

COPD Best Practice Guide



**Healthier
Scotland**
Scottish
Government

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1. Introduction

Every winter the delivery of unscheduled healthcare is challenged by changes in the profile and volume of emergency presentations. In advance of winter 2015 an analysis was made of the admissions trends for the most frequent conditions presenting to emergency care, which revealed that respiratory illness featured as a key diagnosis in three of the top five emergency presentations in those over 65 years old. Underpinning a significant proportion of these is chronic lung disease, of which the most frequently encountered is Chronic Obstructive Pulmonary Disease (COPD).

COPD is a leading cause of death and disability internationally that affects approximately one in ten adults in the developed world and is increasing in prevalence globally; in this respect WHO now predicts COPD will be the third most common cause of mortality worldwide by 2030. An estimated three million people have COPD in the UK so it is unsurprisingly the commonest cause of presentation to Emergency Departments (ED) with a respiratory emergency; in Scotland COPD accounts for 122,000 emergency bed days annually with an average inpatient stay lasting 4-8 days and costing £3000. And with an increase in the life expectancy of the population, the over 75s are the highest user of the NHS so ageing is also changing the disease profile of COPD making it a more complex multi-morbid condition. This adds further to the challenges of how to manage the condition more effectively.

Forecasts for the years ahead indicate a steady rise in admissions from respiratory disease – and in particular COPD - so that if the current model of care were to remain unchanged we would expect an almost 29% increase in admissions by 2034. Similarly if length of stay remains the same, bed days will increase from 519,898 in 2014 to 669,920 by 2034. **By 2033, the number of people over the age of 75 in Scotland will increase by 60%¹.**

Admissions for COPD exacerbations, defined as episodic deterioration in respiratory health, not only present a significant financial burden to health services but are also associated with a stepwise deterioration in an individual's quality of life as well as psychosocial health and further contribute to disease progression and severity of the disease.

This best practice guideline and series of case studies bring a strong focus to streamlining COPD management, using the Six Essential Actions of Unscheduled Care, and in particular essential actions 5 and 6.

This is not a 'clinical guideline'

Healthcare Improvement Scotland produced a Clinical Standards publication² for COPD services across Scotland in 2010, which focuses on clinical aspects of the disease and optimum management and should be referenced in any discussions on services; NICE have also produced a guideline on optimal clinical management³. This best practice document provides healthcare professionals and patients alike the opportunity to see how this condition could be best managed from the unscheduled care perspective so that individuals living with COPD enjoy structured and better care that is safe, effective and person-centred at every point of the patient journey.

2. The Context for this Work

What is COPD?

COPD is a long-term respiratory condition characterised by chronic obstruction of lung airflow that interferes with normal breathing and is not fully reversible (WHO Definition⁴). The vast majority of COPD cases are smoking-related, however there are other less common causes such as alpha-one antitrypsin deficiency, a genetic disorder that causes COPD in younger people and which affects both smokers and non-smokers; and exposure to certain dusts and fumes. COPD is characterised by frequent and sometimes preventable exacerbations of the condition which often result in admissions to hospital. It is the third most common reason for hospital admission in Scotland and has high readmission rates.

There is no known 'cure' for COPD, focus therefore has to be on stable management of the disease, reducing the frequency of exacerbations, and optimising lung health by regular exercise and pulmonary rehabilitation. It's also important that the psychological aspects of COPD as a long-term chronic condition are catered for and managed appropriately.

3. The Strategic Landscape

The Six Essential Actions (6EA) to Improve Unscheduled Care national programme was launched by the Cabinet Secretary for Health and Wellbeing in May 2015 to foster a whole system approach to patient care that is safe, effective and person-centred so that the right patient is managed at the right time in the right place.

The priority for **Essential Action 5** is to reduce evening, weekday and weekend variation in access to assessment, diagnostics and support services in order to minimise all delays in care and

safely improve weekend and early in the day discharges.

Essential Action 6 strives to manage patients at home or in a homely setting wherever possible which aligns to other portfolios of work aimed at enhancing self-management, with a longer term focus on preventative care, self-directed care and enablement services for complex conditions. This essential action (EA) is aimed at avoiding admission where appropriate; shifting emergency to urgent care; and reducing length of stay. All these ambitions should be supported jointly by the introduction of the Integrated Joint Boards and associated community care developments. Managing the patient journey to promote living well and dying well at home includes a focus on patient-led self-care and improved communication between the whole system health care team.

The 6EA programme of work links with several key government strategies including most notably, Realising Realistic Medicine (RRM): Chief Medical Officer's Report⁵, which was published in 2016. Here the clear emphasis is on reducing harm, variation and waste; improving communication and collaboration; and placing a strong emphasis on patient empowerment where the individual is at the centre of decision-making. Both 6EA and RRM strive for personalised care that takes full account of a patient's needs and expectations.

These ambitions are further borne out by the Scottish Ambulance Service Vision for 2020: Taking Care to the Patient⁶, where the goal is to strengthen community resilience, improve access to healthcare, and once again aim to manage patients at home or in a homely environment wherever possible.

4. The COPD National Working Group

In December 2016, the Scottish Government established the COPD National Working Group. Chaired by Mr Jacques Kerr, National Clinical Adviser to the Scottish Government the group included multidisciplinary representation from regions across Scotland and sought to inform best management for this group of patients and to take account of inter-regional differences in service availability and patient demographics. (See appendix A for Terms of Reference and Group Membership).

Given the data around COPD attendances and admissions, the forecasts for occupied bed days and, moreover, the need to reduce variation and improve our person-centred approach to care, the

group's initial focus was to shift the balance of care from hospital to home, and to streamline the patient journey.

To achieve this goal its three principal aims were to:

- reduce unnecessary emergency hospital attendances
- reduce unnecessary hospital admissions (and readmissions within 28 days), and
- reduce length of stay (LoS) for in-patients.

The group focused on developing an ideal patient pathway that fulfilled the national strategic criteria of being safe, effective and person-centred, and identified the following key themes:

1. Wherever possible patients should be managed at home
2. Care should be bespoke and tailored to an individual's needs and should also take account of their disease progression
3. All aspects of a patient's wellbeing should be taken into account including psychological and social needs
4. Hospital care in an acute bed should be for the minimum duration possible
5. A multidisciplinary approach should be adopted to facilitate linkage between specialties and to ensure the patient receives the best possible care

5. Sub group and key themes

The Working Group divided into sub-groups, each tasked with exploring a different theme in relation to improving the care of COPD patients. The themes were:

- **Reducing ED Attendances and hospital admissions/readmissions:** This subgroup focused on exploring all initiatives that supported safe home management for patients with stable disease or whose exacerbation could be managed in the pre-hospital environment. In the larger conurbations (Edinburgh and Glasgow) the presence of a Community Respiratory Team (CRT) facilitated this and made it possible, however the group acknowledged the geographical variation across Scotland and was also tasked with looking at alternative models of care where no CRT existed. The emphasis was

also very clearly on pulmonary rehabilitation (PR) which has been demonstrated to reduce the frequency of exacerbations, strengthen exercise tolerance and improve overall patient wellbeing (<https://www.blf.org.uk/support-for-you/exercise/pulmonary-rehabilitation>).

- **Scottish Ambulance Service (SAS):** As mentioned above the SAS 2020 vision of 'Taking Care to the Patient' was at the heart of the group's ambitions for shifting the balance of care to the home environment so it was decided to have a separate subgroup dedicated to SAS initiatives. The focus was on building stronger links with the SAS and ensuring they have access to Key Information Summaries (KIS) and an awareness of alternatives to admission for COPD patients.
- **NHS 24 and Telehealth:** This subgroup considered IT-based solutions, such as 'Skyping' patients, 111, SMS communications between specialists and patients, and other technology solutions that offered bespoke alternatives to 999 and secondary care. Leads looked at streamlining patient pathways and tests of change that strengthened the linkage between NHS 24 and CRT-like services, but also focused on how call handlers at NHS 24 might identify patients with COPD or emphysema, prompting them to access the patient's Anticipatory Care Plan. The aim was to ensure that more patients receive care that is bespoke and right for them.
- **Anticipatory Care Planning, Pharmacy initiatives and Palliative care:** The focus of this subgroup was again to engender a bespoke approach to patient care, but especially for those whose condition was terminal. From the pharmacy viewpoint the focus was on development of the community pharmacist role, not solely for acute management, but through its potential to integrate with other services.

6. The Vision for Optimal COPD Care

Drawing on the above workstreams the COPD Working Group distilled the ideal COPD patient pathway into the following acronym:

- e Exacerbation Management - Local initiatives and protocols**
- C Community Respiratory Team - This could be approached creatively in those regions that don't have a CRT where paramedic practitioners or other healthcare professionals might be deployed**
- O Online and Offline Support - e.g. 'Florence' (an SMS-based text messaging service that allows patients to relay information on their clinical observations to a specialist in real time), COPD websites, technology-enabled care**
- P Pulmonary Rehabilitation - Including the use of leisure facilities, peer groups, choirs etc. that give the individual a good 'lung workout'**
- D Documentation of an Anticipatory Care Plan (ACP) in the Key Information Summary (KIS), which clearly outlines the patient's physical, psychological and social needs, resuscitation status and level of escalation during an acute exacerbation.**

7. COPD Workshop at National Planning Event

The group's meetings and workstreams culminated in a dedicated COPD Session at the *6 Essential Actions to Improve Unscheduled Care* event in Edinburgh on 18 May 2017 where all those working to improve patient flow and experience were invited to participate in a number of different workshops, including one focusing on COPD.

