Leicestershire Partnership NHS
NHS Trust

729 – Re-audit of Chronic Obstructive Pulmonary Disease (COPD)

A re-audit against NICE CG101 for patients on the domiciliary and community hospital caseload of the LPT COPD Specialist Nurse Team

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Audit Period:	June 2013 – August 2013
Report Date:	August 2013

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Abbreviations

LPT	Leicestershire Partnership NHS Trust
LLR	Leicester, Leicestershire and Rutland
COPD	Chronic Obstructive Pulmonary Disorder
NICE	National Institute of Health & Care Excellence
CHS	Community Health Service
NHSLA	National Health Service Litigation Authority
DH	Department of Health
PSEG	Patient Safety & Experience Group
SCQG	Senior Clinical Quality Group
CAEG	Divisional Clinical Audit & Effectiveness Groups
LTC	Long Term Condition

Executive Summary

Why the audit was undertaken

The re-audit was undertaken to establish if the changes listed in the action plan following the baseline audit in January 2013 had led to improvements in the care given to people with COPD on the caseload of the respiratory specialist nurse service. This is a part of (West) Community Health Services Division. The NICE COPD (CG101) 2010 guidelines were used to establish best practice for delivering COPD care.

How the audit was carried out

The re-audit has been conducted to establish current practice following the implementation of the action plan which was formulated following the baseline audit. It has involved a retrospective case note review of 78 electronic patient records out of a whole population size of 300 from six respiratory specialist nurses. Only patients that had been referred onto the caseload from March 2013 were reviewed. The sample was evenly split across all six nurses. The sample was taken randomly from each nurse's community hospital and domiciliary caseload; the date of the initial referral was checked for each patient to ensure they had been added to the caseload in the given period, this was done to ensure that patients included in the baseline audit were not used again and also to allow time for the steps in the action plan to be implemented.

The agreed action plan (appendix 3) included:
1. Improving the systm1 templates to ensure that the assessment questions are clear within the template
2. Improving history taking, an education session was delivered to the team by a respiratory Consultant from UHL
3. Improving record keeping and documentation by completing spot check notes audits
4. To ensure enough time was allowed during appointment for accurate record keeping; by increasing first appointments from sixty minutes to ninety minutes slots.
5. A 'crib sheet' has been developed as a prompt to ensure that all relevant information is gathered.
6. Finally, increasing the number of patients referred to pulmonary rehabilitation by adding a prompt for this below the MRC score section in the template

As with the first audit the sections within the NICE guidance that were related to medicines management were not included as the patient's general practitioner has the continuing responsibility for this. Those parts relating to spirometry and diagnosis were also omitted as the service is commissioned for those patients who have an existing diagnosis of COPD.

Thirteen notes were examined from each of the six nurses. Every set of notes was audited against the documentation audit tool (see appendix 1). The tool was developed using the recommendations from the COPD NICE guidance (CG101).The Respiratory Specialist Nurse Team Lead collected the data on three consecutive dates from the 25th to 28th of June. The information was collected from the journal of the electronic patient notes on Systm1.

This was a retrospective case note review of 78 electronic patient records out of a whole population size of 300 from six respiratory specialist nurses

Criteria	2011/12 Compliance	2012/13 Compliance	▲/▼
1. Is the patient being assessed for COPD?	99%	100%	▲1%
2. Has patient with COPD on the 1st assessment, been asked about the presence of the following factors by the respiratory nurse?			
a) weight loss?	35%	91%	▲56%
b) effort intolerance?	81%	99%	▲18%
c) waking at night?	19%	65%	▲46%
d) ankle swelling?	58%	97%	▲39%
e) fatigue?	35%	78%	▲43%
f) Occupational hazards?	45%	78%	▲33%
g) Chest pain?	17%	91%	▲74%
h) haemoptysis?	19%	95%	▲76%
3. Was the MRC dyspnoea scale used to grade breathlessness according to the level of exertion required to elicit it?	86%	99%	▲13%
4. Have patients with an MRC score of 3, 4 or 5 been offered a referral to pulmonary rehabilitation?	50%	80%	▲30%
5. Has pulse oximetry been recorded to assess the need for oxygen?	97%	100%	▲3%
6. Is there an up to date smoking history for the patient?	77%	99%	▲23%
a) Smoker		**18%**	
b) Ex-Smoker		**75%**	
c) Non-Smoker		**6%**	
7 & 8 Does it include smoking pack years?	30%		
a) Smoker		**71%**	▲78%
b) Ex-Smoker		**79%**	
9. If the patients is planning to stop smoking, have they been referred to smoking cessation services – Making Every Contact Count (MECC)?	1%	100%	▲99%
10. Has the patient been given a personalised care plan which includes a self-management plan for exacerbations?	79%	100%	▲21%

