

Influenza but not pneumococcal vaccination protects against all cause mortality in patients with chronic obstructive pulmonary disease.

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Keywords: Chronic obstructive pulmonary disease; Influenza; Mortality; Vaccination; Pneumococcus.

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Background: Influenza and pneumococcal vaccination are recommended in patients with chronic obstructive pulmonary disease (COPD). A recent study from Tayside found a reduced risk of all cause mortality with vaccination in COPD patients. **Objectives:** We used The Health Improvement Network (THIN) database to test this hypothesis in a different data source.

Methods: We searched the THIN database for patients with COPD. Vaccination status against pneumococcus and their annual influenza vaccination status were determined. Mortality rates were calculated in the periods: December-March and April-November. Relative risks for the effect of vaccination on all cause mortality were estimated by Poisson regression, adjusting for age, sex, year and serious co-morbidities.

Results: We found 177,120 patients with COPD, mean age of 65 years, with an average of 6.8 years follow up between 1988 and 2006. Vaccination rates against influenza rose <30% prior to 1995 to >70% in 2005 among patients aged 60 years or more. The cumulative vaccination rate against pneumonia rose from almost zero to 70% in patients aged 70 years or more over the same period. For all cause mortality the adjusted relative risks (95% CI) associated with influenza vaccination were 0.59(0.57-0.61) during the influenza season and 0.97(0.94,1.00) outside the season in patients not vaccinated against pneumonia, and 0.30(0.28,0.32) and 0.98(0.96,1.11) respectively in patients vaccinated against pneumonia. The relative risk associated with pneumococcal vaccination was greater than 1 at all times of the year.

Conclusions: Influenza but not pneumococcal vaccination was associated with a reduced risk of all cause mortality in COPD.

Introduction

Chronic obstructive pulmonary disease (COPD) is the fourth leading cause of death worldwide resulting in more than 2.7 million deaths in 2000¹. COPD exacerbations are a common cause of mortality and morbidity and prevention is an important strategy as

effective treatment of exacerbations is still inadequate. Vaccinations against influenza and pneumococcus are recommended in NICE guidelines for COPD².

A recent study used data from the Tayside Respiratory Disease Information System (TARDIS) to develop a score predicting mortality in patients with COPD. This showed a reduced risk of all cause mortality in patients vaccinated against influenza and pneumococcus³. As testing for the effect of vaccination was not the primary objective of that study, we tested the hypothesis using a different source of data - The Health Improvement Network (THIN). THIN is a medical research database of over 4.25 million anonymised patient records from information entered by more than 300 general practices throughout the United Kingdom that have joined the scheme. An audit of this database confirmed a high level of completeness of recording of clinical information⁴.

Published randomised controlled trials have not demonstrated a mortality benefit for these interventions⁵⁻⁹ and observational studies have an important role in addressing this gap in knowledge. Many previous published studies of influenza vaccine effectiveness have possible biases as they include only one or a few influenza seasons thus not controlling for the variability from season to season¹⁰. Such studies attempt to control for confounding factors by adjusting for co morbidities, as shown by Jackson et al, such adjustment is unlikely to remove all bias¹¹. This may be due to the presence of functional limitations in the group defined as free of comorbidity by diagnosis code criteria. Such uncontrolled functional limitations appear to be important confounders of the association of vaccination and risk of death¹².

In this study we ascertained the effectiveness of influenza and pneumococcal vaccination in a community population of patients with COPD over an 18 year period in order to obtain a long term view of vaccine effectiveness.

Methods

Study population and study cohort

The study population consisted of all patients over 40 years of age, permanently registered with practices contributing to the THIN database with a diagnosis coded as COPD, chronic obstructive airway disease (COAD), chronic bronchitis or emphysema. Patients with any history of lung fibrosis, sarcoidosis, lung cancer, or lung surgery were excluded. The study period was from 1988 to 2006.

Outcomes

We defined 3 outcomes: all deaths; the subset of deaths where a respiratory code was recorded on the day of death or was cited as the cause of death; and the subset of deaths where a respiratory code was cited as the cause of death (see Appendix 1 for Read codes).

Bias and confounding factors

Age, gender and comorbidity were used as covariates to attempt to adjust for any confounding bias that could have affected the likelihood of vaccination. To identify

serious comorbidities that were likely to be risk factors for death, we used the list of serious diseases included in the Charlson comorbidity score¹³. We defined a flag variable for each of these disease groups for each patient in each year. We did not calculate the Charlson score, but used the individual indicator variables in our statistical models.

An apparent vaccination effect outside the influenza season would probably be due to bias associated with unidentified risk factors. A difference between the apparent vaccination effects in the influenza season and in the rest of the year in the same patient population may be a better measure of any benefit provided by vaccination. Therefore we estimated the ratio of relative risks in the influenza season and in the rest of the year, i.e. the interaction between influenza vaccination and season.

Statistical methods

We performed a retrospective analysis of the cohorts of patients who were vaccinated against influenza, pneumonia, both or neither between 1988 and 2006. The study period for each patient was divided into consecutive one year periods starting on 1st December each year.

A patient was regarded as immunised against pneumonia in a given year if they had been vaccinated at any time prior to 1st December of that year. A patient was regarded as immunised against influenza in a given year if they received a vaccination at any time after 1st August of that year and before the 1st August of the next year. We assumed that immunity to influenza was acquired 30 days after vaccination. In patient-years where influenza vaccination occurred, the time prior to vaccination is “immortal” time, i.e. death could not have occurred in this period. We discarded time prior to the date that immunity was acquired, i.e. the immortal period plus the first 30 days after vaccination.

We identified deaths from any cause in December-March and April-November for unvaccinated patient-years, and in the periods of immunity between these dates for vaccinated patient-years. Relative risks for the effect of vaccination on all cause mortality were estimated for each period by Poisson regression, using time at risk as an offset variable and adjusting for age, sex, year and 15 co-morbidities. We also included a factor to indicate whether or not the influenza vaccine used each year included all the strains of virus in circulation in that season.

Preliminary analyses suggested a strong interaction between pneumonia and influenza vaccination, so we estimated the interaction between influenza vaccination and season separately in patients who had and had not been vaccinated against pneumonia.

Results

We found 177,120 patients with COPD with an average of 6.8 years follow up between 1988 and 2006. Their mean age at the start of each influenza season was about 65 years. Figure 1 shows that rates of vaccination against influenza among patients aged 60 or more rose from between 20 and 30% in the early 1990s to at least 70% (and 80% in patients aged 80 or more) after 2000. Figure 2 shows that the cumulative rates of vaccination against pneumonia rose from almost zero in 1993 to at least 75% in patients aged 70 years or more in 2006.

Table 1 shows sex and age distributions and the co morbidities of vaccinated and unvaccinated patients in 2006/7 influenza season. Vaccinated patients, particularly those who received both vaccinations, were older than unvaccinated patients. Most of the co morbidities were substantially more prevalent in patients who received either vaccination or both.

Table 1. Comorbidity of COPD patients aged at least 40 years vaccinated against influenza, pneumonia, neither or both in the 2006/7 influenza season.

	None		Pneumonia only		Influenza only		Both	
	N	%	N	%	N	%	N	%
	Patients	31,062	100.0	5,635	100.0	9,679	100.0	50,699
Male	13,286	42.8	2,386	42.3	4,102	42.4	23,830	47.0
Age								
40-49	10,577	34.1	557	9.9	1,208	12.5	1,471	2.9
50-59	10,816	34.8	979	17.3	2,596	26.8	4,525	8.9
60-69	6,083	19.6	1,436	25.5	3,248	33.6	13,406	26.4
70-79	2,088	6.7	1,480	26.3	1,468	15.2	18,942	37.4
80-89	1,206	3.9	964	17.1	929	9.6	10,843	21.4
90+	292	0.9	219	3.9	230	2.4	1,512	3.0
Myocardial Infarction	479	1.54	377	6.69	536	5.54	4,822	9.51
Congestive Heart Disease	476	1.53	411	7.29	440	4.55	4,641	9.15
Peripheral vascular disease	994	3.20	482	8.55	617	6.37	4,931	9.73
Cerebrovascular disease	936	3.01	589	10.45	793	8.19	5,965	11.77
Dementia	72	0.23	64	1.14	76	0.79	364	0.72
Rheumatic disease	678	2.18	300	5.32	418	4.32	3,165	6.24
Peptic ulcer disease	1,155	3.72	432	7.67	560	5.79	4,010	7.91
Mild liver disease	66	0.21	30	0.53	35	0.36	154	0.30
Diabetes	775	2.50	655	11.62	780	8.06	6,964	13.74
Diabetes with chronic disorders	31	0.10	46	0.82	36	0.37	428	0.84
Hemiplegia or paraplegia	58	0.19	14	0.25	32	0.33	182	0.36
Renal disease	170	0.55	150	2.66	112	1.16	1,455	2.87
Any malignancy	1,546	4.98	672	11.93	892	9.22	7,092	13.99
Moderate or severe liver disease	40	0.13	6	0.11	15	0.15	67	0.13
Metastatic solid tumour	41	0.13	32	0.57	23	0.24	172	0.34

Table 2 shows the unadjusted all cause mortality rates and death rates associated with respiratory events for the periods December to March and April to November, pooled over the whole study period. The all cause mortality rate was 52 deaths per thousand

patient years (ptpy) during the influenza seasons, and 46 deaths ptpy at other times. The unadjusted death rate was substantially higher among patients vaccinated against pneumonia than those who were not vaccinated (64 vs 48 deaths ptpy in the influenza season, 68 vs 40 deaths ptpy at other times). In April to November it was also higher in patients who had been vaccinated against influenza in the previous flu season than in those who had not (63 vs 35 deaths ptpy), although the rates had been similar during the flu season (53 vs 51 deaths ptpy).

Table 2. Number of deaths (N) and death rates (per thousand patient years) from all causes and associated with respiratory events, 1988-2006, in COPD patients aged at least 40 years.