The COPD session was led and facilitated by the national group and was used as a means whereby representatives from different regions could network and share their experience around optimal COPD pathway management but also as a scoping exercise for the COPD National Group to establish what services existed across the country.

The group were given a scenario to focus attention on an individual patient living with COPD (see below scenario details) who experiences a mild exacerbation of his condition and feedback was received from frontline clinicians, executive teams, service improvement managers, primary and secondary care, patients and stakeholders on the basis of the following questions:

1. What services exist in your area to support management of COPD at home, to reduce ED attendances and hospital admissions and to reduce length of stay?
2. What services and initiatives might you develop to improve the COPD patient pathway in your area?

Scenario



- 63 year old man with COPD; mMRC dyspnoea - 2
- Last exacerbation 8 months ago
- Last pulm rehab 10 months ago
- PMHx – mild depression, NIDDM
- DHx - Relvar, Umeclidinium, Salbutamol MDI, Citalopram, Lorazepam, Metformin
- SHx – Lives alone, current smoker, son lives 10 miles away



Our Patients Journey

Sunday		Found it difficult to tie his shoelaces	
	Monday	8am	Woke feeling lethargic, coughed up light green sputum
		10am	Called his son who planned to visit after work
		12pm	Feeling worse - called GP receptionist - no home visits - advised to call 111
		1pm	Called 111, feeling SOB, explained COPD history - SAS response dispatched
		1.10pm	SAS attended, patient nebulised, felt slightly better but still scoring on NEWS so transferred to ED
		2pm	Arrival at ED, very busy (Monday afternoon), patient transferred into high acuity area (resus full)
		7pm	No resp beds, bed available in acute receiving area, transferred from ED; waited 5 hours in ED
		7.15pm	Admitted to acute receiving unit, missed evening Consultant ward round
	Tuesday	9am	Consultant Review, transfer to respiratory ward requested.
1pm		No respiratory beds available, patient transferred to care of the elderly ward	
Thursday	2pm	Post medical review, transfer to respiratory bed requested. Transferred to respiratory at 4pm.	
Sunday	1pm	Discharged home	

5 hours in ED

Inpatient LoS 6 days

Table Top Exercise



Our Aim

- To improve the patient journey for patients who experience exacerbations
- To reduce unnecessary hospital attendances
- To reduce unnecessary hospital admissions
- To reduce length of stay for inpatients

The following gives an overview of the outputs from the session and is divided into a) those local/ regional initiatives that currently are in place and are making a difference to patient management and b) what is needed to improve COPD pathways:

What we currently have that makes a difference

BORDERS
 Direct access to Specialist Respiratory Nurse (Phone Line) - previously admitted to hospital
 Nurse Led Clinics
 Self Management Plans
 Supported Discharge Maintenance
 Practice Nurse

Respiratory Nurse outreach in afternoons (not weekends)
 COPD patients standby meds + ACP

DUMFRIES AND GALLOWAY
 Links with Crews and Hospital
 Resp. MDT meetings
 PT/OT in ED, MAU

GGC – GRI
 Community Respiratory Team, MDT (pharm, RNS) North East Only
 Triage + in ED - referral pathway to ambulatory care/assessment
 Access to ART review

TAYSIDE
 Enhanced community support (MDT). Access to other support e.g. physio etc
 EKIS is used
 Professional to Professional call in AMU, GP/SAS

Six Essential Actions to Improve Unscheduled Care Learning Workshop 5 – Key Themes from COPD Breakout

Session Session Aims

To improve the patient journey for COPD patients who experience exacerbations

To reduce unnecessary hospital attendances

To reduce unnecessary hospital admissions

To reduce length of stay for inpatients

To include the patient in the decision-making

OUT OF HOSPITAL What we Need KEY THEMES

- ACP in place for all patients with chronic disease
- Patient Education – self management – all options for care/support
- Every patients to have access to community respiratory teams/ 3rd sector support – regular follow up, care plan review – access to pulm. Rehab etc
- NHS24/SAS – signpost patients to options for care/refer to community respiratory team
- Early Identification of ‘repeat attenders/admissions’ – early intervention and support
- 7 day services

IN HOSPITAL What we Need KEY THEMES

- Use patients ACP at front door
- Education for front door- re. respiratory/COPD, community options/support
- Respiratory Nurse Specialist in-reach to ED/Assessment Areas
- Direct access to respiratory bed or early review by respiratory in reach team.
- Early supported discharge/ Criteria Led Discharge
- Integrated Teams – community and hospital – developing pathways, guidelines together
- 7 day services

8. What Best Practice Looks Like - Recommendations from the COPD Working Group

The preceding chapters have given an outline of best practice to improve the patient journey for those living with COPD and experiencing exacerbations that require specialist input. What follows are the key recommendations from the interrogation, research, case studies and data accumulated over the course of the meetings of the national group and its subgroups together with the above outputs from the COPD session at the 6EA Event.

1. Reducing ED attendances

- ✦ **Creating a new default process:** rather than patient to GP then ED and automatic admission to hospital, increase use of Community Respiratory Teams, district nurses, and support/advice from GP practices when no appointments are available. Also use Third Sector support. Incorporate strategies to prevent admission such as discharge to assess (providing diagnostics as an outpatient and calling patients back into hospital for further assessment/treatment).
- ✦ **Professional to professional advice:** telephone support for GPs and ambulance teams to help prevent admissions.
- ✦ **Individualising care:** patients that are already known to the relevant clinical services will benefit from care that is based on what is normal for the patient, and the avoidance of over-medicalisation (Realistic Medicine – see above).
- ✦ **Community Virtual Wards:** utilising ‘at risk of admission’ data and information to support and manage care proactively, led by GP and Primary Health Care/Community teams. Involving carer and patient in care needs.
- ✦ **Anticipatory Care Plans (ACPs)** that detail a patient’s medical, physical and social needs and describe what is normal for this particular individual. Ideally these should be readily accessible in a single document online or may even be carried by the patient.
- ✦ **Patient education:** raise awareness of the services available to support them. Empower patients to know what they need to do to stay well and engender good self-management processes including exacerbation management and maintaining physical activity.
- ✦ **Development of rescue medications for suitable patients** supplied to appropriate patients using a PGD (patient group directive) by community pharmacy.
- ✦ **Community pharmacy support** for patients with COPD using Chronic Medication Service care planning to support patient education and/or identify potential or real care issues.
- ✦ **Access to psychological therapies** and assessment of psychological distress to reduce anxiety and improve mood and coping skills.

2. Reducing admissions and readmissions

- ✦ A **multidisciplinary approach** should be adopted wherever possible. This should include nurses, doctors, allied health professionals (AHPs), pharmacy, social care but above all, the patient should be involved in all decision-making. Psychology also has a clear role to play here as readmissions may not be due necessarily to an exacerbation but because the patient's condition is causing them to panic and increase their respiratory rate.
- ✦ **Respiratory specialists taking referrals directly from the ED.** Allied Health Professionals, psychologists and respiratory nurse specialists attending ED to reduce unnecessary (re) admissions and to promote facilitated discharges. Enhanced triage by a senior emergency physician may also support the process of reducing unnecessary admissions.
- ✦ **Early pulmonary rehabilitation** should be initiated as soon as possible after a hospitalisation (ideally 4-6 weeks). Focus also needs to be given to prevent deconditioning of patients during an exacerbation and maintain muscle strength through early mobilisation and specific exercise regime (endurance training, interval training, walking exercise, neuromuscular electrical stimulation etc.). Consideration should also be given to home rehab programmes through CRT-like services following discharge from hospital especially when the patient is frail and not suitable to attend community rehab programmes.
- ✦ **Technology-Enabled Care** including 'digital postcards', a COPD app, Florence, a text-based messaging service that brings telehealth directly to patients and online support.
- ✦ **Central information hub:** for all patients with long-term conditions including COPD. This may be through NHS 24 or online.
- ✦ **COPD care bundle:** which focuses on optimising the patient journey.
- ✦ **Connected care** across primary and secondary services built on good communication between the pre-hospital and secondary care environments. Effective use of an Anticipatory Care Plan for each patient should link into multidisciplinary meetings for high risk patients that are prone to attend frequently.

3. Reducing Length of Stay

- ✦ **Rapid discharge with enhanced care team:** Hospital at Home (see Case Study No. 2).
- ✦ **'Red-Green Days Visual Management System':** Here the focus is on cLoSely interrogating how many days of a patient's acute admission to hospital actually require to be spent in an in-patient bed.
- ✦ **The Daily Dynamic Discharge Approach:** This is one of the key areas of the 6EA programme which focuses on the three elements of: daily 'whiteboard' meetings that have representation from the multidisciplinary team; assigning an estimated date of discharge (EDD) to each patient's admission; and introducing 'golden-hour' ward rounds whereby high acuity patients are seen first, then those that are ready for discharge; all these elements help to streamline flow through organisations so that patients are discharged earlier in the day, more discharges are made per week and overall length of stay is reduced. (see: <http://www.gov.scot/Publications/2016/06/5432>)
- ✦ **Support from ANPs and other specialist nursing care:** Patients do not always need to be seen by a doctor or even a respiratory medical specialist; we should link into our 'non-medical' resource of AHPs, nurses and specialist paramedics wherever possible.
- ✦ **Dedicated psychology input** in such models: the more severe COPD spectrum patients come with a huge burden of anxiety and other psychosocial concerns.
- ✦ **Role of third sector involvement:** The **Scottish Pulmonary Rehabilitation Action Group** (SPRAG) endeavours to raise the profile of Pulmonary Rehabilitation and improve quality of this multi-disciplinary service across Scotland. Also Grapevine in Edinburgh can help with social issues (See following case study).