Aims and objectives

Chronic obstructive pulmonary disease (COPD) is characterised by airflow obstruction that is progressive, not reversible and does not change markedly over several months. It is predominantly caused by smoking. COPD kills 25,000 people a year in England and Wales and is the fifth biggest killer in the UK NICE (2010).

COPD has been highlighted as a priority area by the local health community within the outline document: A five year plan to improve COPD care in Leicestershire, it causes significant morbidity, unscheduled admissions and readmissions and there is variability in the care delivered in primary and secondary care. The respiratory specialist nurses in Leicestershire Partnership Trust (LPT) provide a specialist service in the community within Leicester, Leicestershire and Rutland (LLR) for patients diagnosed with COPD. The purpose of the service is to improve quality of life, avoid unnecessary admissions and reduce length of stay in accordance with NICE guidance (CG101) and locally agreed pathways.

Objective five within the Department of Health COPD Outcomes Strategy (2011) states that people with COPD should receive safe and effective care which minimises disease progression enhances recovery and promotes independence. The aim of this audit is to measure the current practice within the LPT team in the diagnosis and management of COPD against the recommendations in NICE guidance.

The objectives are:

- To determine if appropriate patients are being assessed by the nurses.
- To examine the initial assessment to ensure a full history has been taken and that alternative diagnoses have been ruled out
- To determine if a course of pulmonary rehabilitation has been offered to patients who are functionally disabled by their COPD
- To determine if patients have been assessed for the need for oxygen therapy
- To examine if patients have been encouraged to stop smoking
- To determine if the patients are being encouraged to manage exacerbations with the utilisation of self-management advice on responding promptly to exacerbations. This is in the form of a personalised care plan. Criteria & standards

The following criteria and standards were set using the recommendations from the NICE guidance (CG101):

Table 1 - Criteria and standards

Criteria	Standard	Evidence base
At first assessment all patients should be asked about weight loss	100%	NICE guidance
At first assessment all patients should be asked about effort intolerance	100%	NICE guidance
At first assessment all patients should be asked about waking at night	100%	NICE guidance
At first assessment all patients should be asked about ankle swelling	100%	NICE guidance
At first assessment all patients should be asked about fatigue	100%	NICE guidance
At first assessment all patients should be asked about occupational hazards	100%	NICE guidance
At first assessment all patients should be asked about chest pain	100%	NICE guidance
At first assessment all patients should be asked about haemoptysis	100%	NICE guidance
The MRC dyspnoea scale should be used to grade breathlessness	100%	NICE guidance
Patients with an MRC score of 3, 4 or 5 are offered a referral to pulmonary rehabilitation	80%	NICE guidance

Criteria	Standard	Evidence base
Pulse Oximetry is recorded to assess the need for oxygen therapy	100%	NICE guidance
An up to date smoking history has been documented in the patients record which includes if the patient is a current smoker, ex-smoker or non-smoker	100%	NICE guidance
The number of pack years smoked has been documented (number of cigarettes smoked a day/ 20 X number of years smoked)	100%	NICE guidance
Patients who wish to stop smoking are offered a referral to smoking cessation services (MECC)	100%	NICE guidance
A personalised care plan which includes a self-management plan for exacerbations is offered to all patients	100%	NICE guidance
NB, the inclusion criteria is that all patients must have a diagnosis of COPD		

Normally the standards for all criteria are set at 100% for NICE guidance audits. However, as there are patients on each caseload who do not meet the inclusion criteria for pulmonary rehabilitation, the standard for referring patients with an MRC of 3, 4 or 5 has been set at 80%.

