The Regulation and Quality Improvement Authority

Northern Ireland COPD Audit

A regional audit of chronic obstructive pulmonary disease (COPD) care

September 2017

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Assurance, Challenge and Improvement in Health and Social Care

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Background & Rationale

The Department of Health (Northern Ireland) has developed a range of service frameworks in an effort to improve the health and social wellbeing of the people in Northern Ireland. These service frameworks set out explicit standards for health and social care that are evidence-based and are capable of being measured. The frameworks identify clear and consistent standards informed by expert advice and by national standard setting bodies such as the National Institute for Health and Clinical Excellence (NICE) and the Social Care Institute for Excellence (SCIE). The auditing and measuring of these standards requires regular audits to support the implementation process of the Service Frameworks.

The aim of the service framework for respiratory health and wellbeing is to improve the health and wellbeing of the population of Northern Ireland, reduce inequalities and improve the quality of health and social care in relation to respiratory disease. The service framework for respiratory health and wellbeing sets standards for the prevention, assessment, diagnosis, treatment, care, rehabilitation and palliative care of individuals/communities who currently have or are at greater risk of developing respiratory disease. The standards aim to ensure that health and social care services are safe, effective, efficient, accessible, patient/client centred and equitable.

Respiratory disease is a major cause of death and disability in Northern Ireland. Chronic obstructive pulmonary disease (COPD) is one of the most common respiratory diseases and is characterised by progressive breathlessness with cough and wheeze, punctuated by exacerbations that may lead to hospital admission with significant morbidity and mortality. In Northern Ireland, around 37,000 people have been diagnosed also as having COPD. Half as many as those already on the COPD registers are thought to be living with COPD without the disease being diagnosed, bringing the total to approximately 55,500. COPD is the second most common reason for emergency admission to hospital. About 30% of patients admitted with

COPD will be readmitted within three months and 15% of patients admitted will die within three months of discharge.

NICE provides guidelines for the assessment and management of COPD. NICE guidance has clear standards for the management of patients with exacerbations of COPD, the use of non-invasive ventilation, pulmonary rehabilitation, long term oxygen and discharge planning. The National COPD Audit Programme for England and Wales outlined wide variations in all aspects of service organisation, process of care and the clinical outcomes that were examined, particularly in secondary care. Some of the key messages include the sub-optimal use of non-invasive ventilation, the adverse effects of high flow oxygen use in pre-admission care, and the variable implementation of national service standards for pulmonary rehabilitation and supported discharge.

Aim

The aim of this audit is to measure the current practice across Trusts in the assessment, management and follow up of patients with COPD in line with standards 13, 14 and 15, as referenced in the findings section of this report (page 8-23) of the Northern Ireland Service Framework for Respiratory Health and Wellbeing.

Objectives

1. To determine whether patients admitted to a hospital for more than 24 hours with an exacerbation of COPD are assessed and managed by respiratory teams.
2. To determine whether patients with COPD are managed in a respiratory ward or formally designated respiratory area within a ward during their hospital admission.
3. To examine whether patients with COPD have been encouraged to stop smoking.
4. To determine whether the COPD discharge bundle is completed for people discharged from hospital following admission for an exacerbation of COPD.
5. To determine whether a course of pulmonary rehabilitation has been offered to patients who are functionally disabled by their COPD.
6. To determine whether people admitted with an exacerbation of COPD have proper assessment on admission including completed arterial blood gas (ABG) to identify ventilatory failure.
7. To determine whether patients have been assessed for the need for oxygen therapy.
8. To determine whether patients are being encouraged to manage exacerbations using self-management advice on responding promptly to exacerbations. This is in the form of a personalised care plan.

Standards / guidelines / evidence base

The table below outlines the standards that exist in relation to this audit, along with associated evidence and anticipated performance levels.

Criteria		RSF Target (%)	Evidence
1	Percentage (%) of people with COPD admitted to hospital for more than 24 hours, with an exacerbation who receive care from a respiratory team.	70%	Northern Ireland Service Framework for Respiratory Health and Wellbeing / British Thoracic Society (BTS) /SIGN/NICE Guidelines
2	Managed in a respiratory ward or formally designated respiratory area within a ward.	50%	Northern Ireland Service Framework for Respiratory Health and Wellbeing BTS/SIGN/NICE Guidelines
3	Smoking status should be documented on all people admitted with an exacerbation of COPD and advice on smoking cessation offered and documented.	70%	Northern Ireland Service Framework for Respiratory Health and Wellbeing BTS/SIGN/NICE Guidelines
4	Percentage (%) of people discharged from hospital following admission for an exacerbation of COPD who have the following aspects of the COPD discharge bundle completed: * smoking cessation advice * individualised self-management plan * inhaler technique checked * referral to pulmonary rehabilitation * referral to community team for assessment & review for more complex needs	Establish Baseline	Northern Ireland Service Framework for Respiratory Health and Wellbeing BTS/SIGN/NICE Guidelines

5	Percentage (%) of people discharged from hospital following admission for an exacerbation of COPD who have been offered access to rapid pulmonary rehabilitation within four weeks of discharge. (Providing they fulfil the inclusion criteria).	40%	Northern Ireland Service Framework for Respiratory Health and Wellbeing BTS/SIGN/NICE Guidelines
6	Percentage (%) of people admitted with an exacerbation of COPD who have had an arterial blood gas (ABG) assessment on admission to identify ventilatory failure.	90%	Northern Ireland Service Framework for Respiratory Health and Wellbeing BTS/SIGN/NICE Guidelines
7	Percentage (%) of people who receive non-invasive ventilation in a respiratory ward or dedicated formally designated respiratory area within a ward.	90%	Northern Ireland Service Framework for Respiratory Health and Wellbeing BTS/SIGN/NICE Guidelines
8	Percentage (%) of people who receive non-invasive ventilation who have a clear management plan which includes ceiling of care.	90%	Northern Ireland Service Framework for Respiratory Health and Wellbeing BTS/SIGN/NICE Guidelines

Methodology

Representatives from the five Healthcare Trusts were invited to form the Project Group. It was comprised of Public health practitioners, Trust nursing staff, project support and RQIA representation. This group agreed upon the methodology, data sources, patient sample, audit standards, data collection tools, data analysis and the final report.

