% cream
m4l..	HYDROCORTISONE BUTYRATE
m4l1.	LOCOID 0.1% cream 30g
m4l2.	LOCOID 0.1% cream 100g
m4l3.	LOCOID LIPOCREAM 0.1% cream 30g
m4l4.	LOCOID 0.1% ointment 30g



m4l5.	LOCOID 0.1% ointment 100g
m4l6.	*LOCOID 0.1% scalp lotion 30mL
m4l7.	LOCOID 0.1% scalp lotion 100mL
m4l8.	*LOCOID C 0.1% cream 30g
m4l9.	*LOCOID C 0.1% ointment 30g
m4la.	LOCOID LIPOCREAM 0.1% cream 100g
m4lb.	LOCOID CRELO 0.1% emulsion
m4lt.	HYDROCORTISONE BUTYRATE 0.1% emulsion
m4lu.	Hydrocortisone butyrate+chlorquinaldol 0.1%/3% ointment
m4lv.	Hydrocortisone butyrate+chlorquinaldol 0.1%/3% cream
m4lw.	HYDROCORTISONE BUTYRATE 0.1% cream
m4lx.	HYDROCORTISONE BUTYRATE 0.1% lipocream
m4ly.	HYDROCORTISONE BUTYRATE 0.1% ointment
m4lz.	HYDROCORTISONE BUTYRATE 0.1% scalp lotion
m4m..	METHYLPREDNISOLONE ACETATE
m4m1.	*NEO-MEDRONE 0.25% cream 15g
m4my.	METHYLPREDNISOLONE/NEOMYCIN 0.25/0.5% cream 15g
m4mz.	METHYLPREDNISOLONE ACET 0.25% cream
m4p..	HYDROCORTISONE ACETATE [TOPICAL]
m4p1.	*HYDROCAL 1% cream
m4p2.	Lanacort cream
m4pz.	Hydrocortisone acetate 1% cream
m59G.	CALCIPOTRIOL+BETAMETHASONE 50micrograms/500mcg/g ointment
m59H.	*DOVOBET ointment 120g
m59I.	*DOVOBET ointment 60g
m59K.	CALCIPOTRIOL+BETAMETHASONE 50micrograms/500micrograms/g gel
m661.	*ACTINAC lotion 25mL x 2
m662.	*MEDRONE lotion 25mL
m663.	*MEDRONE lotion 75mL
m664.	*NEO-MEDRONE lotion 50mL
m665.	*NEO-MEDRONE lotion 75mL
m666.	QUINODERM+HYDROCORTISONE cream 30g
me46.	*LOTRIDERM cream 15g
me4D.	LOTRIDERM cream 30g
me4x.	BETAMETHASONE+CLOTRIMAZOLE 0.05%/1% cream
x001L	Betamethasone+clioquinol
x001M	Betamethasone+clotrimazole
x001N	Betamethasone+fusidic acid
x001O	Betamethasone+neomycin sulphate
x001P	Betamethasone+salicylic acid
x005p	Hydrocortisone+fusidic acid
x005q	Hydrocortisone+gentamicin
x005s	Hydrocortisone+pramoxine
x005t	Hydrocortisone+sodium fusidate
x005u	Hydrocortisone+chlorquinaldol
x005v	Hydrocortisone+chloramphenicol
x005x	Hydrocortisone+clioquinol

x005y	Hydrocortisone+clotrimazole
x005z	Hydrocortisone+crotamiton
x0060	Hydrocortisone+dimeticone '350'
x0061	Hydrocortisone+econazole
x0062	Hydrocortisone+lidocaine
x0063	Hydrocortisone+miconazole
x0064	Hydrocortisone+neomycin
x0066	Hydrocortisone+nystatin
x0067	Hydrocortisone+oxytetracycline
x0069	Hydrocortisone+potassium hydroxyquinoline
x006A	Hydrocortisone+urea
x007e	Methylprednisolone+lidocaine
x007f	Methylprednisolone+neomycin
x00FN	Alphaderm cream
x00Fa	Betnovate cream
x00Fb	Betnovate C cream
x00Fc	Betnovate N cream
x00Fd	Betnovate RD cream
x00Fk	Calmurid HC cream
x00Fm	Canesten HC cream
x00Fv	Cobadex 0.5% cream
x00Fw	Cobadex 1% cream
x00G0	Daktacort cream
x00G6	Dioderm cream
x00G8	Diprosone cream
x00GI	Econacort cream
x00GM	Efcortelan 0.5% cream
x00GN	Efcortelan 1% cream
x00GO	Efcortelan 2.5% cream
x00GU	Eurax-Hydrocortisone cream
x00GY	Fucibet cream
x00Ga	Fucidin H cream
x00Gc	Gentisone HC cream
x00GI	Hydrocortisone 0.5% cream
x00Gm	Hydrocortisone 1% cream
x00Go	Hydrocortistab 1% cream
x00Gp	Hydrocortisyl 1% cream
x00Gw	Locoid 0.1% cream
x00Gx	Locoid C 0.1% cream
x00Gy	Lotriderm cream
x00H1	Methylprednisolone acetate+neomycin sulphate 0.25/0.5% cream
x00H2	Mildison Lipocream 1% cream
x00H6	Neo-Medrone 0.25% cream
x00H9	Nystaform-HC 0.5% cream
x00HL	Quinocort cream
x00HO	Quinoderm+hydrocortisone cream
x00Hd	Terra-Cortril Nystatin cream

x00He	Timodine cream
x00Hu	Vioform Hydrocortisone cream
x00Iu	Dexamethasone 0.1% preservative-free eye drops
x00Iv	Dexamethasone 0.1% eye drops
x00Jv	Maxidex eye drops
x00Jw	Maxitrol eye drops
x00Kb	Pred Forte 1% eye drops
x00Kc	Prednisolone 0.001% eye drops
x00Kd	Prednisolone 0.003% eye drops
x00Ke	Prednisolone 0.01% preservative-free eye drops
x00Kf	Prednisolone 0.01% eye drops
x00Kg	Prednisolone 0.03% preservative-free eye drops
x00Kh	Prednisolone 0.03% eye drops
x00Ki	Prednisolone 0.1% preservative-free eye drops
x00Kj	Prednisolone 0.1% eye drops
x00Kk	Prednisolone 0.3% preservative-free eye drops
x00Kl	Prednisolone 0.3% eye drops
x00Km	Prednisolone acetate 1% eye drops
x00LH	Betnesol 0.1% eye ointment
x00LI	Betnesol-N eye ointment
x00LO	Maxitrol eye ointment
x00LR	Otosporin ear drops
x00LV	Terra-Cortril ear drops
x00Lb	Otomize ear spray
x00Lc	Predsol 0.5% eye/ear drops
x00Ld	Predsol N eye/ear drops
x00Le	Sofradex eye/ear drops
x00Lh	Sofradex eye/ear ointment
x00Lj	Betnesol 0.1% eye/ear/nose drops
x00Lk	Betnesol-N eye/ear/nose drops
x00LI	Vista-methasone 0.1% eye/ear/nose drops
x00Lm	Vista-methasone N eye/ear/nose drops
x00MF	Colifoam 10% foam
x00MG	Epifoam foam
x00Mo	Fucidin H gel
x00T5	Actinac lotion (pdr for recon)
x00TA	Betnovate lotion
x00TG	Diprosone lotion
x00Tx	Locoid 0.1% lipocream
x00Wb	Betnovate ointment
x00Wc	Betnovate C ointment
x00Wd	Betnovate N ointment
x00We	Betnovate RD ointment
x00WI	Daktacort ointment
x00Wp	Diprosalic ointment
x00Wq	Diprosone ointment
x00Wu	Efcortelan 0.5% ointment

x00Wv	Efcortelan 1% ointment
x00Ww	Efcortelan 2.5% ointment
x00X0	Fucidin H ointment
x00X2	Gregoderm ointment
x00X5	Hydrocortisone 1% ointment
x00X7	Hydrocortistab 1% ointment
x00X8	Hydrocortisyl 1% ointment
x00XB	Locoid 0.1% ointment
x00XC	Locoid C 0.1% ointment
x00XI	Nystaform-HC 1% ointment
x00XQ	Terra-Cortril ointment
x00XT	Tri-Cicatrín ointment
x00XX	Vioform Hydrocortisone ointment
x00aE	Hydrocortisone acetate powder
x00bo	Betnovate scalp application
x00br	Diprosalic scalp application
x00bs	Locoid 0.1% scalp lotion
x00cx	Terra-Cortril spray
x00yl	Topical hydrocortisone
x00yW	Topical betamethasone
x00zu	Prednisolone 20mg rectal foam
x01MX	Parenteral betamethasone
x01Mi	Parenteral dexamethasone
x01Mj	Topical dexamethasone
x01Mk	Topical compound dexamethasone preparation
x01NR	Efcortelan 1% lotion
x01NS	Hydrocortisone eye ointment
x01NT	Rectal hydrocortisone preparations
x01NU	Topical compound hydrocortisone preparation
x01NV	Framycort ointment
x01NW	Eczederm+hydrocortisone cream
x01NX	Barquinol-HC cream
x01NY	Gentisone HC ointment
x01NZ	Parenteral hydrocortisone
x01Nc	Parenteral methylprednisolone
x01Nd	Neo-Medrone lotion
x01Ne	Medrone lotion
x01Nm	Parenteral prednisolone
x01Nn	Topical prednisolone
x01No	Prednisolone drops
x01Np	Rectal prednisolone preparations
x025f	Predfoam 20mg enema
x026v	Chloromycetin Hydrocortisone eye ointment
x026w	Minims Prednisolone 0.5% single-use eye drops
x027S	Hydrocortisone 0.5% ointment
x02L2	Betamethasone sodium phosphate 0.1% eye/ear/nose drops
x02L3	Prednisolone sodium phosphate 0.5% eye/ear drops

x03eA	Bettamousse 0.12% foam
x03ky	Canesten Hydrocortisone cream
x03m3	Eurax HC cream
x03n9	Hydrocortisone acetate+neomycin sulphate 1.5%/0.5% eye drops
x04ok	Minims Dexamethasone Na phosphate 0.1% s-d eye drops
x04pc	Dayleve 0.1% cream
x05JB	Dexamethasone+tobramycin
x05JC	Tobradex eye drops
x05YY	Daktacort HC cream
x05cv	Betamethasone+calcipotriol
x05cz	Dovobet ointment
x05r8	Exe-Cort Hydrocortisone 1% cream

### 8.2.3 Codes for other chronic respiratory conditions

Read code	Read term
23E5.	O/E - fibrosis of lung
A114.	Tuberculous fibrosis of lung
A115.	Tuberculous bronchiectasis
A1202	Tuberculous hydrothorax
A7899	HIV disease resulting in lymphoid interstitial pneumonitis
AD50.	Sarcoidosis of lung
AD52.	Sarcoidosis of lung with sarcoidosis of lymph nodes
AD54.	Sarcoidosis of inferior turbinates
B2...	Malignant neoplasm of respiratory tract and intrathoracic organs
B22..	Malignant neoplasm of trachea, bronchus and lung
B220.	Malignant neoplasm of trachea
B2200	Malignant neoplasm of cartilage of trachea
B2201	Malignant neoplasm of mucosa of trachea
B220z	Malignant neoplasm of trachea NOS
B221.	Malignant neoplasm of main bronchus
B2210	Malignant neoplasm of carina of bronchus
B2211	Malignant neoplasm of hilus of lung
B221z	Malignant neoplasm of main bronchus NOS
B222.	Malignant neoplasm of upper lobe, bronchus or lung
B2220	Malignant neoplasm of upper lobe bronchus
B2221	Malignant neoplasm of upper lobe of lung
B222z	Malignant neoplasm of upper lobe, bronchus or lung NOS
B223.	Malignant neoplasm of middle lobe, bronchus or lung
B2230	Malignant neoplasm of middle lobe bronchus
B2231	Malignant neoplasm of middle lobe of lung
B223z	Malignant neoplasm of middle lobe, bronchus or lung NOS
B224.	Malignant neoplasm of lower lobe, bronchus or lung
B2240	Malignant neoplasm of lower lobe bronchus
B2241	Malignant neoplasm of lower lobe of lung
B224z	Malignant neoplasm of lower lobe, bronchus or lung NOS
B225.	Malignant neoplasm of overlapping lesion of bronchus and lung

