



# COPD management



Using telehealth in the management of Chronic Obstructive Pulmonary Disease (COPD)

## COPD key facts

- 600 million people worldwide have COPD and it is the fourth leading cause of death<sup>1</sup>
- Quality of life (QoL) is severely affected with 80% of patients hospitalised following an exacerbation
- 35% of patients with COPD are re-admitted after discharge
- About one million people in the UK have COPD costing the NHS £818 million per annum<sup>2</sup>

## Using telehealth in the management of COPD

A comprehensive COPD care programme which incorporates telehealth provides a key enabler in the improvement of the health and well being of patients, as well as facilitating a reduction in non-elective hospital admissions, A&E visits and supporting early discharge.

Telehealth enables individuals to manage their COPD effectively at home and can result in early diagnosis of unforeseeable health related problems, empowering patients to take a more active role in their care. The collection of vital sign data, in addition to the answers to symptomatic health interview questions supports clinical staff when evaluating the patient on a regular basis.

Sources and further reading

1. <http://www.internationalcopd.org/materials/patients/learn/facts.aspx>
2. <http://acutemed.co.uk/diseases/COPD>
3. <http://www.tunstallhealth.com/casestudies>
4. <http://www.tunstallhealth.com/casestudies>

## Measuring vital signs and health interview questions

Recommended medical devices which measure the required vital sign data for COPD patients include pulse oximeters, blood pressure monitors, temperature scanner and spirometers.

Health interview questions are answered which give an overview of how the patient is feeling and are based on established clinical guidelines (NICE, Map of Medicine) and have been clinically verified by health professionals. Once the patient takes their measurements and completes the associated health interview questions the information is then automatically transmitted to the **icp triagemanager™** clinical software platform which supports validation of data, monitoring of health status and triaging.

## Signs and symptoms associated with COPD

Although it affects people in different ways, those with COPD often have breathlessness, reduced exercise tolerance, a cough and repeated chest infections. Telehealth can identify these important signs and symptoms, indicating that the patient may have an exacerbation or infection. Measures such as changing medication or initiating antibiotics can then be implemented to help ensure a hospital admission is avoided.

Telehealth monitoring can help to stabilise a patient's condition making it easier for the patient to adhere to treatment plans and changes in their lifestyle.



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## Medication management

Regular analysis of telehealth data enables clinicians to see any changes to a patient's vital signs and relate it to the medication compliance questions on their health interview session.

The **mymedic** telehealth monitor can be configured to remind the patient both visually and verbally at the relevant time intervals to take their medication and provides appropriate advice dependent on patient response to the health interview questions.

## Acute exacerbation management

Exacerbations are common, especially during winter months and it is important that patients and their carers are able to understand and recognise exacerbation symptoms.

Telehealth can help to prevent a severe exacerbation developing by alerting the health professional should there be a change in the patient's health data and therefore taking action before the exacerbation occurs.

A rescue pack (antibiotic and steroid medication) can be prescribed to COPD patients so that should the patient feel unwell (e.g. a change in their sputum colour), and their health data shows a change, they have medication at home to allow them to self medicate.

## Anxiety management

COPD patients can be susceptible to increased anxiety and depression. Through daily telehealth monitoring, patients learn to recognise their symptoms which brings them reassurance and reduces their anxiety levels, helping to improve their quality of life<sup>3</sup>.

## Tele-coaching and education

Once the patient's condition has stabilised, they are more receptive to coaching and education. By providing the right information, patients can learn to self-manage their COPD<sup>4</sup>.

It encourages a more proactive relationship with health professionals, where the patient understands what to ask when speaking with health professionals.

## Telehealth solutions

The recommended telehealth medical devices that monitor vital signs and support self-management for a COPD patient include:

- Pulse oximetry
- Temperature scanner
- Blood pressure
- Spirometry - optional (PEF, FEV1, FVC)\*
- COPD health interviews, QoL surveys and CAT\*\* questions at 3, 6 and 12 monthly intervals

### COPD Advanced package



## Telecare solutions

In addition, patients can greatly benefit from a telecare service which consists of a Lifeline Connect+ home hub and a range of appropriate sensors which are linked to a 24/7 monitoring service, enabling patients to access help and support at any time of the day or night.

### Lifeline Connect+ and pendant



## Telehealth and telecare supported evidence

The Tunstall Healthcare Group has case studies which can help explain best practice for the delivery of care to COPD patients using telehealth. Check online for case studies on NHS Swindon, NHS Blackpool and Blackpool Vitaline and NHS Leeds. [www.tunstallhealth.com/casestudies](http://www.tunstallhealth.com/casestudies)  
**For more information call 01977 660479.**

\*Peak Expiratory Flow, Forced Expiratory Volume, Forced Volume Capacity  
\*\*COPD Assessment Test

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Tunstall Healthcare (UK) Ltd, Whitley Lodge, Whitley Bridge, Yorkshire DN14 0HR  
Tel: 01977 661234 Fax: 01977 662450 Email: [icp@tunstall.co.uk](mailto:icp@tunstall.co.uk)  
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