Sample

The sample population was selected from adult patients (over 16 years of age) who had a hospital admission in a Northern Ireland Healthcare Trust between Sept 2015 and November 2015, related to COPD. Sample sizes were then determined by using the ©Raosoft sample calculator. It was agreed that 57 was a representative sample

for the Trust population. That equates to a total sample size of 285 cases across all five Trusts. Patients were sequentially selected in order of the date of admission and their clinical notes were audited if available, until the predetermined quota was reached.

Data source

The data source used for the audit was Patient Administration System (PAS) and patient case notes.

Audit type

The audit design was a retrospective review of clinical notes by trained data collectors.

Data collection methods

Patients who had a hospital admission were identified from each hospital's PAS database for the audit period September – November 2015. The case notes were retrieved by the audit department and reviewed by the identified trained data collectors in each Trust who completed the agreed data collection tool. Data from the audit tool (appendix 1) were then collated, coded and entered into an electronic database.

Data collector and training

Data collectors were nominated and supported by a Clinical Lead in each Trust. They were familiar with the management of COPD patients. The data collectors attended a training day where they were presented with an overview of the rationale, audit standards and methodology involved. They were then given time to examine sample patient clinical notes and make data entries into the data collection tool. Any issues identified in this process were then taken into account in the final revision of the data collection tool. To support the data collectors during the data collection process, project support was identified who was available to deal with any queries or issues.

Data analysis

All Trusts completed data collection for the required sample size which were collated by the Trusts into an agreed database. This was then submitted to the project coordinator. All five trust databases were then centrally collated into one master database. Data were then cleansed and coded for analysis. Data were then analysed and final outputs generated which are included in this report.

Caveats

Percentages are given as a proportion of known results, excluding missing or unclear answers. This means that where a large proportion of information was missing, such as was the case for whether pulmonary rehabilitation was offered within four weeks, the percentage may not be a reliable reflection of performance. Unavailability of patient clinical notes impeded auditing of consecutive patients in some hospitals.

Findings

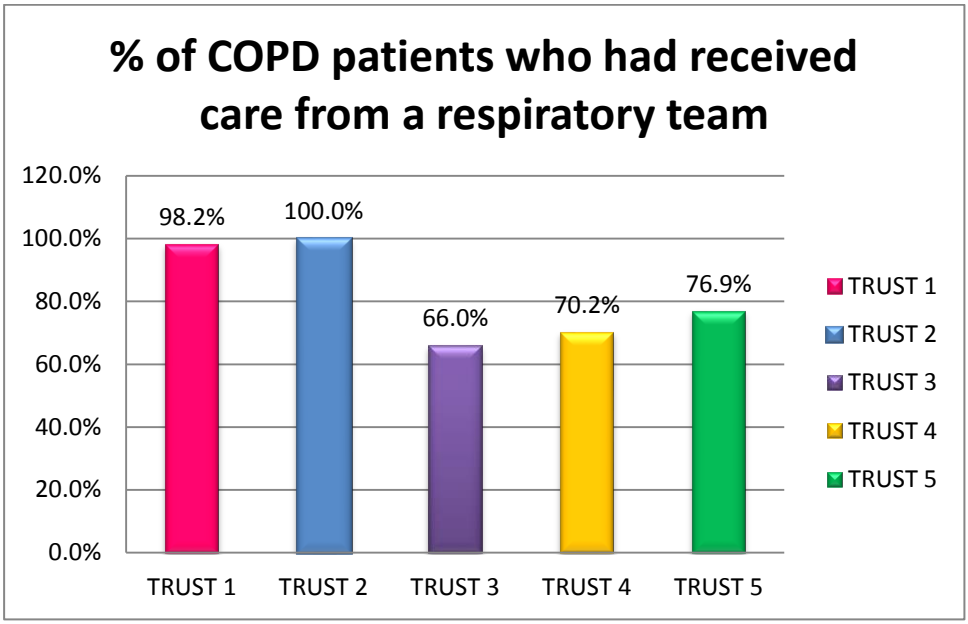
All five Healthcare Trusts participated in the audit and returned the required number of cases. The final sample size of 285 case was identified for inclusion in the audit of COPD management (N=285).

Criterion 1

'Percentage (%) of people with COPD admitted to hospital for more than 24 hours, with an exacerbation who receive care from a respiratory team.' (RSF KPI 13c)

Anticipated Performance Level = 70% in March 2016; 90% in March 2018					
Trust / Hospital	Not Available	No	Yes	Total	Percent
TRUST 1	**1**	**1**	**54**	**56**	**98.2%**
Hospital A	0	0	8	8	100%
Hospital B	0	0	15	15	100%
Hospital C	1	1	31	33	96.9%
TRUST 2	**0**	**0**	**45**	**45**	**100%**
Hospital D	0	0	37	37	100%
Hospital E	0	0	8	8	100%
TRUST 3	**0**	**18**	**35**	**53**	**68%**
Hospital F	0	15	15	30	50%
Hospital G	0	3	20	23	87%
TRUST 4	**0**	**17**	**40**	**57**	**70.2%**
Hospital H	0	13	28	41	68.3%
Hospital I	0	4	12	16	75%
TRUST 5	**0**	**12**	**40**	**52**	**76.9%**
Hospital J	0	4	23	27	85.2%
Hospital K	0	8	17	25	68.0%
Grand total	1	48	214	263	81.7%