Read code	Read term
B226.	Mesothelioma
B22y.	Malignant neoplasm of other sites of bronchus or lung
B22z.	Malignant neoplasm of bronchus or lung NOS
B23..	Malignant neoplasm of pleura
B230.	Malignant neoplasm of parietal pleura
B231.	Malignant neoplasm of visceral pleura
B232.	Mesothelioma of pleura
B23y.	Malignant neoplasm of other specified pleura
B23z.	Malignant neoplasm of pleura NOS
B24..	Malignant neoplasm of thymus, heart and mediastinum
B242.	Malignant neoplasm of anterior mediastinum
B243.	Malignant neoplasm of posterior mediastinum
B24X.	Malignant neoplasm of mediastinum, part unspecified
B24y.	Malignant neoplasm of other site of heart, thymus and mediastinum
B24z.	Malignant neoplasm of heart, thymus and mediastinum NOS
B25..	Malignant neoplasm, overlapping lesion of heart, mediastinum and pleura
B26..	Malignant neoplasm, overlapping lesion of respiratory and intrathoracic organs
B2z..	Malignant neoplasm of other and ill-defined sites within the respiratory and intrathoracic organs
B2z0.	Malignant neoplasm of upper respiratory tract, part unspecified
B2zy.	Malignant neoplasm of other site of respiratory tract
B2zz.	Malignant neoplasm of respiratory tract NOS
B57..	Secondary malignant neoplasm of respiratory and digestive systems
B570.	Secondary malignant neoplasm of lung
B571.	Secondary malignant neoplasm of mediastinum
B572.	Secondary malignant neoplasm of pleura
B573.	Secondary malignant neoplasm of other respiratory organs
B57z.	Secondary malignant neoplasm of respiratory or digestive system NOS
B81..	Carcinoma in situ of respiratory system
B811.	Carcinoma in situ of trachea
B812.	Carcinoma in situ of bronchus and lung
B8120	Carcinoma in situ of carina of bronchus
B8121	Carcinoma in situ of main bronchus
B8122	Carcinoma in situ of upper lobe bronchus and lung
B8123	Carcinoma in situ of middle lobe bronchus and lung
B8124	Carcinoma in situ of lower lobe bronchus and lung
B812z	Carcinoma in situ of bronchus or lung NOS
B81y.	Carcinoma in situ of other specified parts of respiratory system
B81y0	Carcinoma in situ of pleura
Byu20	[X]Malignant neoplasm of bronchus or lung, unspecified
C10N1	Cystic fibrosis related diabetes mellitus
C370.	Cystic fibrosis
C3700	Cystic fibrosis with no meconium ileus
C3701	Cystic fibrosis with meconium ileus
C3702	Cystic fibrosis with pulmonary manifestations
C3703	Cystic fibrosis with intestinal manifestations
C3704	Arthropathy in cystic fibrosis

Read code	Read term
C3705	Cystic fibrosis with distal intestinal obstruction syndrome
C3707	Liver disease due to cystic fibrosis
C3708	Cystic fibrosis related cirrhosis
C3709	Exacerbation of cystic fibrosis
C370y	Cystic fibrosis with other manifestations
C370z	Cystic fibrosis NOS
H34..	Bronchiectasis
H340.	Recurrent bronchiectasis
H341.	Post-infective bronchiectasis
H34z.	Bronchiectasis NOS
H35..	Hypersensitivity pneumonitis
H350.	Farmers' lung
H351.	Bagassosis
H352.	Bird-fancier's lung
H3520	Budgerigar-fanciers' lung
H3521	Pigeon-fanciers' lung
H352z	Bird-fancier's lung NOS
H353.	Suberosis ( cork-handlers' lung )
H354.	Malt workers' lung
H355.	Mushroom workers' lung
H356.	Maple bark strippers' lung
H35y.	Other allergic alveolitis
H35y0	Cheese-washers' lung
H35y1	Coffee-workers' lung
H35y2	Fish-meal workers' lung
H35y3	Furriers' lung
H35y4	Grain-handlers' disease
H35y5	Pituitary snuff-takers' disease
H35y6	Sequoiosis (red-cedar asthma)
H35y7	Wood asthma
H35y8	Air-conditioner and humidifier lung
H35yz	Other allergic alveolitis NOS
H35z0	Allergic extrinsic alveolitis NOS
H35z1	Hypersensitivity pneumonitis NOS
H4...	Lung disease due to external agents
H40..	Coal workers' pneumoconiosis
H41..	Asbestosis
H410.	Pleural plaque disease due to asbestosis
H41z.	Asbestosis NOS
H42..	Silica and silicate pneumoconiosis
H420.	Talc pneumoconiosis
H421.	Simple silicosis
H422.	Complicated silicosis
H423.	Massive silicotic fibrosis
H42z.	Silica pneumoconiosis NOS
H43..	Pneumoconiosis due to other inorganic dust

Read code	Read term
H430.	Aluminosis of lung
H431.	Bauxite fibrosis of lung
H432.	Berylliosis
H433.	Graphite fibrosis of lung
H434.	Siderosis
H435.	Stannosis
H43z.	Pneumoconiosis due to inorganic dust NOS
H44..	Pneumopathy due to inhalation of other dust
H440.	Byssinosis
H441.	Cannabinosis
H442.	Flax-dressers' disease
H44z.	Pneumopathy due to inhalation of other dust NOS
H45..	Pneumoconiosis NOS
H450.	Pneumoconiosis associated with tuberculosis
H46..	Respiratory disease due to chemical fumes and vapours
H462.	Upper respiratory inflammation due to chemical fumes
H464.	Chronic respiratory conditions due to chemical fumes
H4641	Obliterative bronchiolitis due to chemical fumes
H4642	Chronic pulmonary fibrosis due to chemical fumes
H464z	Chronic respiratory conditions due to chemical fumes NOS
H465.	Chemical-induced pulmonary oedema
H46z.	Respiratory conditions due to chemical fumes NOS
H46z0	Silo-fillers' disease
H46zz	Respiratory conditions due to chemical fumes NOS
H4710	Lipoid pneumonia (exogenous)
H48..	Progressive massive fibrosis
H4y..	Other specified lung diseases due to external agent
H4y1.	Chronic pulmonary radiation disease
H4y10	Chronic pulmonary fibrosis following radiation
H4y1z	Chronic pulmonary radiation disease NOS
H4y2.	Drug-induced interstitial lung disorders
H4y21	Chronic drug-induced interstitial lung disorders
H4yy.	Other external agent causing respiratory condition
H4yz.	External agent causing respiratory conditions NOS
H4z..	Lung disease due to external agents NOS
H5000	Empyema necessitans
H5001	Empyema with bronchopleural fistula
H5002	Empyema with hepatopleural fistula
H5003	Empyema with mediastinal fistula
H5004	Empyema with pleural fistula NOS
H5005	Empyema with thoracic fistula NOS
H5010	Loculated empyema
H5012	Pleural empyema
H5013	Lung empyema NOS
H5015	Pyopneumothorax
H510C	Pleural plaque



Read code	Read term
H51y.	Other pleural effusion excluding mention of tuberculosis
H51y0	Encysted pleurisy
H51y7	Malignant pleural effusion
H51yz	Other pleural effusion
H51z.	Pleural effusion NOS
H54..	Pulmonary congestion and hypostasis
H540.	Pulmonary hypostasis
H540z	Pulmonary hypostasis NOS
H5410	Chronic pulmonary oedema
H541z	Pulmonary oedema NOS
H54z.	Pulmonary congestion and hypostasis NOS
H55..	Postinflammatory pulmonary fibrosis
H56..	Other alveolar and parietoalveolar disease
H560.	Pulmonary alveolar proteinosis
H561.	Idiopathic pulmonary haemosiderosis
H562.	Pulmonary alveolar microlithiasis
H563.	Idiopathic pulmonary fibrosis
H5630	Alveolar capillary block
H5631	Diffuse pulmonary fibrosis
H5632	Pulmonary fibrosis
H5633	Usual interstitial pneumonitis
H563z	Idiopathic fibrosing alveolitis NOS
H56yz	Other alveolar and parietoalveolar disease NOS
H56z.	Alveolar and parietoalveolar disease NOS
H57y0	Pulmonary amyloidosis
H57y2	Pulmonary sarcoidosis
H583.	Pulmonary eosinophilia
H5830	Loeffler's syndrome
H5831	Tropical eosinophilia
H583z	Pulmonary eosinophilia NOS
H5840	Postoperative pulmonary oedema
H5850	Pulmonary insufficiency following shock
H5851	Pulmonary insufficiency following surgery
H5852	Pulmonary insufficiency following trauma
H585z	Trauma and postoperative pulmonary insufficiency NOS
H58y0	Broncholithiasis
H58y3	Interstitial lung disease NEC
H58y5	Respiratory bronchiolitis associated interstitial lung disease
H58y6	Interstitial lung disease due to collagen vascular disease
H58y7	Interstitial lung disease due to connective tissue disease
H5X..	Pleural condition, unspecified
H5y30	Fibrosis of mediastinum
Hy02.	Chronic pulmonary insufficiency following surgery
Hyu4.	[X]Lung diseases due to external agents
Hyu40	[X]Pneumoconiosis due to other dust containing silica
Hyu41	[X]Pneumoconiosis due to other specified inorganic dusts

Read code	Read term
Hyu42	[X]Airway disease due to other specific organic dusts
Hyu43	[X]Hypersensitivity pneumonitis due to other organic dusts
Hyu44	[X]Upper respiratory inflammation due to chemicals, gases, fumes and vapours, not elsewhere classified
Hyu46	[X]Other respiratory conditions due to chemicals, gases, fumes and vapours
Hyu48	[X]Chronic and other pulmonary manifestations due to radiation
Hyu49	[X]Respiratory conditions due to other specified external agents
Hyu4A	[X]Respiratory conditions due to unspecified external agent
Hyu5.	[X]Other respiratory diseases principally affecting the interstitium
Hyu50	[X]Other interstitial pulmonary diseases with fibrosis
Hyu51	[X]Other specified interstitial pulmonary diseases
Hyu6.	[X]Suppurative and necrotic conditions of the lower respiratory tract
Hyu70	[X]Pleural effusion in conditions classified elsewhere
P861.	Congenital bronchiectasis
PK35.	Kartageners syndrome
SP130	Mendelson's syndrome as a complication of care
X00IU	Nasal sarcoidosis
X00nm	Laryngeal sarcoidosis
X100I	Congenital cystic bronchiectasis
X100m	Acquired bronchiectasis
X100n	Idiopathic bronchiectasis
X100o	Obstructive bronchiectasis
X100p	Toxin-induced bronchiectasis
X100q	Bronchiectasis due to toxic aspiration
X100r	Bronchiectasis due to toxic inhalation
X100t	Post-lung transplantation bronchiectasis
X100V	Chronic pulmonary coccidioidomycosis
X1012	Benign asbestos pleural effusion
X1013	Drug-induced pleural effusion
X1014	Meigs syndrome
X101a	Primary ciliary dyskinesia due to transposition of ciliary microtubules
X101b	Immotile cilia syndrome due to defective radial spokes
X101c	Immotile cilia syndrome due to excessively long cilia
X101d	Young's syndrome
X101e	Rutland ciliary disorientation syndrome
X101T	Pleural plaque
X101U	Asbestos-induced pleural plaque
X101Z	Polynesian bronchiectasis
X102b	High altitude pulmonary oedema
X102c	Post-upper airway obstruction pulmonary oedema
X102d	Toxic pulmonary oedema
X102e	Chemical-induced pulmonary oedema
X102F	Allergic bronchopulmonary aspergillosis
X102g	Oxygen-induced pulmonary oedema
X102h	Fluid overload pulmonary oedema
X102H	Cryptogenic pulmonary eosinophilia
X102I	Pulmonary histiocytosis X

Read code	Read term
X102i	Uraemic pulmonary oedema
X102J	Animal handlers' lung
X102k	Seasonal cryptogenic organising pneumonia with biochemical cholestasis
X102K	Dog house disease
X102l	Diffuse infiltrative lung disease
X102L	Dry rot lung
X102M	Lycoperdonosis
X102n	Idiopathic diffuse pulmonary ossification
X102N	Wheat weevil disease
X102o	Micronodular pulmonary ossification
X102O	New Guinea lung
X102p	Diffuse pulmonary neurofibromatosis
X102P	Paprika splitters' lung
X102q	Pulmonary tuberosc sclerosis
X102Q	Pyrethrum alveolitis
X102R	Rodent handlers' lung
X102s	Pulmonary lipid storage disease
X102S	Sewage workers' lung
X102t	Bronchocentric granulomatosis
X102T	Summer-type hypersensitivity pneumonitis
X102U	Vineyard sprayers' lung
X102u	Fibrosis of lung
X102V	Interstitial lung disease
X102v	Usual interstitial pneumonitis
X102w	Desquamative interstitial pneumonitis
X102x	Lymphoid interstitial pneumonitis
X102y	Giant cell interstitial pneumonitis
X102Z	Neurogenic pulmonary oedema
X1030	Toxic diffuse interstitial pulmonary fibrosis
X1031	Drug-induced diffuse interstitial pulmonary fibrosis
X1032	Localised pulmonary fibrosis
X1033	Mediastinal radiation fibrosis
X103a	Erionite pneumoconiosis
X103b	Kaolin pneumoconiosis
X103c	Metal pneumoconiosis
X103d	Antimony pneumoconiosis
X103e	Argyro-siderosis
X103f	Barium pneumoconiosis
X103G	Radiation-induced fibrous mediastinitis
X103i	Chronic berylliosis
X103j	Cerium pneumoconiosis
X103k	Hard metal pneumoconiosis
X103l	Nickel pneumoconiosis
X103m	Thorium pneumoconiosis
X103N	Mediastinal lymph node sarcoidosis
X103n	Zirconium pneumoconiosis

