VANGUARD: Better Care Together	
Case study:	**Respiratory Care in Barrow-in-Furness : PDSA Cycle**
	
Purpose:	The purpose of the project was to implement a consistent and sustainable pathway for respiratory care, enabling early supported discharge for people living with respiratory conditions in the Barrow Integrated Care Community (ICC). The project aims to: • Ensure rapid assessment for people presenting with exacerbation of respiratory illnesses • Ensure early supported discharge for people admitted to hospital with Chronic Obstructive Pulmonary Disease (COPD) • Offer an intervention that enables people to manage their respiratory condition more appropriately with self-care methods or within the ICC team • Ensure continuity of care in the community for patients once they are discharged from hospital and prevent readmission rates • Manage respiratory patients presenting to acute care in a different way to avoid an inappropriate admission to hospital
Context:	Barrow in Furness has a high level of deprivation and the associated life expectancy is significantly worse than the England average. Smoking prevalence in the area is higher than the England average along with subsequent smoking related deaths. Similarly between 2011 and 2013 it was reported that the mortality rate for cardiovascular issues in those under the age of 75 in Barrow in Furness was worse than the England average. More specifically, the population of the Barrow town ICC is approximately 33,661. Of this population 9.3% of people have been identified as having respiratory conditions. Specifically 829 people have been identified as having Chronic Obstructive Pulmonary

	Disease (COPD) and 2,304 are identified as having asthma. The British Thoracic Society guidance recommends people living with COPD should be offered pulmonary rehabilitation on an annual basis and within four weeks following hospital admission with acute exacerbation of COPD. The pulmonary rehabilitation course is a seven week programme of gradually increasing exercise, education on disease self-management and advice on symptom control. The overall aim of pulmonary rehabilitation is to enable patients to manage their condition and live independently at home.
Existing infrastructure	A high proportion of people who presented at the Emergency Department at Furness General Hospital (FGH) with breathing difficulties attributed to COPD or asthma would result in a hospital admission.
Set up processes	1. Due to the high prevalence of respiratory issues within the area and the need for increased support in the community, respiratory services were chosen as one of the main priorities for the Barrow town ICC. 2. Consequently, at one of the Barrow town ICC steering group meetings Dr Farhan Amin, the lead GP for the Barrow town ICC highlighted the need to develop a new respiratory pathway PDSA (plan, do, study, and act) which offers sustainable support in the community. At this meeting it was established that the Community Respiratory Team from Cumbria Partnership NHS Foundation Trust had the capacity to do more work outside of hospital. 3. Subsequently Dr Farhan Amin approached the GP practices within the Barrow town ICC via their practice managers, to ask if they wanted to get involved in the project. These include Bridgegate, Burnett Edgar, Norwood and Duke Street. 4. Dr Farhan Amin then liaised with the Respiratory Consultant lead at Furness General Hospital and Dr Paul Grout, Clinical Director and Accident & Emergency Consultant from University Hospitals Morecambe Bay NHS Foundation Trust, to begin the process of developing a new pathway, with an emphasis on improved care in the community. 5. Dr Farhan Amin then worked with the Barrow town ICC, the Respiratory Consultant lead, Deputy Medical Director and lead for Emergency Medicine, Acute Nurse Practitioners and the Community Respiratory Team to develop and review the pathway together, ensuring the safe delivery of the PSDA including appropriate referral. 6. It was agreed that every individual who was a part of the Barrow town ICC and presented at the Emergency Department or the Medical Assessment Unit at Furness General Hospital between 9.00am and 17.00pm with a respiratory issue would be automatically enrolled to take part in the Respiratory PSDA trial.