		Vaccinated against pneumonia	December to March			April to November			
			Vaccinated against influenza			Vaccinated against influenza			
			No	Yes	Total	No	Yes	Total	
Time at risk 1988-2006 (Thousand patient years)	No		198	91	289	373	120	494	
	Yes		9	91	100	16	123	139	
	Total		207	182	389	390	243	633	
Deaths	N	No	9,328	4,545	13,873	12,469	7,133	19,602	
		Yes	1,288	5,128	6,416	1,218	8,240	9,458	
		Total	10,616	9,673	20,289	13,687	15,373	29,060	
	Rate	No		47	50	48	33	59	40
		Yes		143	56	64	75	67	68
		Total		51	53	52	35	63	46
Deaths associated with a respiratory event	N	No	2001	944	2945	2167	1202	3369	
		Yes	237	996	1233	199	1344	1543	
		Total	2238	1940	4178	2366	2546	4912	
	Rate	No		10.1	10.3	10.2	5.8	10.0	6.8
		Yes		26.3	11.0	12.3	12.3	10.9	11.1
		Total		10.8	10.6	10.7	6.1	10.5	7.8
Deaths with a respiratory event recorded as cause of death	N	No	232	192	424	283	266	549	
		Yes	96	567	663	89	754	843	
		Total	328	759	1087	372	1020	1392	
	Rate	No		1.2	2.1	1.5	0.8	2.2	1.1
		Yes		10.7	6.2	6.6	5.5	6.1	6.1
		Total		1.6	4.2	2.8	1.0	4.2	2.2

The annual all cause mortality rate varied little over the study period. However, deaths rates associated with a respiratory event increased substantially over the study period.

This may be due to improvements made by GPs in their recording of cause of death, and a year effect was therefore included in all the statistical models to account for this trend.

Table 3 shows the relative risks of death from any cause for the other risk factors included in the models. Men were at higher risk than women and there was a strong trend with age. The relative risk of death in Decemeber-March vs April –November was 1.37(1.33,1.40). Furthermore, in years when the influenza vaccine did not include all strains of the virus circulating during that season, mortality rates were also higher (RR 1.19(1.13,1.25)). All of the comorbidities identified, except diabetes with chronic disorders, were also significant risk factors for death.

Table 3. Adjusted relative risks for all cause mortality in COPD patients aged at least 40 years (from a multivariate Poisson model which also included year and vaccination status).

Risk factor	RR	95% CI
Gender (Men vs women)	1.41	(1.38,1.43)
Age		
40 to 49	0.12	(0.11,0.13)
50 to 59	0.37	(0.35,0.38)
60 to 69	1.00	
70 to 79	2.12	(2.06,2.18)
80 to 89	3.77	(3.66,3.88)
90 Plus	6.74	(6.49,7.00)
Season (December to March vs April to November)	1.37	(1.33,1.40)
Unexpected influenza strain	1.19	(1.13,1.25)
Myocardial Infarction	1.26	(1.23,1.30)
Congestive Heart Disease	2.17	(2.12,2.22)
Peripheral vascular disease	1.36	(1.33,1.40)
Cerebrovascular disease	1.37	(1.34,1.40)
Dementia	2.33	(2.22,2.44)
Rheumatic disease	1.14	(1.09,1.18)
Peptic ulcer disease	1.11	(1.07,1.14)
Mild liver disease	2.12	(1.86,2.42)
Diabetes	1.29	(1.25,1.32)
Diabetes with chronic disorders	1.04	(0.90,1.19)
Hemiplegia or paraplegia	1.48	(1.35,1.61)
Renal disease	1.79	(1.71,1.87)
Any malignancy	1.42	(1.39,1.45)
Moderate or severe liver disease	2.98	(2.49,3.57)

Risk factor	RR	95% CI
Metastatic solid tumour	3.95	(3.70,4.21)

Table 4 shows the adjusted relative risks for the effect of vaccination against influenza and pneumonia. In December to March the RR associated with vaccination against influenza was 0.59(0.57,0.61) in patients not vaccinated against pneumonia, but vaccination against influenza provided no benefit to the same patients in the following April to November (RR 0.98(0.95,1.01)). Similar relative risks were obtained from the 2 subsets of deaths associated with respiratory events. A RR close to 1 for influenza vaccination outside the influenza season suggests that confounding between vaccination and the major risk factors for death have been accounted for in the analysis, and that the RR estimated for the influenza season may be a good guide to the benefits of vaccination.

Table 4. Adjusted relative risks associated with influenza and pneumonia vaccination for all cause mortality rates and death associated with a respiratory event in COPD patients aged at least 40 years.

	Vaccinated Against influenza	December to March		April to November	
		Vaccinated against Pneumonia		Vaccinated against Pneumonia	
		No	Yes	No	Yes
Deaths	No	1	1.68 (1.58,1.78)	1	1.28 (1.20,1.36)
	Yes	0.59 (0.57,0.61)	0.53 (0.51,0.56)	0.98 (0.95,1.01)	0.88 (0.85,0.91)
Deaths associated with a respiratory event	No	1	1.78 (1.55,2.04)	1	1.45 (1.25,1.79)
	Yes	0.63 (0.58,0.68)	0.61 (0.56,0.67)	1.03 (0.96,1.11)	1.03 (0.96,1.12)
Deaths with a respiratory event recorded as cause of death	No	1	2.29 (1.80,2.91)	1	1.93 (1.52,2.46)
	Yes	0.63 (0.55,0.77)	0.87 (0.74,1.03)	1.00 (0.85,1.19)	1.26 (1.09,1.46)

Patients vaccinated against pneumonia but not against influenza had a higher risk of death in both seasons (RR 1.68(1.58,1.78) in December to March, RR 1.28 (1.20,1.36) in April to November). This pattern, too, was repeated from the 2 subsets of deaths associated with respiratory events. RRs greater than 1 for vaccination against pneumonia suggests that some confounding between vaccination and risk factors for death remains unidentified.

Rrs for patients immunised against both pneumonia and influenza were similar to those for patients vaccinated against influenza only.

Table 5 shows the results of subgroup analyses for patients who have and have not been vaccinated against pneumonia. They confirm that in both populations there is a strong

interaction between season and the apparent effect of vaccination against influenza. In patients not vaccinated against pneumonia the ratio of RRs for December to March vs April to November is 0.60(0.58,0.63) for all cause mortality, very close to the apparent effect observed in December to March since the RR in April to November is close to 1.

Table 5. Interaction between influenza vaccination and season for all cause mortality rates and death associated with a respiratory event in COPD patients aged at least 40 years.

	Dec-Nov	December to March	April to November	December to March vs April to November
Patients not vaccinated against pneumonia				
Deaths	0.79 (0.77,0.80)	0.59 (0.57,0.61)	0.97 (0.94,1.00)	0.60 (0.58,0.63)
Deaths associated with a respiratory event	0.82 (0.77,0.86)	0.6 (0.53,0.68)	1.03 (0.96,1.11)	0.61 (0.55,0.68)
Deaths with a respiratory event recorded as cause of death	0.80 (0.70,0.92)	0.61 (0.51,0.75)	0.98 (0.83,1.17)	0.63 (0.49,0.81)
Patients vaccinated against pneumonia				
Deaths	0.46 (0.44,0.48)	0.30 (0.28,0.32)	0.64 (0.60,0.68)	0.47 (0.43,0.51)
Deaths associated with a respiratory event	0.47 (0.42,0.52)	0.32 (0.28,0.37)	0.65 (0.56,0.76)	0.49 (0.40,0.60)
Deaths with a respiratory event recorded as cause of death	0.50 (0.48,0.52)	0.37 (0.30,0.46)	0.63 (0.510.79)	0.59 (0.43,0.80)

In patients who had been vaccinated against pneumonia, those who were also vaccinated against influenza had a lower risk of death even outside the influenza season (RR 0.64(0.60,0.68)). However, the RR associated with influenza vaccination in these patients during the influenza season was lower still (0.30(0.28,0.32)) and the ratio of RRs (0.47(0.43,0.51)) suggests a substantial benefit from vaccination in these patients too.

Discussion

Our study is the largest study of patients with COPD and provides data that supports vaccination in this patient group. Unlike a recent Cochrane review, which showed no effect of influenza¹⁴ vaccination on mortality, our study suggests that influenza vaccinations are effective in decreasing all cause mortality. NICE guidelines advise vaccination of COPD patients against influenza and pneumococcus. Rates of influenza vaccination in COPD patients over 60 have increased from <30% prior to 1995 to >70% since 2000. Immunisation against pneumococcal disease has risen from almost zero in 1995 to >70% in patients aged 70 or more. .

Previous studies of influenza vaccination have shown significant protection against all cause mortality in a cohort of elderly patients¹⁵ and also in elderly patients with chronic

lung disease¹⁶, our study is the first in a community-based population of patients with COPD of all ages.

The strengths of this study are that data were collected in routine care from an unselected community population of COPD patients throughout the United Kingdom. This increases the likelihood that the results will be applicable to other COPD populations. We adjusted for a number of possible confounders, and we measured the effect of vaccination during the influenza season relative to that among the same patients in the summer in an attempt to minimise the effects of unobserved confounding factors. Unlike most studies which often cover only one season our study covered several influenza seasons which is especially important as the antibody levels may fall to nonprotective levels within a year of vaccination resulting in lack of spillover protection from year to year¹⁷.

We used the THIN database; this is a relatively new primary care medical records database in the UK. It comprises prospectively collected data from September 2002. Some practices had electronic medical records as early as 1987 and these data were also included in THIN. The validity of the THIN database was confirmed in a recent study replicating well established associations and by comparing results with other primary care databases¹⁸.

Limitations of the study include possible misclassification since COPD is often misdiagnosed or miscoded in electronic medical records. COPD is a diagnosis based on spirometry but these results are not always available from routine records. Thus the study population is likely to include patients with a false positive diagnosis of COPD. However, such misclassification of disease is likely to bias the study towards the null unless vaccination has a similar effect size in subjects without COPD. It is also possible that vaccination status misclassification may have occurred, however this seems less likely. There may also be a channelling bias in this study, i.e. patients at most risk of hospitalisation or death may be more likely to be vaccinated. If this had occurred then vaccination would be expected to be associated with a worse outcome and an observed benefit would be more impressive of efficacy.

We attempted to adjust for this using confounding factors where recorded, but some bias due to unrecorded factors may remain. It may also be true that patients with good health behaviour may seek vaccination more frequently than those with poor health behaviour. This healthy user effect may partly explain the present results. Also, the completeness of cause of death records appeared to vary substantially over the study period.

It would have been ideal to adjust for years with an influenza epidemic as the protective effect would be expected to be greater but we did not have this information. However, we were able to identify years in which the influenza vaccine included all the strains of virus that were in circulation during subsequent season, and mortality rates were lower in these years. Pneumococcal vaccination is thought to offer protection against bacterial septicaemia¹⁹, but this data was not available.

Conclusion

Influenza vaccination was associated with a reduced risk of all cause mortality in COPD patients but pneumococcal vaccination was not, possibly due to the effect of unidentified confounding factors.

Figure legends

Figure 1. Trends in vaccination rates against influenza in patients aged over 40 with COPD

Figure 2. Trends in vaccination rates against pneumonia in patients aged over 40 with COPD

Conflict of interest statement

SS has received funding from GlaxoSmithKline, AstraZeneca and Boehringer Ingelheim to attend meetings. He has been a consultant to GlaxoSmithKline.

SM has been a paid consultant to Pfizer Inc.

JHW has no conflicts of interest.

