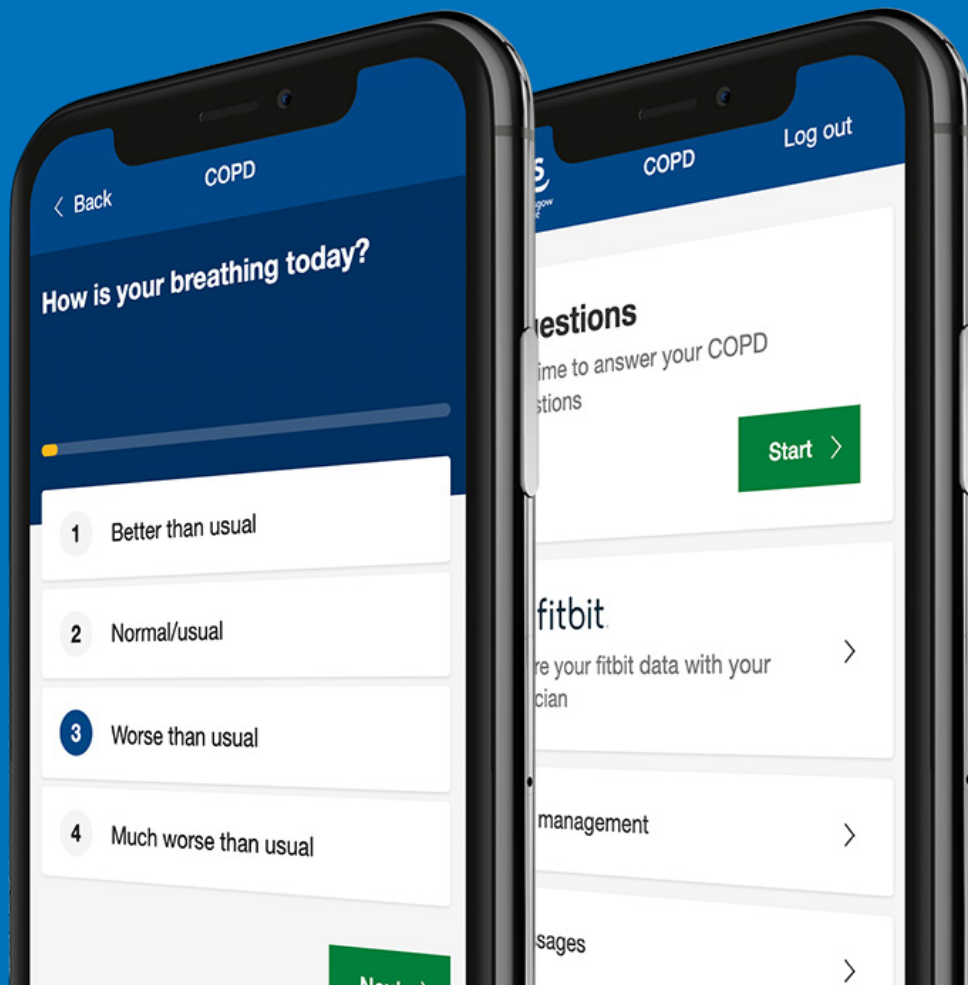


Dynamic Scot

Issue 1: May 2021

Digital Innovation with Remote Management and Predictive Modelling to Integrate Care of COPD across Scotland.



Partners



Introduction

Dynamic Scot is a unique collaboration that brings together public sector, innovation and industry partners with experience in the design and delivery of person-centred digital solutions. The project expands on earlier work, by NHS Greater Glasgow and Clyde (NHSGGC) and was made possible with a UK Research and Innovation Grant.

Individuals with COPD are being offered a digital healthcare service enabling remote monitoring of their condition using new technologies, support from clinicians and tools for self-management. The project will evaluate the benefits of the new service with a view to informing future scaling up across Scotland for people living with COPD.

NHSGGC patients involved monitor their symptoms of COPD at home through a digital service that can be accessed via a smartphone, tablet or computer. This allows for asynchronous communication between a patient, their clinician and community respiratory response team. This also allows for routine care to continue virtually.

Background

Chronic Obstructive Pulmonary Disease (COPD) is a major healthcare Challenge. COPD exacerbations are 2nd commonest reason for patients.

Digital tools and services, when integrated into COPD Care Pathways have the potential to transform COPD management to a proactive preventative person-centred care model, empowering self management as patients access their own health data. This enables a clinician to provide tailored intervention and risk assessment through real time integration of clinical data.

What is Dynamic Scot?