Figure 1

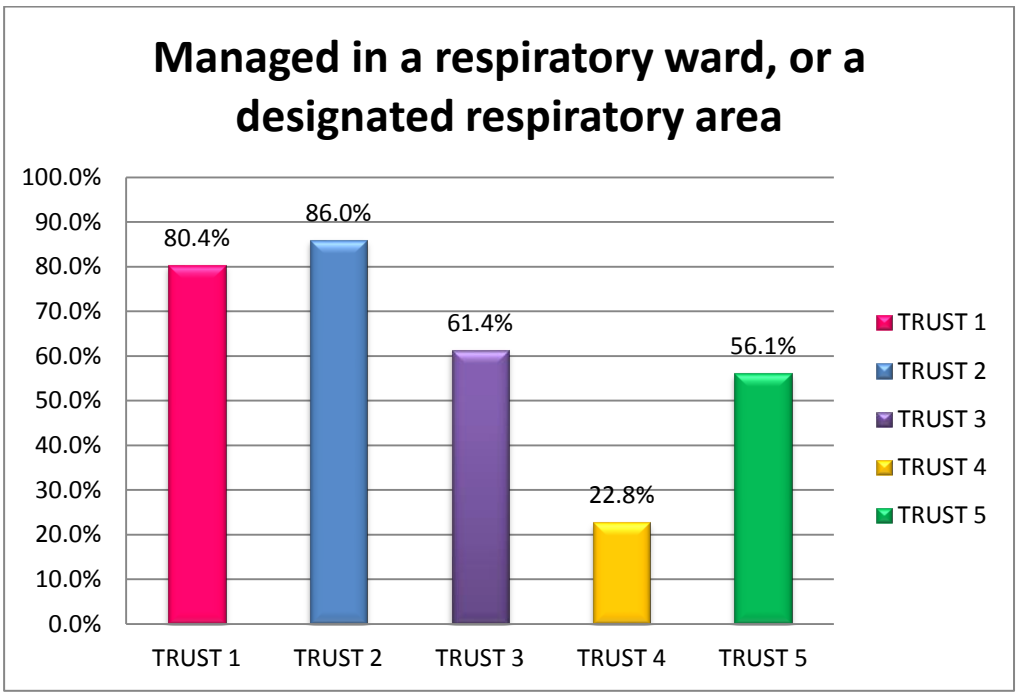

% of COPD patients who had received care from a respiratory team
120.0%
100.0%
80.0%
60.0%
40.0%
20.0%
0.0%
98.2%
100.0%
66.0%
70.2%
76.9%
TRUST 1
TRUST 2
TRUST 3
TRUST 4
TRUST 5
TRUST 1
TRUST 2
TRUST 3
TRUST 4
TRUST 5

Criterion 2

'Percentage (%) managed in a respiratory ward or formally designated respiratory area within a ward.' (RSF KPI 13d)

Anticipated Performance Level = 50% in March 2016; 70% in March 2018					
Trust / Hospital	Not Available	No	Yes	Total	Percent
TRUST 1	**1**	**11**	**45**	**57**	**80.4%**
Hospital A	0	0	8	8	100.0%
Hospital B	0	3	12	15	80.0%
Hospital C	1	8	25	34	75.8%
TRUST 2	**0**	**8**	**49**	**57**	**86.0%**
Hospital D	0	8	36	44	81.8%
Hospital E	0	0	13	13	100.0%
TRUST 3	**0**	**22**	**35**	**57**	**61.4%**
Hospital F	0	13	21	34	61.8%
Hospital G	0	9	14	23	60.9%
TRUST 4	**0**	**44**	**13**	**57**	**22.8%**
Hospital H	0	28	13	41	31.7%
Hospital I	0	16	0	16	0.0%
TRUST 5	**0**	**25**	**32**	**57**	**56.1%**
Hospital J	0	13	17	30	56.7%
Hospital K	0	12	15	27	55.6%
Grand total	**1**	**110**	**174**	**285**	**61.3%**

Figure 2

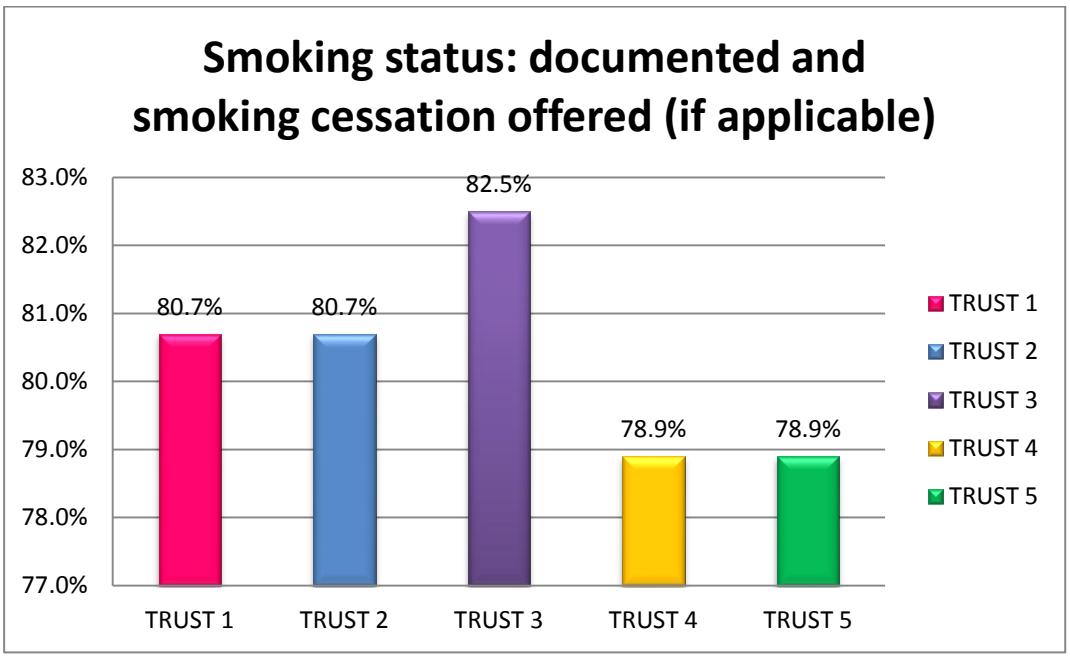

Managed in a respiratory ward, or a designated respiratory area
100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
80.4%
86.0%
61.4%
22.8%
56.1%
TRUST 1
TRUST 2
TRUST 3
TRUST 4
TRUST 5
TRUST 1
TRUST 2
TRUST 3
TRUST 4
TRUST 5

Criterion 3

'Smoking status should be documented on all people admitted with an exacerbation of COPD and advice on smoking cessation offered and documented.' (RSF KPI 13e)

Anticipated Performance Level = 70% in March 2016; 90% in March 2018											
Trust / Hospital	Status not documented	Status documented	Non-Smoker	Status not reported	Smoker	Smoker given cessation advice	Smoker not given advice	Smoker - unknown whether given advice	Total documented and given advice if smoker	Total	Percent
TRUST 1	**3**	**54**	**27**	**2**	**25**	**19**	**5**	**1**	**46**	**57**	**80.7%**
Hospital A	2	6	3	2	1	1	0	0	4	8	50.0%
Hospital B	0	15	10	0	5	4	1	0	14	15	93.3%
Hospital C	1	33	14	0	19	14	4	1	28	34	82.4%
TRUST 2	**6**	**51**	**32**	**2**	**17**	**14**	**3**	**0**	**46**	**57**	**80.7%**
Hospital D	5	39	27	1	11	8	3	0	35	44	79.5%
Hospital E	1	12	5	1	6	6	0	0	11	13	84.6%
TRUST 3	**4**	**53**	**31**	**0**	**22**	**16**	**6**	**0**	**47**	**57**	**82.5%**
Hospital F	3	31	16	0	15	11	4	0	27	34	79.4%
Hospital G	1	22	15	0	7	5	2	0	20	23	87.0%
TRUST 4	**4**	**53**	**31**	**2**	**20**	**14**	**6**	**0**	**45**	**57**	**78.9%**
Hospital H	4	37	19	2	16	10	6	0	29	41	70.7%
Hospital I	0	16	12	0	4	4	0	0	16	16	100.0%
TRUST 5	**4**	**53**	**36**	**0**	**17**	**9**	**8**	**0**	**45**	**57**	**78.9%**
Hospital J	4	26	16	0	10	5	5	0	21	30	70.0%
Hospital K	0	27	20	0	7	4	3	0	24	27	88.9%
Grand Total	**21**	**264**	**157**	**6**	**101**	**72**	**28**	**1**	**229**	**285**	**80.4%**