9. Case Studies

What follows are case studies from three different regions that showcase this best practice through taking a whole system, multi-disciplinary approach to best practice.

Case Study 1

Integrated Care in NHS Lothian – Edinburgh Health and Social Care Partnership

Shifting the Balance from Hospital to Home

The team in Edinburgh have set out to change the way the COPD pathway is delivered, shifting the balance away from care in hospital to care at home. The aim is to support patients to self-manage confidently and safely out of the acute setting, to reduce avoidable ED attendances and admissions, and to future proof against unsustainable increases in demand. It secured short-term Invest to Save funding to drive forward an improvement programme.

Programme Manager for Long-Term Conditions, Edinburgh Health and Social Care Partnership, Amanda Fox explained:

“In 2013, hospital was the default destination for too many COPD patients. Our aim was to create a person-centred Community Respiratory Hub that would provide an alternative and support patients with COPD to stay out of hospital and manage their condition effectively at home. We looked at every aspect of COPD – physical, psychological and social - and devised a holistic multidisciplinary team approach to patient care.”

The Crucial Role of Prevention and Supported Self-Management

Respiratory Consultant and COPD Clinical Lead for NHS Lothian, Gourab Choudhury explains how his region is leading the way in COPD care by focusing on prevention and supported-self management:

“The situation for us here in Lothian in relation to COPD care is not uncommon. Currently, over 75s are the highest users of NHS services and that figure is set to rise significantly. COPD represents 20% of all respiratory conditions presenting in hospital and is the most common condition presenting in primary care.”

Early Intervention

Education and communication are important if we are to make a difference to the lives of COPD patients. The onset of the disease can be insidious and we estimate that there are high numbers of people who are undiagnosed. It's important to catch the disease early as 20-30% of lung function decline happens in the first phase, and stable and moderate patients can quickly become severe and complex.

Self-Management

“There are some things that patients can do – such as giving up smoking and improving their self-management - to slow the decline and improve their quality of life. The Community Respiratory Team (CRT) play a crucial role in supporting people to better understand and effectively self-manage their condition using LiteTouch telehealth and it acts as a first point of contact for people when their health deteriorates.”

Reducing Bed Days

“Between 30-50% of acute COPD exacerbations could be treated effectively at home, which was a driver to developing a community-based respiratory hub that integrated primary and secondary care, out of hours and emergency services whilst delivering consistency of care across the city. Since the creation of the new integrated multi-disciplinary team in early 2014, we have succeeded in reducing respiratory bed days by 3000.”

Prompt Intervention

“The improvements are not simply about exacerbation management, rather the focus is to adopt a ‘whole system’ and ‘whole person’ approach ensuring people at risk of health deterioration are proactively identified and supported earlier in their pathway, ensuring unnecessary admissions are prevented. To achieve this, a new pathway has been developed for patients who are attended by the Scottish Ambulance Service (SAS) but who do not need to be conveyed to hospital. As an alternative, SAS refer to the community respiratory team who are committed to responding to the patient within 90 minutes”.

Immediate and Early Supported Discharge

“The team recognises that a number of patients will require an admission to support their respiratory deterioration however facilitating early supported discharge is a key role for the community respiratory team who proactively identify inpatients via Boxi reports. The team has established a ‘prof-to-prof’ telephone support line with the hospital consultant to enable direct and frequent communication for advice and support. There is a percentage of patients who self-present at the ED or are conveyed but an admission is preventable. To support these patients, they have a dedicated team of respiratory nurses who visit ED and the Medical Assessment Unit (MAU) three or four times a day to assess if they are stable enough for an immediate discharge into the care of the community respiratory team. This has significantly increased the number of immediate discharges since we began the COPD improvement work.

It is in everyone’s interests to discharge COPD patients from hospital as quickly as possible. Aside from saving money and freeing up beds, older patients who remain in hospital can decondition quickly, LoSing muscle mass and confidence. It might take a week in hospital to bring a patient back up to their baseline, which is frustrating for them and an inefficient use of resources.

Acute and Chronic Condition Management

The CRT responds to acute episodes for COPD patients before handing over to the IMPACT team of district nurses who manage chronic cases. Every COPD patient has an anticipatory care plan which is created by their GP and shared via their Key Information Summary (KIS) and can be accessed by those involved in their care including NHS 24, the Scottish Ambulance Service, Lothian Unscheduled Care Service (LUCS), and primary and secondary care teams. Additionally, an alert is placed on the patient’s record in hospital and community IT system, Trakcare, to highlight that CRT is the first point of contact for care of patients known to their team.

Challenges

Prior to the integrated service, communication between primary and secondary care was not well established. It was a challenge to deliver the vision of one integrated team across this interface, but this was achieved by running a series of innovation sessions where the wider teams, including external partners, could contribute to a ‘share and learn’ environment and design the new pathway together. Although the community respiratory team

existed before the project they were little known and GPs didn’t have the confidence to refer acutely unwell patients at the point of deterioration. Through well planned stakeholder engagement that has completely changed with an increase in GP referrals.

A. Community Respiratory Team - Spreading the Model

“The COPD integrated care model we have developed in Edinburgh has been extremely successful. We far exceeded our bed day reduction target and have been successful in truly integrating teams from primary and secondary care to form one multidisciplinary team with a shared vision of improving patient care: ‘wherever and whenever the patient should have the best service’. The person-centred nature of the integrated team ensures a patient’s physical, psychological and social needs are met. Currently, the model is being tested within Midlothian where as an ex-mining community, there is a high prevalence of COPD. We believe all parts of Scotland could benefit from a Whole System, Whole Person approach like ours. In each region the particular challenges and circumstances will be different but the key is to have the right team with the right skillset”.

What They Did:

1. **Community Respiratory Hub:** A community based respiratory hub was developed to support people at home during acute exacerbations – preventing unnecessary hospital attendances and to empower patients to self-manage their condition. The aim was to provide the best service to patients wherever and whenever they needed it. The multi-disciplinary hub team includes a dedicated clinical psychologist, integrated care pharmacist and a co-ordinator from the third sector organisation, Grapevine, to provide disability information support to people with COPD that are housebound.



Edinburgh Community Respiratory Hub: Integrated Working with Grapevine Third Sector Agency

Amanda Fox (Programme Manager); Laura Groom (Team Lead);
Kirstie Henderson (Grapevine); Klaudia Bielecki (Project Support)

Grapevine and Edinburgh COPD Integrated Service



“Wherever and whenever, the patient should have the best service.”

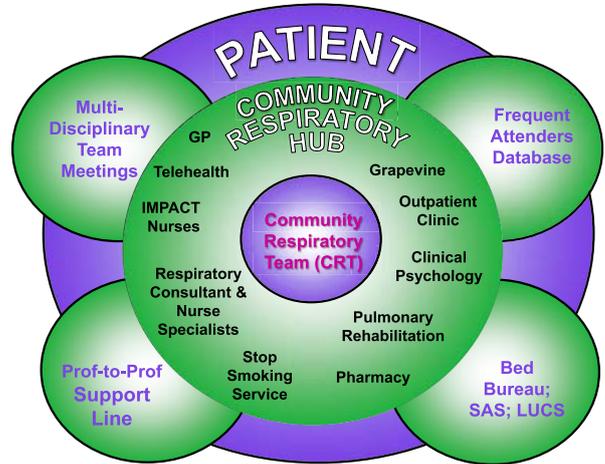


Service Changes

Edinburgh’s Community Respiratory Hub is a multi-disciplinary team who support people with COPD (Chronic Obstructive Pulmonary Disease) and recognised their patient’s need for help to access disability information including benefits support.

The hub engages a third sector organisation, Grapevine, to provide support to house-bound patients.

These patients often have multiple unmet needs and require advice and assistance with many aspects of daily living. This may include specialist, up to date, accessible, independent information and advice on welfare issues, health and social care matters.



Methods

Grapevine provides specialist, independent information/advice on welfare, health and social-care matters to older and/or disabled people and people with long term conditions.

A service-level-agreement was established for Grapevine’s co-ordinator to co-locate within the hub one-day weekly and participate in monthly ‘huddles’. A secure referral pathway was designed for home-visit requests and a performance scorecard was set up to record referrals/outcomes.



What’s Going Well?

During the first year of the service, 57 individuals were referred for independent advice and support. Of those worked with, 347 issues were addressed, as seen in graph on left. The vast majority are for assistance with disability benefit claims and help with identifying grants and trusts to fund essential household items.