Read code	Read term
X103o	Mica pneumoconiosis
X103p	Mixed mineral dust pneumoconiosis
X103q	Liparosis
X103r	Slate pneumoconiosis
X103s	Diatomite pneumoconiosis
X103v	Chronic silicosis
X103W	Simple pneumoconiosis
X103w	Silicotuberculosis
X103X	Complicated pneumoconiosis
X103x	Wollastonite pneumoconiosis
X103Y	Rheumatoid pneumoconiosis
X103Z	Bentonite pneumoconiosis
X1043	Stage 1 pulmonary sarcoidosis
X1044	Stage 2 pulmonary sarcoidosis
X1045	Stage 3 pulmonary sarcoidosis
X1046	Stage 4 pulmonary sarcoidosis
X1047	Endobronchial sarcoidosis
X1048	Necrotising sarcoid granulomatosis
X1049	Sarcoid pulmonary calcification
X2032	Pulmonary tumour embolism
X20GM	Nasopharyngeal sarcoidosis
X309R	Cystic fibrosis of pancreas
X70Qb	Chronic necrotising pulmonary aspergillosis
X70Ra	Chronic pulmonary African histoplasmosis
X70Rg	Chronic pulmonary blastomycosis
X77nT	Carcinoid bronchial adenoma
X78kV	Metastasis to bronchus
X78kX	Secondary lymphangitic carcinoma
X78kY	Lymphangitis carcinomatosa
X78Py	Tumour of lower respiratory tract
X78Q6	Tumour of bronchus
X78Q7	Malignant tumour of bronchus
X78Q8	Squamous cell carcinoma of bronchus
X78QA	Carcinoma in situ of bronchus
X78QD	Papilloma of bronchus
X78QE	Tumour of lung parenchyma
X78QF	Malignant tumour of lung parenchyma
X78QG	Adenocarcinoma of lung
X78QI	Carcinoid tumour of lung
X78QJ	Carcinoma of lung parenchyma
X78QK	Large cell carcinoma of lung
X78QL	Clear cell carcinoma of lung
X78QM	Giant cell carcinoma of lung
X78QN	Small cell carcinoma of lung
X78QO	Oat cell carcinoma of lung
X78QP	Squamous cell carcinoma of lung

Read code	Read term
X78QQ	Epithelioid haemangioendothelioma of lung
X78QR	Lymphomatoid granulomatosis of lung
X78QS	Non-small cell lung cancer
X78QT	Pancoast tumour
X78QU	Carcinoma in situ of lung parenchyma
X78QW	Histiocytoma of lung
X78QX	Adenoma of lung
X78QY	Intrapulmonary teratoma
X78QZ	Hamartoma of lung
Xa08A	Chronic pulmonary insufficiency of prematurity
Xa0IL	Malignant pleural effusion
Xa0kb	Tropical pulmonary eosinophilia
Xa0KF	Tumour of lung
Xa0KG	Malignant tumour of lung
Xa0lb	Pleural effusion
Xa0Xi	Pulmonary lymphangiomyomatosis
Xa3A4	Metastasis to bronchus of unknown primary
Xa3A5	Metastasis to lung of unknown primary
Xa6YO	Pulmonary oedema
Xa98a	Bronchial adenoma
Xa9Bw	Pneumoconiosis
Xa9By	Diffuse pulmonary calcinosis
Xaa7C	Eosinophilic bronchitis
XaB1L	Haemorrhagic pleural effusion
XaBAp	Bronchioloalveolar adenocarcinoma of lung
XaBDdb	Cystic fibrosis with other manifestations
XaCL7	Sarcoidosis of inferior turbinates
XaEJe	Squamous cell carcinoma of bronchus in left lower lobe
XaEJf	Squamous cell carcinoma of bronchus in left upper lobe
XaEJg	Squamous cell carcinoma of bronchus in right lower lobe
XaEJh	Squamous cell carcinoma of bronchus in right middle lobe
XaEJi	Squamous cell carcinoma of bronchus in right upper lobe
XaFr7	Local recurrence of malignant tumour of lung
XaJIX	[X]Hepatopulmonary syndrome
XaMzl	Cystic fibrosis related diabetes mellitus
XaREa	Liver disease due to cystic fibrosis
XaREX	Arthropathy in cystic fibrosis
XaREZ	Cystic fibrosis with distal intestinal obstruction syndrome
XaXIE	Respiratory bronchiolitis associated interstitial lung disease
XaXIF	Interstitial lung disease due to collagen vascular disease
XaXIJ	Interstitial lung disease due to connective tissue disease
XaZr7	Exacerbation of cystic fibrosis
XE0Ya	Post-inflammatory pulmonary fibrosis
XE0Yb	Cryptogenic fibrosing alveolitis
XE0Yd	Trauma and postoperative pulmonary insufficiency
XE0Ye	Adult respiratory distress syndrome

Read code	Read term
XE0YY	Lung disease due to external agents
XE0Zn	Lung: [pulmonary oedema NOS] or [congestion]
XE0Zr	Idiopath. fibrosing alveolitis (& Hamman-Rich syndrome)
XE0ZZ	(Pneumoconiosis NOS) or (siderosis)
XE1vb	Malignant neoplasm of upper lobe, bronchus or lung
XE1vc	Malignant neoplasm of bronchus or lung NOS
XE1yJ	Ca main bronchus
XE1yL	Ca upper lobe bronchus/lung
XE1yN	Ca middle lobe bronchus/lung
XE1yP	Ca lower lobe bronchus/lung
XE2wL	Tuberculous pleural empyema
XE2wM	Pleural empyema
XE2wN	Pleural empyema with fistula
XE2wP	Pleural empyema with no fistula
XE2wR	Pleural empyema NOS

## 8.2.4 Referral to, or were managed in a specialist severe respiratory centre

### *Respiratory specific referral codes that denoted referral*

Read code	Read term
663d.	Emergency asthma admission since last appointment
663m.	Asthma accident and emergency attendance since last visit
66Yd.	COPD accident and emergency attendance since last visit
66Ye.	Emergency COPD admission since last appointment
66Yi.	Multiple COPD emergency hospital admissions
8H2P.	Emergency admission, asthma
8H3P.	Non-urgent respiratory admission
8H4C.	Referred to chest physician
8H4g.	Referral to respiratory physician
8H7j.	Referral to respiratory rapid response team
8HgT.	Discharge from community respiratory team
8HHJ.	Referral to respiratory nurse specialist
8Hkb.	Referral to respiratory outreach team
8HTT.	Referral to asthma clinic
8IEB.	Referral to respiratory clinic declined
9N1b.	Seen in chest clinic
9N2g.	Seen by respiratory physician
9N2I0	Seen by respiratory nurse specialist
9Nh2.	Under care of community respiratory team
9NNf2	Under care of respiratory physician
H2C..	Hospital acquired pneumonia
XaAcS	Referral to respiratory medicine service
XaAfm	Referral to respiratory physician

XaAip	Discharge by respiratory physician
XaAlZ	Discharge from respiratory medicine service
XaANF	Admission to respiratory medicine department
XaAPC	Under care of respiratory physician
XaASI	Seen by respiratory physician
XaAVY	Seen by respiratory medicine - service
XaAZu	Referral by respiratory physician
XaBpM	Respiratory physician Asthma accident and emergency attendance since last visit
XaIIW	
XaJeS	Referral to respiratory nurse specialist
XaJtu	Referral to asthma clinic
XaLr5	Under care of community respiratory team
XaXki	Referral to respiratory clinic declined
XaXyZ	Seen by respiratory nurse specialist
XaYWS	Referral to respiratory clinic
<u>XaZbc</u>	Discharge from community respiratory team

*Referral codes used in conjunction with an asthma diagnoses to denote a referral*

Read code	Read term
6613	Next hospital appointment
03D4.	Consultant physician
13F8.	Hospital patient
66S2.	Shared care - specialist / GP
6A1..	Patient reviewed at hospital
7L1W2	Assessment by multidisciplinary team
8B2D.	Hospital prescription
8B3S0	Post hospital discharge medication reconciliation with pt
8B3S1	Post hospital dischrge med reconciliation with medical notes
8H...	Referral for further care
8H2..	Emergency hospital admission
8H21.	Admit medical emergency unsp.
8H2Z.	Admit hospital emergency NOS
8H3..	Non-urgent hospital admission
8H3Z.	Other hospital admission NOS
8H4..	Referral to physician
8H7a.	Refer to hospital
8H7h.	Urgent referral
8H7o.	Fast track referral
8HBA.	Follow up in outpatient clinic
8HC..	Refer to hospital casualty
8HC1.	Refer to A. & E. department
8Hd..	Admission to hospital
8HD..	Refer to hospital OPD
8Hd1.	Admission by accident and emergency doctor
8HE..	Discharged from hospital

8HE1.	Discharged from outpatients
8HE2.	Discharged from inpatient care
8HE8.	Discharged from accident and emergency
8HEZ.	Discharged from hosp. care NOS
8HJ..	Self-referral to hospital
8HJJ.	Self-referral to accident and emergency department
8Hk..	Referred to service
8Hp..	Choose and book referral
8Hu..	Admission to accident and emergency department
8HV..	Private referral
93A..	Discharge summary
9b00.	A&E report
9b0A.	Discharge report
9b0B.	Discharge summary report
9b0g.	Referral letter
9b0M.	Hospital outpatient report
9b8D.	Accident & emergency
9bK1.	Outpatient letter
9c0B.	Referral
9kK..	Choice and booking - enhanced services administration
9N04.	Seen in emergency clinic
9N19.	Seen in hospital casualty
9N1A.	Seen in hospital out-pat.
9N1y3	Seen in emergency clinic
9N2G.	Seen by consultant
9N36.	Letter from specialist
9N3D.	Letter received
9N58.	Emergency appointment
9N62.	Referred by hospital Dr.
9Nc0.	Patient declines copy of referral letter
9NC7.	Discharge letter sent to general practitioner
9ND8.	I/patient disch summary rec'vd
9Nk4.	Seen in urgent care centre
9NM..	Attending clinic
Xa1qK	Admission to hospital
Xa4HR	Referral
Xa6p1	Number of admissions
XaAL0	Admission by accident and emergency doctor
XaAMw	Admission to ward
XaAZQ	Referral by GP
XaboT	Post hospital discharge followed up within 3 days
XaBPg	Discharge from hospital
XaFqz	Discharge summary
Xalg2	A&E report
XalgE	Discharge summary report
Xalng	Hospital prescription
XaKYE	Discharged from accident and emergency



XaN5D	Discharge letter sent to general practitioner
XaQGb	Medication monitored in secondary care
XaQW2	Self-referral to accident and emergency department
XaWSQ	Post hospital discharge medication reconciliation with pt
<u>XM1Tt</u>	Letter from consultant

## 8.2.5 Codes for Ethnicity classification

GLI (2012) Category	Read code	Read term
Caucasian	9S10.00	White British
Caucasian	9S13.00	White Scottish
Caucasian	9S14.00	Other white British ethnic group
Caucasian	9i00.00	White British - ethnic category 2001 census
Caucasian	9i20.00	English - ethnic category 2001 census
Caucasian	9i21.00	Scottish - ethnic category 2001 census
Caucasian	9i22.00	Welsh - ethnic category 2001 census
Caucasian	9i23.00	Cornish - ethnic category 2001 census
Caucasian	9S11.00	White Irish
Caucasian	9SA9.00	Irish (NMO)
Caucasian	9SI..00	Irish traveller
Caucasian	9i1..00	Irish - ethnic category 2001 census
Caucasian	9i10.00	White Irish - ethnic category 2001 census
Caucasian	9i24.00	Northern Irish - ethnic category 2001 census
Caucasian	9i2C.00	Irish Traveller - ethnic category 2001 census
Caucasian	9S12.00	Other white ethnic group
Caucasian	9SAA.00	Greek/Greek Cypriot (NMO)
Caucasian	9SAA.11	Greek (NMO)
Caucasian	9SAA.12	Greek Cypriot (NMO)
Caucasian	9SAB.00	Turkish/Turkish Cypriot (NMO)
Caucasian	9SAB.11	Turkish (NMO)
Caucasian	9SAB.12	Turkish Cypriot (NMO)
Caucasian	9SAC.00	Other European (NMO)
Caucasian	9T1..00	New Zealand ethnic groups
Caucasian	9T1Y.00	Other New Zealand ethnic group
Caucasian	9T1Z.00	New Zealand ethnic group NOS
Caucasian	9i2..00	Other White background - ethnic category 2001 census
Caucasian	9i26.00	Cypriot (part not stated) - ethnic category 2001 census
Caucasian	9i27.00	Greek - ethnic category 2001 census
Caucasian	9i28.00	Greek Cypriot - ethnic category 2001 census
Caucasian	9i29.00	Turkish - ethnic category 2001 census
Caucasian	9i2A.00	Turkish Cypriot - ethnic category 2001 census
Caucasian	9i2B.00	Italian - ethnic category 2001 census
Caucasian	9i2D.00	Traveller - ethnic category 2001 census
Caucasian	9i2E.00	Gypsy/Romany - ethnic category 2001 census
Caucasian	9i2F.00	Polish - ethnic category 2001 census
Caucasian	9i2G.00	Baltic Estonian/Latvian/Lithuanian - ethn categ 2001 census