Figure 3

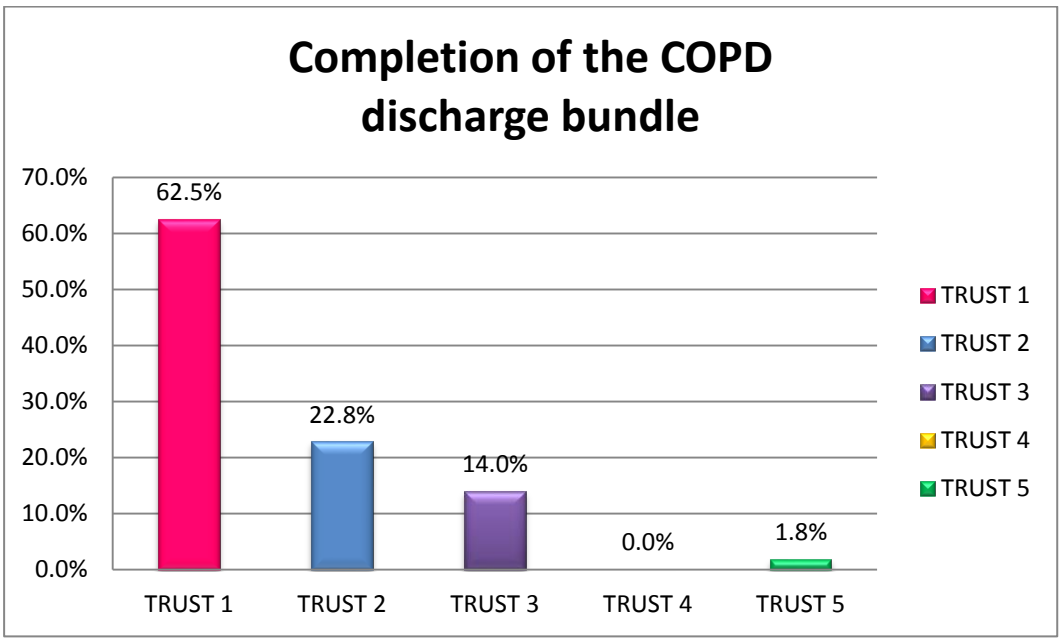

Smoking status: documented and smoking cessation offered (if applicable)
83.0%
82.0%
81.0%
80.0%
79.0%
78.0%
77.0%
80.7%
80.7%
82.5%
78.9%
78.9%
TRUST 1
TRUST 2
TRUST 3
TRUST 4
TRUST 5
TRUST 1
TRUST 2
TRUST 3
TRUST 4
TRUST 5

Criterion 4

'Percentage (%) of people discharged from hospital following admission for an exacerbation of COPD who have the following aspects of the COPD discharge bundle completed: smoking cessation advice; individualised self-management plan; inhaler technique checked; referral to pulmonary rehabilitation; referral to community team for assessment & review for more complex needs.' (RSF KPI 15a)

Anticipated Performance Level = 70% in March 2016; 90% in March 2018					
Trust / Hospital	**Not Available**	**No**	**Yes**	**Total**	**Percent**
TRUST 1	**1**	**21**	**35**	**57**	**62.5%**
TRUST 1	0	2	6	8	75.0%
Hospital A	0	5	10	15	66.7%
Hospital B	1	14	19	34	57.6%
Hospital C	1	14	19	34	57.6%
TRUST 2	**0**	**44**	**13**	**57**	**22.8%**
Hospital D	0	38	6	44	13.6%
Hospital E	0	6	7	13	53.8%
TRUST 3	**0**	**49**	**8**	**57**	**14.0%**
Hospital F	0	30	4	34	11.8%
Hospital G	0	19	4	23	17.4%
TRUST 4	**0**	**57**	**0**	**57**	**0.0%**
Hospital H	0	41	0	41	0.0%
Hospital I	0	16	0	16	0.0%
TRUST 5	**0**	**56**	**1**	**57**	**1.8%**
Hospital J	0	29	1	30	3.3%
Hospital K	0	27	0	27	0.0%
Grand Total	**1**	**227**	**57**	**285**	**20.1%**

Figure 4


Completion of the COPD discharge bundle
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
62.5%
22.8%
14.0%
0.0%
1.8%
TRUST 1
TRUST 2
TRUST 3
TRUST 4
TRUST 5
TRUST 1
TRUST 2
TRUST 3
TRUST 4
TRUST 5