In anonymous qualitative feedback questionnaires from service users of the project in 2015-16, **100% of people said the help they had received had been very helpful.**

“Grapevine got me started with things, before I was put in touch with them I was clueless about the rights and entitlements to anything. It’s made a big difference. They gave me the right phone numbers and helped ease the process with dealing with different services”
- Patient

“Many of our patients are non-internet users or have literacy challenges. Grapevine is able to explain information they need to help them in an appropriate and helpful way” - Clinician

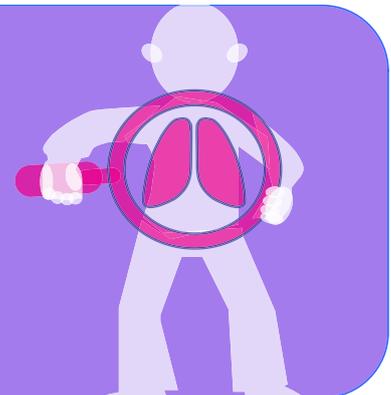
“Less isolated”
- Patient

“The input provided by Grapevine has been life changing for one man in particular – he was supported with re-housing and given financial advice which has improved his quality of life and enabled him to live more independently” - Clinician

“I now deal with things that come up right away..I was in a dark hole and didn’t know how to get out until I received help”
- Patient

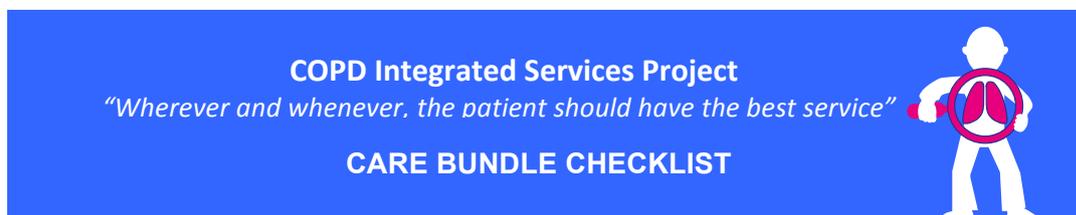
Conclusions

- Improved integrated multi-disciplinary and multi-agency working helps identify and support house-bound patients who are most in need.
- Working collaboratively with Grapevine has allowed patients the time to talk about what really matters to them and get impartial, independent advice whilst at home.
- Patients feel better supported with their condition(s) and trust the information and support they received.
- People who had not been able to leave their home for months were able to access the advice they needed to make connections in the community to assist them to self-manage at home.
- This partnership working supports the evidence that a person’s health is directly affected by their social situation.



Based on: Lothian Centre for Inclusive Living (LCIL) Council Report, “Year 1: Activity and Outcomes Report for the Grapevine home visiting service, funded via NHS Lothian. September 2016”

2. **COPD Care Bundle Checklist:** The team devised a checklist that is used by every team for every COPD patient. Prior to the creation of the checklist, acute staff were assuming certain discussions were taking place with GPs and vice versa. Now, the checklist enables everyone to see what interventions have taken place and when, including advice about quitting smoking, anticipatory care planning and end of life discussions. The checklist remains with the patient’s records and is accessible by everyone involved in their care, including out of hours and the ambulance service.



Date of MDTM:

Patient name:
CHI

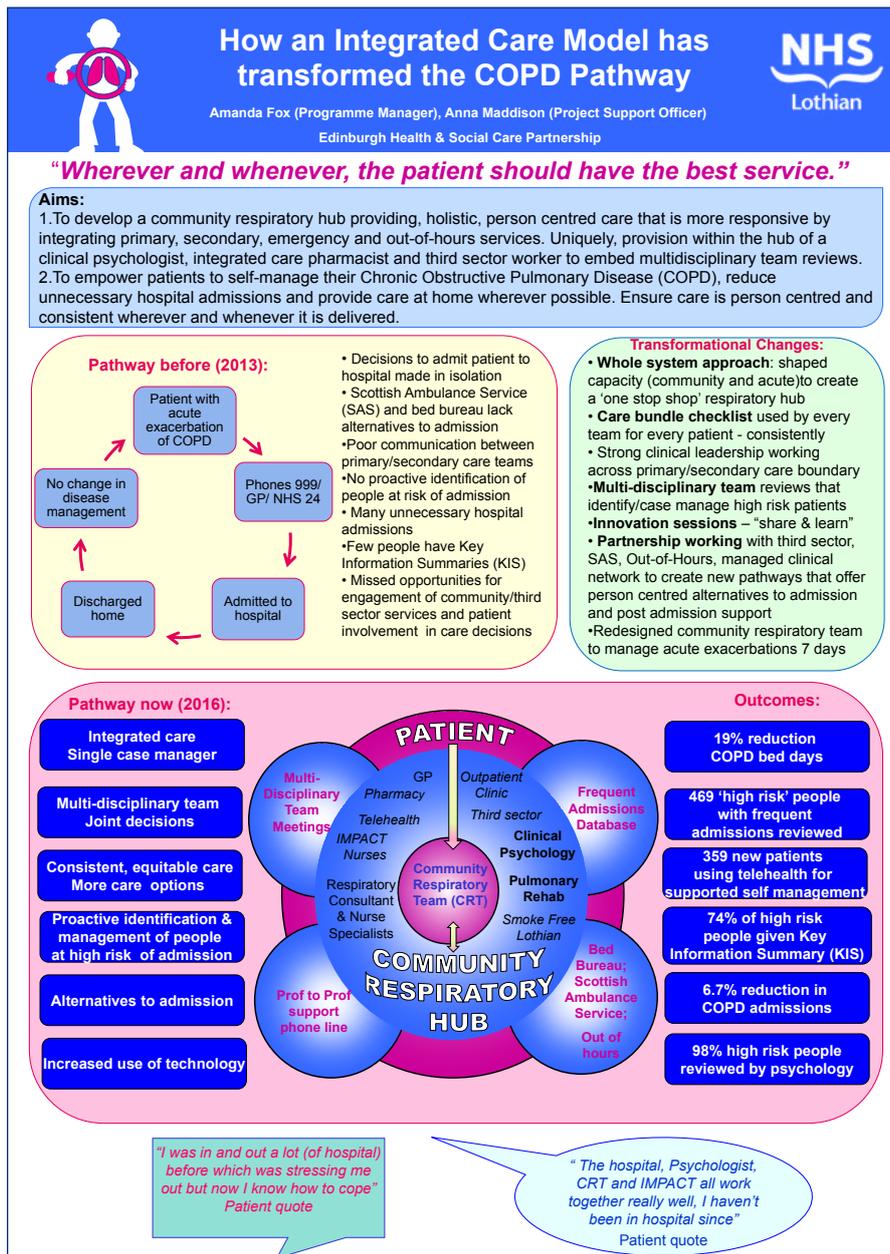
Case Manager:

KIS						
Yes			NO			
Stop Smoking Service						
Offered Declined		Not Offered		Non Smoker		
TRAK Alert						
In Place		Needs/Updating		Not Needed		
INHALER Technique						
Known to be satisfactory			Needs Assessed			
Current social work/ voluntary service input						
Social Work		Council		Voluntary		Requires referral
Cancel automated follow up clinic appointment?						
Yes			No			
Refer to Psychology?						
Yes			No			
Refer to Pharmacy?						
Yes			No			
Follow up arrangement						
CRT	IMPACT	Own GP	Community Physio	Pulmonary Rehab	Outpatient COPD Clinic	No Follow Up
End of Life Discussions						
Not appropriate to discuss		Conversation started		Anticipatory Care plan in place		DNAR form complete
02 Alert Card						
Yes			No			

3. **Extended Skills and Operating hours:** A community respiratory team already existed in Edinburgh prior to the respiratory hub. The new hub brought in additional services and upskilled staff, with training in effective communication for anticipatory care planning and independent prescribing. Operating hours were extended from 8am to 6pm to provide a seamless transition to out of hours services. Uniquely, the community respiratory team have admission rights and are able to admit patients directly to a respiratory ward if necessary, without having to refer them back to their GP. GPs who request a COPD bed are automatically referred to the hub by the Bed Bureau.
4. **Psychology Input:** Evidence tells us that up to 55% of patients with COPD have anxiety and up to 25% have depression, and they are ten times more likely to experience panic disorder

than the general population⁷⁻⁹. This can lead to people with COPD calling 999 when they become breathless. These symptoms can be exacerbated by their hyperventilating due to stress rather than being entirely due to the condition. Prior to the project there was no dedicated psychology input to support these individuals so a dedicated COPD clinical psychologist was asked to join the multi-disciplinary hub team to provide support to patients at home, in hospital and in a clinic setting (see below for more info).

5. **Pharmacy Support:** Many of the patients managed by the Community Respiratory Hub have multimorbidity and are prescribed an average of 15 medications. An integrated care pharmacist reviews the medications for these patients and provides support with administration and compliance.



B. Psychological Services – Support model

Impact of Mental Health

As mentioned on page 18 there is a high prevalence of psychological distress in people with COPD with some evidence that mental health concerns in COPD patients are three times more prevalent than in the rest of the population¹⁰. In view of this the Lothian team believed that it was essential to address both the physical and mental health of COPD patients if it was to make a lasting impact on admissions and patient experience. Head of Adult Psychology Services for NHS Lothian, Belinda Hacking explained why:

“Anxiety and depression in COPD patients are strong predictors for hospital admission, readmission, increased exacerbations and longer hospital stays. They affect a patient’s ability to manage their condition, making them less likely to stick to their treatment plan and more likely to take risks, such as drinking and smoking. This places increased demand on an already over-stretched system. The cost of treating COPD patients who have anxiety and/or depression is twice as much as treating those who don’t. In the past there has been too much focus on a patient’s physical symptoms and very little consideration of the psychological factors affecting their behaviour. We wanted to address that.”