		Commonwealth (Russian) Indep States - ethn categ 2001 census
Caucasian	9i2H.00	
Caucasian	9i2J.00	Kosovan - ethnic category 2001 census
Caucasian	9i2K.00	Albanian - ethnic category 2001 census
Caucasian	9i2L.00	Bosnian - ethnic category 2001 census
Caucasian	9i2M.00	Croatian - ethnic category 2001 census
Caucasian	9i2N.00	Serbian - ethnic category 2001 census
Caucasian	9i2P.00	Other republics former Yugoslavia - ethnic categ 2001 census
	9i2T.00	Other White or White unspecified ethnic category 2001 census
Caucasian		
Caucasian	9S1..00	White
Caucasian	9SB3.00	Other ethnic, mixed white orig
Caucasian	9i25.00	Ulster Scots - ethnic category 2001 census
Caucasian	9i2Q.00	Mixed Irish and other White - ethnic category 2001 census
	9i2R.00	Oth White European/European unsp/Mixed European 2001 census
Caucasian		
Caucasian	9i2S.00	Other mixed White - ethnic category 2001 census
Caucasian	9SB5.00	Black Caribbean and White
Caucasian	9SB6.00	Black African and White
Caucasian	9i3..00	White and Black Caribbean - ethnic category 2001 census
Caucasian	9i4..00	White and Black African - ethnic category 2001 census
Mixed	9SB2.00	Other ethnic, Asian/White orig
Mixed	9i5..00	White and Asian - ethnic category 2001 census
Mixed	9S45.00	Black E Afric Asia/Indo-Caribb
Mixed	9S45.11	Black East African Asian
Mixed	9S45.12	Black Indo-Caribbean
Mixed	9S46.00	Black Indian sub-continent
Mixed	9S47.00	Black - other Asian
Mixed	9S52.00	Other Black - Black/Asian orig
Mixed	9SA6.00	E Afric Asian/Indo-Carib (NMO)
Mixed	9i60.00	Black and Asian - ethnic category 2001 census
Mixed	9i61.00	Black and Chinese - ethnic category 2001 census
Mixed	9iA7.00	Caribbean Asian - ethnic category 2001 census
Mixed	9SB..00	Other ethnic, mixed origin
Mixed	9SB4.00	Other ethnic, other mixed orig
Mixed	9i6..00	Other Mixed background - ethnic category 2001 census
Mixed	9i63.00	Chinese and White - ethnic category 2001 census
Mixed	9i64.00	Asian and Chinese - ethnic category 2001 census
	9i65.00	Other Mixed or Mixed unspecified ethnic category 2001 census
Mixed		
Mixed	9S51.00	Other Black - Black/White orig
Mixed	9SB1.00	Other ethnic, Black/White orig
Mixed	9i62.00	Black and White - ethnic category 2001 census
White	9S6..00	Indian
White	9SA7.00	Indian sub-continent (NMO)
White	9i7..00	Indian or British Indian - ethnic category 2001 census
White	9iA1.00	Punjabi - ethnic category 2001 census
White	9S7..00	Pakistani

White	9i8..00	Pakistani or British Pakistani - ethnic category 2001 census
White	9iA2.00	Kashmiri - ethnic category 2001 census
White	9S8..00	Bangladeshi
White	9i9..00	Bangladeshi or British Bangladeshi - ethn categ 2001 census
White	9SA6.11	East African Asian (NMO)
White	9SA8.00	Other Asian (NMO)
White	9SH..00	Other Asian ethnic group
White	9iA..00	Other Asian background - ethnic category 2001 census
White	9iA3.00	East African Asian - ethnic category 2001 census
White	9iA8.00	British Asian - ethnic category 2001 census
White	9iA9.00	Mixed Asian - ethnic category 2001 census
White	9iAA.00	Other Asian or Asian unspecified ethnic category 2001 census
Black	9S2..00	Black Caribbean
Black	9S42.00	Black Caribbean/W.I./Guyana
Black	9S42.11	Black Caribbean
Black	9S42.12	Black West Indian
Black	9S42.13	Black Guyana
Black	9SA3.00	Caribbean I./W.I./Guyana (NMO)
Black	9SA3.11	Caribbean Island (NMO)
Black	9SA3.12	West Indian (NMO)
Black	9SA3.13	Guyana (NMO)
Black	9iB..00	Caribbean - ethnic category 2001 census
Black	9S3..00	Black African
Black	9S44.00	Black - other African country
Black	9SA5.00	Other African countries (NMO)
Black	9iC..00	African - ethnic category 2001 census
Black	9iD0.00	Somali - ethnic category 2001 census
Black	9iD1.00	Nigerian - ethnic category 2001 census
Black	9S4..00	Black, other, non-mixed origin
Black	9S41.00	Black British
Black	9S43.00	Black N African/Arab/Iranian
Black	9S43.11	Black North African
Black	9S43.12	Black Arab
Black	9S43.13	Black Iranian
Black	9S48.00	Black Black - other
Black	9S5..00	Black - other, mixed
Black	9SG..00	Other black ethnic group
Black	9iD..00	Other Black background - ethnic category 2001 census
Black	9iD2.00	Black British - ethnic category 2001 census
Black	9iD3.00	Mixed Black - ethnic category 2001 census
Black	9iD4.00	Other Black or Black unspecified ethnic category 2001 census
Chinese	9S9..00	Chinese
Chinese	9iE..00	Chinese - ethnic category 2001 census
Mixed/Other	9SA..00	Other ethnic non-mixed (NMO)
Mixed/Other	9SA1.00	Brit. ethnic minor. spec.(NMO)
Mixed/Other	9SA2.00	Brit. ethnic minor. unsp (NMO)

Mixed/Other	9SA4.00	N African Arab/Iranian (NMO)
Mixed/Other	9SA4.11	North African Arab (NMO)
Mixed/Other	9SA4.12	Iranian (NMO)
Mixed/Other	9SAD.00	Other ethnic NEC (NMO)
Mixed/Other	9SC..00	Vietnamese
Mixed/Other	9SJ..00	Other ethnic group
Mixed/Other	9T1A.00	Other Pacific ethnic group
Mixed/Other	9iA4.00	Sri Lankan - ethnic category 2001 census
Mixed/Other	9iA5.00	Tamil - ethnic category 2001 census
Mixed/Other	9iA6.00	Sinhalese - ethnic category 2001 census
Mixed/Other	9iF..00	Other - ethnic category 2001 census
Mixed/Other	9iF0.00	Vietnamese - ethnic category 2001 census
Mixed/Other	9iF1.00	Japanese - ethnic category 2001 census
Mixed/Other	9iF2.00	Filipino - ethnic category 2001 census
Mixed/Other	9iF3.00	Malaysian - ethnic category 2001 census
Mixed/Other	9iF4.00	Buddhist - ethnic category 2001 census
Mixed/Other	9iF5.00	Hindu - ethnic category 2001 census
Mixed/Other	9iF6.00	Jewish - ethnic category 2001 census
Mixed/Other	9iF7.00	Muslim - ethnic category 2001 census
Mixed/Other	9iF8.00	Sikh - ethnic category 2001 census
Mixed/Other	9iF9.00	Arab - ethnic category 2001 census
Mixed/Other	9iFA.00	North African - ethnic category 2001 census
Mixed/Other	9iFB.00	Mid East (excl Israeli, Iranian & Arab) - eth cat 2001 cens
Mixed/Other	9iFC.00	Israeli - ethnic category 2001 census
Mixed/Other	9iFD.00	Iranian - ethnic category 2001 census
Mixed/Other	9iFE.00	Kurdish - ethnic category 2001 census
Mixed/Other	9iFF.00	Moroccan - ethnic category 2001 census
Mixed/Other	9iFG.00	Latin American - ethnic category 2001 census
Mixed/Other	9iFH.00	South and Central American - ethnic category 2001 census
Mixed/Other	9iFJ.00	Mauritian/Seychellois/Maldivian/St Helena eth cat 2001 census
Mixed/Other	9iFK.00	Any other group - ethnic category 2001 census
Unknown	9i6E.00	Patient ethnicity unknown
Unknown	9S...00	Ethnic groups (1991 census)
Unknown	9SD..00	Ethnic group not given - patient refused
Unknown	9SE..00	Ethnic group not recorded
Unknown	9SZ..00	Ethnic groups (census) NOS
Unknown	9T...00	Ethnicity and other related nationality data
Unknown	9i...00	Ethnic category - 2001 census
Unknown	9i0..00	British or mixed British - ethnic category 2001 census
Unknown	9iG..00	Ethnic category not stated - 2001 census

### 8.2.6 Codes for height, weight and BMI

Read code	Read term
229..	Height
22A..	Weight

## 8.2.7 Codes for Smoking

Read code	Read term
<b>Never smoked</b>	
1371.	Never smoked tobacco
1371.	Never smoked tobacco
137D.	Admitted tobacco cons untrue ?
137I.	Passive smoker
13WF.	Family smoking history
13WF.	Family smoking history
13WF4	Passive smoking risk
Ub0oq	Non-smoker
XE0oh	Never smoked tobacco
XM1Jh	Smoker in the family
<b>Current smoker</b>	
137..	Tobacco consumption
137..	Tobacco consumption
1372.	Trivial smoker - < 1 cig/day
1372.	Trivial smoker - < 1 cig/day
1373.	Light smoker - 1-9 cigs/day
1374.	Moderate smoker - 10-19 cigs/d
1375.	Heavy smoker - 20-39 cigs/day
1376.	Very heavy smoker - 40+cigs/d
137C.	Keeps trying to stop smoking
137G.	Trying to give up smoking
137H.	Pipe smoker
137J.	Cigar smoker
137M.	Rolls own cigarettes
137P.	Cigarette smoker
137P.	Cigarette smoker
137Q.	Smoking started
137Q.	Smoking started
137R.	Current smoker
137V.	Smoking reduced
137W.	Chews tobacco
137X.	Cigarette consumption
137Y.	Cigar consumption
137Z.	Tobacco consumption NOS
137b.	Ready to stop smoking
137c.	Thinking about stopping smoking
137d.	Not interested in stopping smoking
137e.	Smoking restarted
137g.	Cigarette pack-years
Ub0pT	Chews tobacco
Ub1tI	Cigarette consumption
Ub1tJ	Cigar consumption
XE0og	Tobacco smoking consumption
XE0oi	Trivial cigarette smoker (less than one cigarette/day)
XE0oq	Cigarette smoker
XE0or	Smoking started
XaBSp	Smoking restarted
Xaltg	Reason for restarting smoking
Xallu	Smoking reduced
XalkX	Ready to stop smoking
XalkW	Thinking about stopping smoking
XalkY	Not interested in stopping smoking
XaluQ	Cigarette pack-years
<b>Ex smoker</b>	

1377.	Ex-trivial smoker (<1/day)
1378.	Ex-light smoker (1-9/day)
1379.	Ex-moderate smoker (10-19/day)
137A.	Ex-heavy smoker (20-39/day)
137B.	Ex-very heavy smoker (40+/day)
137F.	Ex-smoker - amount unknown
137K.	Stopped smoking
137L.	Current non-smoker
137N.	Ex pipe smoker
137O.	Ex cigar smoker
137S.	Ex smoker
137T.	Date ceased smoking
137a.	Pipe tobacco consumption
137f.	Reason for restarting smoking
Ub1na	Ex-smoker
Ub1tK	Pipe tobacco consumption

### 8.2.8 Codes for Royal College of Physicians (RCP) Asthma 3-Questions

Read code	Read term
6635	Increasing exercise wheeze
663N.	Asthma disturbing sleep
663N0	Asthma causing night waking
663N1	Asthma disturbs sleep weekly
663N2	Asthma disturbs sleep frequently
663O.	Asthma not disturbing sleep
663O0	Asthma never disturbs sleep
663P.	Asthma limiting activities
663P0	Asthma limits activities 1 to 2 times per month
663P1	Asthma limits activities 1 to 2 times per week
663P2	Asthma limits activities most days
663Q.	Asthma not limiting activities
663e.	Asthma restricts exercise
663	Asthma sometimes restricts exercise
6630	Asthma severely restricts exercise
663f.	Asthma never restricts exercise
663q.	Asthma daytime symptoms
663r.	Asthma causes night symptoms 1 to 2 times per month
663s.	Asthma never causes daytime symptoms
663t.	Asthma causes daytime symptoms 1 to 2 times per month
663u.	Asthma causes daytime symptoms 1 to 2 times per week
663v.	Asthma causes daytime symptoms most days
663w.	Asthma limits walking up hills or stairs
663x.	Asthma limits walking on the flat
66YP.	Asthma night-time symptoms
66Yq.	Asthma causes night time symptoms 1 to 2 times per week
66Yr.	Asthma causes symptoms most nights
66Ys.	Asthma never causes night symptoms

XaIIZ	Asthma daytime symptoms
XaINZ	Asthma causes night symptoms 1 to 2 times per month
XaINa	Asthma never causes daytime symptoms
XaINb	Asthma causes daytime symptoms 1 to 2 times per month
XaINc	Asthma causes daytime symptoms 1 to 2 times per week
XaINd	Asthma causes daytime symptoms most days
XaINf	Asthma limits walking up hills or stairs
XaINg	Asthma limits walking on the flat
XaIoE	Asthma night-time symptoms
XaXZm	Asthma causes night time symptoms 1 to 2 times per week
XaXZp	Asthma causes symptoms most nights
XaXZs	Asthma limits activities 1 to 2 times per month
XaXZu	Asthma limits activities 1 to 2 times per week
XaXZx	Asthma limits activities most days
XaY2V	Asthma never causes night symptoms

### 8.2.9 Codes for Asthma Control Test (ACT)

Read code	Read term
38DL.	Asthma control test
XaQHq	Asthma control test

### 8.2.10 Codes for Exacerbation

Read code	Read term
H333.	Acute exacerbation of asthma
663y.	Number of asthma exacerbations in past year
Xa1hD	Exacerbation of asthma
Xafdj	Acute severe exacerbation of asthma
Xafdy	Moderate acute exacerbation of asthma
Xafdz	Life threatening acute exacerbation of asthma
XaINh	Number of asthma exacerbations in past year

### 8.2.11 Codes Blood Eosinophil Counts

Read code	Read term
42K..	Eosinophil count
42K1.	Eosinophil count normal
42K2.	Eosinopenia
42K3.	Eosinophil count raised
42KZ.	Eosinophil count NOS
42b9.	Percentage eosinophils
4E32.	Sputum: eosinophilia
D403	Hereditary eosinophilia
D403.	Eosinophilia
D4033	Allergic eosinophilia
D4034	Secondary eosinophilia NOS