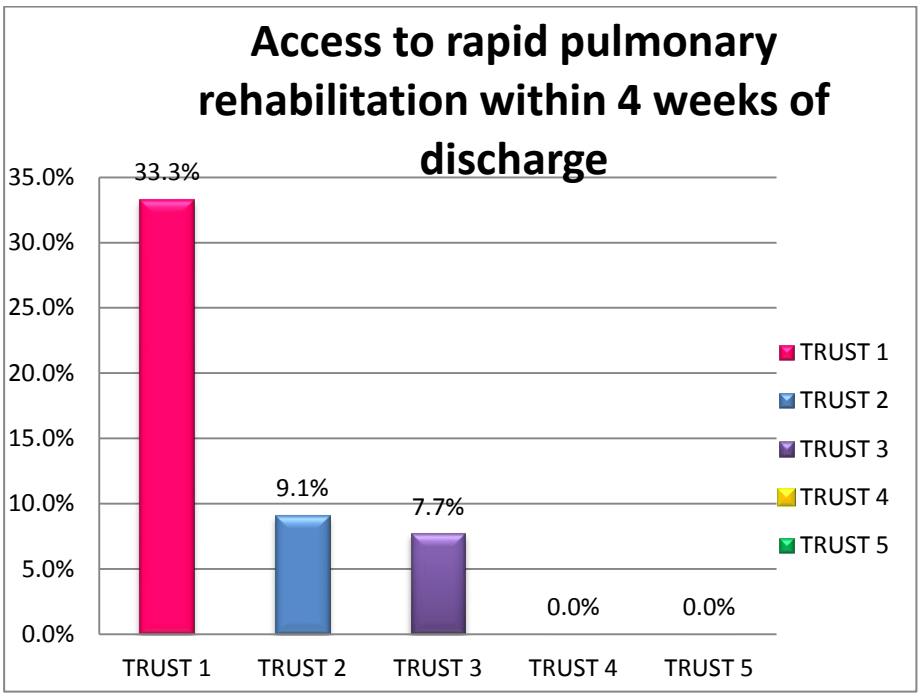
Criterion 5

'Percentage (%) of people discharged from hospital following admission for an exacerbation of COPD who have been offered access to rapid pulmonary rehabilitation within four weeks of discharge. (Providing they fulfil the inclusion criteria)' (RSF KPI 15b)

Anticipated Performance Level = 40% in March 2016; 60% in March 2018									
Trust / Hospital	Unknown whether referred	Patient declined referral	Previous referral	Not referred	Referred time unknown	Referred >4 weeks	Referred <4 weeks	Total	Percent
TRUST 1	**2**	**7**	**1**	**2**	**8**	**0**	**1**	**21**	**33.3%**
Hospital A	2	0	0	0	0	0	0	2	0.0%
Hospital B	0	1	0	1	3	0	0	5	0.0%
Hospital C	0	6	1	1	5	0	1	14	50.0%
TRUST 2	**0**	**6**	**0**	**10**	**7**	**0**	**1**	**24**	**9.1%**
Hospital D	0	5	0	7	6	0	0	18	0.0%
Hospital E	0	1	0	3	1	0	1	6	25.0%
TRUST 3	**0**	**3**	**0**	**22**	**2**	**2**	**2**	**31**	**7.7%**
Hospital F	0	1	0	12	0	1	2	16	13.3%
Hospital G	0	2	0	10	2	1	0	15	0.0%
TRUST 4	**0**	**5**	**0**	**18**	**0**	**2**	**0**	**25**	**0.0%**
Hospital H	0	0	0	16	0	0	0	16	0.0%
Hospital I	0	5	0	2	0	2	0	9	0.0%
TRUST 5	**0**	**0**	**4**	**8**	**1**	**1**	**0**	**14**	**0.0%**
Hospital J	0	0	4	1	0	1	0	6	0.0%
Hospital K	0	0	0	7	1	0	0	8	0.0%
Grand Total	**2**	**21**	**5**	**60**	**18**	**5**	**4**	**115**	**5.8%**

NB: The large proportion of referrals with unknown time to appointment makes this extremely unreliable. Therefore the reported percentage may not be a reliable reflection of regional or local performance in this area. To enhance this, a retrospective check of the patient's pulmonary rehabilitation appointment date is recommended.

Figure 5

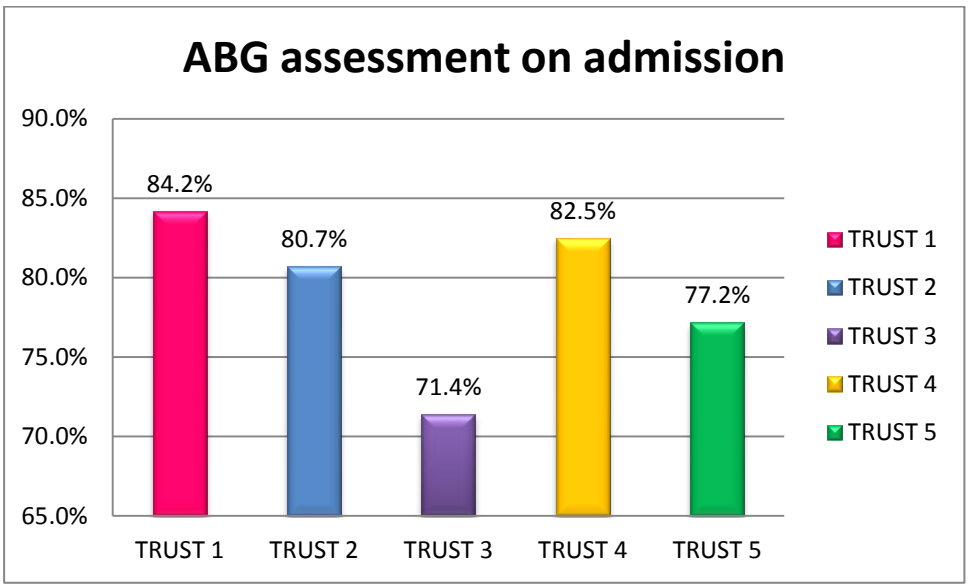

Access to rapid pulmonary rehabilitation within 4 weeks of discharge
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
33.3%
9.1%
7.7%
0.0%
0.0%
TRUST 1
TRUST 2
TRUST 3
TRUST 4
TRUST 5
TRUST 1
TRUST 2
TRUST 3
TRUST 4
TRUST 5

Criterion 6

'Did this patient have ABG assessment on admission?' (RSF KPI 14a)

Anticipated Performance Level = 90% in March 2016; 95% in March 2018					
Trust / Hospital	**Not Available**	**No**	**Yes**	**Total**	**Percent**
TRUST 1	**0**	**9**	**48**	**57**	**84.2%**
Hospital A	0	0	8	8	100.0%
Hospital B	0	1	14	15	93.3%
Hospital C	0	8	26	34	76.5%
TRUST 2	**0**	**11**	**46**	**57**	**80.7%**
Hospital D	0	10	34	44	77.3%
Hospital E	0	1	12	13	92.3%
TRUST 3	**1**	**16**	**40**	**57**	**71.4%**
Hospital F	0	10	24	34	70.6%
Hospital G	1	6	16	23	72.7%
TRUST 4	**0**	**10**	**47**	**57**	**82.5%**
Hospital H	0	8	33	41	80.5%
Hospital I	0	2	14	16	87.5%
TRUST 5	**0**	**13**	**44**	**57**	**77.2%**
Hospital J	0	3	27	30	90.0%
Hospital K	0	10	17	27	63.0%
Grand Total	**1**	**59**	**225**	**285**	**79.2%**

