

Respiratory Rate

Reference Number: RDF1595-23

Date of Response: 27/07/23

Further to your Freedom of Information Act request, please find the Trust's response(s) below:

Please be aware that the Royal Devon University Healthcare NHS Foundation Trust (Royal Devon) has existed since 1st April 2022 following the integration of the Northern Devon Healthcare NHS Trust (known as Northern Services) and the Royal Devon and Exeter NHS Foundation Trust (known as Eastern Services).

For the attention of the Trust Freedom of Information Requests Officer;

Under the Freedom of Information Act, I would like to request the following information:

1. *For the period from the 1st of March 2022 to the 28th of February 2023,*
 - (a) how many patients were admitted to your hospitals with the following SNOMED codes,*
 - (b) how long did they stay in the hospital in terms of the average length of stay,*
 - (c) how many were readmitted within 30, 60 and 90 days, and*
 - (d) how many wards were they admitted to during their stay?*

SNOMED-CT	SNOMED-CT Description	Category
54150009	Upper respiratory infection (disorder)	Respiratory
50417007	Lower respiratory tract infection (disorder)	Respiratory
195967001	Asthma (disorder)	Respiratory
276191000000107	Viral wheeze (disorder)	Respiratory
1240751000000100	Coronavirus disease 19 caused by severe acute respiratory syndrome coronavirus 2 (disorder)	Respiratory
13645005	Chronic obstructive lung disease (disorder)	Respiratory
4120002	Bronchiolitis (disorder)	Respiratory
59282003	Pulmonary embolism (disorder)	Respiratory
233604007	Pneumonia (disorder)	Respiratory
278516003	Lobar pneumonia (disorder)	Respiratory
7520000	Pyrexia of unknown origin (finding)	Respiratory
60046008	Pleural effusion (disorder)	Respiratory
422588002	Aspiration pneumonia (disorder)	Respiratory
1325171000000100	Acute disease caused by severe acute respiratory syndrome coronavirus 2 infection (disorder)	Respiratory
195951007	Acute exacerbation of chronic obstructive airways disease (disorder)	Respiratory
6142004	Influenza (disorder)	Respiratory
40541001	Acute pulmonary edema (disorder)	Respiratory
262599003	Foreign body in respiratory tract (disorder)	Respiratory
398447004	Severe acute respiratory syndrome (disorder)	Respiratory
709109004	Hypercapnic respiratory failure (disorder)	Respiratory
371043007	Toxic inhalation injury (disorder)	Respiratory
233765002	Respiratory failure without hypercapnia (disorder)	Respiratory
1325181000000100	Ongoing symptomatic disease caused by severe acute respiratory syndrome coronavirus 2 (disorder)	Respiratory
262784001	Contusion of lung (disorder)	Respiratory
42434002	Pneumothorax due to trauma (disorder)	Respiratory
212962007	Drowning and non-fatal immersion (disorder)	Respiratory
205237003	Pneumonitis (disorder)	Respiratory
12295008	Bronchiectasis (disorder)	Respiratory
233703007	Interstitial lung disease (disorder)	Respiratory
284188001	Burn of respiratory tract (disorder)	Respiratory
195889001	Legionella pneumonia (disorder)	Respiratory
233658003	Pleural plaque (disorder)	Respiratory
40122008	Pneumoconiosis (disorder)	Respiratory
443980004	Neutropenic sepsis (disorder)	Sepsis
2858002	Puerperal sepsis (disorder)	Sepsis
42343007	Congestive heart failure (disorder)	CHF

If it is not possible to supply any part of this information, please provide as much information as possible.

Answer: Please see attached reports representing Royal Devon's Eastern & Northern Services.

In accordance with Section 40 (2) of the Freedom of Information Act 2000, we are unable to provide figures where the number of patients is less than or equal to five and could risk the identification of those patients and breach Caldicott principles. In these cases ≤ 5 is used to indicate that a figure between 1 and 5 is being suppressed.

This follows NHS Digital (formerly HSCIC) analysis guidance (2014) which states that small numbers within local authorities, wards, postcode districts, CCG's providers and Trusts may allow identification of patients and should not be published.

2. How was their respiratory rate incorporated into the NEWS2 record and EHR or similar system for the patients admitted with these codes? Please describe as closely as possible the process and systems used.

Answer: The observations were recorded on the EPIC system - the Electronic Healthcare Record (EHR).

3. Was any digital or remote patient monitoring of respiratory rate used to monitor these patients?

Answer: Digital.

(a) If yes, what form did this monitoring take, and who was the supplier or manufacturer?

Answer: Welch Allyn are the suppliers of the patient observation machines for RR rate.