An individual’s ability to cope with COPD is due only partly to the severity of their condition. To a large extent, their attitude to the condition and ability to adjust to their change in circumstances is crucial. For these reasons, tackling the psychological challenges of living with COPD was regarded as the missing piece of the jigsaw by the NHS Lothian team.

What They Did

The Psychology Service proposed a three-level approach to managing COPD patients:

1. Providing **psychological support** to patients with the most complex disorders.
2. Assessing the **most frequent hospital attenders** to understand in more detail the reasons for their hospital visits. The need for this was highlighted by the case of one individual whose COPD was relatively mild but whose high anxiety levels had prompted one hospital visit after another, seeking reassurance. The review found that only 40% of those patients reviewed had a pressing medical

need to go to hospital. The remaining 60% needed varying degrees of psychological support.

3. Reviewing **Key Information Summaries** and feeding into case conferences and discharge planning meetings. Highlighting the psychological needs and psychosocial context of each individual ensured holistic patient-centred management plans were created to help people to cope better at home.

Programme Manager for Long-Term Conditions, Edinburgh Health and Social Care Partnership, Amanda Fox created a checklist to identify COPD patients who may benefit from referral to the psychology team. This included all frequent attenders.

Impact

Of those patients referred to the clinical psychology service in Edinburgh, 63% had clinically significant anxiety and 38% had clinically significant depression. Before psychological intervention, 28% of patients had ‘severe’ anxiety symptoms and 36% had ‘moderate’ symptoms. Following psychological intervention 89% of participants’ scores fell within the ‘normal’ range. It was a similar pattern for depression, with 12% of patients initially having ‘severe’ symptoms and 27% ‘moderate’. After working with the psychology service, 82% of scores fell within the ‘normal’ range. A clinically significant improvement was seen in the overall quality of life in those people with COPD who completed a psychological intervention. Patients reported less shortness of breath, less tiredness, and increased confidence in their ability to cope with their COPD symptoms following psychological input.

One patient with COPD explained that psychological intervention helped her to understand that anxiety and panic played a part in her breathlessness and admissions to hospital. Introducing new coping skills helped her to manage her panic more effectively:

“Before my COPD got worse, when I had an episode, I would get panicked and go to the hospital, but now I can manage that panic better and manage to stay at home most of the time, which is where you want to be.”

There are many reasons why COPD patients experience high levels of anxiety and depression as Dr Grainne O’Brien, Clinical Psychologist, explained:

“People with COPD often experience anxiety – being breathless can be very scary and can cause someone to hyperventilate, thereby adding to the sensation of breathlessness. This symptom of breathlessness is experienced alongside other challenges of living with a long-term condition including other physical symptoms such as fatigue, limited mobility and increased dependence upon family and carers, People with COPD can LoSe touch with their social networks and have to stop certain hobbies which can be very isolating. These changes can result in increased anxiety, a LoSs of confidence and lowered mood.

“If we really want to make a difference to the lives of people with COPD, why would we not address their mental, as well as their physical health?”

As well as tackling some of the causes behind a patient’s anxiety or depression, the psychology team were also able to support people to become more engaged in their treatment. “It is about understanding what matters to them,” added Grainne, “so we can help them to understand the relevance of their treatment to achieving their personal goals and best quality of life. This is a very enabling way of working with COPD patients and it proved very effective.”

The Psychology Team also plays a key role in helping patients and their families to adjust to their new circumstances, particularly as they approach the palliative stage of their illness. For some patients the prescription of long-term oxygen therapy at home can represent a significant deterioration in their condition. Psychological intervention can help somebody to adjust to the change in their illness as demonstrated by the below quote from a specialist respiratory nurse in relation to a particular case.

“When Mrs X was required to have Long Term Oxygen Therapy, this became a major hurdle for her to come to terms with. With the help of psychology she was able to overcome this and is now well established at home with oxygen. I feel that if she had not had any input from psychology then she would have required more admissions to hospital due to anxiety and an inability to cope rather than actually due to being medically unwell.”
(Specialist Respiratory Nurse).

Challenges

As clinical psychology was a new service within COPD care in Edinburgh, an initial challenge was to link the new service into the various existing COPD services and demonstrate the various roles a psychologist could play within the team. Time was spent embedding psychology within the wider integrated care team and ensuring accessibility and responsive service provision by locating the service across multiple bases (across community and acute settings), attending regular MDT meetings and providing alternative psychological viewpoints into patient careplans.

C. Principles of the overall approach

- 1. Collaboration and Co-location:** Co-locating the Psychologist, Pharmacist and third sector co-ordinator with the Community Respiratory Hub helped to create a sense of shared vision and purpose. Regular conversations took place between acute colleagues and the Psychology Team to encourage different perspectives on the reasons that patients were presenting for treatment. It was about everyone collaborating and playing to their strengths. Belinda said: “Sometimes colleagues would say “I know there is something else going on here but I don’t have the skills to deal with it”. Clinicians are very time-limited and when they are trying to work outside their speciality it can take too long. They welcomed being able to refer people to us for further assessment”.
- 2. A Holistic View of Patients:** Considering both the physical and psychological factors at play enabled the team to gain a really clear understanding of patients and how best to help them. Once they understood the actual issues it was far easier for the team to address them. For example, one patient who regularly called for an ambulance was found to be suffering from depression and loneliness. She was given the number of a 24-hour telephone helpline for older people and the frequency of her admissions has dropped dramatically.
- 3. Innovation:** There was a great deal of enthusiasm and willingness to try new approaches amongst the stakeholders including SAS, community and acute-based respiratory teams. The innovation sessions provided a platform for the different disciplines to learn from each other and share their ideas and support a collaborative approach to developing the new pathways.

4. **Support to Staff:** Not only does the Psychology Team support patients but it also provides psychological advice, training consultation to staff. For example, the team has held training sessions for senior physiotherapists to enable them to have difficult Do Not Resuscitate conversations with patients. The Prof-to-Prof support line is in place to provide direct communication between the Community Respiratory Hub and the hospital consultant for advice which can be decision to admit or general support.

5. **Liaising with the Ambulance Service:** The team worked collaboratively with the SAS to develop new COPD pathways providing an alternative to hospital admission. The Community Respiratory Hub will respond to SAS referrals within 90 minutes. Out of hours, SAS can request an urgent visit from a Lothian Unscheduled Care Service GP. Overnight information of these referrals are passed to CRT to follow up, ensuring there is consistency of care.


South East Division
COPD Pathway Edinburgh

ePRF No.	Name:	D.O.B
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Patient excluded from pathway if (✓) any of the grey boxes

	Yes	No
Eligibility		
Aged 40 Years or Over		
Registered with an Edinburgh GP		
Known diagnosis of COPD		
Are they known to the Community Respiratory Team (CRT)		
Past Medical History		
Known Asthmatic		
Home ventilated patient (i.e. mechanical ventilator)		
Previous admissions to ITU / History of Non-Invasive Ventilation		
Acute Admission Indicators		
Presenting Pale & Sweaty		
New Onset of Peripheral Oedema		
Acute Confusion or Decreased level of consciousness		
Ability to Cope at Home (basic mobility, sanitation, feeding) without carer support		
Significant Co-Morbidity (type 1 Diabetes, IHD, Renal Impairment etc)		
Access to a Telephone		
Referral Consent		
Diagnosis Uncertain		
Critical Vital Signs		
Respiratory Rate RR > 30		
Respiratory Rate RR < 10		
Heart Rate (BPM) > 110		
Blood Pressure (BP) < 100mm (Hg) systolic		
Temperature > 37.7c		
SpO2 ≥ 88% (on room air or on normal prescribed level of Oxygen)		
Signs and symptoms of Pneumothorax, Pneumonia, CCF, Cardiac Arrhythmia		

CRT Referral Times
0800-1800 Monday to Friday
0900-1600 Saturday to Sunday
This is a 90 minute response
(including public Holidays)

07826 894067

NHS Lothian Hub
(outwith trial hours)
as per pre-existing
prof 2 prof arrangements
(request 10 min call back)

0131 537 2703

Write Outcome

Outcome (Refer to Key)
1. CRT **2.** LUCS
3. Acute Facility **4.** Referred to GP
5. Refused (Forward to GP)

Version 1.0 (02/15)