D403z	Eosinophilia NOS
H583.	Pulmonary eosinophilia
H5831	Tropical eosinophilia
H583z	Pulmonary eosinophilia NOS
J08z	Oral mucosa eosinoph.granuloma
X00I1	Eosinophil non-allergic rhinit
X102G	Asthmatic pulm eosinophilia
X102H	Cryptogenic pulm eosinophilia
X3009	Eosinophilic oesophagitis
X80VM	Eosinophil
Xa0kb	Tropical pulm eosinophilia
Y02Rr	Eosinophil non-allergic rhinit
Y108t	Eosinophilic pneumonia
Y108u	EP - Eosinophilic pneumonia
Y108v	Pulm infiltrate + eosinophilia
Y108w	PIE - Pul infil + eosinophilia
Y108z	Acute eosinophilic pneumonia
Y1090	Simple pulmonary eosinophilia
Y1094	Asthmatic pulm eosinophilia
Y1095	Cryptogenic pulm eosinophilia
Y1096	Chronic eosinophilic pneumonia
Y1097	Crypt eosinophilic pneumonia
Y1098	Chronic pulmonary eosinophilia
Y1099	Tropical pulm eosinophilia
Y20fq	Eosinophilic disorder
Y3017	Eosinophilic oesophagitis
Y80ID	Eosinophil
Ya14p	EP-Acute eosinophil pneumonia
Yaeib	Percentage eosinophil count
YakcK	Eosinophil count - observation

### 8.2.12 Codes for spirometry measurements

Read code	Read term
3396.	Forced vital capacity - FVC
33960	FVC - forced vital capacity normal
33961	FVC - forced vital capacity abnormal
3397.	Forced expiratory volume - FEV
3398.	FEV1/FVC ratio normal
3399.	FEV1/FVC ratio abnormal
339a.	FEV1 before bronchodilation
339b.	FEV1 after bronchodilation
339e.	FEV1 pre steroids
339f.	FEV1 post steroids
339h.	FVC after bronchodilation
339j.	FEV1/FVC ratio pre steroids
339k.	FEV1/FVC ratio post steroids
339l.	FEV1/FVC ratio before bronchodilator
339M.	FEV1/FVC ratio
339m.	FEV1/FVC ratio after bronchodilator
339O.	Forced expired volume in 1 second
339O1	Forced expired volume in one second/vital capacity ratio



Read code	Read term
339P.	Expected FEV1
339R.	FEV1/FVC percent
339s.	Forced vital capacity before bronchodilation
339S.	Percent predicted FEV1
339S0	Percentage predicted FEV1 after bronchodilation
339T.	FEV1/FVC > 70% of predicted
339U.	FEV1/FVC < 70% of predicted
X77Qu	Forced expired volume in 1 second
X77Ra	Forced expired volume in one sec/forced vital capacity ratio
XaCJK	Expected FEV1
XaEFy	FEV1/FVC percent
XaEFz	Percent predicted FEV1
XalxQ	FEV1 before bronchodilation
XalxR	FEV1 after bronchodilation
XalxU	FEV1 pre steroids
XalxV	FEV1 post steroids
XaJ3K	FVC after bronchodilation
XaJ9B	FEV1/FVC ratio pre steroids
XaJ9C	FEV1/FVC ratio post steroids
XaJ9D	FEV1/FVC ratio before bronchodilator
XaJ9E	FEV1/FVC ratio after bronchodilator
XaPpl	Forced vital capacity before bronchodilation
XaVx3	Percentage predicted FEV1 after bronchodilation

### 8.2.13 Codes for Peak Expiratory Flow

Read code	Read term
339..	Respiratory flow rates
3391	Resp. flow rate measured
3392	Resp. flow rate not measured
3393	Resp. flow rate normal
3394	Resp. flow rate abnormal
3395	Peak exp. flow rate: PEFR/PFR
339A.	PFR - before bronchodilation
339B.	PFR - after bronchodilation
339C.	PFR - expected
339D.	PFR - best ever
339E.	PFR >80% of predicted
339F.	PFR 60-80% of predicted
339G.	PFR <60% of predicted
339H.	Predicted peak flow
339I.	Expected peak flow rate x 50%
339J.	Optimal peak flow rate
339K.	Expected peak flow rate x 30%
339L.	Expected peak flow rate x 80%
339V.	Recorded/predicted PEFR ratio
339W.	Worst peak flow rate
339X.	Percentage of best ever PEFR
339Y.	Percentage of PEFR variability
339Z.	Respiratory flow rates NOS
339c.	PEFR pre steroids
339d.	PEFR post steroids

339g.	Serial peak expirat flow rate
339n.	Serial PEFR abnormal
339o.	PEFR using EN 13826 device
339p.	Predict PEFR using EN13826 std
339u.	Peak inspiratory flow rate
745C0	Measure peak expirat flow rate

#### 8.2.14 Codes for (FeNO)

Read code	Read term
XaRCB	Exhaled nitric oxide test
3C...	Exhaled nitric oxide test

#### 8.2.15 Codes for allergic rhinitis

Read code	Read term
H120.	Chronic rhinitis
H1200	Chronic simple rhinitis
H1201	Chronic catarrhal rhinitis
H1202	Chronic hypertrophic rhinitis
H1203	Chronic atrophic rhinitis
H1204	Chronic infective rhinitis
H1205	Chronic ulcerative rhinitis
H1206	Chronic membranous rhinitis
H1207	Chronic fibrinous rhinitis
H120z	Chronic rhinitis NOS
H17..	Allergic rhinitis
H170.	Allergic rhinitis due to pollens
H171.	Allergic rhinitis due to other allergens
H172.	Allergic rhinitis due to unspecified allergen
H17z.	Allergic rhinitis NOS
H170.	Hay fever - pollens
H171.	Hay fever - other allergen
H172.	Hay fever - unspecified allergen
X00I1	NARES - Non-allergic rhinitis with eosinophilia
X00I1	Non-allergic rhinitis with eosinophilia
H1206	Chronic membranous rhinitis
XE0Y6	Allergic rhinitis due to other allergens
XE0Y5	AR - Allergic rhinitis
Xa0IX	Seasonal allergic rhinitis
XE2QI	Allergic rhinitis due to pollens
Hyu20	[X]Other seasonal allergic rhinitis
X00I8	Hay fever - other allergen
X00I9	Hay fever - unspecified allergen
X1020	Hay fever with asthma

H170.	Pollinosis (& allergic rhinitis due to pollens)
X00IA	Perennial allergic rhinitis
X00IB	Perennial allergic rhinitis with seasonal variation
H17z.	Allergic rhinitis NOS
Hyu21	[X]Other allergic rhinitis
XE0Y6	Allergic rhinitis due to other allergens
XE0Y7	Allergic rhinitis due to unspecified allergen
H17..	Rhinitis: [perennial] or [allergic] (Hay fever) or (allergic rhinitis) due to unspecified allergen
H172.	
H1203	Chronic atrophic rhinitis
H1204	Chronic infective rhinitis
H18..	VMR - Vasomotor rhinitis
X00kz	Rhinitis caseosa
H1207	Chronic fibrinous rhinitis
X00I2	NINA - Non-infective non-allergic rhinitis
XE0Y5	Allergic rhinitis (Hay fever) or (allergic rhinitis) due to unspecified allergen
H172.	
X00I1	Eosinophilic non-allergic rhinitis
XE0Y7	Allergic rhinitis due to unspecified allergen
X00I2	Non-infective non-allergic rhinitis
XE0Xx	Chronic rhinitis
X00ky	Rhinitis sicca
X00kz	Rhinitis caseosa
X00I1	Eosinophilic non-allergic rhinitis
X00I2	Non-infective non-allergic rhinitis
Xa2dV	Ozaena
H18..	Vasomotor rhinitis
XE0Y5	Allergic rhinitis
Xa0IX	Seasonal allergic rhinitis
XE2QI	Allergic rhinitis due to pollens
Hyu20	[X]Other seasonal allergic rhinitis
X00I8	Hay fever - other allergen
X00I9	Hay fever - unspecified allergen
X1020	Hay fever with asthma
H170.	Pollinosis (& allergic rhinitis due to pollens)
X00IA	Perennial allergic rhinitis
X00IB	Perennial allergic rhinitis with seasonal variation
H17z.	Allergic rhinitis NOS
Hyu21	[X]Other allergic rhinitis
XE0Y6	Allergic rhinitis due to other allergens
XE0Y7	Allergic rhinitis due to unspecified allergen
H17..	Rhinitis: [perennial] or [allergic] (Hay fever) or (allergic rhinitis) due to unspecified allergen
H172.	
H120z	Chronic rhinitis NOS
XE0Xy	Chronic catarrhal rhinitis

XE2RT	Chronic rhinitis (& ozaena)
XE0Xy	Chronic catarrhal rhinitis
X00IA	Perennial allergic rhinitis
X00IB	Perennial allergic rhinitis with seasonal variation
Hyu21	[X]Other allergic rhinitis
Xa0IX	Seasonal allergic rhinitis
XE2QI	Allergic rhinitis due to pollens
Hyu20	[X]Other seasonal allergic rhinitis
X00I8	Hay fever - other allergen
X00I9	Hay fever - unspecified allergen
X1020	Hay fever with asthma
H170.	Pollinosis (& allergic rhinitis due to pollens)
H18..	Vasomotor rhinitis
H120z	Chronic rhinitis NOS
XE2QI	Allergic rhinitis due to pollens
Hyu20	[X]Other seasonal allergic rhinitis
XaNkV	Acute rhinosinusitis
H1205	Chronic ulcerative rhinitis
H1200	Chronic simple rhinitis
X00ky	Rhinitis sicca
H1202	Chronic hypertrophic rhinitis
X00IB	Perennial allergic rhinitis with seasonal variation
X00Zj	Hay fever conjunctivitis
X1020	Hay fever with asthma
X00I8	Hay fever - other allergen
Xa0IX	Hay fever
H170.	Pollinosis (& allergic rhinitis due to pollens)
12D4.	FH: Hay fever
X00IB	Perennial allergic rhinitis with seasonal variation
X00I9	Hay fever - unspecified allergen

### 8.2.16 Codes for eczema

Read code	Read term
8HTu.	Referral to eczema clinic
A540.	Eczema herpeticum - Kaposi's varicelliform eruption
AB030	Dermatophytosis of groin
AB031	Dermatophytosis of the perianal area
F4D3.	Noninfected eyelid dermatosis
F4D31	Contact or allergic eyelid dermatitis
F4D33	Eyelid discoid lupus erythematosus
F4D3z	Noninfected eyelid dermatoses NOS
F4D4.	Infective eyelid dermatitis of types resulting in deformity
F4D5.	Other eyelid infective dermatitis
F4D6.	Parasitic eyelid infestation
F5024	Acute eczematoid otitis extern
G831.	Varicose veins of the leg with eczema

Read code	Read term
M10..	Erythematous squamous dermatosis
M100.	Pityriasis capitis - dandruff
M102.	Infectious eczematoid dermatitis
M10z.	Erythematous squamous dermatosis NOS
M11..	Atopic dermatitis and related conditions
M111.	Atopic dermatitis/eczema
M112.	Infantile eczema
M113.	Flexural eczema
M114.	Allergic (intrinsic) eczema
M115.	Besnier's prurigo
M117.	Neurodermatitis - atopic
M118.	Infantile seborrheic dermatitis
M1180	Infantile seborrheic dermatitis capitis
M118z	Infantile seborrheic dermatitis NOS
M119.	Discoid eczema
M11A.	Asteatotic eczema
M11z.	Atopic dermatitis NOS
M12..	Contact dermatitis and other eczemas
M125z	Contact dermatitis due to food NOS
M1280	Allergic contact dermatitis due to adhesives
M1283	Allergic contact dermatitis due to dyes
M1285	Allergic contact dermatitis due to food in contact with skin
M129.	Irritant contact dermatitis
M1290	Irritant contact dermatitis due to cosmetics
M1291	Irritant contact dermatitis due drugs in contact with skin
M1292	Irritant contact dermatitis due to other chemical products
M1293	Irritant contact dermatitis due to food in contact with skin
M1294	Irritant contact dermatitis due to plants, except food
M12A0	Drug phototoxic response
M12A1	Drug photoallergic response
M12y8	Contact dermatitis due to metals
M12z0	Dermatitis NOS
M12z1	Eczema NOS
M12z2	Infected eczema
M12z3	Hand eczema
M12z4	Erythrodermic eczema
M13..	Ingestion dermatitis
M131.	Ingestion dermatitis due to food
M13y.	Ingestion dermatitis due to other specified substance
M13z.	Ingestion dermatitis NOS
M1452	Senile dermatitis herpetiformis
M183z	Lichenification NOS
M1y1.	Cutaneous autosensitization
M2521	Pompholyx unspecified
M2522	Cheirpompholyx
M2523	Podopompholyx