1st March 2022 - 28th Feb 2023 Patients admitted to RDUH EASTERN SERVICES through ED looking at coding on FCE. (A few of the ICD-10 codes were repeated or a Judgement call/no mapping from SNOMED to ICD-10)

SNOMED-CT	SNOMED-CT Description	ICD-10 Code Mapped to (TRUE)	Category	Admissions from ED	Average Length of stay	30 day readmission	60 day readmission	90 day readmission	Number of wards
54150009	Upper respiratory infection (disorder)	J06.9	Respiratory	528	11	18	28	37	1.5
50417007	Lower respiratory tract infection (disorder)	J22.X	Respiratory	348	3	22	31	35	2.9
195967001	Asthma (disorder)	J45.9	Respiratory	199	3	11	15	23	3
2.76E+14	Viral wheeze (disorder)	B34.9 + R06.2 (JUDGEMENT AS COULDN'T SEARCH BY THIS CODE)	Respiratory	15	0.3	≤5	≤5	≤5	1.6
1.24E+15	Coronavirus disease 19 caused by severe acute respiratory syndrome coronavirus 2 (disorder)	U07.1 (JUDGEMENT AS COULDN'T SEARCH BY THIS CODE)	Respiratory	489	8	15	18	18	3.9
13645005	Chronic obstructive lung disease (disorder)	J44.9	Respiratory	17	4	≤5	≤5	≤5	5.6
4120002	Bronchiolitis (disorder)	J21.9	Respiratory	330	0.5	39	53	60	1.8
59282003	Pulmonary embolism (disorder)	I26.9	Respiratory	78	5	≤5	≤5	≤5	4
233604007	Pneumonia (disorder)	J18.9	Respiratory	339	10	9	15	23	4.9
278516003	Lobar pneumonia (disorder)	J18.1	Respiratory	346	7.6	15	20	21	4.7
7520000	Pyrexia of unknown origin (finding)	NO MAP TO ICD-10 Try R50.8 and R50.9	Respiratory	172	1.3	6	9	9	1.7
60046008	Pleural effusion (disorder)	J90.X	Respiratory	30	9	≤5	≤5	≤5	5.8
422588002	Aspiration pneumonia (disorder)	J69.0	Respiratory	56	11	≤5	≤5	≤5	4.3
1.33E+15	Acute disease caused by severe acute respiratory syndrome coronavirus 2 infection (disorder)	U07.1 (JUDGEMENT AS COULDN'T SEARCH BY THIS CODE)	Respiratory	0	0	0	0	0	0
195951007	Acute exacerbation of chronic obstructive airways disease (disorder)	J44.1	Respiratory	140	7	14	29	36	5
6142004	Influenza (disorder)	J11.1	Respiratory	8	2.5	0	0	0	3
40541001	Acute pulmonary edema (disorder)	J81.X	Respiratory	9	8	0	0	0	6.5
262599003	Foreign body in respiratory tract (disorder)	T17.9	Respiratory	10	0.4	0	0	0	1.9
398447004	Severe acute respiratory syndrome (disorder)	U04.9	Respiratory	0	0	0	0	0	0
709109004	Hypercapnic respiratory failure (disorder)	J96.91	Respiratory	0	0	0	0	0	0
371043007	Toxic inhalation injury (disorder)	T59.9	Respiratory	0	0	0	0	0	0
233765002	Respiratory failure without hypercapnia (disorder)	J96.99	Respiratory	0	0	0	0	0	0
1.33E+15	Ongoing symptomatic disease caused by severe acute respiratory syndrome coronavirus 2 (disorder)	U07.1 (JUDGEMENT AS COULDN'T SEARCH BY THIS CODE)	Respiratory	0	0	0	0	0	0
262784001	Contusion of lung (disorder)	S27.30	Respiratory	0	0	0	0	0	0
42434002	Pneumothorax due to trauma (disorder)	S27.20	Respiratory	0	0	0	0	0	0
212962007	Drowning and non-fatal immersion (disorder)	T75.1	Respiratory	≤5	1.6	0	0	0	2
205237003	Pneumonitis (disorder)	J18.9	Respiratory	0	0	0	0	0	0
12295008	Bronchiectasis (disorder)	J47.X	Respiratory	21	11	≤5	≤5	6	4.6
233703007	Interstitial lung disease (disorder)	J84.9	Respiratory	≤5	12	0	0	0	4.3
284188001	Burn of respiratory tract (disorder)	T27.3	Respiratory	0	0	0	0	0	0
195889001	Legionella pneumonia (disorder)	A48.1	Respiratory	≤5	38	0	0	0	3
233658003	Pleural plaque (disorder)	J92.9	Respiratory	0	0	0	0	0	0
40122008	Pneumoconiosis (disorder)	M05.1D +J99.0A/J64.X (TWO TRUE MAPS)	Respiratory	0	0	0	0	0	0
443980004	Neutropenic sepsis (disorder)	A41.9+D70.X	Sepsis	19	8	≤5	≤5	≤5	4
2858002	Puerperal sepsis (disorder)	O85.X	Sepsis	0	0	0	0	0	0
42343007	Congestive heart failure (disorder)	I50.0	CHF	162	11	≤5	13	15	5

1st March 2022 - 28th Feb 2023 Patients admitted to RDUH NORTHERN SERVICES through ED looking at coding on FCE. (A few of the ICD-10 codes were repeated or a Judgement call/no mapping from SNOMED to ICD-10)