6. **Supported Self Management:** Patients are supported to self-manage their condition at home using LiteTouch telehealth. An in-depth assessment establishes their normal levels and they regularly monitor for changes. If changes are noted, patients have a proactive plan of self-care, including use of nebulizer or certain medications, anxiety management strategies such as breathing exercises, along with CRT contact details if symptoms worsen. Rather than being the default, calling an ambulance only becomes necessary when other routes have been tried.
7. **Medication Reviews:** An Integrated Care pharmacist conducts medication reviews, ensuring that patients are taking the right medication in the right dose at the right time and offering them the opportunity to ask questions. Often the pharmacist will visit patients at home jointly with the CRT to ensure the medication regime is understood.
8. **Frequent Attender Database:** COPD patients who have had two or more hospital admissions within 12 months are added to the frequent attender database. These patients are reviewed at the regular multidisciplinary team meetings. The team can see the patients' admission patterns and check what types of support services are in place. Using a care bundle checklist to consider all options, the multi-disciplinary team agree a plan of care which is shared with the patient's GP. A member of the team visits the patients to discuss the plan and GPs are asked to create a KIS with action points for review at the next meeting.
9. **Multidisciplinary Team Meetings:** Full multidisciplinary team meetings are held fortnightly at the Royal Infirmary and monthly at the Western General in Edinburgh. They take the form of a virtual clinic and include members of the extended team, including: respiratory consultants, community respiratory physiotherapists, respiratory nurse specialists, IMPACT nurses, psychologist, pharmacist, PACT doctors, GPs, the ambulatory service and pulmonary rehab. The care bundle checklist prompts discussion and case review for frequent attenders and other patients highlighted at being at risk by the team.
10. **Branding and marketing:** The project manager developed a brand for the Community Respiratory Hub using the strapline "Think COPD, think CRT". Fridge magnets and mousemats are available to drive home its

message to patients and healthcare professionals alike. Every GP practice in Edinburgh was sent mousemats and regular newsletters to raise awareness of the newly formed service and the support available. In the run-up to public holidays, the team holds a marketing campaign to remind referrers to use the hub rather than sending COPD patients to the ED. The 'Think COPD, Think CRT' strapline has been added to every frequent attender KIS to prompt referrals at point of deterioration.

Challenges

- Primary care, secondary care, social care and the ambulance service were all accustomed to working in silos. There was no joined up approach to COPD and no alternative pathways to acute care. Innovation sessions helped to break down these barriers and support teams to better understand each other's roles and facilitate integrated working.
- The COPD project only covers the Edinburgh area. There were some challenges for the SAS as their boundaries were different and they could only refer Edinburgh patients to the service. The team responded by producing easy-reference pocket guides for ambulance crews.
- There was no ring-fenced training time for SAS staff so any training they attended was unpaid. The team created a series of accessible online video clips that staff could watch without having to take time off work.

Impact

The project was evaluated by Lothian Analytical Services between April 2013 and September 2015. The target was to reduce respiratory bed days by 206. The team achieved a reduction of 1,418.

Since that time, bed days have continued to fall. The figure now stands at 2,954. There has also been a 7% reduction in length of stay of 48 hours or less.

There have been 252 multidisciplinary team reviews of frequent attenders and 74% had a new KIS as a result.

10% of all COPD requests to the bed bureau have been rerouted to the Community Respiratory Hub. There has been a 23% increase in referrals to the Community Respiratory Team. 37% of patients referred to the team have avoided a hospital admission.

Pharmacy has conducted 239 medication reviews helping to target non-compliance.

The project has achieved several accolades including a Scottish Health award: Care for Long Term Illness and poster awards at the National Respiratory Managed Clinical Network learning event and Institute of Healthcare Management (IHM) conference. The programme manager, Amanda Fox, was awarded Scotland's Top Healthcare Manager runner up by the Institute of Healthcare Management.

WHAT MADE THE EDINBURGH PROJECT SO SUCCESSFUL

A View from the Frontline

Laura Groom is Team Lead for the Community Respiratory Team in Edinburgh and Advanced Physiotherapy Practitioner. She joined the service in 2008 and has gained a detailed insight into the factors that contribute to its success.

Plugging the Gaps

Laura explained:

“We recognised in Edinburgh that there were significant unmet needs in the care of COPD patients. For example, we realised that:

- we might not be capturing all of the patients who could be successfully treated at home
- COPD patients are at high risk of anxiety and depression
- patients might need support with other aspects of their life besides their physical wellbeing
- options for acutely ill patients were limited. They tended to call 999

COPD management is typically fairly standardised. This project set out to identify gaps in the service and plug them wherever possible.”

GP Engagement

Members of the CRT visited GPs to discuss the type of support they might need for COPD patients, including mental health provision and prescribing. The team held GP events, both to hear from GPs about their experience of caring for COPD patients and to introduce them to the services offered by the Community Respiratory Team. They also talked at GP forums. Laura commented:

“A key piece of learning for us was to create different presentations for different audiences so you can really target your message. The presentation we gave to GPs, for example, was different to the presentation we gave to colleagues in social care.”

GPs have been enthusiastic about the new service. Day-to-day care of COPD patients is provided by the Community Respiratory Team with GPs being kept informed.

A Holistic Perspective

COPD is a risk factor for low mood and anxiety. Laura said:

“Breathlessness, infections and regular hospital admissions are characteristics of COPD. Ongoing poor health and a decline in function can bring people down, making them prone to depression. At the same time, the sensation of breathlessness can lead to rising anxiety, which may contribute to the breathlessness. A patient’s mental health, along with factors such as poor living conditions and financial difficulties all contribute to their overall health and wellbeing. One of the major success factors for our work in Edinburgh is the fact that we consider the patient in their entirety, not their physical health alone.”

Integrated Model of Care

One of the factors that contributed to true multidisciplinary working in Edinburgh was the fact that services are co-located, making it easier to provide an integrated model of care. This gives clinicians a good understanding of each other’s roles and challenges. Some of the services, such as psychology and pharmacy, are co-located for one day a week. The full team meets monthly at the Western General Hospital and weekly at the Royal Infirmary. Patients who are unwell are discussed at these multidisciplinary team meetings.

The team also holds regular shadowing sessions so the clinicians can experience their colleagues’ day-to-day reality. The benefits of this, in terms of insights and relationship-building, make it a very worthwhile investment of time and resources. The Community Respiratory Team has successfully built a bridge between primary and secondary care.

Data to Inform Services

The team has used data effectively to identify frequent attenders. This enables them to target COPD patients who need their support the most, thereby allowing them to make the biggest difference. At each multidisciplinary team meeting, the team reviews the latest data on patient referrals and admissions, making decisions based on real-time information.

Clinical Leadership

Strong clinical leadership played a key role both in getting the project underway and in unsticking possible challenges. The team found it particularly helpful for one clinician to be able to speak to another about the most appropriate care of a patient.

Innovation Sessions

At the start of the project, the team held Innovation Sessions to give everybody the opportunity to share their thoughts on what good COPD care looks like. This helped to achieve a good cross-fertilisation of ideas and also assisted with engaging stakeholders in the work taking place and the reasons behind it.

An Alternative to Admission for the Ambulance Service

Paramedics have welcomed the new Community Respiratory Team as it provides a viable alternative to hospital admissions for COPD patients experiencing an exacerbation in their symptoms. Now ambulance teams can confidently refer patients to a community-based service rather than automatically admitting them.

Self-Referral by Patients

“I feel very strongly about this,” said Laura. “In the past there has been a perception that allowing patients to self-refer would open the floodgates. Clinicians believed that patients were on a downward trajectory and it was pointless to discharge them when it was likely that they would have to come back into hospital. Actually, we have found that giving them the right level of education and confidence in the service and providing telehealth has enabled us to manage self-referrals effectively. There has undoubtedly been an increase in telephone triage but this is the right thing to do for patients. It is good for us to build an ongoing relationship with them rather than having to start from scratch with them when they become unwell.”

The Right Model of Care

Laura believes that the model of care for COPD developed in Edinburgh could be scaled across NHSScotland. “This is the right model of care for COPD patients and is very transferable, if not in its entirety then in part. We have invested a huge amount of time in developing this process. It would be great if other Health Boards could benefit from this and improve their services for this group of patients who are often overlooked.

Case Study 2

Hospital at Home Keeps COPD Patients out of Hospital

NHS Lanarkshire

The 2020 Vision sets out the government's aspiration for people to live longer, healthier lives, supported to be at home rather than in a hospital setting wherever possible. In this vision, hospital becomes the place of choice only after all other resources have been exhausted. COPD patients in Lanarkshire are treated on a virtual ward rather than being admitted to hospital, helping to reduce the risk of deconditioning and hospital-acquired infections.

National Clinical Lead for Older People and Frailty, Dr Graham Ellis explained:

“Hospital at Home provides a genuine alternative to admission, taking multidisciplinary care into the patient’s own home thereby avoiding the disruption and potential harm of an admission. Crucially, there is no difference between the diagnostics provided in hospitals and the diagnostics that we can provide in the patient’s own home.”

Since the service was launched in 2012, any GP that contacts the bed bureau requesting admission for a COPD patient is automatically referred to Hospital at Home. Patients are seen by a geriatrician or COPD specialist within an hour of referral and consultants create an individual care plan. Only those patients with a genuine clinical need are admitted to hospital.

Virtual Ward Round

Hospital at Home employs a team of 38 WTE (whole time equivalent) therapists, consultants, nurses, physiotherapists, OTs, ambulance staff and support workers. The team holds a daily virtual ward round to assess all patients under its care. Staff visit patients in their own home to carry out all of the tests that would normally be done in hospital, including blood tests and X-rays. They can also carry out clinical reviews and prescribe or amend medication plans.