Thresholds of compliance

Key:	Full compliance	Partial compliance	Minimal compliance
	$\geq 90\%$ $x \geq 100\%$	$70\% \leq x < 89\%$	$x < 69\%$

Method

The re-audit has been conducted to establish if the action plan had improved practice and involved a retrospective case note review of 78 electronic patient records out of a whole population size of 300 from six respiratory specialist nurses. The sample is to a confidence level of 95% (+/- 10%). Only patients that had been on the caseload since March 2013 were reviewed. The sample was evenly split across all six nurses. The sample was taken randomly from each nurse's domiciliary and community hospital caseload; the date of the initial referral was checked for each patient to ensure they had been added to the caseload from March 2013. This was done to ensure that patients had not been included in the first audit and also to allow time for the steps in the action plan to be implemented.

Thirteen notes were examined from the six nurses. Each set of notes was audited against the documentation audit tool (see Appendix 1). The tool was developed using the recommendations from the COPD NICE guidance (CG101). The Respiratory Specialist Nurse Team Lead collected the data on three consecutive dates from the 25th to 28th of June. The information was collected from the journal of the electronic patient notes on Systm1.

The intention is to conduct a re-audit annually

Audit type

This is a re-audit to establish if the action plan from the baseline audit has improved practice.

Service areas / teams included

The team included is the CHS Respiratory Specialist Nurse Service which is part of the Long term Conditions (LTC) portfolio of Community Health Service (CHS) within Leicestershire Partnership Trust (LPT).

Audit findings

A summary of the findings from this audit is shown in the table below.

Table 2 – Summary of findings

Criteria	2011/12 Compliance	2012/13 Compliance	▲/▼	Comments
1. Is the patient being assessed for COPD?	99%	100%	▲1%	In all 78 computer records patients had a formal diagnosis of COPD.
2 During the first assessment has the patient with COPD been asked about the presence of:				
a) Weight loss?	35%	91%	▲56%	Out of 78 computer records 71 had been asked about the presence of weight loss.
b) Effort intolerance?	81%	99%	▲18%	Out of 78 computer records 77 had evidence that effort intolerance had been discussed.
c) Waking at night?	19%	65%	▲46%	Out of 77 computer records 51 had documentation that waking at night was discussed
d) Ankle swelling?	58%	97%	▲39%	Out of 78 computer records 75 had evidence that the patient had been asked about ankle swelling.
e) Fatigue?	35%	78%	▲43%	Out of 78 computer records 60 had evidence that fatigue had been discussed.
f) Occupational hazards?	45%	78%	▲33%	Out of 78 computer records 61 had documentation regarding occupation.
g) Chest pain?	17%	91%	▲74%	Out of 78 computer records 71 had evidence that the patient had been asked about the presence of chest pain.
h) Haemoptysis?	19%	95%	▲76%	Out of 77 computer records 74 had evidence that they had been asked about the presence of haemoptysis.
3. Was the MRC dyspnoea scale used to grade breathlessness according to the level of exertion required to elicit it?	86%	99%	▲13%	Out of 78 computer records 77 had the MRC scale documented. There was one exception this was a patient who was referred to pulmonary rehabilitation but the MRC had not been recorded as the criteria for pulmonary rehabilitation is having an MRC score of 3, 4 or 5 this must have been discussed.