Read code	Read term
Myu2.	[X]Dermatitis and eczema
Myu21	[X]Allergic contact dermatitis due to oth chemical products
Myu23	[X]Allergic contact dermatitis due to other agents
Myu26	[X]Unspcfd contact dermatitis due to other chemical products
Myu27	[X]Unspecified contact dermatitis due to other agents
Myu28	[X]Dermatitis due to other substances taken internally
Myu29	[X]Dermatitis due to unspecified substance taken internally
Myu2C	[X]Other specified dermatitis
Ua1AR	Occupational eczema
X00YO	Seborrhoeic blepharitis
X00YS	Infectious dermatosis of eyelid
X00YT	Bacterial dermatitis of eyelid
X00YV	Viral dermatitis of eyelid
X00iT	Eczematous otitis externa
X30Cp	Peristomal dermatitis
X40Fx	Nipple eczema
X5005	Eczema vaccinatum
X503I	Friction eczema
X504O	Fibreglass dermatitis
X504r	Photosensitisation reaction
X504s	Phototoxic reaction
X504t	Phytophotodermatitis
X504u	Strimmer dermatitis
X504v	Photoallergic eczema
X5051	Chronic actinic dermatitis
X505H	Cactus dermatitis
X505K	Eczema
X505L	Hand eczema
X505M	Constitutional eczema
X505N	Atopic dermatitis of hands
X505P	Discoid atopic dermatitis
X505Q	Erythrodermic atopic dermatitis
X505R	Follicular atopic dermatitis
X505S	Pruriginous atopic dermatitis
X505T	Photosensitive atopic dermatitis
X505U	Photoaggravated atopic dermatitis
X505V	Constitutional eczema of hands and feet
X505W	Acute cheiropodopompholyx
X505X	Hyperkeratotic eczema of hands and feet
X505Y	Discoid eczema of hands and feet
X505Z	Constitutional eczema of hands
X505a	Apron pattern of vesicular eczema of hands
X505b	Hyperkeratotic fissured hand eczema
X505c	Hyperkeratotic eczema of palms
X505d	Constitutional discoid hand eczema
X505e	Constitutional fingertip eczema

Read code	Read term
X505f	Constitutional eczema of feet
X505g	Acute podopompholyx
X505h	Chronic podopompholyx
X505i	Hyperkeratotic eczema of soles
X505j	Discoïd eczema
X505l	Psoriasiform eczema
X505o	Truncal seborrhoeic dermatitis
X505p	Flexural seborrhoeic dermatitis
X505r	Grease contact dermatitis
X505s	Oil contact dermatitis
X505t	Elastoplast contact dermatitis
X505u	Egg contact dermatitis
X505w	Perfume contact dermatitis
X505y	Nickel sensitivity
X505z	Implant allergic nickel contact dermatitis
X5060	Ingested allergen contact dermatitis
X5061	Photoallergic contact dermatitis
X5062	Occupational allergic contact dermatitis
X5063	Irritant contact dermatitis
X5064	Acute irritant contact dermatitis
X5066	Chronic irritant contact dermatitis
X5068	Saliva-induced contact dermatitis
X506E	Subacute prurigo
X506F	Chronic prurigo
X506G	Dermographic prurigo
X506l	Juvenile plantar dermatosis
X506K	Gravitational eczema
X506L	Chronic superficial scaly dermatitis
X506M	Eosinophilic pustular folliculitis
X506N	Exudative discoïd and lichenoid dermatosis
X506O	Papular eczema with elimination of papillary oedema
X506P	Desiccation eczema
X506Q	Asteatotic eczema
X506T	Erythroderma
X506U	Site-specific eczema
X506d	Eczematized psoriasis
X50AK	Perioral dermatitis
X50Gj	Eczematous drug eruption
X50Gk	Seborrhoeic eczema-like eruption
X50Gm	Drug-induced erythroderma
X70QP	Dermatophytosis of groin and pubic area
XE1An	Seborrhoeic dermatitis
XE1Av	Eczema NOS
XE1Aw	Ingestion dermatitis due to drugs
XE1Ay	Juvenile dermatitis herpetiformis
XE1C6	Atopic eczema/dermatitis NOS

Read code	Read term
XE1CG	(Contact dermat NOS) or (discoid eczema) or (nummul eczema)
XE1CI	Dermatitis &/or eczemas NOS
XE1Cu	(Pompholyx) or (cheiropompholyx) or (podopompholyx)
XM1GA	Pompholyx
XM1PZ	Dermatitis medicamentosa
Xa0WJ	Swimming pool dermatitis
Xa0p8	Dermatitis of eyelid
Xa1dl	Unclassifiable eczema
Xa7IZ	Eczema of face
Xa7lb	Eczema of wrist
XaBml	Eczema of leg
XaBmm	Eczema of foot
XaBsL	Chronic lichenified atopic dermatitis
XaINM	Exacerbation of eczema
XaL2Q	Periocular dermatitis
XaQfn	Referral to eczema clinic
XaY4Z	Infective eczematoid dermatitis
XaY4o	Infected eczema
XaYX9	Irritant contact dermatitis due to incontinence

### 8.2.17 Codes for nasal polyps

Read code	Read term
XalwR	Functional endoscopic sinus surg - polypectomy nasal sinus
H11y1	Polyp of ethmoidal sinus
H11y2	Polyp of maxillary sinus
H11y3	Polyp of sphenoidal sinus
H11yz	Other polyp of sinus NOS
H11z.	Nasal polyp NOS
Hyu23	[X]Other polyp of sinus
X1024	Aspirin-sensitive asthma with nasal polyps
XE0Xv	Other polyp of sinus
XE0Xw	Maxillary sinus polyp
Xa0MF	Nasal sinus polyp
H11y0	Polyp of frontal sinus
H11y.	Other polyp of sinus
H111z	Polypoid sinus degeneration NOS
H11..	Nasal polyps
H110.	Polyp of nasal cavity
H1100	Choanal polyp
H1101	Nasopharyngeal polyp
H110z	Polyp of nasal cavity NOS
H111.	Polypoid sinus degeneration
H1110	Woakes' ethmoiditis
XaDyR	Nasal polypectomy using auto-debrider



Read code	Read term
XaBIB	Nasal polyp sample
XaBDP	Nasal septal polypectomy
74060	Nasal polypectomy
XaOCA	Uncinectomy and polypectomy
74067	Nasal polypectomy using auto-debrider
74116	Removal of antrochoanal polyp
X70Rm	Rhinospordial mucosal polyp
2D33.	O/E - nasal polyp present

### 8.2.18 Codes for anxiety/depression

Read code	Read term
173f.	Anxiety about breathlessness
1B1..	General nervous symptoms
1B12.	Nerves - nervousness
1B13.	Anxiousness
1B1H.	Frightened
1B1Z.	General nervous symptom NOS
1BT..	Depressed mood
1Bb0.	Fear of falling
62T1.	Puerperal depression
8BK0.	Depression management programme
8CAZ0	Patient given advice about management of anxiety
8CAa.	Patient given advice about management of depression
8G94.	Anxiety management training
8HHp.	Referral for guided self-help for anxiety
8HHq.	Referral for guided self-help for depression
9H90.	Depression annual review
9H91.	Depression medication review
9H92.	Depression interim review
9HA0.	On depression register
9k4..	Depression - enhanced services administration
E1100	Single manic episode, unspecified
E1101	Single manic episode, mild
E1102	Single manic episode, moderate
E1103	Single manic episode, severe without mention of psychosis
E1104	Single manic episode, severe, with psychosis
E1105	Single manic episode in partial or unspecified remission
E1106	Single manic episode in full remission
E111z	Recurrent manic episode NOS
E112.	Single major depressive episode
E1120	Single major depressive episode, unspecified
E1121	Single major depressive episode, mild
E1122	Single major depressive episode, moderate
E1123	Single major depressive episode, severe, without psychosis
E1124	Single major depressive episode, severe, with psychosis

Read code	Read term
E1125	Single major depressive episode, partial or unspec remission
E1126	Single major depressive episode, in full remission
E112z	Single major depressive episode NOS
E113.	Recurrent major depressive episode
E1130	Recurrent major depressive episodes, unspecified
E1131	Recurrent major depressive episodes, mild
E1132	Recurrent major depressive episodes, moderate
E1133	Recurrent major depressive episodes, severe, no psychosis
E1134	Recurrent major depressive episodes, severe, with psychosis
E1135	Recurrent major depressive episodes,partial/unspec remission
E1136	Recurrent major depressive episodes, in full remission
E1137	Recurrent depression
E113z	Recurrent major depressive episode NOS
E114.	Bipolar affective disorder, currently manic
E1140	Bipolar affective disorder, currently manic, unspecified
E1141	Bipolar affective disorder, currently manic, mild
E1142	Bipolar affective disorder, currently manic, moderate
E1143	Bipolar affect disord, currently manic, severe, no psychosis
E1144	Bipolar affect disord, currently manic,severe with psychosis
E1145	Bipolar affect disord,currently manic, part/unspec remission
E1146	Bipolar affective disorder, currently manic, full remission
E114z	Bipolar affective disorder, currently manic, NOS
E115.	Bipolar affective disorder, currently depressed
E1150	Bipolar affective disorder, currently depressed, unspecified
E1151	Bipolar affective disorder, currently depressed, mild
E1152	Bipolar affective disorder, currently depressed, moderate
E1153	Bipolar affect disord, now depressed, severe, no psychosis
E1154	Bipolar affect disord, now depressed, severe with psychosis
E1155	Bipolar affect disord, now depressed, part/unspec remission
E1156	Bipolar affective disorder, now depressed, in full remission
E115z	Bipolar affective disorder, currently depressed, NOS
E116.	Mixed bipolar affective disorder
E1160	Mixed bipolar affective disorder, unspecified
E1161	Mixed bipolar affective disorder, mild
E1162	Mixed bipolar affective disorder, moderate
E1163	Mixed bipolar affective disorder, severe, without psychosis
E1164	Mixed bipolar affective disorder, severe, with psychosis
E1165	Mixed bipolar affective disorder, partial/unspec remission
E1166	Mixed bipolar affective disorder, in full remission
E116z	Mixed bipolar affective disorder, NOS
E117.	Unspecified bipolar affective disorder
E1170	Unspecified bipolar affective disorder, unspecified
E1171	Unspecified bipolar affective disorder, mild
E1172	Unspecified bipolar affective disorder, moderate
E1173	Unspecified bipolar affective disorder, severe, no psychosis
E1174	Unspecified bipolar affective disorder,severe with psychosis

Read code	Read term
E1175	Unspecified bipolar affect disorder, partial/unspec remission
E1176	Unspecified bipolar affective disorder, in full remission
E117z	Unspecified bipolar affective disorder, NOS
E118.	Seasonal affective disorder
E11y.	Other and unspecified manic-depressive psychoses
E11y0	Unspecified manic-depressive psychoses
E11y2	Atypical depressive disorder
E11y3	Other mixed manic-depressive psychoses
E11yz	Other and unspecified manic-depressive psychoses NOS
E11z.	Other and unspecified affective psychoses
E11z0	Unspecified affective psychoses NOS
E11z1	Rebound mood swings
E11z2	Masked depression
E11zz	Other affective psychosis NOS
E130.	Reactive depressive psychosis
E135.	Agitated depression
E200.	Anxiety states
E2000	Anxiety state unspecified
E2001	Panic disorder
E2002	Generalised anxiety disorder
E2003	Anxiety with depression
E2004	Chronic anxiety
E2005	Recurrent anxiety
E200z	Anxiety state NOS
E201B	Compensation neurosis
E202.	Phobic disorders
E2020	Phobia unspecified
E2021	Agoraphobia with panic attacks
E2022	Agoraphobia without mention of panic attacks
E2023	Social phobia, fear of eating in public
E2024	Social phobia, fear of public speaking
E2025	Social phobia, fear of public washing
E2026	Acrophobia
E2027	Animal phobia
E2028	Claustrophobia
E2029	Fear of crowds
E202A	Fear of flying
E202B	Cancer phobia
E202C	Dental phobia
E202D	Fear of death
E202E	Fear of pregnancy
E202z	Phobic disorder NOS
E203.	Obsessive-compulsive disorders
E2030	Compulsive neurosis
E204.	Neurotic depression reactive type
E20y.	Other neurotic disorders

Read code	Read term
E20yz	Other neurotic disorder NOS
E211.	Affective personality disorder
E2112	Depressive personality disorder
E2113	Cyclothymic personality disorder
E211z	Affective personality disorder NOS
E2620	Cardiac neurosis
E2621	Cardiovascular neurosis
E2751	Bulimia (non-organic overeating)
E27z.	Other and unspecified psychogenic syndrome NEC
E290.	Brief depressive reaction
E2900	Grief reaction
E290z	Brief depressive reaction NOS
E292.	Adjustment reaction, predominant disturbance other emotions
E292y	Adjustment reaction with mixed disturbance of emotion
E293.	Adjustment reaction with predominant disturbance of conduct
E293z	Adjustment reaction with predominant disturbance conduct NOS
E294.	Adjustment reaction with disturbance emotion and conduct
E29y.	Other adjustment reactions
E29y2	Adjustment reaction with physical symptoms
E29y3	Elective mutism due to an adjustment reaction
E29y5	Other adjustment reaction with withdrawal
E29yz	Other adjustment reactions NOS
E2B..	Depressive disorder NEC
E2B1.	Chronic depression
E2D..	Disturbance of emotion specific to childhood and adolescence
E2D0.	Disturbance of anxiety and fearfulness childhood/adolescent
E2D00	Childhood and adolescent overanxiousness disturbance
E2D01	Childhood and adolescent fearfulness disturbance
E2D0z	Disturbance anxiety and fearfulness childhood/adolescent NOS
E2D1.	Childhood and adolescence disturbance of unhappiness
E2D2.	Childhood and adolescent disturbance with sensitivity
E2D20	Childhood and adolescent disturbance with shyness
E2D21	Childhood and adolescent disturbance with introversion
E2D22	Childhood and adolescent disturbance with elective mutism
E2Dy0	Childhood and adolescent oppositional disorder
E2Dy1	Childhood and adolescent identity disorder
E2Dz.	Childhood and adolescent emotion disorder NOS
Eu054	[X]Organic anxiety disorder
Eu310	[X]Bipolar affective disorder, current episode hypomanic
Eu311	[X]Bipolar affect disorder cur epi manic wout psychotic symp
Eu312	[X]Bipolar affect disorder cur epi manic with psychotic symp
Eu313	[X]Bipolar affect disorder cur epi mild or moderate depressn
Eu314	[X]Bipol aff disord, curr epis sev depress, no psychot symp
Eu315	[X]Bipolar affect dis cur epi severe depres with psyc symp
Eu316	[X]Bipolar affective disorder, current episode mixed
Eu317	[X]Bipolar affective disorder, currently in remission