A Genuine Alternative to Admission

Graham said:

“The service succeeds in keeping 75% of COPD patients in their own homes. We have an average length of stay of four or five days and our readmission and mortality rates are on a par with the acute hospital. We are working with some of the region’s most unwell patients, many of whom have multiple pathologies including COPD. It is important to keep them out of hospital wherever possible as they are highly susceptible to hospital-acquired infection, falls and deconditioning.”

Pioneering and Cost-Effective

Hospital at Home in Lanarkshire was the first of its kind in Scotland and has inspired the creation of similar services in Lothian and Fife. The service also attracted the praise of The Scottish Government’s Director of Health and Social Care, Derek Feeley.

Allied Health Professional Rehabilitation Consultant in Older People and Lanarkshire Hospital at Home Lead, Claire Ritchie commented:

“When the service began we found we were using far fewer resources than we anticipated – just a third of our total budget. We identified a number of reasons for this. Older people are far more resilient when they remain in their own homes. They remain mobile and cognitively more aware. Often they have family or friends to support them. Hospital at Home gives them rapid access to skilled geriatricians who can create a tailored treatment plan and review their medications. On occasions we have been able to reduce significantly the amount of drugs people are taking.”

Meeting Demand at Lower Cost

Since 2015, Hospital at Home has managed 1,751 patients in their own home. It has cut ambulance service costs by £464,000 and reduced A&E admissions by 24%. In addition to seeing patients referred by GPs, the service now manages step-down patients from acute wards. Patient satisfaction levels are high. Prescribing costs are also significantly lower than in hospital.

Graham concluded:

“We believe that virtual wards will enable us to meet growing demand for COPD services over the next 10 years. Forecasters predict

that, based on the current trajectory, we would need an additional 440 beds to meet rising rates of the condition. This is clearly unsustainable and Hospital at Home is proving to be a genuine alternative to an exponential rise in hospital admissions.”

Challenges

1. **Resistance to Change:** As with any new service there was a certain amount of resistance to change and uncertainty at first. The Hospital at Home team met up with GPs and acute consultants to answer questions and allay fears. Bringing together different cultures and teams into one also proved challenging. “We worked with a coalition of the willing at first,” explained Claire. “Once we began to collect evidence of the impact we were making it became easier to engage people.”
2. **Rapid Diagnostics:** For the new service to work, it was important for the team to have rapid access to diagnostics and for lab results to be processed as quickly as they would be for inpatients. The Hospital at Home team worked hard to engage colleagues in diagnostics and explain the new service.
3. **Building the Right Skills Mix:** Hospital at Home needs a blended mix of skills. It took time to recruit and train staff in the correct skills mix. The team developed a set of competency-based assessments and used the Aston Model to build a cohesive team culture.

Case Study 3

Small Changes Make a Big Difference in NHS Greater Glasgow and Clyde

Small things can make a big difference to the quality of life of patients with COPD, according to Dave Anderson, Clinical Lead for the Community Respiratory Team and Pulmonary Rehab in NHS Greater Glasgow and Clyde. If you live in Glasgow, you are 45% more likely to have COPD than any other part of Scotland where it accounts for 45,000 emergency bed days costing £9.5 million to the health board annually.

The region launched a pilot project to reduce COPD admissions and improve quality of life for patients in Glasgow. A Community Respiratory Team provides home-based care for COPD patients and a hospital-based Pulmonary Rehabilitation Team deliver patient education and support with mobilisation and exercise capacity.

Dave explained:

“There are 120,000 people with COPD in Scotland. The condition is responsible for around 4,500 deaths per year - one of the most common causes of death in Scotland. Nationally there is a lack of recognition of the condition and an almost constant pressure to reduce services.

“Coupled with this is a lack of funding for services, and it can be challenging to get COPD patients to engage with support services. Their expectations tend to be low and it can be hard to get them to recognise the impact that even small changes could have on their life. But, just because it is challenging, that is not a reason to accept the status quo. People with COPD often come from poorer backgrounds. It is a disease associated with smoking and it is easy to overlook these patients because of that. But this is a growing challenge for all of us and I feel strongly that these patients deserve better. This is happening on our doorstep, right now, and we owe it to people with COPD to do what we can to make things better.”

Community Respiratory Team Working Towards a Patient's Own Goals

Making things better means keeping patients out of hospital wherever possible and supporting them to make changes in their lives. Dave explained:

“We encourage patients to set their own goals. They might want to be able to go out to the shops or to Bingo, for example. The Community Respiratory Team works with them to help them achieve whatever it is they want to achieve, however small. People's quality of life can improve significantly by achieving even marginal improvements in mobility. There is no wonder drug that can cure COPD but there are things that can be done to ensure that patients are receiving the best treatment for their condition, including support to stop smoking or to walk more.”

Community Respiratory Team

The Community Respiratory Team serves Glasgow City Health and Social Care Partnership and is located in Possilpark Glasgow, in one of Scotland's most deprived areas. The team has twenty members and consists of physiotherapists, respiratory nurse specialists, occupational therapists, pharmacists, dieticians and support workers. The service covers the whole of Glasgow City HSCP, a population of 596,550.

The Community Respiratory Team was created following a five-year project in primary care. During this time three separate projects were piloted and evaluated and the team implemented some of the most successful components of each. These include having respiratory nurses located within the community and adding in a specialist dietician into the team.

The focus of the Community Respiratory Team is avoidance of hospital admissions. As Marianne Milligan, Team Leader of the Community Respiratory Team explains:

“If you live in Glasgow, you are more likely to have Chronic Obstructive Pulmonary Disease (COPD) than any other part of Scotland and the condition accounts for 45,000 emergency bed days costing £9.5 million to the health board annually which is the highest nationally. A specialist multidisciplinary team placed in the community to support people having exacerbations of COPD was previously not in existence; people had to be admitted to hospital to receive this support. Piloted initially in one sector of the city, the

service proved that it could provide safe and quality person-centred care that produced significant cost savings. With Scottish Integration Care Fund we could expand to city wide and now have secured permanent funding for this service. Scottish Government drivers are to transfer the balance of care into the community and enabling self-management, this is what our service can deliver. In my experience people want to stay in their own homes if there is a safe and effective alternative and wish to avoid a hospital admission as much as possible”.

The team provides a reactive service to people suffering exacerbations. GPs utilise it as an alternative to patients going into hospital by accessing the specialist service and supporting the patient in their own home. 92% of acutely unwell patients at risk of hospital admission are seen the same working day and there has been an 83% reduction in anticipated hospital admissions as a result.

The service also facilitates early discharge from hospital by cLoSely linking with secondary care colleagues and providing responsive follow up and support. The ethos of the service is to provide a personalised approach to care, enabling self-management by the patients which includes: increasing their own knowledge of their condition and especially what to do when they are unwell; improving knowledge of inhaled therapies; knowing how to clear their chest and also increasing their physical activity and independence through the provision of home pulmonary rehabilitation and equipment. In addition, malnutrition, mental health issues of anxiety and depression, and complex polypharmacy/comorbidities that are commonly seen in end stage COPD are addressed through the coordinated, multidisciplinary approach.

COPD patients are frequently living in areas of deprivation. Glasgow City contains 3 in 10 of the 15% most deprived data zones in Scotland, which is the highest proportion for a local authority. Deprivation in patients with COPD is a significant predictor of the frequency and duration of hospital admissions, resulting in increased rates and longer lengths of stay especially during the winter. It is also linked to reduced secondary care outpatient attendance. More than 60% of patients that are supported by the Community Respiratory Team live in the most deprived areas of Scotland (Scottish Index of Multiple Deprivation), this figure rising to 74% when analysing the North East of the city.

The team supports patients with end stage COPD with a myriad of co-morbidities living with significant levels of complex physical, mental and social issues. The ethos of this multidisciplinary service surrounds the collaborative effort between the patient and the clinician. Delivering person-centred SMART goal setting and working towards a personalised outcome approach increases participation and engagement. The multidisciplinary service is then coordinated to meet the needs of the patient and their goal. Over 80% of patients decide and agree on their own individualised and meaningful goals. Patients score their own progress at the end of the intervention as a measure of their own success.

Example of a goal may be:

- “To feel more confident with my breathlessness and have fewer panic attacks when out walking to my local shop every day so I can have my independence back”.

The team signposts to other agencies e.g. in the third sector and utilises community services such as befriending, hospice or services such as Community Connectors to reduce social isolation in this client group. The most common referrals, in order of frequency are: financial inclusion, social care direct, hospice and pulmonary rehabilitation.

Reduced impact of disease and improved quality of life has been demonstrated through validated outcome measures of patients who are supported by the Community Respiratory Team. Statistically significant increases in both the COPD Assessment Test (CAT) and EQ5DL Quality of Life measures are shown. Significant average improvements of CAT score pre- and post-input have been delivered. This figure was a substantial 5, with the authors of the assessment noting 2 as being clinically significant. Likewise sizeable average increases of 13% in a patient's quality of life are shown.

Virtual Ward Rounds

Development of interface joint working through a “virtual MDT”, led by the consultant respiratory physician, allows clinicians in the Community Respiratory Team to discuss current patients on their caseloads facilitating secondary assessment, opinion and input. For example, this could include: addition and optimisation of medication, organisation of investigations and review of chest X-rays/CTs, decisions for clinic reviews plus educational sessions. This streamlines the referral process for this patient group for secondary referral. The weekly treatment plan of 10 – 12

complex patients are discussed as a team with the plans and outcomes being communicated on Clinical portal but also directly with the GP.