Criteria	2011/12 Compliance	2012/13 Compliance	▲/▼	Comments
4. Have patients with an MRC score of 3, 4 or 5 been offered a referral to pulmonary rehabilitation or a home visit from a respiratory physiotherapist?	50%	80%	▲30%	Out of 78 computer records 62 had evidence that a referral to pulmonary rehabilitation or to the respiratory physiotherapist had been offered. Out of these 62 there were 3 that were referred to the physiotherapist for a home visit and 59 to pulmonary rehabilitation. There were no patients who had not been offered a referral. There were 16 exceptions of these 13 were unsuitable for a rehabilitation programme due to, 2 had an MRC of 2 and 1 was already attending. Of the 13 who were unsuitable 7 patients had dementia, 1 was housebound, 1 was bedbound, 1 had poor mobility following a CVA and in 3 records the nurse had felt patient was unsuitable but not stated the reason. In the re- audit the criteria was changed to include those patients who had been referred for a home visit from a respiratory physiotherapist.
5. Has pulse oximetry been recorded to assess the need for oxygen?	97%	100%	▲3%	All 78 patients had evidence that pulse oximetry had been recorded.
6. Is there an up to date smoking history for the patient?	77%	99%	▲23%	In the re-audit the wording of this question was changed as consideration was given to problems with the initial audit which had not identified if patients were non-smokers, ex-smokers or current smokers. The audit tool identified the smokers and ex- smokers and both these groups then had the smoking pack year audited. In the first audit the data was confused as the patients who had never smoked or were ex-smokers were not always clearly identified. Out of 78 records 77 had a smoking history recorded and of these 14 were current smokers, 58 were ex-smokers and 5 were non-smokers.
a) Smoker		18%		Out of 78 records there were 14 smokers
b) Ex-smoker		75%		Out of 78 records there were 58 ex-smokers
c) Non-smoker		6%		Out of 78 records there were 5 non-smokers

Criteria	2011/12 Compliance	2012/13 Compliance	▲/▼	Comments
7 & 8. Does it include smoking pack years?	30%	78%	▲	In the records of the 72 patients who were either ex-smokers or smokers there was a pack year smoking history recorded in 56 records.
a) Smoker		71%		Out of the 14 smokers there was a pack year history present in 10 records.
b) Ex-smoker		79%		Out of the 58 ex-smokers, 46 had smoking pack years recorded and 11 did not, 1 patient was unable to give a clear smoking history.
8. If the patient is planning to stop smoking, have they been referred to smoking cessation services – Making Every Contact Count (MECC)?	1%	100%	▲99%	Of the 14 current smokers only 1 was planning to stop smoking and that patient was offered and accepted a referral to MECC. There were 14 in the NA /Exception group and of these 9 were offered but declined a MECC referral as they were contented smokers and 4 were not offered a MECC referral. In the baseline audit the patients who were ex-smokers or non-smokers had been included. Actually there were 6 patients who were thinking about stopping smoking and one was referred – so the result in the first audit should have been 16% and not 1%
8. Has the patient been given a personalised care plan which includes a self-management plan for exacerbations?	79%	100%	▲21%	Out of 78 computer records 77 had evidence that a self-management plan had been given to the patient. There was one skipped question.

How compliance was calculated

$$\text{Compliance} = \frac{\text{number of YES}}{\text{number of YES and NO and BLANK}} \times 100$$

Comments

Areas of good practice

The results had improved across the board in every category.

- All the patients included in the audit had been diagnosed with COPD so were appropriate to be included on the respiratory specialist nurse caseload.

- The initial assessment included evidence of comprehensive respiratory history taking with documentation of weight loss, effort intolerance, ankle swelling, chest pain and haemoptysis achieving compliance.

- MRC dyspnoea score had been assessed in 99% of patients. The one patient that this information was missing from had, in fact, been referred for a course of pulmonary rehabilitation so their MRC must have been a 3, 4 of 5 to have met the criteria for referral. The MRC score allows the respiratory nurse to decide whether interventions such as pulmonary rehabilitation may be indicated and is helpful in monitoring disability and response to treatment.

- 80% of patients with an MRC score of 3, 4 or 5 had been offered a referral to pulmonary rehabilitation or a home visit from a specialist respiratory physiotherapist. Every patient who was suitable for this course had been offered a referral. The standard for this had been set at 80% to account for those patients who may be unsuitable. The benefits of this course are well documented and include improving health related quality of life and exercise capacity whilst reducing dyspnoea, improving support available in the community and reducing the length of hospital stays NICE(2010)

- Pulse oximetry had been recorded in 97% of patients this will allow for further assessment and referral to be made as appropriate for those patient who may require oxygen therapy. The NICE COPD Quality Standard- statement 8 describes that assessing for oxygen saturations that are <92% will help identify patients who may require long term oxygen therapy.