TMM has been paid Speaker's fees or travel costs by: Pfizer, Novartis, Servier, Takeda. His department has had research grants from GlaxoSmithKline, Aventis, Novartis, AstraZeneca, BMS, Boehringer Ingelheim, Pfizer and Novartis. TMM has been paid Consulting fees by Pfizer, Novartis, Kaiser Permanente, Quintiles, Takeda, AstraZeneca, Sankyo Recordati and Speedel.

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Appendix 1 Read codes

READ code	Translation of the code
12D2.00	FH: Asthma
12D4.00	FH: Hay fever
13Y4.00	Asthma society member
14B..00	H/O: respiratory disease
14B1.00	H/O: hay fever
14B2.00	H/O: pneumonia
14B3.00	H/O: chr.obstr. airway disease
14B3.11	H/O: bronchitis
14B4.00	H/O: asthma
14B5.00	H/O: pneumothorax
14BZ.00	H/O: respiratory disease NOS
17...00	Respiratory symptoms
171..00	Cough
171..11	C/O - cough
171..12	Sputum - symptom
1716.11	Coughing up phlegm
1719.11	Bronchial cough
171A.00	Chronic cough
171B.00	Persistent cough
171C.00	Morning cough
171D.00	Evening cough
171E.00	Unexplained cough
171F.00	Cough with fever
171G.00	Bovine cough
171H.00	Difficulty in coughing up sputum
171Z.00	Cough symptom NOS
172..00	Blood in sputum - haemoptysis
172..11	Blood in sputum - symptom
172..12	Haemoptysis - symptom
173..00	Breathlessness
173..11	Breathlessness symptom
173..12	Dyspnoea - symptom
173..13	Shortness of breath symptom
1735.11	Orthopnoea symptom
1737.11	Wheezing symptom
173A.00	Exercise induced asthma
173B.00	Nocturnal cough / wheeze
173C.00	Short of breath on exertion
173C.11	Dyspnoea on exertion
173C.12	SOBOE
173D.00	Nocturnal dyspnoea
173F.00	Short of breath dressing/undressing
173G.00	Breathless - strenuous exertion
173H.00	MRC Breathlessness Scale: grade 1
173I.00	MRC Breathlessness Scale: grade 2
173J.00	MRC Breathlessness Scale: grade 3
173K.00	MRC Breathlessness Scale: grade 4
173L.00	MRC Breathlessness Scale: grade 5
173S.00	Borg Breathlessness Score: 4 somewhat severe

173T.00	Borg Breathlessness Score: 5 severe
173Y.00	Borg Breathlessness Score: 9 very, very sev (almost maximal)
173Z.00	Breathlessness NOS
175..00	Breath symptom
176..00	C/O - catarrh
178..00	Asthma trigger
17Z..00	Respiratory symptoms NOS
17Z1.00	No respiratory symptoms
17ZZ.00	Respiratory symptom NOS
1C5..00	Sneezing symptoms
1C52.00	Sneezes
1C5Z.00	Sneezing symptom NOS
1C7..00	Snoring symptoms
1C71.00	Does not snore
1C72.00	Snores
1C7Z.00	Snoring symptom NOS
1C8..00	Nasal symptoms OS
1C8..11	Nasal symptoms
1C8..12	Nose symptoms
1C81.00	No nasal symptoms
1C82.00	Nasal obstruction present
1C82.11	C/O nasal congestion
1C83.00	Nasal discharge present
1C83.11	Nose running
1C83.12	Nose dripping
1C83.13	Rhinorrhoea
1C84.00	C/O - post nasal drip
1C85.00	Swollen nose
1C86.00	Blocked nose
1C8Z.00	Nasal symptom NOS
1CA..00	Hoarseness symptom
1CA..11	Hoarseness - throat symptom
1CA2.00	Hoarse
1CA2.11	Voice hoarseness
1CAZ.00	Hoarseness symptom NOS
1CB..00	Throat symptom NOS
1CB1.00	No throat symptom
1CB2.00	Choking sensation
1CB3.00	Throat pain
1CB3.11	Pain in throat
1CB4.00	Feeling of lump in throat
1CB4.11	Constriction in throat
1CB4.12	Tightness in throat
1CB5.00	Throat irritation
1CBZ.00	Throat symptom NOS
1CC..00	Blocked sinuses
1CD..00	Ear pressure sensation
1J7..00	Suspected respiratory disease
1J70.00	Suspected asthma
1O2..00	Asthma confirmed
2126200	Asthma resolved
23...00	Examn. of respiratory system

336..00	Allergy testing NOS
336..11	Allergy test - not skin
336Z.00	Allergy testing NOS
337..00	Lung function testing
337..11	Lung function tests
337..12	Pulmonary function tests
337Z.00	Lung function test NOS
338..00	Lung volume testing
338..11	Lung volume test
338..12	Pulmonary function-lung volume
3385.11	Tidal volume test
3386.11	Vital capacity test
3387.11	Residual vol. test-lung
338Z.00	Lung volume testing NOS
339..00	Respiratory flow rates
3393.11	Peak flow rate normal
3394.11	Peak flow rate abnormal
3395.11	PEFR - peak exp. flow rate
3395.12	PFR - peak flow rate
3395.13	Peak flow rate
3396000	FVC - forced vital capacity normal
3396100	FVC - forced vital capacity abnormal
3397000	FEV normal
339A.00	Peak flow rate before bronchodilation
339A.11	Peak expiratory flow rate before bronchodilation
339B.00	Peak flow rate after bronchodilation
339B.11	Peak expiratory flow rate after bronchodilation
339C.00	Expected peak flow rate
339C.11	Expected peak expiratory flow rate
339D.00	Best ever peak flow rate
339D.11	Best ever peak expiratory flow rate
339E.00	More than 80% of predicted peak flow rate
339E.11	More than 80% of predicted peak expiratory flow rate
339F.00	60-80% of predicted peak flow rate
339F.11	60-80% of predicted peak expiratory flow rate
339G.00	Less than 60% of predicted peak flow rate
339G.11	Less than 60% of predicted peak expiratory flow rate
339H.00	Predicted peak flow
339I.00	Expected peak flow rate x 50%
339J.00	Optimal peak flow rate
339K.00	Expected peak flow rate x 30%
339L.00	Expected peak flow rate x 80%
339M.00	FEV1/FVC ratio
339N.00	Expected FEV1/FVC ratio
339O.00	Forced expired volume in 1 second
339P.00	Expected FEV1
339Q.00	Expected FVC
339R.00	FEV1/FVC percent
339S.00	Percent predicted FEV1
339T.00	FEV1/FVC > 70% of predicted
339U.00	FEV1/FVC < 70% of predicted
339V.00	Recorded/predicted peak expiratory flow rate ratio

339W.00	Worst peak flow rate
339X.00	Percentage of best ever peak expiratory flow rate
339Y.00	Percentage of peak expiratory flow rate variability
339Z.00	Respiratory flow rates NOS
339a.00	FEV1 before bronchodilation
339b.00	FEV1 after bronchodilation
339c.00	Peak expiratory flow rate pre steroids
339g.00	Serial peak expiratory flow rate
339g.11	Serial PEFr
339h.00	FVC after bronchodilation
339i.00	FVC/Expected FVC percent
339j.00	FEV1/FVC ratio pre steroids
339k.00	FEV1/FVC ratio post steroids
339l.00	FEV1/FVC ratio before bronchodilator
339m.00	FEV1/FVC ratio after bronchodilator
339n.00	Serial peak expiratory flow rate abnormal
33G..00	Spirometry reversibility
33G0.00	Spirometry reversibility negative
33G1.00	Spirometry reversibility positive
33H..00	Salbutamol reversibility
33H0.00	Negative reversibility test to salbutamol
33H1.00	Positive reversibility test to salbutamol
33I..00	Ipratropium reversibility
33I0.00	Negative reversibility test to ipratropium bromide
33I1.00	Positive reversibility test to ipratropium bromide
33J..00	Combined reversibility
33J0.00	Neg reversibil test to combinat of salbutamol + ipratrop br
33J1.00	Pos reversib test to combin of salbutamol + ipratropium br
33K..00	Steroid reversibility
33K0.00	Negative reversibility test to corticosteroid
33K1.00	Positive reversibility test to corticosteroids
33L..00	Shuttle walking test
33Z..00	Physiol. function test NOS
535..00	Standard chest X-ray
535..11	Chest X-ray - routine
5352.11	Chest X-ray normal
535Z.00	Standard chest X-ray NOS
663..00	Respiratory disease monitoring
663..11	Asthma monitoring
663..12	Chronic resp. dis. monitoring
6631.00	Initial resp. assessment
6632.00	Follow-up resp. assessment
6633.00	Oral steroids last used
6634.00	Intermittent drugs used more
6635.00	Increasing exercise wheeze
6636.00	Inhaler technique shown
6637.00	Inhaler technique observed
6638.00	Home nebuliser
6638.11	Nebuliser at home
6639.00	Home oxygen supply
6639.11	Home oxygen supply started
6639.12	Oxygen at home

663A.00	Resp. drug side effects
663B.00	Resp. treatment changed
663B.11	Resp.dis.-treatment changed
663C.00	Resp.dis.treatment started
663D.00	Resp.dis.treatment stopped
663E.00	Home oxygen supply stopped
663F.00	Oral steroids started
663G.00	Oral steroids stopped
663H.00	Inhaler technique - good
663I.00	Inhaler technique - poor
663J.00	Airways obstruction reversible
663K.00	Airways obstructn irreversible
663L.00	Bronchodilators used more than once daily
663M.00	Bronchodilators used a maximum of once daily
663N.00	Asthma disturbing sleep
663N000	Asthma causing night waking
663N100	Asthma disturbs sleep weekly
663N200	Asthma disturbs sleep frequently
663O.00	Asthma not disturbing sleep
663O000	Asthma never disturbs sleep
663P.00	Asthma limiting activities
663Q.00	Asthma not limiting activities
663R.00	Service of nebuliser
663S.00	Peak flow meter at home
663T.00	No peak flow meter at home
663U.00	Asthma management plan given
663V.00	Asthma severity
663V000	Occasional asthma
663V100	Mild asthma
663V200	Moderate asthma
663V300	Severe asthma
663W.00	Asthma prophylactic medication used
663X.00	Irritable airways
663Y.00	Steroid dose inhaled daily
663Z.00	Resp. disease monitoring NOS
663a.00	Oral steroids used since last appointment
663b.00	Home nebuliser used since last appointment
663c.00	Nebulisation since last appointment
663d.00	Emergency asthma admission since last appointment
663e.00	Asthma restricts exercise
663f.00	Asthma never restricts exercise
663g.00	Inhaled steroids use
663g000	Not using inhaled steroids
663g100	Using inhaled steroids - normal dose
663g200	Using inhaled steroids - high dose
663g300	Increases inhaled steroids appropriately
663h.00	Asthma - currently dormant
663j.00	Asthma - currently active
663k.00	Reversibility trial by steroids
663l.00	Spacer device in use
663m.00	Asthma accident and emergency attendance since last visit
663n.00	Asthma treatment compliance satisfactory