The service has been warmly welcomed by GPs, who are the largest referral group into the service. The team has had a positive impact on primary care by freeing up GP time. 75% of 70 GPs surveyed reported a reduction in the number of home visits and 63% reported that patients were able to self-manage their condition more effectively with 60% specifically being around optimisation and use of inhaled therapies. 85% of GPs rated the service as good or very good. Ongoing engagement sessions with GP continually increase awareness and use of the service.

The service aims to be easily accessible to people with COPD in Glasgow as Marianne Milligan explains:

“We support patients in their home making sure they have an appropriate level of input and care to safely and effectively help them recover. We then look at how we can help them to optimise their own health, what they can do to help their symptoms, particularly of breathlessness, and ensure they have an understanding of their condition so they know how to control their own health. They often have a lack of confidence in how active they can be as breathlessness leads to feelings of anxiety and results in inactivity. By providing them with a rounded approach with all members of the team working towards the patient’s goal we support people to be as active and engaged in their surroundings and community as much as possible and their quality of life is massively enhanced as a result. Once they have achieved their goal, we discharge them, however patients can then self-refer into our service when they are becoming unwell. This can greatly relieve any anxiety as they know our team, they know who to call and we can see them that day if required. There are continual increases in patients self-referring into the service and patients are no longer waiting to become so unwell that they need a hospital admission and instead contacting us earlier in their exacerbation. All these factors are leading to a trend of reductions in hospital admissions being shown in Glasgow”.

Over 90% of patients supported by the service are graded on the MRC Breathlessness Score as being 4 or 5 (grade 5 being they are breathless when getting dressed). A significant proportion of

COPD patients are entering the final stages of their life and the Community Respiratory Team also works with them to create anticipatory and end of life plans.

Combined Respiratory Services

Establishing patient pathways between the combined Glasgow Respiratory services of the Community Respiratory Team, Pulmonary Rehabilitation classes and Hospital-based Respiratory Nursing Teams have considerably improved service delivery ensuring the patient is seeing the right person at the right time.

Investing in training has led to Advanced Practitioner qualification by the majority of clinicians who work with acutely unwell patients.

£1m Savings

The pilot project delivered net savings of more than £1 million a year and avoids, on average, 45 admissions a month. Patient quality of life has improved and GPs are fully onboard with the service. NHS Greater Glasgow and Clyde has now provided full funding for the COPD service and believes there is potential to scale the project to the NHS Greater Glasgow and Clyde area and to apply similar approaches to other long-term conditions. Additional future plans include: increasing to a seven day service, improving links with Scottish Ambulance Service, and increasing presence of health professionals in the Emergency Department to improve the turnaround of patients at the front door towards community support.

The team’s success has been recognised and includes best COPD abstract selection in European Respiratory Society Conference, a Scottish Pharmacy Award, a Scottish Respiratory MCN award and a Health Improvement Scotland Research award

<http://www.scottishpharmacist.co.uk/2016/09/30/scottish-pharmacist-awards-201516-winners/>

http://www.healthcareimprovementscotland.org/news_and_events/events/5th_annual_research_symposium.aspx

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Appendix A

National COPD Working Group

TERMS OF REFERENCE

1. In advance of winter 2015 an analysis was made of the admissions trends for the most frequent conditions presenting to emergency care, which revealed that respiratory illness featured as a key diagnosis in three of the top five emergency presentations. Underpinning a significant proportion of these is chronic lung disease, of which the most frequently encountered is Chronic Obstructive Pulmonary Disease (COPD).
 2. Forecasts for the next twenty years indicate a steady rise in admissions from respiratory disease so that if the current model of care were to remain unchanged we would expect an almost 29% increase in admissions by 2034. Similarly if length of stay remains the same, bed days will increase from 519,898 in 2014 to 669,920 by 2034. Admissions for COPD exacerbations, defined as episodic deterioration in respiratory health, therefore present a significant financial burden to health services, which is set to worsen dramatically in the next twenty years, but are also associated with a stepwise deterioration in an individual's quality of life.
 3. The National COPD Working Group has therefore been established to address the healthcare challenges arising from this long-term condition and in particular to reduce unnecessary hospital admissions wherever possible, aligning with the Six Essential Actions of Unscheduled Care – EA6; keeping patients at home or in a homely setting.
 4. The group will look at all aspects of COPD management, from pre-hospital care, including ambulance service management and community respiratory teams, through to discharge from hospital, readmission avoidance and palliative care for patients with end-stage disease. The group will focus on strengthening links between the different services that can support and manage patients with COPD through tests of change across and within these services. The ambition of the group is to improve the management of patients with COPD along every step of the patient journey so that the right patient is managed in the right place at the right time, in line with the following national strategies:
Realising Realistic Medicine
National Clinical Strategy
 5. Pulling Together, transforming urgent and emergency care
Taking Care to the Patient – the Ambulance Service 2020 Vision, and
The Six Essential Actions of Unscheduled Care.
 5. The full group will be composed of four subgroups that each focus on different aspects of the patient journey:
 - a. Reducing unnecessary hospital admissions
 - b. Scottish Ambulance Service initiatives
 - c. NHS 24, Telehealth and Technology-Enabled Care
 - d. Palliative Care and Anticipatory Care Planning
 6. Each subgroup will have its own terms of reference and subgroup leader. The subgroups will meet independently and their leaders will share any actions and outputs in the full group forum.
 7. Key deliverables for the group and subgroups will be to:
 - a. map out the patient journey from the patient's home through to hospital and subsequent discharge
 - b. identify areas of good practice nationally
 - c. interrogate each step of the journey to look for improvement opportunities
 - d. carry out tests of change at each step
 8. The impact of any tests of change will be analysed in terms of the following key performance measures:
 - Reduced attendances at A&E
 - Reduced TOTAL admissions to hospital
 - Proportion of COPD patients being admitted
 - Re-admission rates (within 28 days)
 - Length of stay in hospital for COPD patients
- Supporting Measures
- Saved bed days (to be derived from reduced length of stay)
 - Numbers of patients contacting the NHS 24 helpline
 - Increased uptake of home health monitoring
9. Outputs from the group and subgroups will be reported through a number of mechanisms including case studies, sharing learning via the Respiratory National Advisory Group (NAG) and a national event which is set to take place in October 2017.

COPD Working Group - Membership

Name	Role	Organisation
Jacques Kerr (Chair)	National Advisor	Scottish Government
Alan Monahan	Policy Officer	Scottish Government
Amanda Fox	Programme Manager, LTC	Edinburgh HSCP
Blythe Robertson	Policy Manager and ACP Lead	Scottish Government
David Anderson	Consultant Resp Physician	NHS GGC
Elaine Paton	Lead Pharmacist	FV
Fiona MacKenzie	Service Manager	ISD
Gourab Choudhury	Consultant Resp Physician	NHS Lothian
Irene Johnstone	Head for Scotland and NI	British Lung Foundation
John Sandbach	Senior Nurse Clinical Development	NHS 24
Kerry Mathewson	GP Advisor	Scottish Government
Laura Groom	Advanced Physiotherapy Practitioner	Lothian Community Resp Team
Marianne Milligan	Team Leader	NHS GGC
Phyllis Murphie	Resp Nurse Consultant & MCN Lead	NHS Dumfries and Galloway
Syed Kerbalai	Programme Manager	Scottish Government
Tim Warren	Team Leader, Palliative and End-of-Life Care	Scottish Government
Tom Fardon	Resp Physician & Chair of Lung Health NAG	NHS Tayside
Alan Hunter	Director of Performance and Delivery	Scottish Government
Alison Strath	Principal Pharmaceutical Officer	Scottish Government
Helen Maitland	Unscheduled Care Director	Scottish Government
Tracy Slater	Business Manager	Scottish Government
Annabel Howell	Associate Med Director and Palliative Care Cons	NHS Borders
Claire Ritchie	National AHP Lead for Older People	NHS Lanarkshire
Callum Johnston	Area Service Manager and Urgent Care Lead	Scottish Ambulance Service
Dahrlene Tough	Consultant Paramedic	Scottish Ambulance Service
Kenny Freeburn	Tayside Lead	Scottish Ambulance Service
Gillian Gunn	Team Leader	Planning and Quality
David McIlhinney	Secretariat	Scottish Government

COPD Sub Groups

A. Reducing hospital admissions/readmissions

Chair: Dave Anderson and Gourab Choudhury

B. Scottish Ambulance Service

Chair: Kenny Freeburn,

Support: Callum Johnston and Dahrlene Tough

C. NHS 24/Telehealth

Chair: John Sandbach

D. Palliative Care/ACP

Chair: Blythe Robertson and Tim Warren

Governance

1. Each subgroup will report to the Full Group and its chair on a regular basis.
2. The subgroups will meet monthly over the duration of the COPD group's lifetime; the full group will meet every three months. On the occasion that the Chair cannot attend a Deputy Chair must be in attendance.

Secretariat

1. Secretariat to the Review and responsibility for coordinating the work of the working groups will be provided by a team within the Unscheduled Care Division in the Directorate for Performance and Delivery.



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