Data implications	Acquiring data re: hospital presentations - within 2016 there were 685 A&E attendances at FGH relating to breathlessness, and 505 of these resulted in a hospital admission. It has been established that 358 of these admissions could have been prevented. Considering workforce data: A test cycle of the new respiratory pathway was evaluated to establish its effectiveness and to identify the right size team across the pathway to enable a consistent and sustainable pathway to be fully implemented. Sample size: Considering number of patients to take part and how the data would be measured: this PDSA involved a pilot with 50 patients. Consideration of control data: The cohort of people who took part in the respiratory PDSA test cycle were compared against a control group made up of people from outside of the Barrow town ICC, who presented at the Emergency Department at FGH with respiratory issues. Follow up data: Following its roll out, the impact of the new respiratory pathway within Barrow town ICC will be monitored via the number of hospital admissions, length of stay and hospital readmissions.
How it works: setting out the steps	1. As part of the new respiratory PDSA, when a patient from any of the Barrow town ICC GP practices presents at FGH regarding a respiratory condition for example breathlessness, which does not require an emergency response, the Emergency Department staff stabilise the patient and refer them directly to the Respiratory Nurse Practitioner. 2. The Respiratory Nurse Practitioner is responsible for completing the individual's COPD care bundle before handing them over to the Community Respiratory Team. 3. At the point of discharge the FGH Respiratory Nurse Practitioner then contacts the patient's GP surgery to book a review appointment within 72 hours of them leaving hospital. 4. When the patient has been discharged back into the community they are provided with a written management plan, details of their scheduled GP Appointment, instructions of what to do if their condition deteriorates and emergency contact details. 5. Within 24 hours of discharge the Community Respiratory Team visit and assess the patient at home. They then offer the individual a plan of self-care and medication management to enable patient to stay well in their own home. 6. When suitable the patient is enrolled for the Pulmonary Rehab Programme within the community before being discharged from the Community Respiratory Team for independent living. 7. Additionally the 'Furness Wellness Days' within the Barrow town ICC are supported and promoted by the Community Respiratory Team. The Furness Wellness Days take place at various venues within the Barrow town ICC and were introduced to bring local communities together to promote health and wellbeing through a range of different activities.

Staff implications: different ways of working	When a patient presents with a respiratory condition at FGH Emergency Department the staff stabilise the patient and refer them directly to the Respiratory Nurse Practitioner. The Respiratory Nurse Practitioner is now responsible for completing the individual's COPD care bundle before handing them over to the Community Respiratory Team. At the point of discharge the FGH Respiratory Nurse Practitioner then contacts the patient's GP surgery to book a review appointment within 72 hours of them leaving hospital. Staff provide the patient with a written management plan, details of their scheduled GP Appointment, instructions of what to do if their condition deteriorates and emergency contact details. Within 24 hours of discharge the Community Respiratory Team visit and assess the patient at home. They then offer the individual a plan of self-care and medication management to enable patient to stay well in their own home. When suitable the patient is enrolled for the Pulmonary Rehab Programme within the community before being discharged from the Community Respiratory Team for independent living. The Community Respiratory Team promote the Furness Wellness Days to patients as a part of a holistic approach to health and wellbeing The PDSA test cycle clearly identified that Nurse Practitioners can see patients more quickly in the Emergency Department and Medical Assessment Unit at Furness General Hospital
Key conversations	• Cross organisation conversations -The respiratory PDSA was developed and reviewed by Dr Farhan Amin, the lead GP for the Barrow ICC, the Consultant respiratory lead, the Deputy Medical Director, the lead for Emergency medicine, Acute Nurse Practitioners and the Community Respiratory Team. • Conversations in Primary Care - For the respiratory PSDA to be successful it was essential for the GP practices within the ICC to be involved. These include Bridgegate, Burnett Edgar, Norwood and Duke Street. • This collaborative project involved close working between University Hospitals Morecambe Bay NHS Foundation Trust and Cumbria Partnership NHS Foundation Trust, with the support of Better Care Together. • Service user conversations - As part of the trial patients were provided with various types of information including a written management plan, details of a GP appointment which would be arranged for them, instructions on what to do if their conditions deteriorate and emergency contact details.