Figure 6

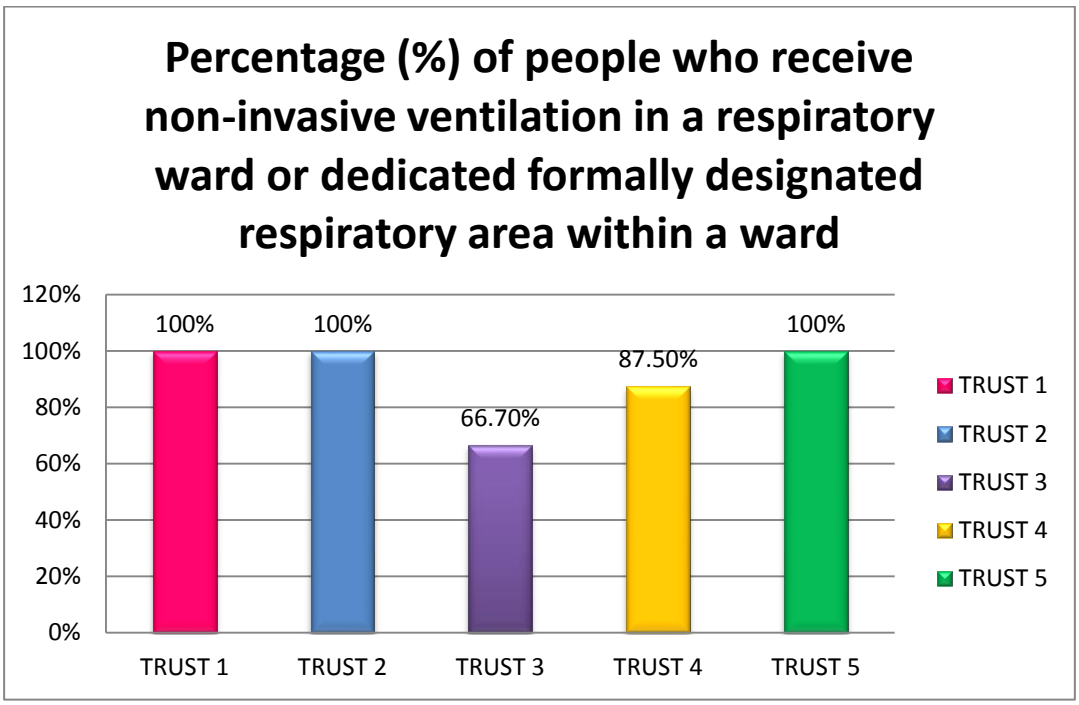

ABG assessment on admission
90.0%
85.0%
80.0%
75.0%
70.0%
65.0%
84.2%
80.7%
71.4%
82.5%
77.2%
TRUST 1
TRUST 2
TRUST 3
TRUST 4
TRUST 5
TRUST 1
TRUST 2
TRUST 3
TRUST 4
TRUST 5

Criterion 7

'Percentage (%) of people who receive non-invasive ventilation in a respiratory ward or dedicated formally designated respiratory area within a ward.' (RSF KPI 14b)

Anticipated Performance Level = 90% in March 2016; 95% in March 2018					
Trust / Hospital	**Respiratory Ward**	**Respiratory Area**	**Neither Respiratory Ward or Area**	**Total**	**Percent**
TRUST 1	**14**	**0**	**0**	**14**	**100.0%**
Hospital A	2	0	0	2	100.0%
Hospital B	7	0	0	7	100.0%
Hospital C	5	0	0	5	100.0%
TRUST 2	**7**	**0**	**0**	**7**	**100.0%**
Hospital D	6	0	0	6	100.0%
Hospital E	1	0	0	1	100.0%
TRUST 3					
Hospital F	1	0	2	3	33.3%
Hospital G	3	0	0	3	100.0%
TRUST 4					
Hospital H	7	0	1	8	87.5%
Hospital I	0	0	0	0	-
TRUST 5					
Hospital J	7	0	0	7	100.0%
Hospital K	0	4	0	4	100.0%
Grand Total	**39**	**4**	**0**	**46**	**93.5%**

Figure 7

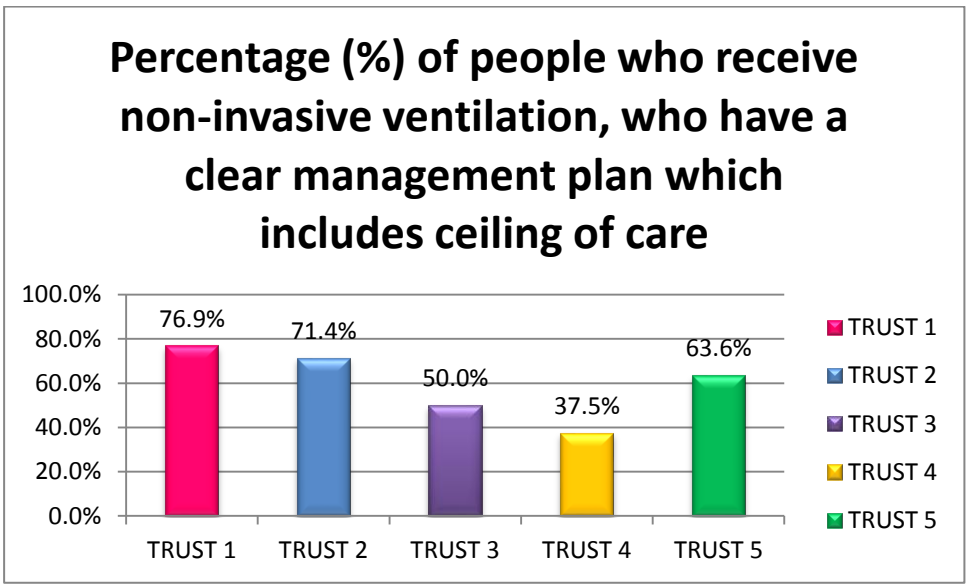

Percentage (%) of people who receive non-invasive ventilation in a respiratory ward or dedicated formally designated respiratory area within a ward
120%
100%
80%
60%
40%
20%
0%
100%
100%
66.70%
87.50%
100%
TRUST 1
TRUST 2
TRUST 3
TRUST 4
TRUST 5
TRUST 1
TRUST 2
TRUST 3
TRUST 4
TRUST 5

Criterion 8

'Percentage (%) of people who receive non-invasive ventilation, who have a clear management plan which includes ceiling of care.' (RSF KPI 14c)