- Recording smoking history for people with COPD is vital, smoking cessation is an intervention that will slow disease progression and every opportunity should be made to encourage people to stop smoking. 99% of the patients had a smoking history recorded which was an improvement of 23%. Only one of the 14 patients who were current smokers was planning to stop smoking and they were referred to MECC.

- Personalised care plans were completed for 100% of patients audited. Issuing personalised care plan is a CQUIN for this service so good results are to be expected. The NICE COPD Quality Standard -statement 2 discusses the need for patients to be issued with individualised comprehensive care plans.

Areas for improvement/Recommendations

Documentation of night waking, fatigue and occupation failed to reach compliance; although all the three criteria had improved from between 33% to 46%. These three factors have important implications for the patient. It is important to have a comprehensive occupational history as certain occupations such as coal mining and working in the hosiery trade may have exposed people to dust and noxious materials. The respiratory consultant had spoken at length about the risks of **(Karen this sentence seems incomplete)**

The recording of smoking pack years had improved by 78% but failed to reach compliance. It had been noted during the data collection that this information was missing from one respiratory nurse consultations and was recorded by the other nurses.

Lessons learnt

- Encouraging a team approach to address the short comings of the first audit helped with motivation of the specialist respiratory nurses
- The templates used were improved which helps the information needed to be gathered in a more comprehensive manner.
- The results from the first audit highlighted the need to increase the amount of time allocated to first assessments which require a great deal of information to be obtained from the patients and added to the electronic record.

References

- Department of Health. An Outcomes Strategy for People with Chronic Obstructive Pulmonary Disease (COPD) and Asthma in England. 2011 http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_127974

- Department of Health. NHS Outcomes Framework 2013/14. https://www.wp.dh.gov.uk/publications/files/2012/11/121109-NHS-Outcomes-Framework-2013-14.pdf

- National Institute for Care Excellence (2010) Chronic Obstructive Pulmonary Disease. Management of COPD in adults in primary and secondary care (partial update). http://www.nice.org.uk/nicemedia/live/13029/49397/49397.pdf

- Puhan M, Scharplatz M, Troosters T, Walters EH, Steurer J. Pulmonary Rehabilitation following Exacerbations of COPD. Cochrane Database Systematic Review; 2009; (1): CD005305

- Quality Standard (QS10) – Information for people who use NHS services for Chronic Obstructive Pulmonary Disease July 2011 http://www.nice.org.uk/nicemedia/live/13833/60194/60194.pdf

Appendix 1 Audit tool

Re-audit of Chronic obstructive pulmonary disease (COPD)

An audit of COPD NICE guidance measured against patients on the domicilliary caseload of the LPT COPD specialist Nurse Team.

Diagnosing COPD: symptoms

Is the patient being assessed for COPD?

- Yes
- No
- NA/ Exceptions

If NA/ Exceptions, please explain

Has patient with COPD on first assessment, been asked about the presence of the following factors by the respiratory nurse?

	Yes	No	N/A
Weightloss			
Effort intolerance			
Waking at night			
Ankle swelling			
Fatigue			
Occupational hazards			
Chest pain			
Haemoptysis			

If NA/ Exception, please explain

Was the MRC dyspnoea scale used to grade breathlessness according to the level of exertion required to elicit it?

- Yes
- No
- NA/ Exceptions

If NA/ Exception please explain

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-audit of Chronic obstructive pulmonary disease (COPD)

Have patients with an MRC of 3, 4 & 5 been offered a referral to pulmonary rehabiliation or a home visit from a respiratory physiotherapy?

- Yes
- No
- N/A/Exceptions

Other (please specify)

Has pulse oximetry been recorded to assess need for oxygen therapy?