663p.00	Asthma treatment compliance unsatisfactory
663q.00	Asthma daytime symptoms
663r.00	Asthma causes night symptoms 1 to 2 times per month
663s.00	Asthma never causes daytime symptoms
663t.00	Asthma causes daytime symptoms 1 to 2 times per month
663u.00	Asthma causes daytime symptoms 1 to 2 times per week
663v.00	Asthma causes daytime symptoms most days
663w.00	Asthma limits walking up hills or stairs
663x.00	Asthma limits walking on the flat
663y.00	Number of asthma exacerbations in past year
663z.00	Number of times bronchodilator used in one week
66Y..00	Other respiratory disease monitoring
66Y0.00	Number of times bronchodilator used in 24 hours
66Y3.00	Peak expiratory flow rate - technique good
66Y4.00	Inhaler technique - moderate
66Y5.00	Change in asthma management plan
66Y9.00	Step up change in asthma management plan
66YA.00	Step down change in asthma management plan
66YB.00	Chronic obstructive pulmonary disease monitoring
66YC.00	Absent from work or school due to asthma
66YE.00	Asthma monitoring due
66YF.00	Nebulizer technique good
66YI.00	COPD self-management plan given
679J.00	Health education - asthma
68C..00	Respiratory disease screen
68C1.00	Screening chest X-ray
68C1.11	CXR - screening
68C2.00	Chr.obst. pulm. dis. screen
68C3.00	Asthma screening
68CZ.00	Resp. disease screen NOS
744..00	Trachea and bronchus operations
7440000	Open excision of lesion of trachea
7440y00	Other specified partial excision of trachea
7440z00	Partial excision of trachea NOS
7441.11	Reconstruction of trachea operations
7441000	Reconstruction of trachea & anastomosis HFQ
7441100	Reconstruction of trachea using graft
7441200	Reconstruction of trachea NEC
7441300	Reconstruction of trachea with skin flap
7441y00	Other specified plastic operation on trachea
7441z00	Plastic operation on trachea NOS
7442000	Open insertion of tubal prosthesis in trachea
7442100	Open renewal of tubal prosthesis in trachea
7442200	Open removal of tubal prosthesis from trachea
7442y00	Other specified open placement of prosthesis in traches
7442z00	Open placement of prosthesis in trachea NOS
7443.11	Tracheostomy
7443000	Permanent tracheostomy
7443100	Cricothyroidostomy
7443200	Temporary tracheostomy
7443211	Placement of tracheostomy tube
7443300	Revision of tracheostomy

7443400	Closure of tracheostomy
7443500	Replacement of tracheostomy tube
7443511	Change of tracheostomy tube
7443600	Removal of tracheostomy tube
7443700	Closure of tracheocutaneous fistula
7443800	Removal of granulation tissue from tracheostomy
7443900	Suction clearance of tracheostomy tube
7443y00	Other specified exteriorisation of trachea
7443z00	Exteriorisation of trachea NOS
7444000	Open destruction of lesion of trachea
7444100	Tracheorrhaphy
7444200	Tracheopexy
7444300	Open biopsy of lesion of trachea
7444y00	Other specified other open operation on trachea
7444z00	Other open operation on trachea NOS
7445.11	Therapeutic operations on trachea using rigid bronchoscope
7445.12	Therapeutic operations on trachea using rigid tracheoscope
7445000	Rigid bronchoscopic destruction of lesion of trachea NEC
7445100	Rigid bronchoscopic removal of foreign body from trachea
7445300	Rigid bronchoscopic snare resection of lesion of trachea
7445400	Rigid bronchoscopic laser destruction of lesion of trachea
7445500	Endoscopic aspiration of trachea using rigid bronchoscope
7445600	Endoscopic irrigation of trachea using rigid bronchoscope
7445y00	Therapeutic rigid bronchoscopic operation on trachea OS
7445z00	Therapeutic rigid bronchoscopic operation on trachea NOS
7446.11	Diagnostic rigid bronchoscopy of trachea
7446.12	Diagnostic rigid tracheoscopy
7446000	Rigid bronchoscopic examination & biopsy lesion of trachea
7446100	Diagnostic tracheoscopy via tracheostomy
7446y00	Diagnostic endoscop exam trachea using rigid bronchoscope OS
7446z00	Diagnostic endosc exam trachea using rigid bronchoscope NOS
7446z11	Tracheoscopy NEC
7447000	Excision of carina
7447100	Reconstruction of carina
7447200	Open biopsy of lesion of carina
7447y00	Other specified open operation on carina
7447z00	Open operation on carina NOS
7448000	Sleeve resection of bronchus and anastomosis HFQ
7448100	Excision of cyst of bronchus
7448200	Excision of lesion of bronchus NEC
7448300	Open destruction of lesion of bronchus
7448400	Bronchial lesion local excision
7448y00	Other specified partial extirpation of bronchus
7448z00	Partial extirpation of bronchus NOS
7449000	Open biopsy of lesion of bronchus NEC
7449100	Closure of fistula of bronchus
7449200	Repair of bronchus NEC
7449y00	Other specified other open operation on bronchus
7449z00	Other open operation on bronchus NOS
744A.00	Rigid therapeutic bronchoscopy
744A000	Rigid bronchoscopic laser destruction lesion below trachea
744A100	Rigid bronchoscopic destruction of lesion below trachea NEC

744A200	Endoscopic aspiration below trachea using rigid bronchoscope
744A300	Rigid bronchoscopy to remove foreign body
744A400	Endoscopic irrigation below trachea using rigid bronchoscope
744A411	Endoscopic lavage below trachea using rigid bronchoscope
744A500	Therapeutic rigid bronchoscopic operation on lung
744A600	Rigid bronchoscopic snare resection of lesion below trachea
744Ay00	Other specified rigid therapeutic bronchoscopy
744Az00	Rigid therapeutic bronchoscopy NOS
744B.00	Diagnostic bronchoscopic examination below trachea
744B000	Rigid bronchoscopic examination and biopsy below trachea
744B100	Diagnostic rig bronchoscopic exam & biopsy lesion of lung
744B200	Diagnostic bronchoscopy via tracheostomy
744By00	Other specified rigid diagnostic bronchoscopy
744Bz00	Rigid diagnostic bronchoscopy NOS
744Bz11	Bronchoscopy NEC
744Bz12	Tracheobronchoscopy NEC
744C.00	Other operations on bronchus or trachea
744C000	Irrigation of bronchus NEC
744C011	Lavage of bronchus NEC
744C100	Aspiration of bronchus NEC
744C111	Clearance of airway
744Cy00	Other specified other operation on bronchus or trachea
744Cz00	Other operation on bronchus or trachea NOS
744D.00	Tracheo-oesophageal puncture
744D000	Tracheo-oesophageal puncture and insertion of prosthesis
744D100	Changing of tracheoesophageal valve
744Dy00	Other specified tracheo-oesophageal puncture
744Dz00	Tracheo-oesophageal puncture NOS
744E.00	Therapeutic fiberoptic endoscopic operations on trachea
744E.11	Therapeutic fiberoptic bronchoscopy of trachea
744E.12	Therapeutic fiberoptic tracheoscopy
744E400	Fiberoptic endoscopic removal of foreign body from trachea
744E500	Fiberoptic endoscopic irrigation of trachea
744E511	Fiberoptic lavage of trachea
744Ey00	Therapeutic fiberoptic endoscopic operation on trachea OS
744Ez00	Therapeutic fiberoptic endoscopic operation on trachea NOS
744F.00	Diagnostic fiberoptic endoscopic examination of trachea
744F.11	Diagnostic fiberoptic bronchoscopic examination of trachea
744F000	Diagnostic fiberoptic endoscopic exam & biopsy of trachea
744Fy00	Diagnostic fiberoptic endoscopic examination of trachea OS
744Fz00	Diagnostic fiberoptic endoscopic examination of trachea NOS
744G.00	Therapeutic fiberoptic bronchoscopy below trachea
744G.11	Therapeutic fiberoptic endoscopic examination of lung
744G000	Fiberoptic endoscopic snare resection lesion below trachea
744G100	Fiberoptic endoscopic laser destruction lesion below trachea
744G200	Fiberoptic endoscopic destruction of lesion below trachea
744G300	Fiberoptic endoscopic aspiration below trachea
744G400	Fiberoptic bronchoscopic removal of foreign body
744G500	Fiberoptic endoscopic irrigation below trachea
744G511	Fiberoptic endoscopic lavage below trachea
744Gy00	Other specified therapeutic fiberoptic bronchoscopy
744Gz00	Therapeutic fiberoptic bronchoscopy NOS

744H.00	Diagnostic fibreoptic bronchoscopy
744H.11	Diagnostic fibreoptic endoscopic examination of lung
744H000	Fibreoptic bronchoscopy and biopsy
744Hy00	Other specified diagnostic fibreoptic bronchoscopy
744Hz00	Diagnostic fibreoptic bronchoscopy NOS
744Hz11	Fibreoptic bronchoscopy NEC
744y.00	Other specified operations on trachea or bronchus
744z.00	Trachea and bronchus operations NOS
745..00	Lung and mediastinum operations
745..11	Lung operations
7450y00	Other specified transplantation of lung
7450z00	Transplantation of lung NOS
7451.11	Pneumonectomy operations
7451000	Total pneumonectomy
7451011	Pneumonectomy
7451100	Bilobectomy of lung
7451200	Lobectomy of lung
7451211	Pulmonary lobectomy
7451300	Excision of segment of lung
7451311	Pulmonary segmentectomy
7451400	Partial lobectomy of lung NEC
7451y00	Other specified excision of lung
7451z00	Excision of lung NOS
7452000	Open decortication of lesion of lung
7452100	Open excision of lesion of lung
7452200	Open cauterisation of lesion of lung
7452300	Open destruction of lesion of lung NEC
7452y00	Other specified open extirpation of lesion of lung
7452z00	Open extirpation of lesion of lung NOS
7453000	Repair of lung
7453100	Ligation of bulla of lung
7453200	Deflation of bulla of lung
7453300	Incision of lung NEC
7453y00	Other specified other open operation on lung
7453z00	Other open operation on lung NOS
7454000	Needle biopsy of lesion of lung
7454100	Aspiration biopsy of lesion of lung
7454200	Biopsy of lesion of lung NEC
7454211	Open biopsy of lung
7454300	Drainage of lung
7454y00	Other specified other operation on lung
7454z00	Other operation on lung NOS
7455000	Open excision of lesion of mediastinum
7455100	Open biopsy of lesion of mediastinum
7455200	Open drainage of mediastinum
7455300	Mediastinotomy NEC
7455400	Exploration of mediastinum NEC
7455y00	Other specified open operation on mediastinum
7455z00	Open operation on mediastinum NOS
7456.11	Therapeutic mediastinoscopy
7456000	Endoscopic extirpation of lesion of mediastinum
7456y00	Therapeutic endoscopic operation on mediastinum OS