Engagement	Prior to the roll out of the respiratory PDSA, Dr Farhan Amin engaged with previous patients to find out about their past experiences of respiratory services. This also gave Dr Farhan Amin the opportunity to ask previous patents for their thoughts on how they felt the respiratory pathway could be improved and what would make their condition easier to manage in the community. All feedback obtained was used to help design the new respiratory pathway.
Resources	Planning time for staff to be involved in the Plan Do Study Act (PDSA) approach. This equated to approximately five meetings of 2 hours each: up to ten people were involved in these meetings but not all ten staff needed to attend all meetings There was no backfill for staff to take part in this work – all contributions were made with goodwill: staff work and time was voluntary illustrating staff desire to improve patient care. The Community Respiratory Team from Cumbria Partnership NHS Foundation Trust agreed to spend more time working out of hospital – this service is available five days per week Staff involved in the planning and delivery: ○ Community respiratory staff: three nurses ○ Community physio staff: two physiotherapists ○ Emergency Department respiratory staff: one consultant and one nurse ○ Emergency Department staff: two consultants ○ GP staff : all four GP surgeries in Barrow in Furness ○ Project support staff: one project manager
Success so far:	The Pilot found that of the Barrow town ICC patients presenting to the Emergency Department or Medical Assessment Unit there were no readmissions following participating in the PDSA test cycle. Also, the length of hospital stay for patients in the cohort reduced by 50% compared to the control group. Additionally 50% of the cohort group was not previously known to the Community Respiratory Team but following the PDSA test cycle they were referred for pulmonary rehabilitation with the hope that this will reduce further Emergency Department attendance and hospital admissions. The PDSA trial was a success and so the new respiratory pathway has now been implemented fully within Barrow town ICC and is being rolled out further to the Alfred Barrow ICC. This project has enabled a team from different organisations to develop joint working, test alternative ways of working and improve relationships with an emphasis on patient needs. The PDSA test cycle clearly identified that Nurse Practitioners can see patients more

	quickly in the Emergency Department and Medical Assessment Unit at Furness General Hospital The PSDA test cycle showed that community and primary care staff can facilitate patients to return home safely. Prior to the PDSA test cycle many people with respiratory conditions within the Barrow town ICC had never seen the Community Respiratory Team and therefore had not benefited from pulmonary rehabilitation. The improved access from the new pathway has given more people a greater awareness of how they can manage their condition in the community. **Staff feedback:** Dr Farhan Amin, the lead GP for the Barrow town ICC said: "All of our partners went above and beyond to make the respiratory PDSA a success as they truly believed it would improve patient care. I am thrilled with the results of the test cycle and feel this is a credit to everyone who has worked on the service redevelopment- It's going to enable an increasing number of people to live well in their own homes." **Patient feedback:** Francis Wilcock from Barrow in Furness said: "The respiratory team were absolutely brilliant! They came to my house once a week to see how I was and to monitor my care. They were all so bright and caring which always perked me up- I cannot fault them."
Lessons learnt:	• It is imperative that clinical guidance is available and that medication directions are clear for patients and public • Clinical teams need to be prepared to work differently • "Take Home medication" needs to be responsive to aid speedy discharge • Nurse Practitioners can effectively treat and assess patients in acute settings • People presenting to Emergency Department and Medical Assessment Unit could be better managed within community with this condition • The Community Respiratory Team have more capacity when working differently • Pulmonary rehab uptake can improve and be a substantial contributing factor to improvement in respiratory functionality for individuals • Very few of this cohort require consultant care-much can be managed with nursing plans and support

	• Service user engagement is essential prior to pathway redesign • The amount of time and corresponding goodwill of staff made this project a success • When setting up a new pathway, ensure that once it is proven that the new pathway is scaled up quickly to improve patient care • Not every innovation, idea or pathway requires finance but does require support from commissioners and senior leadership – this encourages staff to be bold and radical • Acknowledge that not all pathway changes go according to plan and be successful. It is therefore important to accept that there are some risks involved in the whole process.
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