- Yes
- No
- NA/ Exceptions

If NA/ Exceptions, please explain

SmokingCessation

Is the patient:

- Smoker
- ExSmoker
- Non-Smoker

If NA/ Exception, please explain

Does it include pack years smoked?(Smoker)

- Yes
- No
- NA/ Exception

If NA/ Exception, please explain

Re-audit of Chronic obstructive pulmonary disease (COPD)

Does it include pack years smoked?(Ex-Smoker)

- Yes
- No
- NA/ Exception

If NA/ Exception, please explain

If the patient was planning to stop smoking, have they been reffered to smoking session - Making Every Contact Count(MECC)?

- Yes
- No
- N/A/Exception

Other (please specify)

Has the patient been given a personalised care plan which includes a self management plan for exacerbations?

- Yes
- No
- NA/Exceptions

Please explain

Appendix 2 Distribution list

Target audience	To (for action) Name, designation	Cc (for info) Name, designation
Senior Clinical Quality Group	To note the report and approve the action plan	
CHS Clinical Audit & Effectiveness sub-group members. For review and adoption of the report and action plan.	Divisional Clinical Governance Lead To add to CASE agenda and to circulate to members.	
CHS Clinical Network meetings	To note the report	
LTC Operational meeting	To note the report	
Patient Safety Group	Audit report to be sent for information	

Appendix 3 Action plan(Actions completed from the baseline audit)

Objective	Level of Risk L|M|H	Agreed Action	By Whom	By When	Resources Required
COPD audit results to be presented to management and cascaded to the LTC COPD specialist Service	H	Feedback of audit to SCQG LTC COPD specialist service	Karen Moore/Zoe Harris	February 2013	Complete
Improve the systmone templates to ensure that the assessment questions are clear within the templates.	H	Two respiratory specialist nurses from the integrated team to meet with Karen Connor/ Kristy Mackinson to improve the respiratory clinical template on systmone. To ensure the template captures all required information, particularly those criteria where there was poor compliance i.e. fatigue, chest pain, haemoptysis, waking at night, weight loss and calculating pack years	Robert Metcalfe and Katrina McSporran	March 2013	Time and venue for meeting
Improve history taking by the Respiratory Specialist Nurses	H	Arrange for a history taking update from a respiratory consultant to increase awareness of red flag symptoms such as haemoptsis/chest pain and the importance of considering environmental factors.	Karen Moore	March 2013	Andy Silver pharma has offered to arrange this
Improve record keeping in line with the Nursing strategy calendar Feb/Mar 2013	H	Team lead and team manager to discuss with team at the next respiratory team meeting Monthly audit of documentation Team lead to discuss at one to ones and also to spend time with team on visits	Karen Moore Zoe Harris	March 2013	
To increase numbers of patients referred to pulmonary rehabilitation	H	Adding a prompt for pulmonary rehabilitation after the MRC scale within the respiratory template may remind clinicians to discuss/complete a referral	Katrina McSporran and Robert Metcalfe	March 2013	
To ensure that the changes have improved the results	H	Re audit in July 2013. Ensure that there are no 'blanks' and offer explanations for exceptions	Karen Moore	July 2013	Help from audit team and time to complete the audit
To increase the number of referrals to the smoking cessation service (MECC)	H	Enhance the systmone template to capture those patients referred into the service	Katrina Mcsporran/Robert Metcalfe	March 2013	

Appendix 4 Action plan (following re-audit)

Objective	Level of Risk L|M|H	Agreed Action	By Whom	By When	Resources Required
COPD re-audit results to be presented to management and cascaded to the LTC COPD specialist Service	H	Feedback of re-audit to SCQG LTC COPD specialist service	Karen Moore/Zoe Harris	October 2013	
To address the failure to reach compliance during assessment in the categories of night waking, fatigue and occupation	H	Feedback to team and discuss with individuals at one to ones to be arranged in October/November	Karen Moore/ Zoe Harris	December 2013	Time and meeting room
To ensure that the improvement are sustained.	H	Re-audit in annually	Karen Moore	July 2014	Help from respiratory team and time to complete the audit
To ensure that pack years are recorded	H	One to one with respiratory nurse who had not recorded information to discuss smoking template and ensure understanding.	Karen Moore	October 2013	