7456z00	Therapeutic endoscopic operation on mediastinum NOS
7457.11	Diagnostic mediastinoscopy
7457000	Diagnostic endoscopic exam & biopsy of mediastinum lesion
7457y00	Diagnostic endoscopic examination of mediastinum OS
7457z00	Diagnostic endoscopic examination of mediastinum NOS
7457z11	Cervical mediastinoscopy NEC
7457z12	Mediastinoscopy NEC
745y.00	Other specified operations on lung or mediastinum
745z.00	Lung and mediastinum operations NOS
74y..00	Other specified operations on respiratory tract
74z..00	Respiratory tract operations NOS
7H0..00	Chest wall, pleura and diaphragm operations
7H0..11	Chest wall operations
7H0..12	Pleural cavity and chest wall operations
7H00.00	Partial excision of chest wall
7H00000	Thoracoplasty
7H00011	Eloesser thoracoplasty
7H00012	Schede thoracoplasty
7H00013	Wilms thoracoplasty
7H00100	Removal of plombage material from chest wall
7H00200	Excision of lesion of chest wall
7H00y00	Other specified partial excision of chest wall
7H00z00	Partial excision of chest wall NOS
7H01.00	Reconstruction of chest wall
7H01000	Correction of pectus deformity of chest wall
7H01011	Correction of pectus carinatum
7H01012	Correction of pectus excavatum
7H01100	Insertion of silicone implant correction of pectus excavatum
7H01200	Insertion of prosthesis into chest wall NEC
7H01300	Removal of prosthesis from chest wall
7H01400	Reconstruction of chest wall with distant flap
7H01500	Reconstruction chest wall with microvascular transferred flap
7H01511	Reconstruction of chest wall with free flap
7H01y00	Other specified reconstruction of chest wall
7H01z00	Reconstruction of chest wall NOS
7H02.00	Opening of chest
7H02.11	Opening of pleural cavity
7H02.12	Thoracotomy
7H02000	Exploratory median sternotomy
7H02100	Exploratory thoracotomy NEC
7H02200	Reopen chest reexplore intraabdom op site surg arr PO bleed
7H02300	Reopening chest reexplore intraabdominal operation site NEC
7H02400	Reopening of chest NEC
7H02y00	Other specified opening of chest
7H02z00	Opening of chest NOS
7H03.00	Other operations on chest wall
7H03.11	Repair of chest wall
7H03000	Suture of chest wall
7H03100	Resuture of previous incision of chest wall
7H03200	Repair of chest wall NEC
7H03300	Removal of wire from chest wall
7H03400	Repair of previous incision of chest wall with local flap

7H03500	Repair of previous incision of chest wall with distant flap
7H03600	Repair previous incision chest wall c microvasc transfer flp
7H03611	Repair of previous incision of chest wall with free flap
7H03y00	Other specified other operation on chest wall
7H03z00	Other operation on chest wall NOS
7H04.00	Open excision of pleura
7H04000	Decortication of pleura
7H04100	Open excision of lesion of pleura
7H04y00	Other specified open excision of pleura
7H04z00	Open excision of pleura NOS
7H04z11	Pleurectomy NEC
7H05.00	Open drainage of pleural cavity
7H05000	Resection of rib and open drainage of pleural cavity
7H05100	Closure of open drainage of pleural cavity
7H05200	Fenestration of pleura
7H05211	Clagett fenestration of chest wall
7H05300	Closure of fenestration of pleura
7H05311	Clagett closure of fenestration of chest
7H05y00	Other specified open drainage of pleural cavity
7H05z00	Open drainage of pleural cavity NOS
7H06.00	Other open operations on pleura
7H06000	Open destruction of lesion of pleura
7H06100	Open biopsy of lesion of pleura
7H06200	Mechanical open pleurodesis
7H06300	Chemical open pleurodesis
7H06400	Open pleurodesis NEC
7H06500	Open instillation of therapeutic substance into pleura
7H06y00	Other specified other open operation on pleura
7H06z00	Other open operation on pleura NOS
7H07.00	Therapeutic endoscopic operations on pleura
7H07000	Endoscopic extirpation of lesion of pleura
7H07100	Endoscopic pleurodesis using talc
7H07200	Endoscopic pleurodesis NEC
7H07300	Therapeutic endoscopic pleurectomy
7H07y00	Other specified therapeutic endoscopic operation on pleura
7H07z00	Therapeutic endoscopic operation on pleura NOS
7H08.00	Diagnostic endoscopic examination of pleura
7H08.11	Thoracoscopy
7H08000	Diagnostic endoscopic examination & biopsy lesion of pleura
7H08100	Diagn endoscopy pleura & biopsy lesion intrathorac organ NEC
7H08y00	Other specified diagnostic endoscopic examination of pleura
7H08z00	Diagnostic endoscopic examination of pleura NOS
7H09.00	Puncture of pleura
7H09.11	Puncture and drainage of pleural cavity
7H09.12	Puncture of pleural cavity
7H09000	Drainage of lesion of pleura NEC
7H09100	Drainage of pleural cavity NEC
7H09111	Paracentesis of chest
7H09112	Thoracic paracentesis
7H09200	Aspiration of pleural cavity
7H09211	Thoracocentesis
7H09300	Insertion of tube drain into pleural cavity

7H09311	Insertion of underwater drain into chest
7H09312	Insertion intercostal drain
7H09400	Diagnostic pleurocentesis
7H09y00	Other specified puncture of pleura
7H09z00	Puncture of pleura NOS
7H0A.00	Introduction of substance into pleural cavity
7H0A000	Insufflation of talc into pleural cavity NEC
7H0A100	Introduction of sclerosing substance into pleural cavity NEC
7H0A200	Introduction of cytotoxic substance into pleural cavity
7H0A300	Introduction therapeutic substance into pleural cavity NEC
7H0Ay00	Introduction of substance into pleural cavity OS
7H0Az00	Introduction of substance into pleural cavity NOS
7H0B.00	Other operations on pleura
7H0B000	Percutaneous biopsy of lesion of pleura
7H0By00	Other specified other operation on pleura
7H0Bz00	Other operation on pleura NOS
876..00	Respiratory medication
876Z.00	Respiratory medication NOS
877..00	Oxygen enrichment therapy
877..11	Oxygen therapy
877Z.00	Oxygen enrichment therapy NOS
878..00	Atmospheric control
8791.00	Further asthma - drug prevent.
8793.00	Asthma control step 0
8794.00	Asthma control step 1
8795.00	Asthma control step 2
8796.00	Asthma control step 3
8797.00	Asthma control step 4
8798.00	Asthma control step 5
879Z.00	Other resp. procedures NOS
87Z..00	Respiratory procedures NOS
8CE2.00	Asthma leaflet given
8CE6.00	Chronic obstructive pulmonary disease leaflet given
8H2P.00	Emergency admission, asthma
8H3P.00	Non-urgent respiratory admission
8H4C.00	Referred to chest physician
8HKB.00	Chest medicine D.V. requested
8HLB.00	Chest medicine D.V. done
8HMB.00	Listed for Chest Med admission
8HR4.00	Refer for lung function test
9N1B.00	Seen in hospital ward
9N1b.00	Seen in chest clinic
9N1d.00	Seen in asthma clinic
9OJ..00	Asthma monitoring admin.
9OJ..11	Asthma clinic administration
9OJ1.00	Attends asthma monitoring
9OJ2.00	Refuses asthma monitoring
9OJ3.00	Asthma monitor offer default
9OJ4.00	Asthma monitor 1st letter
9OJ5.00	Asthma monitor 2nd letter
9OJ6.00	Asthma monitor 3rd letter
9OJ7.00	Asthma monitor verbal invite

90J8.00	Asthma monitor phone invite
90J9.00	Asthma monitoring deleted
90JA.00	Asthma monitoring check done
90JA.11	Asthma monitored
90JZ.00	Asthma monitoring admin.NOS
90O..00	Anti-smoking monitoring admin.
90O..11	Stop smoking clinic admin.
90O..12	Stop smoking monitoring admin.
90O1.00	Attends stop smoking monitor.
90O2.00	Refuses stop smoking monitor
90O3.00	Stop smoking monitor default
90O4.00	Stop smoking monitor 1st lettr
90O5.00	Stop smoking monitor 2nd lettr
90O6.00	Stop smoking monitor 3rd lettr
90O7.00	Stop smoking monitor verb.inv.
90O8.00	Stop smoking monitor phone inv
90O9.00	Stop smoking monitoring delete
90OA.00	Stop smoking monitor.chck done
90OZ.00	Stop smoking monitor admin.NOS
9Q21.00	Patient in asthma study
AB20.00	Candidiasis of mouth and oesophagus
AB20.00	Candidiasis of mouth and oesophagus
AB20.11	Monilia of mouth and oesophagus
AB20.11	Monilia of mouth and oesophagus
AB20.12	Thrush of mouth and oesophagus
AB20.12	Thrush of mouth and oesophagus
AB20.13	Pharyngeal candidiasis
AB20.14	Oral candidiasis
AB20.15	Oral moniliasis
AB20000	Candidiasis of mouth
AB20011	Oral thrush
AB20z00	Candidiasis of mouth and oesophagus NOS
AB20z00	Candidiasis of mouth and oesophagus NOS
C362100	Respiratory acidosis
C362500	Respiratory acidaemia
C363100	Respiratory alkalosis
C363300	Respiratory alkalaemia
G581.11	Asthma - cardiac
H1...00	Other upper respiratory tract diseases
H11..00	Nasal polyps
H12..00	Chronic pharyngitis and nasopharyngitis
H120.00	Chronic rhinitis
H120.11	Catarrh unspecified
H120000	Chronic simple rhinitis
H120100	Chronic catarrhal rhinitis
H120111	Catarrhal child
H120200	Chronic hypertrophic rhinitis
H120300	Chronic atrophic rhinitis
H120400	Chronic infective rhinitis
H120500	Chronic ulcerative rhinitis
H120600	Chronic membranous rhinitis
H120700	Chronic fibrinous rhinitis