Anticipated Performance Level = 90% in March 2016; 95% in March 2018					
Trust / Hospital	**Not Available**	**No**	**Yes**	**Total**	**Percent**
TRUST 1	1	3	10	14	76.9%
Hospital A	1	0	1	2	100.0%
Hospital B	0	1	6	7	85.7%
Hospital C	0	2	3	5	60.0%
TRUST 2	0	2	5	7	71.4%
Hospital D	0	2	4	6	66.7%
Hospital E	0	0	1	1	100.0%
TRUST 3	0	3	3	6	50.0%
Hospital F	0	2	1	3	33.3%
Hospital G	0	1	2	3	66.7%
TRUST 4	0	5	3	8	37.5%
Hospital H	0	5	3	8	37.5%
Hospital I	0	0	0	0	-
TRUST 5	0	4	7	11	63.6%
Hospital J	0	4	3	7	42.9%
Hospital K	0	0	4	4	100.0%
Grand Total	1	17	28	46	62.2%

Figure 8


Percentage (%) of people who receive non-invasive ventilation, who have a clear management plan which includes ceiling of care
100.0%
80.0%
60.0%
40.0%
20.0%
0.0%
76.9%
71.4%
50.0%
37.5%
63.6%
TRUST 1
TRUST 2
TRUST 3
TRUST 4
TRUST 5
TRUST 1
TRUST 2
TRUST 3
TRUST 4
TRUST 5

Observations and discussion

From this audit, a number of key observations can be made in relation to current practice for the assessment, management and follow-up of patients admitted to hospital with an exacerbation of COPD. The audit has revealed a number of areas of good practice, and also a number of key areas for improvement which are discussed below.

It is clear that the majority of patients who are admitted to hospital with an exacerbation of COPD are receiving care from a respiratory team; this is in line with the Respiratory Service Framework standards. Although the majority of Trusts are currently achieving the RSF target of 70%, one Trust is currently performing at 66%.

It is also clear from this audit that four out of five Trusts are currently achieving the required standard of 50% of patients managed in a respiratory ward or formally designated respiratory area within the ward. However, the current performance level in one Trust is 22.8%.

All Trusts are currently meeting the Respiratory Service Framework requirement of 70% of those admitted to hospital with an exacerbation of COPD. The audit confirms that the majority of patients have their smoking status documented and cessation advice given. The audit has found that this target is currently being met, with 80% of patients across the region having their smoking status documented and advice given as appropriate.

This audit has successfully established the current baseline practice in relation to the use of the COPD discharge bundle across Trusts. It is important to note that Northern Ireland started the implementation of this bundle during 2015/16. The current baseline performance across Trusts reflects the different stages of implementation, i.e. those Trusts who have started implementation early are currently performing higher than other Trusts who have started implementation more recently.

It is therefore likely that the time period selected for this audit (Sept-Nov 15) does not capture the recent progress in implementation for those low-performing Trusts.

This audit also collected data in relation to access to rapid pulmonary rehabilitation for suitable post-discharge patients. Given the limitations of available data in this aspect, the results need to be interpreted with caution. A large proportion of referrals included in this audit had unknown time to appointment; that makes these results unreliable. It is therefore advised that each Trust should complete a retrospective check of their pulmonary rehabilitation appointment dates, to confirm if there are any Trust-specific issues and identify appropriate actions as required.

It is also highlighted that whilst access to rapid rehabilitation needs to be addressed across all Trusts, it was acknowledged that the evidence in relation to the benefits of such early intervention needs to be reviewed.

The findings from the audit have revealed that currently, 79% of patients across Northern Ireland are receiving ABG assessment on admission to hospital, although the RSF target is 90%. From discussions with Trust clinical colleagues, it is our understanding that completion of ABG for admission is a standard practice across all Trusts and the below-target result is therefore likely to be reflective of an issue of documentation. It is therefore advised that each Trust should investigate this further and take appropriate action as required.

The final area of focus for this audit was in relation to COPD patients receiving NIV. This further covered two main areas: firstly, if the patient receiving NIV was in a respiratory ward or dedicated respiratory area within a ward, and secondly, if the patient on NIV had a clear management plan which included ceilings of care. Overall, Trusts are performing well on the first of these two areas, but most Trusts are lagging behind in relation to the second area. The Respiratory Service Framework indicates that 90% of these patients should have a clear management plan which includes ceilings of care. However, this audit has revealed that only 62%

of COPD patients across the region are currently receiving this. This therefore is one of the key areas for improvement for COPD care.

Recommendations

From this audit, a number of key recommendations are made in relation to current practice for the assessment, management and follow-up of patients admitted to hospital with an exacerbation of COPD, which are discussed below.

1. All Trusts should continue to improve the percentage of COPD patients admitted to hospital who are a) receiving care from the respiratory teams, and b) receiving care in a respiratory ward or designated respiratory area. This will be crucial in achieving the more challenging targets within the respiratory service framework.
2. Trust 4 should examine their current acute respiratory care pathway, and how patients are allocated to wards within the hospital. This will be important to improve performance in relation to COPD patients who are currently admitted with exacerbations and receiving care from a respiratory team in respiratory wards or dedicated respiratory areas.
3. All Trusts should continue to build on their already good performance in relation to smoking cessation advice and appropriate access/referral to smoking cessation services.
4. All Trusts should continue to implement the COPD discharge bundle to achieve future RSF targets; as different Trusts at different stages of implementation, each Trust needs to develop their own Trust-specific action plan to implement the COPD discharge bundle consistently across all hospital sites.
5. The Regional Respiratory Forum should complete an evidence review in relation to the four week timing of rapid pulmonary rehabilitation. The findings from this review will then inform the future service requirements and targets for RSF.

6. Given the limitations of current available data in relation to rapid pulmonary rehabilitation, and the associated significant uncertainty in interpretation of results, all Trusts should complete a retrospective check of their pulmonary rehabilitation appointment dates to confirm if there are any Trust-specific issues and identify appropriate actions.
7. All Trusts should improve the documentation of ABGs in the patient's clinical records to enable the future measurements of this aspect of COPD care.
8. Trust 3 & Trust 4 should examine their current acute non-invasive NIV care pathway to ensure that all patients on non-invasive ventilation are receiving this in respiratory ward or designated respiratory area within a ward.
9. All Trusts should improve the percentage of COPD patients receiving NIV who have clear management plans which includes ceilings of care.