Read code	Read term
Eu318	[X]Bipolar affective disorder type I
Eu319	[X]Bipolar affective disorder type II
Eu31y	[X]Other bipolar affective disorders
Eu31z	[X]Bipolar affective disorder, unspecified
Eu32.	[X]Depressive episode
Eu320	[X]Mild depressive episode
Eu321	[X]Moderate depressive episode
Eu322	[X]Severe depressive episode without psychotic symptoms
Eu323	[X]Severe depressive episode with psychotic symptoms
Eu327	[X]Major depression, severe without psychotic symptoms
Eu328	[X]Major depression, severe with psychotic symptoms
Eu32y	[X]Other depressive episodes
Eu32z	[X]Depressive episode, unspecified
Eu33.	[X]Recurrent depressive disorder
Eu331	[X]Recurrent depressive disorder, current episode moderate
Eu332	[X]Recurr depress disorder cur epi severe without psyc sympt
Eu333	[X]Recurrent depress disorder cur epi severe with psyc symp
Eu33z	[X]Recurrent depressive disorder, unspecified
Eu341	[X]Dysthymia
Eu40.	[X]Phobic anxiety disorders
Eu400	[X]Agoraphobia
Eu401	[X]Social phobias
Eu402	[X]Specific (isolated) phobias
Eu403	[X]Needle phobia
Eu40z	[X]Phobic anxiety disorder, unspecified
Eu410	[X]Panic disorder [episodic paroxysmal anxiety]
Eu412	[X]Mixed anxiety and depressive disorder
Eu413	[X]Other mixed anxiety disorders
Eu41y	[X]Other specified anxiety disorders
Eu41z	[X]Anxiety disorder, unspecified
Eu515	[X]Nightmares
Eu931	[X]Phobic anxiety disorder of childhood
Eu932	[X]Social anxiety disorder of childhood
Ua1qS	Panic attack
Ua1qU	Fear of walking
Ua1qV	Fear of mobilising
Ua1qW	Fear of disconnection from ventilator
Ua1qX	Fear of being left alone during period of dependence
Ua1qY	Fear of being left alone
Ua1qa	Fear of dentist
Ua1qc	Fear of not coping with treatment
Ua1qd	Fear of lifts
Ua1qe	Fear of thunderstorm
Ua1qf	Terrified
Ua1qj	Anxiety about resuming sexual relations
Ua1qn	Anxiety about not coping with parenthood

Read code	Read term
Ua1qo	Anxiety about making mistakes
Ua1qp	Anxiety about altered body image
Ua1qs	Fear of wetting self in public
Ua1qt	Fear of losing control of bowels in public
X00RP	Organic anxiety disorder
X00S8	Post-schizophrenic depression
X00SM	Bipolar disorder
X00SN	Bipolar II disorder
X00SO	Depressive disorder
X00SQ	Agitated depression
X00SR	Endogenous depression
X00SS	Endogenous depression first episode
X00SU	Masked depression
X00SV	Agoraphobia
X00SW	Social phobia
X00SX	Specific phobia
X00SY	Needle phobia
X00SZ	Situational panic attack
X00Sa	Non-situational panic attack
X00Sb	Mixed anxiety and depressive disorder
X00Sc	Anxiety hysteria
X00Sd	Stage fright
X00Se	Examination fear
X00T7	Anxious personality disorder
X40DI	Mild postnatal depression
X40Dm	Severe postnatal depression
X761L	Seasonal affective disorder
X761N	Anxiety and fear
X761T	Anxiety about body function or health
X761U	Fear of losing control of bowels
X761W	Fear of vomiting in public
X761X	Fear of having a fit
X761Y	Fear of choking
X761Z	Anxiety about blushing
X761a	Fear of swallowing
X761b	Fear of collapsing
X761c	Fear of fainting
X761d	Fear of having a heart attack
X761e	Fear of shaking
X761f	Fear of sweating
X761g	Fear of dying
X761h	Fear of going crazy
X761i	Fear of losing emotional control
X761j	Fear of becoming fat
X761k	Anxiety about behaviour or performance
X761l	Fear of appearing ridiculous

Read code	Read term
X761m	Fear of saying the wrong thing
X761n	Fear of going out
X761p	Fear of empty streets
X761q	Fear of open spaces
X761r	Fear of crossing streets
X761t	Fear of transport
X761u	Social fear
X761v	Fear of activities in public
X761w	Fear of eating in public
X761x	Fear of public speaking
X761y	Fear of using public toilets
X761z	Fear of writing in public
X7620	Fear of social group activities
X7621	Fear of being in a small group
X7622	Fear of social gatherings
X7623	Fear of speaking on the phone
X7624	Fear of speaking to people in authority
X7625	Fear of being laughed at
X7626	Fear of being watched
X7627	Specific fear
X7628	Fear of natural phenomena
X7629	Fear of the dark
X762A	Fear of animals
X762B	Fear of feathers
X762C	Fear of enclosed spaces
X762E	Fear of tunnels
X762F	Fear of phone boxes
X762G	Fear of flying
X762H	Flying phobia
X762I	Fear associated with illness and body function
X762J	Fear of anaesthetic
X762K	Fear of general anaesthetic
X762L	Fear of awareness under general anaesthetic
X762M	Fear of not waking from general anaesthetic
X762N	Fear of local anaesthetic
X762O	Fear of problem after anaesthetic
X762R	Fear of surgical masks
X762S	Fear of hospitals
X762T	Fear of death
X762U	Fear of contracting disease
X762V	Fear of infection
X762W	Fear of contracting venereal disease
X762X	Fear of contracting HIV infection
X762Y	Fear of contracting radiation sickness
X762Z	Fear of the bogey man
XE0ra	Nervousness



Read code	Read term
XE0rb	Feeling anxious
XE0re	Depressed mood
XE0ri	Fear
XE1Y0	Single major depressive episode
XE1Y7	Panic disorder
XE1YA	Phobic anxiety disorder
XE1YB	Phobic disorder NOS
XE1YC	Reactive depression
XE1ZX	[X]Other bipolar affective disorders
XE1ZY	[X]Severe depressive episode without psychotic symptoms
XE1ZZ	[X]Severe depressive episode with psychotic symptoms
XE1Za	[X]Other depressive episodes
XE1Zb	[X]Depressive episode, unspecified
XE1Zd	[X]Recurr depress disorder cur epi severe without psyc sympt
XE1Ze	[X]Recurrent depress disorder cur epi severe with psyc symp
XE1Zf	[X]Recurrent depressive disorder, unspecified
XE1aD	Childhood social anxiety disorder
XE1aY	Depression: [reactive (neurotic)] or [postnatal]
XM00G	Separation anxiety
XM0Ak	School phobia
XM1GC	Endogenous depression - recurrent
XM1OD	Hydrophobia
XSEGJ	Major depressive disorder
XSGok	Mild major depression
XSGol	Moderate major depression
XSGom	Severe major depression without psychotic features
XSGon	Severe major depression with psychotic features
Xa00r	Fear of heights
Xa00s	Fear of water
Xa0XB	Fear relating to body function
Xa0XG	Anxiety about losing control of bowels
Xa0XH	Anxiety about wetting self
Xa0XI	Anxiety about vomiting in public
Xa0XJ	Anxiety about having a fit
Xa0XK	Anxiety about choking
Xa0XM	Anxiety about swallowing
Xa0XN	Anxiety about collapsing
Xa0XO	Anxiety about shaking
Xa0XP	Anxiety about sweating
Xa0XQ	Anxiety about dying
Xa0XR	Anxiety about going crazy
Xa0XS	Anxiety about losing emotional control
Xa0XU	Anxiety about becoming fat
Xa0XX	Anxiety about fainting
Xa0XY	Anxiety about having a heart attack
Xa0Xc	Anxiety about appearing ridiculous



Read code	Read term
Xa0Xd	Anxiety about saying the wrong thing
Xa0wV	Recurrent brief depressive disorder
Xa11O	Maternity blues
Xa19B	Performance anxiety
Xa1Ev	Fear of needles
Xa1a8	Examination phobia
Xa3Vj	Panic
Xa3Vk	Fear of insects
Xa3VI	Fear of birds
Xa3WH	Fear associated with healthcare
Xa3WI	Fear of blood
Xa3WJ	Fear of getting cancer
Xa7k9	Parental anxiety
Xa7kB	Anxiety attack
Xa7lj	Cancer phobia
Xa7lx	Pre-examination nerves
XaB95	Other manic-depressive psychos
XaB96	Other phobias
XaB9J	Depression NOS
XaCHo	[X]Manic-depress psychosis,depressd,no psychotic symptoms
XaCHr	[X]Single episode agitated depressn w/out psychotic symptoms
XaCHs	[X]Single episode major depression w/out psychotic symptoms
XaCIIs	Mild depression
XaCIIt	Moderate depression
XaCIlu	Severe depression
XaECG	Anxiety counselling
XaEG0	Dysmorphophobia
Xalvf	Fear of falling
XaKUk	Dysphoric mood
XaL0q	Referral for guided self-help for anxiety
XaMFU	Paruresis
XaP8d	Stranger anxiety
XaX53	Single major depress ep, severe with psych, psych in remissn
XaX54	Recurr major depress ep, severe with psych, psych in remissn
XaY1Y	Bipolar I disorder
XaY2C	Antenatal depression
Xaafv	Anxiety about breathlessness
XaboM	Referral for guided self-help for anxiety declined

## 8.2.19 Codes for Diabetes Mellitus

Read code	Read term
C10..	Diabetes mellitus
C100.	Diabetes mellitus with no mention of complication
C1000	Diabetes mellitus, juvenile type, no mention of complication
C1001	Diabetes mellitus, adult onset, no mention of complication
C100z	Diabetes mellitus NOS with no mention of complication

C101.	Diabetes mellitus with ketoacidosis
C1010	Diabetes mellitus, juvenile type, with ketoacidosis
C1011	Diabetes mellitus, adult onset, with ketoacidosis
C101y	Other specified diabetes mellitus with ketoacidosis
C101z	Diabetes mellitus NOS with ketoacidosis
C102.	Diabetes mellitus with hyperosmolar coma
C1020	Diabetes mellitus, juvenile type, with hyperosmolar coma
C1021	Diabetes mellitus, adult onset, with hyperosmolar coma
C102z	Diabetes mellitus NOS with hyperosmolar coma
C103.	Diabetes mellitus with ketoacidotic coma
C1030	Diabetes mellitus, juvenile type, with ketoacidotic coma
C1031	Diabetes mellitus, adult onset, with ketoacidotic coma
C103y	Other specified diabetes mellitus with coma
C103z	Diabetes mellitus NOS with ketoacidotic coma
C104.	Diabetes mellitus with renal manifestation
C1040	Diabetes mellitus, juvenile type, with renal manifestation
C1041	Diabetes mellitus, adult onset, with renal manifestation
C104y	Other specified diabetes mellitus with renal complications
C104z	Diabetes mellitus with nephropathy NOS
C105.	Diabetes mellitus with ophthalmic manifestation
C1050	Diabetes mellitus, juvenile type, + ophthalmic manifestation
C1051	Diabetes mellitus, adult onset, + ophthalmic manifestation
C105y	Other specified diabetes mellitus with ophthalmic complicatn
C105z	Diabetes mellitus NOS with ophthalmic manifestation
C106.	Diabetes mellitus with neurological manifestation
C1060	Diabetes mellitus, juvenile, + neurological manifestation
C1061	Diabetes mellitus, adult onset, + neurological manifestation
C106y	Other specified diabetes mellitus with neurological comps
C106z	Diabetes mellitus NOS with neurological manifestation
C107.	Diabetes mellitus with peripheral circulatory disorder
C1070	Diabetes mellitus, juvenile +peripheral circulatory disorder
C1071	Diabetes mellitus, adult, + peripheral circulatory disorder
C1072	Diabetes mellitus, adult with gangrene
C1073	IDDM with peripheral circulatory disorder
C1074	NIDDM with peripheral circulatory disorder
C107z	Diabetes mellitus NOS with peripheral circulatory disorder
C108.	Insulin dependent diabetes mellitus
C1080	Insulin-dependent diabetes mellitus with renal complications
C1081	Insulin-dependent diabetes mellitus with ophthalmic comps
C1082	Insulin-dependent diabetes mellitus with neurological comps
C1083	Insulin dependent diabetes mellitus with multiple complicatn
C1084	Unstable insulin dependent diabetes mellitus
C1085	Insulin dependent diabetes mellitus with ulcer
C1086	Insulin dependent diabetes mellitus with gangrene
C1087	Insulin dependent diabetes mellitus with retinopathy
C1088	Insulin dependent diabetes mellitus - poor control
C1089	Insulin dependent diabetes maturity onset