H120z00	Chronic rhinitis NOS
H121.00	Chronic pharyngitis
H121.11	Sore throat - chronic
H121000	Simple chronic pharyngitis
H121100	Atrophic pharyngitis
H121200	Granular pharyngitis
H121300	Hypertrophic pharyngitis
H121400	Pharyngitis keratosa
H121500	Pharyngitis sicca
H121600	Chronic follicular pharyngitis
H121z00	Chronic pharyngitis NOS
H122.00	Chronic nasopharyngitis
H12z.00	Chronic pharyngitis and nasopharyngitis NOS
H13..00	Chronic sinusitis
H13..11	Chronic rhinosinusitis
H13..11	Chronic rhinosinusitis
H14..00	Chronic tonsil and adenoid disease
H14..11	Adenoid disease - chronic
H14..12	Tonsil disease - chronic
H141.00	Tonsil and/or adenoid hypertrophy
H141.11	Adenoid hypertrophy
H141.12	Enlargement of tonsil or adenoid
H141000	Hypertrophy of tonsils and adenoids
H141100	Hypertrophy of tonsils alone
H141200	Hypertrophy of adenoids alone
H141z00	Hypertrophy of tonsils and adenoids NOS
H15..00	Peritonsillar abscess - quinsy
H15..11	Quinsy
H16..00	Chronic laryngitis and laryngotracheitis
H161.00	Chronic laryngotracheitis
H16z.00	Chronic laryngitis NOS
H17..00	Allergic rhinitis
H17..11	Perennial rhinitis
H17..12	Allergic rhinosinusitis
H17..12	Allergic rhinosinusitis
H170.00	Allergic rhinitis due to pollens
H170.11	Hay fever - pollens
H170.12	Pollinosis
H172.00	Allergic rhinitis due to unspecified allergen
H172.11	Hay fever - unspecified allergen
H17z.00	Allergic rhinitis NOS
H18..00	Vasomotor rhinitis
H1z..00	Upper respiratory tract disease NOS
H2...00	Pneumonia and influenza
H2...00	Pneumonia and influenza
H20..00	Viral pneumonia
H20..11	Chest infection - viral pneumonia
H200.00	Pneumonia due to adenovirus
H201.00	Pneumonia due to respiratory syncytial virus
H202.00	Pneumonia due to parainfluenza virus
H20y.00	Viral pneumonia NEC
H20y000	Severe acute respiratory syndrome

H20z.00	Viral pneumonia NOS
H21..00	Lobar (pneumococcal) pneumonia
H21..11	Chest infection - pneumococcal pneumonia
H22..00	Other bacterial pneumonia
H22..11	Chest infection - other bacterial pneumonia
H220.00	Pneumonia due to klebsiella pneumoniae
H221.00	Pneumonia due to pseudomonas
H222.00	Pneumonia due to haemophilus influenzae
H222.11	Pneumonia due to haemophilus influenzae
H223.00	Pneumonia due to streptococcus
H223000	Pneumonia due to streptococcus, group B
H224.00	Pneumonia due to staphylococcus
H22y.00	Pneumonia due to other specified bacteria
H22y000	Pneumonia due to escherichia coli
H22y011	E.coli pneumonia
H22y100	Pneumonia due to proteus
H22y200	Pneumonia - Legionella
H22yX00	Pneumonia due to other aerobic gram-negative bacteria
H22yz00	Pneumonia due to bacteria NOS
H22z.00	Bacterial pneumonia NOS
H23..00	Pneumonia due to other specified organisms
H23..11	Chest infection - pneumonia organism OS
H230.00	Pneumonia due to Eaton's agent
H231.00	Pneumonia due to mycoplasma pneumoniae
H232.00	Pneumonia due to pleuropneumonia like organisms
H233.00	Chlamydial pneumonia
H23z.00	Pneumonia due to specified organism NOS
H24..00	Pneumonia with infectious diseases EC
H24..11	Chest infection with infectious disease EC
H240.00	Pneumonia with measles
H241.00	Pneumonia with cytomegalic inclusion disease
H242.00	Pneumonia with ornithosis
H243.00	Pneumonia with whooping cough
H243.11	Pneumonia with pertussis
H244.00	Pneumonia with tularaemia
H245.00	Pneumonia with anthrax
H246.00	Pneumonia with aspergillosis
H247.00	Pneumonia with other systemic mycoses
H247000	Pneumonia with candidiasis
H247100	Pneumonia with coccidioidomycosis
H247200	Pneumonia with histoplasmosis
H247z00	Pneumonia with systemic mycosis NOS
H24y.00	Pneumonia with other infectious diseases EC
H24y000	Pneumonia with actinomycosis
H24y100	Pneumonia with nocardiasis
H24y200	Pneumonia with pneumocystis carinii
H24y300	Pneumonia with Q-fever
H24y400	Pneumonia with salmonellosis
H24y500	Pneumonia with toxoplasmosis
H24y600	Pneumonia with typhoid fever
H24y700	Pneumonia with varicella
H24yz00	Pneumonia with other infectious diseases EC NOS

H24z.00	Pneumonia with infectious diseases EC NOS
H25..00	Bronchopneumonia due to unspecified organism
H25..11	Chest infection - unspecified bronchopneumonia
H26..00	Pneumonia due to unspecified organism
H26..11	Chest infection - pneumonia due to unspecified organism
H260.00	Lobar pneumonia due to unspecified organism
H260000	Lung consolidation
H261.00	Basal pneumonia due to unspecified organism
H262.00	Postoperative pneumonia
H27..00	Influenza
H270.00	Influenza with pneumonia
H270.11	Chest infection - influenza with pneumonia
H270000	Influenza with bronchopneumonia
H270100	Influenza with pneumonia, influenza virus identified
H270100	Influenza with pneumonia, influenza virus identified
H270z00	Influenza with pneumonia NOS
H271.00	Influenza with other respiratory manifestation
H271000	Influenza with laryngitis
H271100	Influenza with pharyngitis
H271z00	Influenza with respiratory manifestations NOS
H27y.00	Influenza with other manifestations
H27y000	Influenza with encephalopathy
H27y100	Influenza with gastrointestinal tract involvement
H27yz00	Influenza with other manifestations NOS
H27z.00	Influenza NOS
H27z.11	Flu like illness
H27z.12	Influenza like illness
H28..00	Atypical pneumonia
H2y..00	Other specified pneumonia or influenza
H2z..00	Pneumonia or influenza NOS
H2z..00	Pneumonia or influenza NOS
H3...00	Chronic obstructive pulmonary disease
H3...11	Chronic obstructive airways disease
H30..00	Bronchitis unspecified
H30..11	Chest infection - unspecified bronchitis
H30..12	Recurrent wheezy bronchitis
H300.00	Tracheobronchitis NOS
H301.00	Laryngotracheobronchitis
H302.00	Wheezy bronchitis
H30z.00	Bronchitis NOS
H31..00	Chronic bronchitis
H310.00	Simple chronic bronchitis
H310000	Chronic catarrhal bronchitis
H310100	Smokers' cough
H310z00	Simple chronic bronchitis NOS
H311.00	Mucopurulent chronic bronchitis
H311000	Purulent chronic bronchitis
H311100	Fetid chronic bronchitis
H311z00	Mucopurulent chronic bronchitis NOS
H312.00	Obstructive chronic bronchitis
H312000	Chronic asthmatic bronchitis
H312100	Emphysematous bronchitis

H312200	Acute exacerbation of chronic obstructive airways disease
H312z00	Obstructive chronic bronchitis NOS
H313.00	Mixed simple and mucopurulent chronic bronchitis
H313.00	Mixed simple and mucopurulent chronic bronchitis
H31y.00	Other chronic bronchitis
H31y000	Chronic tracheitis
H31y100	Chronic tracheobronchitis
H31yz00	Other chronic bronchitis NOS
H31z.00	Chronic bronchitis NOS
H32..00	Emphysema
H320.00	Chronic bullous emphysema
H320000	Segmental bullous emphysema
H320100	Zonal bullous emphysema
H320200	Giant bullous emphysema
H320300	Bullous emphysema with collapse
H320311	Tension pneumatocele
H320z00	Chronic bullous emphysema NOS
H321.00	Panlobular emphysema
H322.00	Centrilobular emphysema
H32y.00	Other emphysema
H32y000	Acute vesicular emphysema
H32y100	Atrophic (senile) emphysema
H32y111	Acute interstitial emphysema
H32y200	MacLeod's unilateral emphysema
H32yz00	Other emphysema NOS
H32yz11	Sawyer - Jones syndrome
H32z.00	Emphysema NOS
H33..00	Asthma
H33..11	Bronchial asthma
H330.00	Extrinsic (atopic) asthma
H330.11	Allergic asthma
H330.12	Childhood asthma
H330.13	Hay fever with asthma
H330.14	Pollen asthma
H330000	Extrinsic asthma without status asthmaticus
H330011	Hay fever with asthma
H330011	Hay fever with asthma
H330100	Extrinsic asthma with status asthmaticus
H330111	Extrinsic asthma with asthma attack
H330z00	Extrinsic asthma NOS
H331.00	Intrinsic asthma
H331.11	Late onset asthma
H331000	Intrinsic asthma without status asthmaticus
H331100	Intrinsic asthma with status asthmaticus
H331111	Intrinsic asthma with asthma attack
H331z00	Intrinsic asthma NOS
H332.00	Mixed asthma
H333.00	Acute exacerbation of asthma
H33z.00	Asthma unspecified
H33z000	Status asthmaticus NOS
H33z011	Severe asthma attack
H33z100	Asthma attack

H33z111	Asthma attack NOS
H33z200	Late-onset asthma
H33zz00	Asthma NOS
H33zz11	Exercise induced asthma
H33zz12	Allergic asthma NEC
H33zz13	Allergic bronchitis NEC
H34..00	Bronchiectasis
H340.00	Recurrent bronchiectasis
H341.00	Post-infective bronchiectasis
H34z.00	Bronchiectasis NOS
H35..00	Extrinsic allergic alveolitis
H350.00	Farmers' lung
H351.00	Bagassosis
H352.00	Bird-fancier's lung
H352000	Budgerigar-fanciers' lung
H352100	Pigeon-fanciers' lung
H352z00	Bird-fancier's lung NOS
H353.00	Suberosis (cork-handlers' lung)
H354.00	Malt workers' lung
H355.00	Mushroom workers' lung
H356.00	Maple bark strippers' lung
H357.00	"Ventilation" pneumonitis
H35y.00	Other allergic alveolitis
H35y000	Cheese-washers' lung
H35y100	Coffee-workers' lung
H35y200	Fish-meal workers' lung
H35y300	Furriers' lung
H35y400	Grain-handlers' disease
H35y500	Pituitary snuff-takers' disease
H35y600	Sequoiosis (red-cedar asthma)
H35y700	Wood asthma
H35y800	Air-conditioner and humidifier lung
H35yz00	Other allergic alveolitis NOS
H35z.00	Allergic alveolitis and pneumonitis NOS
H35z000	Allergic extrinsic alveolitis NOS
H35z100	Hypersensitivity pneumonitis NOS
H35zz00	Allergic alveolitis and pneumonitis NOS
H36..00	Mild chronic obstructive pulmonary disease
H37..00	Moderate chronic obstructive pulmonary disease
H38..00	Severe chronic obstructive pulmonary disease
H3y..00	Other specified chronic obstructive airways disease
H3y..11	Other specified chronic obstructive pulmonary disease
H3y0.00	Chronic obstruct pulmonary dis with acute lower resp infectn
H3y0.00	Chronic obstruct pulmonary dis with acute lower resp infectn
H3y1.00	Chron obstruct pulmonary dis wth acute exacerbation, unspec
H3z..00	Chronic obstructive airways disease NOS
H3z..11	Chronic obstructive pulmonary disease NOS
H4...00	Lung disease due to external agents
H4...11	Pneumoconioses
H4...12	Occupational lung disease
H40..00	Coal workers' pneumoconiosis
H41..00	Asbestosis