SNOMED-CT	SNOMED-CT Description	ICD-10 Code Mapped to (TRUE)	Category	Admissions from ED	Average Length of stay	30 day readmission	60 day readmission	90 day readmission	Number of wards
54150009	Upper respiratory infection (disorder)	J06.9	Respiratory	43	0.3	0	0	0	1
50417007	Lower respiratory tract infection (disorder)	J22.X	Respiratory	80	9	6	6	7	2.1
195967001	Asthma (disorder)	J45.9	Respiratory	63	4.7	6	6	7	2
2.76E+14	Viral wheeze (disorder)	B34.9 + R06.2 (JUDGEMENT AS COULDN'T SEARCH BY THIS CODE)	Respiratory	≤5	0.5	0	0	0	1
1.24E+15	Coronavirus disease 19 caused by severe acute respiratory syndrome coronavirus 2 (disorder)	U07.1 (JUDGEMENT AS COULDN'T SEARCH BY THIS CODE)	Respiratory	159	9.8	10	12	14	2.3
13645005	Chronic obstructive lung disease (disorder)	J44.9	Respiratory	8	7	0	0	0	2.3
4120002	Bronchiolitis (disorder)	J21.9	Respiratory	31	0.9	0	0	0	1.2
59282003	Pulmonary embolism (disorder)	I26.9	Respiratory	38	7.1	0	≤5	≤5	2.1
233604007	Pneumonia (disorder)	J18.9	Respiratory	123	9.5	≤5	7	9	2.4
278516003	Lobar pneumonia (disorder)	J18.1	Respiratory	316	11.3	12	22	26	1
7520000	Pyrexia of unknown origin (finding)	NO MAP TO ICD-10 Try R50.8 and R50.9	Respiratory	18	4.4	0	0	0	2.1
60046008	Pleural effusion (disorder)	J90.X	Respiratory	17	8.8	≤5	≤5	≤5	2.8
422588002	Aspiration pneumonia (disorder)	J69.0	Respiratory	41	11.2	7	7	7	2.5
1.33E+15	Acute disease caused by severe acute respiratory syndrome coronavirus 2 infection (disorder)	U07.1 (JUDGEMENT AS COULDN'T SEARCH BY THIS CODE)	Respiratory	0	0	0	0	0	0
195951007	Acute exacerbation of chronic obstructive airways disease (disorder)	J44.1	Respiratory	51	7.4	≤5	6	8	2.4
6142004	Influenza (disorder)	J11.1	Respiratory	≤5	2.5	0	0	0	1.5
40541001	Acute pulmonary edema (disorder)	J81.X	Respiratory	≤5	1	0	0	0	1
262599003	Foreign body in respiratory tract (disorder)	T17.9	Respiratory	≤5	0	0	0	0	1.5
398447004	Severe acute respiratory syndrome (disorder)	U04.9	Respiratory	≤5	5	≤5	≤5	≤5	0
709109004	Hypercapnic respiratory failure (disorder)	J96.91	Respiratory	0	0	0	0	0	0
371043007	Toxic inhalation injury (disorder)	T59.9	Respiratory	0	0	0	0	0	0
233765002	Respiratory failure without hypercapnia (disorder)	J96.99	Respiratory	0	0	0	0	0	0
1.33E+15	Ongoing symptomatic disease caused by severe acute respiratory syndrome coronavirus 2 (disorder)	U07.1 (JUDGEMENT AS COULDN'T SEARCH BY THIS CODE)	Respiratory	0	0	0	0	0	0
262784001	Contusion of lung (disorder)	S27.30	Respiratory	0	0	0	0	0	0
42434002	Pneumothorax due to trauma (disorder)	S27.20	Respiratory	0	0	0	0	0	0
212962007	Drowning and non-fatal immersion (disorder)	T75.1	Respiratory	≤5	2	0	0	0	0
205237003	Pneumonitis (disorder)	J18.9	Respiratory	0	0	0	0	0	1
12295008	Bronchiectasis (disorder)	J47.X	Respiratory	10	14.5	≤5	≤5	≤5	3.4
233703007	Interstitial lung disease (disorder)	J84.9	Respiratory	≤5	16	0	≤5	≤5	3
284188001	Burn of respiratory tract (disorder)	T27.3	Respiratory	0	0	0	0	0	0
195889001	Legionella pneumonia (disorder)	A48.1	Respiratory	≤5	1.5	0	0	0	2
233658003	Pleural plaque (disorder)	J92.9	Respiratory	0	0	0	0	0	0
40122008	Pneumoconiosis (disorder)	M05.1D +J99.0A/J64.X (TWO TRUE MAPS)	Respiratory	0	0	0	0	0	0
443980004	Neutropenic sepsis (disorder)	A41.9+D70.X	Sepsis	17	9	0	0	≤5	4
2858002	Puerperal sepsis (disorder)	O85.X	Sepsis	≤5	0	0	0	0	3
42343007	Congestive heart failure (disorder)	I50.0	CHF	132	12.3	7	10	11	2.5