Learning Points

This audit demonstrates that there is potential to make improvement in the management of the COPD patients in Northern Ireland. An action plan on how this could be taken forward by key individuals, groups, committees and Healthcare Trusts is outlined on the following page.

- The results of this audit should be widely distributed to all Healthcare Trusts and Healthcare Professionals Action: RQIA, Respiratory Forum
- An educational presentation of this audit should be made available to all Hospital Action: Respiratory Forum
- All Healthcare Trusts should have developed a clear action plan to address the Trust specific gaps identified in this audit. Action: All HSC Trusts

References

- *NICE (March 2009). Clinical Guideline 82: Core interventions in the treatment and management of schizophrenia in primary and secondary care (update).*
- *St Elsewhere Health & Social Care Trust (January 2008). Audit of asthma management in paediatrics (Project number 111).*

Project Number:

KEY (Change status)

1. **Recommendation agreed but not yet actioned**
2. **Action in progress**
3. **Recommendation fully implemented**
4. **Recommendation never actioned (please state reasons)**
5. **Other (please provide supporting information)**

2. Clinical Audit Action Plan

Project title	***Northern Ireland COPD Audit***

Action plan lead	Name: ***<Enter Trust lead>***	Title:	Contact:

Ensure that the recommendations detailed in the action plan mirror those recorded in the "Recommendations" section of the report. The "Actions required" should specifically state what needs to be done to achieve the recommendation. All updates to the action plan should be included in the "Comments" section.

Recommendation	**Actions required** (specify "None", if none required)	**Action by date**	**Person responsible** (Name and grade)	**Comments / action status** (Provide examples of action in progress, changes in practices, problems encountered in facilitating change, reasons why recommendation has not been actioned etc)	**Change stage** (see Key)
1. All HSC Trusts should continue to improve the percentage of COPD patients admitted to hospital who are a) receiving care from the respiratory teams, and b) receiving care in a respiratory ward or designated respiratory area. This will be crucial in achieving the future more challenging targets within the respiratory service framework. 2. Trusts should examine their current	Trust Respiratory leads will ensure: a. Patients are receiving care from respiratory team b. Patients are nursed in a respiratory ward	Ongoing	Respiratory leads		

acute respiratory care pathway, and how patients are allocated to wards within the hospital. This will be important to improve performance in relation to COPD patients who are currently admitted with exacerbations are receiving care from a respiratory team in respiratory wards or dedicated respiratory areas.	Trust Respiratory leads will ensure that the acute respiratory pathway is followed and patients are allocated to respiratory ward				
3. All HSC Trusts should continue to build on their already good performance in relation to the smoking cessation advice and appropriate access referral to smoking cessation services	Trust Respiratory leads will ensure smoking cessation advice is given and service offered. Trust Respiratory leads will ensure that all staff working within respiratory have brief intervention smoking cessation training, to include consultants, nursing, physio and pharmacy. Trusts to ensure this is documented in medical and nursing notes.	Ongoing	Respiratory leads		
4. All Trusts should continue to implement the COPD discharge bundle to achieve future RSF targets, as different Trusts are different stages of implementation, each Trust needs to develop their own Trust-specific action plan to implement the COPD discharge bundle consistently across all hospital sites.	Trust Respiratory leads will ensure the roll out of the COPD discharge bundle.	Ongoing	Respiratory leads		
5. The regional respiratory forum should complete an evidence review in	Evidence review to be included in the Respiratory Forum work plan	Ongoing	Respiratory leads		

relation to the 4-week timing of rapid pulmonary rehabilitation. The findings from this review will then inform the future service requirements and targets for RSF.	for 2017/18				
6. Given the limitations of current available data in relation to rapid pulmonary rehabilitation, and the associated significant uncertainty in interpretation of results, the Trusts should complete a retrospective check of their pulmonary rehabilitation appointment dates to confirm if there are any Trust-specific issues and identify appropriate actions.	Trust Respiratory leads will complete a retrospective check of the pulmonary rehabilitation appointment dates, if the data is not collected, and take appropriate action.	Ongoing	Respiratory leads		
7. All Trusts should improve the documentation of ABGs in the patient's clinical records to enable the future measurements of this aspect of COPD care.	Trust Respiratory leads will ensure the documentation of ABGs is improved by highlighting to junior doctors the importance of ABG on admission.	Ongoing	Respiratory leads		
8. Trusts should examine their current acute non-invasive NIV care pathway to ensure that all patients on non-invasive ventilation are receiving this in respiratory ward or designated respiratory area within a ward.	Trust Respiratory leads will continue to ensure that all NIV patients are nursed in respiratory wards or designated respiratory areas.	Ongoing	Respiratory leads		
9. All HSC Trusts should improve the percentage of COPD patients receiving NIV who have clear management plans which includes ceilings of care.	Trust Respiratory leads will implement the ceiling of treatment form.	Ongoing	Respiratory leads		

Audit Project Team

Name	Job Title/Specialty	Trust Area	Role within Project (Project lead, data collector, data analyse, data cleansing, report writing, internal reviewer, etc)
Dr Muhammad Sartaj	Public health consultant	PHA	**Project lead** *(overall responsibility for leading project, co-ordinating the writing of the final report & dissemination of results)*
Anne-Marie Marley	Respiratory nurse consultant	BHSCT	**Project deputy lead** / Trust audit co-ordinator
Siobhan Bradley	Respiratory nurse specialist	NHSCT	**Trust audit co-ordinator** *(Trust audit co-ordinators will be responsible for the co-ordination of the audit within their own Trust, providing input into the design of the audit, and act as a point of contact for Trust data collector. Internal review also)*
Catriona Kavanagh	Head of service - respiratory	SHSCT	**Trust audit co-ordinator**
Janet Sinnerton	Respiratory nurse specialist Clinical Manager, adults	SET	**Trust audit co-ordinator**
Mary McMenamin	Respiratory co-ordinator	WHSCT	**Trust audit co-ordinator**
Wendy Thornton	Project manager for respiratory services framework	PHA	**Regional audit co-ordinator** *(Will support the project lead and act as contact point for the Trust audit co-ordinators, planning and support of data collector training and all Project and steering team meetings)*
Rose McHugh	Nurse consultant	PHA	**Regional nursing lead** *(will support the design of the audit and internal review)*
Robert Mercer	Regional clinical audit facilitator	RQIA	**RQIA representative**
Dr Declan Bradley	Public health registrar	HSCB	**Regional co-ordinator** *(data analysis and report writer*)

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