C108A	Insulin-dependent diabetes without complication
C108B	Insulin dependent diabetes mellitus with mononeuropathy
C108C	Insulin dependent diabetes mellitus with polyneuropathy
C108D	Insulin dependent diabetes mellitus with nephropathy
C108E	Insulin dependent diabetes mellitus with hypoglycaemic coma
C108F	Insulin dependent diabetes mellitus with diabetic cataract
C108G	Insulin dependent diab mell with peripheral angiopathy
C108H	Insulin dependent diabetes mellitus with arthropathy
C108J	Insulin dependent diab mell with neuropathic arthropathy
C108y	Other specified diabetes mellitus with multiple comps
C108z	Unspecified diabetes mellitus with multiple complications
C109.	Non-insulin dependent diabetes mellitus
C1090	Non-insulin-dependent diabetes mellitus with renal comps
C1091	Non-insulin-dependent diabetes mellitus with ophthalm comps
C1092	Non-insulin-dependent diabetes mellitus with neuro comps
C1093	Non-insulin-dependent diabetes mellitus with multiple comps
C1094	Non-insulin dependent diabetes mellitus with ulcer
C1095	Non-insulin dependent diabetes mellitus with gangrene
C1096	Non-insulin-dependent diabetes mellitus with retinopathy
C1097	Non-insulin dependent diabetes mellitus - poor control
C1099	Non-insulin-dependent diabetes mellitus without complication
C109A	Non-insulin dependent diabetes mellitus with mononeuropathy
C109B	Non-insulin dependent diabetes mellitus with polyneuropathy
C109C	Non-insulin dependent diabetes mellitus with nephropathy
C109D	Non-insulin dependent diabetes mellitus with hypoglyca coma
C109E	Non-insulin depend diabetes mellitus with diabetic cataract
C109F	Non-insulin-dependent d m with peripheral angiopath
C109G	Non-insulin dependent diabetes mellitus with arthropathy
C109H	Non-insulin dependent d m with neuropathic arthropathy
C109J	Insulin treated Type 2 diabetes mellitus
C109K	Hyperosmolar non-ketotic state in type 2 diabetes mellitus
C10A.	Malnutrition-related diabetes mellitus
C10A0	Malnutrition-related diabetes mellitus with coma
C10A1	Malnutrition-related diabetes mellitus with ketoacidosis
C10A5	Malnutritn-relat diabetes melitus wth periph circul complctn
C10B.	Diabetes mellitus induced by steroids
C10B0	Steroid induced diabetes mellitus without complication
C10C.	Diabetes mellitus autosomal dominant
C10D.	Diabetes mellitus autosomal dominant type 2
C10E.	Type 1 diabetes mellitus
C10E0	Type 1 diabetes mellitus with renal complications
C10E1	Type 1 diabetes mellitus with ophthalmic complications
C10E2	Type 1 diabetes mellitus with neurological complications
C10E3	Type 1 diabetes mellitus with multiple complications
C10E4	Unstable type 1 diabetes mellitus
C10E5	Type 1 diabetes mellitus with ulcer
C10E6	Type 1 diabetes mellitus with gangrene

C10E7	Type 1 diabetes mellitus with retinopathy
C10E8	Type 1 diabetes mellitus - poor control
C10E9	Type 1 diabetes mellitus maturity onset
C10EA	Type 1 diabetes mellitus without complication
C10EB	Type 1 diabetes mellitus with mononeuropathy
C10EC	Type 1 diabetes mellitus with polyneuropathy
C10ED	Type 1 diabetes mellitus with nephropathy
C10EE	Type 1 diabetes mellitus with hypoglycaemic coma
C10EF	Type 1 diabetes mellitus with diabetic cataract
C10EG	Type 1 diabetes mellitus with peripheral angiopathy
C10EH	Type 1 diabetes mellitus with arthropathy
C10EJ	Type 1 diabetes mellitus with neuropathic arthropathy
C10EK	Type 1 diabetes mellitus with persistent proteinuria
C10EL	Type 1 diabetes mellitus with persistent microalbuminuria
C10EM	Type 1 diabetes mellitus with ketoacidosis
C10EN	Type 1 diabetes mellitus with ketoacidotic coma
C10EP	Type 1 diabetes mellitus with exudative maculopathy
C10EQ	Type 1 diabetes mellitus with gastroparesis
C10ER	Latent autoimmune diabetes mellitus in adult
C10F.	Type 2 diabetes mellitus
C10F0	Type 2 diabetes mellitus with renal complications
C10F1	Type 2 diabetes mellitus with ophthalmic complications
C10F2	Type 2 diabetes mellitus with neurological complications
C10F3	Type 2 diabetes mellitus with multiple complications
C10F4	Type 2 diabetes mellitus with ulcer
C10F5	Type 2 diabetes mellitus with gangrene
C10F6	Type 2 diabetes mellitus with retinopathy
C10F7	Type 2 diabetes mellitus - poor control
C10F9	Type 2 diabetes mellitus without complication
C10FA	Type 2 diabetes mellitus with mononeuropathy
C10FB	Type 2 diabetes mellitus with polyneuropathy
C10FC	Type 2 diabetes mellitus with nephropathy
C10FD	Type 2 diabetes mellitus with hypoglycaemic coma
C10FE	Type 2 diabetes mellitus with diabetic cataract
C10FF	Type 2 diabetes mellitus with peripheral angiopathy
C10FG	Type 2 diabetes mellitus with arthropathy
C10FH	Type 2 diabetes mellitus with neuropathic arthropathy
C10FJ	Insulin treated Type 2 diabetes mellitus
C10FK	Hyperosmolar non-ketotic state in type 2 diabetes mellitus
C10FL	Type 2 diabetes mellitus with persistent proteinuria
C10FM	Type 2 diabetes mellitus with persistent microalbuminuria
C10FN	Type 2 diabetes mellitus with ketoacidosis
C10FP	Type 2 diabetes mellitus with ketoacidotic coma
C10FQ	Type 2 diabetes mellitus with exudative maculopathy
C10FR	Type 2 diabetes mellitus with gastroparesis
C10FS	Maternally inherited diabetes mellitus
C10G.	Secondary pancreatic diabetes mellitus

C10G0	Secondary pancreatic diabetes mellitus without complication
C10H.	Diabetes mellitus induced by non-steroid drugs
C10H0	DM induced by non-steroid drugs without complication
C10J.	Insulin autoimmune syndrome
C10K.	Type A insulin resistance
C10K0	Type A insulin resistance without complication
C10M.	Lipoatrophic diabetes mellitus
C10N.	Secondary diabetes mellitus
C10N0	Secondary diabetes mellitus without complication
C10N1	Cystic fibrosis related diabetes mellitus
C10P.	Diabetes mellitus in remission
C10P0	Type I diabetes mellitus in remission
C10P1	Type II diabetes mellitus in remission
C10y.	Diabetes mellitus with other specified manifestation
C10y1	Diabetes mellitus, adult, + other specified manifestation
C10yy	Other specified diabetes mellitus with other spec comps
C10yz	Diabetes mellitus NOS with other specified manifestation
C10z.	Diabetes mellitus with unspecified complication
C10z0	Diabetes mellitus, juvenile type, + unspecified complication
C10z1	Diabetes mellitus, adult onset, + unspecified complication
C10zy	Other specified diabetes mellitus with unspecified comps
C10zz	Diabetes mellitus NOS with unspecified complication
Cyu23	[X]Unspecified diabetes mellitus with renal complications
E0304	Acute confusional state, of cerebrovascular origin
E0314	Subacute confusional state, of cerebrovascular origin
F1711	Autonomic neuropathy due to diabetes
F3450	Diabetic mononeuritis multiplex
F35z0	Diabetic mononeuritis NOS
F372.	Polyneuropathy in diabetes
F3720	Acute painful diabetic neuropathy
F3721	Chronic painful diabetic neuropathy
F3722	Asymptomatic diabetic neuropathy
F3813	Myasthenic syndrome due to diabetic amyotrophy
F3y0.	Diabetic mononeuropathy
F420.	Diabetic retinopathy
F4200	Background diabetic retinopathy
F4201	Proliferative diabetic retinopathy
F4202	Preproliferative diabetic retinopathy
F4203	Advanced diabetic maculopathy
F4204	Diabetic maculopathy
F4205	Advanced diabetic retinal disease
F4206	Non proliferative diabetic retinopathy
F4207	High risk proliferative diabetic retinopathy
F4208	High risk non proliferative diabetic retinopathy
F420z	Diabetic retinopathy NOS
F4407	Diabetic iritis
F4640	Diabetic cataract

## 8.2.20 Codes for osteoporosis

Read code	Read term
58E4.	Forearm DXA scan result osteoporotic
58EA.	Heel DXA scan result osteoporotic
58EG.	Hip DXA scan result osteoporotic
58EM.	Lumbar DXA scan result osteoporotic
58EV.	Femoral neck DEXA scan result osteoporotic
N330.	Osteoporosis
N3300	Osteoporosis, unspecified
N3301	Senile osteoporosis
N3302	Postmenopausal osteoporosis
N3303	Idiopathic osteoporosis
N3304	Dissuse osteoporosis
N3305	Drug-induced osteoporosis
N3306	Postoophorectomy osteoporosis
N3307	Postsurgical malabsorption osteoporosis
N3309	Osteoporosis in multiple myelomatosis
N330A	Osteoporosis in endocrine disorders
N330B	Vertebral osteoporosis
N330C	Osteoporosis localized to spine
N330D	Osteoporosis due to corticosteroids
N330z	Osteoporosis NOS
N3312	Postoophorectomy osteoporosis with pathological fracture
N3313	Osteoporosis of disuse with pathological fracture
N3314	Postsurgical malabsorption osteoporosis with pathological fracture
N3315	Drug-induced osteoporosis with pathological fracture
N3316	Idiopathic osteoporosis with pathological fracture
N3318	Osteoporosis + pathological fracture lumbar vertebrae
N3319	Osteoporosis + pathological fracture thoracic vertebrae
N331A	Osteoporosis + pathological fracture cervical vertebrae
N331B	Postmenopausal osteoporosis with pathological fracture
N331H	Collapse of cervical vertebra due to osteoporosis
N331J	Collapse of lumbar vertebra due to osteoporosis
N331K	Collapse of thoracic vertebra due to osteoporosis
N331L	Collapse of vertebra due to osteoporosis NOS
N331M	Fragility fracture due to unspecified osteoporosis
NyuB0	[X]Other osteoporosis with pathological fracture
NyuB1	[X]Other osteoporosis
NyuB2	[X]Osteoporosis in other disorders classified elsewhere
NyuB8	[X]Unspecified osteoporosis with pathological fracture
X70At	Adult idiopathic generalised osteoporosis
X70Au	Juvenile idiopathic generalised osteoporosis
X70Av	Secondary generalised osteoporosis
X70Aw	Regional migrating osteoporosis
X70B0	Secondary localised osteoporosis

X70B1	Post-irradiation osteoporosis
X78BC	Osteoporosis with pseudoglioma
Xa0AZ	Primary osteoporosis
Xa1k0	Regional osteoporosis
XaC12	Osteoporosis localised to spine
XaD2s	Collapse of cervical vertebra due to osteoporosis
XaD4I	Collapse of lumbar vertebra due to osteoporosis
XaD4J	Collapse of thoracic vertebra due to osteoporosis
XaD4K	Collapse of vertebra due to osteoporosis NOS
XaIlp	Fragility fracture due to unspecified osteoporosis
XaIP4	Osteoporosis due to corticosteroids
XaITb	Lumbar DXA scan result osteoporotic
XaITM	Forearm DXA scan result osteoporotic
XaITR	Heel DXA scan result osteoporotic
XaITW	Hip DXA scan result osteoporotic
XaPE2	Femoral neck DEXA scan result osteoporotic
XE1GA	Localised disuse osteoporosis

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### 8.2.21 Codes for heart failure

Read code	Read term
1O1..	Heart failure confirmed
662f.	New York Heart Association classification - class I
662g.	New York Heart Association classification - class II
662h.	New York Heart Association classification - class III
662i.	New York Heart Association classification - class IV
8H2S.	Admit heart failure emergency
8HBE.	Heart failure follow-up
G2111	Benign hypertensive heart disease with congestive cardiac failure
G21z1	Hypertensive heart disease NOS with congestive cardiac failure
G58..	Heart failure
G580.	Congestive heart failure
G5800	Acute congestive heart failure
G5801	Chronic congestive heart failure
G5802	Decompensated cardiac failure
G5803	Compensated cardiac failure
G5804	Congestive heart failure due to valvular disease
G581.	Left ventricular failure
G5810	Acute left ventricular failure
G582.	Acute heart failure
G583.	Heart failure with normal ejection fraction
G58z.	Heart failure NOS
G5y4z	Post cardiac operation heart failure NOS
X202k	Heart failure as a complication of care
XaEgY	Refractory heart failure
XaIQM	Heart failure follow-up
XaIQN	Heart failure annual review

XaJ9G	New York Heart Association classification - class I
XaJ9H	New York Heart Association classification - class II
XaJ9I	New York Heart Association classification - class III
XaJ9J	New York Heart Association classification - class IV
XaO5n	Congestive heart failure due to valvular disease
XaWyi	Heart failure with normal ejection fraction
XE0V8	Biventricular failure
XE0V9	Heart failure NOS
XE2QG	Left ventricular failure

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