H410.00	Pleural plaque disease due to asbestosis
H41z.00	Asbestosis NOS
H42..00	Silica and silicate pneumoconiosis
H420.00	Talc pneumoconiosis
H421.00	Simple silicosis
H422.00	Complicated silicosis
H423.00	Massive silicotic fibrosis
H42z.00	Silica pneumoconiosis NOS
H43..00	Pneumoconiosis due to other inorganic dust
H430.00	Aluminosis of lung
H431.00	Bauxite fibrosis of lung
H432.00	Berylliosis
H433.00	Graphite fibrosis of lung
H434.00	Siderosis
H435.00	Stannosis
H43z.00	Pneumoconiosis due to inorganic dust NOS
H44..00	Pneumopathy due to inhalation of other dust
H440.00	Byssinosis
H441.00	Cannabinosis
H442.00	Flax-dressers' disease
H44z.00	Pneumopathy due to inhalation of other dust NOS
H45..00	Pneumoconiosis NOS
H450.00	Pneumoconiosis associated with tuberculosis
H46..00	Respiratory disease due to chemical fumes and vapours
H460.00	Bronchitis and pneumonitis due to chemical fumes
H460000	Acute bronchitis due to chemical fumes
H460100	Acute pneumonitis due to chemical fumes
H460z00	Bronchitis and pneumonitis due to chemical fumes NOS
H461.00	Acute pulmonary oedema due to chemical fumes
H462.00	Upper respiratory inflammation due to chemical fumes
H463.00	Other acute respiratory diseases due to chemical fumes
H464.00	Chronic respiratory conditions due to chemical fumes
H464000	Chronic emphysema due to chemical fumes
H464100	Obliterative bronchiolitis due to chemical fumes
H464200	Chronic pulmonary fibrosis due to chemical fumes
H464z00	Chronic respiratory conditions due to chemical fumes NOS
H46z.00	Respiratory conditions due to chemical fumes NOS
H46z000	Silo-fillers' disease
H46zz00	Respiratory conditions due to chemical fumes NOS
H47..00	Pneumonitis due to inhalation of solids or liquids
H47..11	Aspiration pneumonitis
H470.00	Pneumonitis due to inhalation of food or vomitus
H470000	Pneumonitis due to inhalation of regurgitated food
H470100	Pneumonitis due to inhalation of gastric secretions
H470200	Pneumonitis due to inhalation of milk
H470211	Milk inhalation pneumonitis
H470300	Pneumonitis due to inhalation of vomitus
H470311	Vomit inhalation pneumonitis
H470312	Aspiration pneumonia due to vomit
H470z00	Pneumonitis due to inhalation of food or vomitus NOS
H471.00	Pneumonitis due to inhalation of oil or essence
H471000	Lipoid pneumonia (exogenous)

H471z00	Pneumonitis due to inhalation of oil or essence NOS
H472.00	Asp pneumonitis due to anaesthesia during labour and deliv
H47y.00	Pneumonitis due to inhalation of other solid or liquid
H47y000	Detergent asthma
H47yz00	Pneumonitis due to inhalation of solid or liquid NOS
H47z.00	Pneumonitis due to inhalation of solid or liquid NOS
H48..00	Progressive massive fibrosis
H4y..00	Other specified lung diseases due to external agent
H4y0.00	Acute pulmonary radiation disease
H4y0000	Acute radiation pneumonitis
H4y0z00	Acute pulmonary radiation disease NOS
H4y1.00	Chronic pulmonary radiation disease
H4y1000	Chronic pulmonary fibrosis following radiation
H4y1z00	Chronic pulmonary radiation disease NOS
H4y2.00	Drug-induced interstitial lung disorders
H4y2000	Acute drug-induced interstitial lung disorders
H4y2100	Chronic drug-induced interstitial lung disorders
H4yy.00	Other external agent causing respiratory condition
H4yz.00	External agent causing respiratory conditions NOS
H4z..00	Lung disease due to external agents NOS
H5...00	Other respiratory system diseases
H50..00	Empyema
H500.00	Empyema with fistula
H500000	Empyema with bronchocutaneous fistula
H500100	Empyema with bronchopleural fistula
H500200	Empyema with hepatopleural fistula
H500300	Empyema with mediastinal fistula
H500400	Empyema with pleural fistula NOS
H500500	Empyema with thoracic fistula NOS
H500z00	Empyema with fistula NOS
H501.00	Empyema with no fistula
H501000	Pleural abscess
H501100	Thorax abscess NOS
H501200	Pleural empyema
H501300	Lung empyema NOS
H501400	Purulent pleurisy
H501500	Pyopneumothorax
H501600	Pyothorax
H501z00	Empyema with no fistula NOS
H50z.00	Empyema NOS
H51..00	Pleurisy
H510.00	Pleurisy without effusion or active tuberculosis
H510000	Adhesion of pleura or lung
H510100	Thickening of pleura
H510200	Calcification of pleura
H510300	Acute dry pleurisy
H510400	Diaphragmatic pleurisy
H510500	Basal pleurisy
H510600	Chronic dry pleurisy
H510700	Fibrinous pleurisy
H510800	Sterile pleurisy
H510900	Pneumococcal pleurisy

H510A00	Staphylococcal pleurisy
H510B00	Streptococcal pleurisy
H510z00	Pleurisy without effusion or active tuberculosis NOS
H511.00	Bacterial pleurisy with effusion
H511000	Pneumococcal pleurisy with effusion
H511100	Staphylococcal pleurisy with effusion
H511200	Streptococcal pleurisy with effusion
H511z00	Bacterial pleurisy with effusion NOS
H51y.00	Other pleural effusion excluding mention of tuberculosis
H51y000	Encysted pleurisy
H51y100	Haemopneumothorax
H51y200	Haemothorax
H51y300	Hydropneumothorax
H51y400	Hydrothorax
H51y500	Chylous effusion
H51y600	Fibrothorax
H51y700	Malignant pleural effusion
H51yz00	Other pleural effusion
H51z.00	Pleural effusion NOS
H51z000	Exudative pleurisy NOS
H51z100	Serofibrinous pleurisy NOS
H51z200	Serous pleurisy NOS
H51zz00	Pleural effusion NOS
H52..00	Pneumothorax
H520.00	Spontaneous tension pneumothorax
H52y.00	Other spontaneous pneumothorax
H52y000	Acute pneumothorax NOS
H52y100	Chronic pneumothorax
H52yz00	Other spontaneous pneumothorax NOS
H52yz11	Spontaneous pneumothorax NOS
H52z.00	Pneumothorax NOS
H53..00	Abscess of lung and mediastinum
H530.00	Abscess of lung
H530000	Single lung abscess
H530100	Multiple lung abscess
H530200	Gangrenous pneumonia
H530300	Abscess of lung with pneumonia
H530z00	Abscess of lung NOS
H531.00	Abscess of mediastinum
H53z.00	Abscess of lung and mediastinum NOS
H54..00	Pulmonary congestion and hypostasis
H540.00	Pulmonary hypostasis
H540000	Hypostatic pneumonia
H540100	Hypostatic bronchopneumonia
H540z00	Pulmonary hypostasis NOS
H541.00	Pulmonary congestion
H541000	Chronic pulmonary oedema
H541z00	Pulmonary oedema NOS
H54z.00	Pulmonary congestion and hypostasis NOS
H55..00	Postinflammatory pulmonary fibrosis
H55..11	Cirrhosis of lung
H56..00	Other alveolar and parietoalveolar disease

H560.00	Pulmonary alveolar proteinosis
H561.00	Idiopathic pulmonary haemosiderosis
H562.00	Pulmonary alveolar microlithiasis
H563.00	Idiopathic fibrosing alveolitis
H563.11	Hamman - Rich syndrome
H563.12	Cryptogenic fibrosing alveolitis
H563000	Alveolar capillary block
H563100	Diffuse pulmonary fibrosis
H563z00	Idiopathic fibrosing alveolitis NOS
H56y.00	Other alveolar and parietoalveolar disease
H56y000	Endogenous lipoid pneumonia
H56y100	Interstitial pneumonia
H56yz00	Other alveolar and parietoalveolar disease NOS
H56z.00	Alveolar and parietoalveolar disease NOS
H57..00	Lung involvement in diseases EC
H570.00	Rheumatoid lung
H571.00	Rheumatic pneumonia
H572.00	Lung disease with systemic sclerosis
H57y.00	Lung disease with diseases EC
H57y000	Pulmonary amyloidosis
H57y100	Lung disease with polymyositis
H57y200	Pulmonary sarcoidosis
H57y300	Lung disease with Sjogren's disease
H57y300	Lung disease with Sjogren's disease
H57y400	Lung disease with systemic lupus erythematosus
H57y400	Lung disease with systemic lupus erythematosus
H57y500	Lung disease with syphilis
H57yz00	Lung disease with diseases EC NOS
H58..00	Other diseases of lung
H580.00	Pulmonary collapse with atelectasis
H580.00	Pulmonary collapse with atelectasis
H580.11	Atelectasis
H580.12	Collapse of lung
H580000	Post operative atelectasis
H581.00	Interstitial emphysema
H581.11	Pneumomediastinum
H582.00	Compensatory emphysema
H583.00	Pulmonary eosinophilia
H583000	Loeffler's syndrome
H583100	Tropical eosinophilia
H583z00	Pulmonary eosinophilia NOS
H584.00	Acute pulmonary oedema unspecified
H584.11	Acute oedema of lung, unspecified
H584000	Postoperative pulmonary oedema
H584z00	Acute pulmonary oedema NOS
H585.00	Trauma and post-operative pulmonary insufficiency
H585.11	Adult respiratory distress syndrome
H585000	Pulmonary insufficiency following shock
H585100	Pulmonary insufficiency following surgery
H585200	Pulmonary insufficiency following trauma
H585300	Adult respiratory distress syndrome
H585z00	Trauma and post-operative pulmonary insufficiency NOS

H58y.00	Other lung disease NEC
H58y000	Broncholithiasis
H58y100	Calcification of lung
H58y200	Pulmolithiasis
H58y300	Interstitial lung disease NEC
H58y400	Squamous metaplasia of lung
H58yz00	Other lung disease NEC NOS
H58z.00	Lung disease NOS
H59..00	Respiratory failure
H590.00	Acute respiratory failure
H591.00	Chronic respiratory failure
H5B..00	Sleep apnoea
H5B0.00	Obstructive sleep apnoea
H5C..00	Choking due to airways obstruction
H5X..00	Pleural condition, unspecified
H5y..00	Other specified diseases of respiratory system
H5y0.00	Tracheostomy complication
H5y0000	Tracheostomy haemorrhage
H5y0000	Tracheostomy haemorrhage
H5y0100	Tracheostomy sepsis
H5y0200	Tracheostomy stenosis
H5y0300	Tracheostomy obstruction
H5y0400	Tracheo-oesophageal fistula following tracheostomy
H5y0z00	Tracheostomy complication NOS
H5y1.00	Other diseases of trachea and bronchus NEC
H5y1.11	Other bronchus disease
H5y1.12	Other trachea disease
H5y1000	Calcification of trachea
H5y1100	Calcification of bronchus
H5y1200	Stenosis of trachea
H5y1300	Stenosis of bronchus
H5y1400	Ulcer of trachea
H5y1500	Ulcer of bronchus
H5y1600	Bronchospasm
H5y1z00	Diseases of trachea and bronchus NEC NOS
H5y2.00	Mediastinitis
H5y3.00	Other diseases of mediastinum, NEC
H5y3000	Fibrosis of mediastinum
H5y3100	Hernia of mediastinum
H5y3200	Retraction of mediastinum
H5y3z00	Diseases of mediastinum, NEC NOS
H5y4.00	Disorders of diaphragm
H5y4000	Diaphragmatitis
H5y4100	Paralysis of diaphragm
H5y4200	Relaxation of diaphragm
H5y4z00	Disorders of diaphragm NOS
H5yy.00	Other diseases of respiratory system NEC
H5yy.11	Respiratory infection NOS
H5yz.00	Other diseases of respiratory system NOS
H5z..00	Respiratory system diseases NOS
Hy...00	Other specified diseases of respiratory system
Hy0..00	Postprocedural respiratory disorders

Hy00.00	Acute pulmonary insufficiency following thoracic surgery
Hy01.00	Acute pulmonary insufficiency following nonthoracic surgery
Hy02.00	Chronic pulmonary insufficiency following surgery
Hy03.00	Postprocedural subglottic stenosis
Hy04.00	Postprocedural respiratory failure
Hy0y.00	Other post procedural respiratory disorder
Hyu..00	[X]Additional respiratory disease classification terms
Hyu0.00	[X]Acute upper respiratory infections
Hyu0000	[X]Other acute sinusitis
Hyu0100	[X]Acute pharyngitis due to other specified organisms
Hyu0200	[X]Acute tonsillitis due to other specified organisms
Hyu0300	[X]Other acute upper respiratory infections/multiple sites
Hyu0400	[X]Flu+oth respiratory manifestatns,'flu virus identified
Hyu0500	[X]Influenza+other manifestatns,influenza virus identified
Hyu0600	[X]Influenza+oth respiratory manifestatns,virus not identifd
Hyu0700	[X]Influenza+other manifestatns, virus not identified
Hyu0800	[X]Other viral pneumonia
Hyu0900	[X]Pneumonia due to other aerobic gram-negative bacteria
Hyu0A00	[X]Other bacterial pneumonia
Hyu0B00	[X]Pneumonia due to other specified infectious organisms
Hyu0C00	[X]Pneumonia in bacterial diseases classified elsewhere
Hyu0D00	[X]Pneumonia in viral diseases classified elsewhere
Hyu0E00	[X]Pneumonia in mycoses classified elsewhere
Hyu0F00	[X]Pneumonia in parasitic diseases classified elsewhere
Hyu0G00	[X]Pneumonia in other diseases classified elsewhere
Hyu0H00	[X]Other pneumonia, organism unspecified
Hyu1.00	[X]Other acute lower respiratory infections
Hyu1000	[X]Acute bronchitis due to other specified organisms
Hyu1100	[X]Acute bronchiolitis due to other specified organisms
Hyu2.00	[X]Other diseases of the upper respiratory tract
Hyu2000	[X]Other seasonal allergic rhinitis
Hyu2100	[X]Other allergic rhinitis
Hyu2200	[X]Other chronic sinusitis
Hyu2300	[X]Other polyp of sinus
Hyu2400	[X]Other specified disorders of nose and nasal sinuses
Hyu2500	[X]Other chronic diseases of tonsils and adenoids
Hyu2600	[X]Other diseases of vocal cords
Hyu2700	[X]Other diseases of larynx
Hyu2800	[X]Other abscess of pharynx
Hyu2900	[X]Other diseases of pharynx
Hyu2A00	[X]Other specified diseases of upper respiratory tract
Hyu3.00	[X]Chronic lower respiratory diseases
Hyu3000	[X]Other emphysema
Hyu3100	[X]Other specified chronic obstructive pulmonary disease
Hyu4.00	[X]Lung diseases due to external agents
Hyu4000	[X]Pneumoconiosis due to other dust containing silica
Hyu4100	[X]Pneumoconiosis due to other specified inorganic dusts
Hyu4200	[X]Airway disease due to other specific organic dusts
Hyu4300	[X]Hypersensitivity pneumonitis due to other organic dusts
Hyu4400	[X]Upper resp inflammation/chemicals,gases,fumes,vapours,NEC
Hyu4500	[X]Oth acute+subacute resp condtns/chemical,gas,fume+vapours
Hyu4600	[X]Othr respiratory conditions/chemicals,gases,fumes+vapours

Hyu4700	[X]Pneumonitis due to inhalation of other solids and liquids
Hyu4800	[X]Chronic+other pulmonary manifestations due to radiation
Hyu4900	[X]Respiratory conditions/other specified external agents
Hyu4A00	[X]Respiratory conditions due to unspecified external agent
Hyu5.00	[X]Other resp diseases principally affecting interstitium
Hyu5000	[X]Other interstitial pulmonary diseases with fibrosis
Hyu5100	[X]Other specified interstitial pulmonary diseases
Hyu6.00	[X]Suppurative & necrotic conditions of lower respir tract
Hyu7.00	[X]Other diseases of the pleura
Hyu7000	[X]Pleural effusion in conditions classified elsewhere
Hyu7100	[X]Other spontaneous pneumothorax
Hyu7200	[X]Other pneumothorax
Hyu7300	[X]Other specified pleural conditions
Hyu7400	[X]Pleural condition, unspecified
Hyu8.00	[X]Other diseases of the respiratory system
Hyu8000	[X]Other postprocedural respiratory disorders
Hyu8100	[X]Other disorders of lung
Hyu8200	[X]Other specified respiratory disorders
Hyu8300	[X]Resp disorders/other diffuse connectv tissue disorders CE
Hyu8400	[X]Respiratory disorders in other diseases CE
Hz...00	Respiratory system diseases NOS
Q30..00	Respiratory distress syndrome
R06..00	[D]Respiratory system and chest symptoms
R060.00	[D]Respiratory abnormalities
R060000	[D]Respiratory symptom, unspecified
R060100	[D]Hyperventilation
R060300	[D]Tachypnoea
R060600	[D]Respiratory distress
R060700	[D]Respiratory insufficiency
R060800	[D]Shortness of breath
R060900	[D]Wheezing
R060A00	[D]Dyspnoea
R060B00	[D]Snoring
R060C00	[D]Yawning
R060D00	[D]Breathlessness
R060z00	[D]Respiratory abnormalities NOS
R061.00	[D]Stridor
R062.00	[D]Cough
R062000	[D]Cough syncope
R063.00	[D]Haemoptysis
R063000	[D]Cough with haemorrhage
R063100	[D]Pulmonary haemorrhage NOS
R063z00	[D]Haemoptysis NOS
R064.00	[D]Abnormal sputum
R064000	[D]Sputum abnormal - amount
R064100	[D]Sputum abnormal - colour
R064200	[D]Sputum abnormal - odour
R064300	[D]Abnormal sputum - tenacious
R064z00	[D]Abnormal sputum NOS
R065.00	[D]Chest pain
R065000	[D]Chest pain, unspecified
R065011	[D] Retrosternal chest pain

R065100	[D]Precordial pain
R065200	[D]Anterior chest wall pain
R065300	[D]Painful respiration NOS
R065400	[D]Pleuritic pain
R065500	[D]Pleurodynia
R065600	[D]Chest discomfort
R065700	[D]Chest pressure
R065800	[D]Chest tightness
R065900	[D]Parasternal chest pain
R065A00	[D]Musculoskeletal chest pain
R065B00	[D]Non cardiac chest pain
R065B14	[D]Non-cardiac chest pain
R065C00	[D]Retrosternal chest pain
R065D00	[D]Central chest pain
R065z00	[D]Chest pain NOS
R066.00	[D]Swelling, mass and lump of chest
R066000	[D]Chest swelling
R066100	[D]Chest lump
R066200	[D]Chest mass
R066z00	[D]Swelling, mass or lump of chest NOS
R067.00	[D]Abnormal chest sounds
R067000	[D]Percussion of chest abnormal
R067100	[D]Friction sounds, chest
R067200	[D]Rales
R067300	[D]Tympany, chest
R067z00	[D]Abnormal chest sounds NOS
R068.00	[D]Hiccough
R06z.00	[D]Other respiratory system and chest symptoms
R06z000	[D]Breath-holding spell
R06zz00	[D]Respiratory system and chest symptoms NOS
SN58.00	Food allergy
SN58000	Egg allergy
SN58100	Egg protein allergy
SN58200	Peanut allergy
SN58300	Nut allergy
SN59.00	Allergic reaction to venom
SN59000	Allergic reaction to bee sting
SN59100	Allergic reaction to insect bite
TJF7.00	Adverse reaction to antiasthmatics
TJF7300	Adverse reaction to theophylline (asthma)
TJF7z00	Adverse reaction to antiasthmatic NOS
U60F600	[X]Antiasthmats caus adverse effects in therapeut use, NEC
U60F615	[X] Adverse reaction to theophylline - asthma
ZV17500	[V]Family history of asthma
ZV19L00	[V]Family history of hay fever