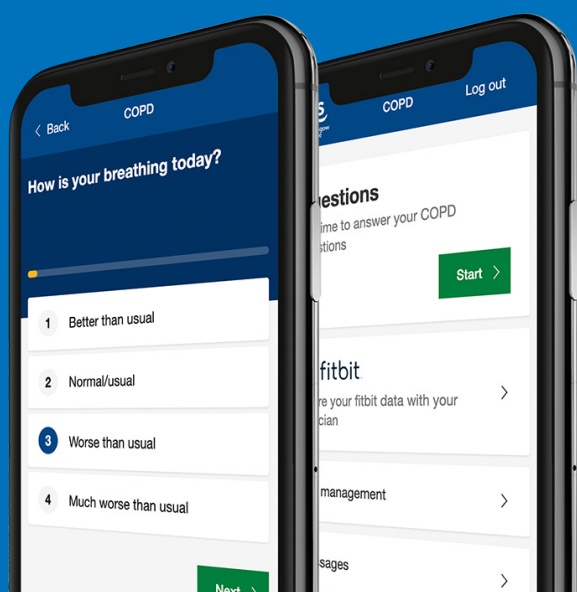
Dynamic Scot utilises the Digital COPD Service which is a web-application accessible to patients through smart phone, tablet or computer to support their COPD management.

The Service is managed by hospital and community respiratory clinical teams and helps patients track their health over time, and manage their condition.

Patients get daily text message to complete symptom diary to help structured reflection on COPD symptoms, access to standardised (Red-Amber-Green) self-management advice and patient clinician messaging service for non-urgent advice regarding COPD/self-management.

Project objectives

- Deliver an expansion of the Digital COPD benefiting up to 2000 patients across NHSGGC using phased recruitment model - prioritising High-Intermediate Risk COPD.
- Generate evidence of impact from patient experience and evaluation metrics including clinical outcomes, health care costs across different patient cohorts participating in the project to inform potential for further scale up.
- Explore opportunity to widen the deployment of the service to an additional health board - NHS Lothian as part of the implementation -effectiveness evaluation informing adoption.
- Capture evidence and implementation learning from the implementation process and initiate development of a business case exploring potential options for future investment and scale up.
- Dynamic Scot is jointly funded by Digital Health and Care Directorate, Modern Patients Pathway Programme and Unscheduled Care Directorate within Scottish Government.



Benefits

The Dynamic Scot is a exemplar project providing NHS Scotland with an opportunity to acquire direct experience with machine-learning based predictive modelling and establish an opportunity for further AI developments and adoption innovation.



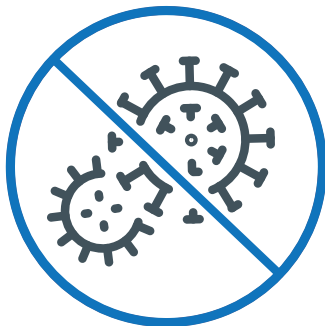
Enabled patient experience including access to two-way messaging with Clinician and have access to medication data (inhalers, rescue medication information) through self-management section of app.



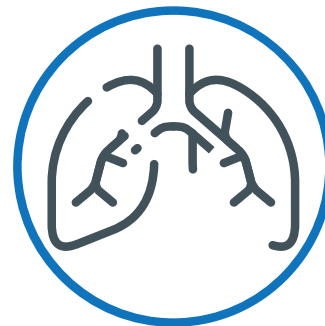
All COPD patients can access weblinks to smoking cessation and pulmonary rehab videos through support site at home using their own technology.



Anticipated to reduce COPD related hospital admissions by 20%



Mitigates health care impacts of Covid 19 by maintaining clinical care through remote management and asynchronous messaging



New Channel Shift – support respiratory services to move from reactive to preventive model of care.



COPD has huge impacts on patient’s quality of life and improving outcomes is one of our national and global healthcare priorities. We’d co-designed with patients a COPD digital service which supports care improvements, and we’d shown this to reduce hospital admissions at interim analysis. It’s great to have the support for this DYNAMIC-SCOT project: its giving us the opportunity to expand access, further develop the service and continue to capture evidence and generic learning points for next generation digital health innovations.



**Clinical Lead Dr Chris Carlin,
Consultant Respiratory Physician, NHS Greater Glasgow and Clyde**

Digital COPD Service

3 key components

1. Clinical App – that enables:


- patient-clinician secure messaging
- structured clinical summary notes prompting value-based care bundle
- anticipatory Care Plan
- data review of patient reported outcomes, events, connected wearable or home NIV: free text clinical notes
- ability to export PDF of clinical summary via NDP to SciStore/ clinical portal and others

2. Patient App – that is:

- usable on any smartphone, tablet or desktop computer
- allows patient clinician secure asynchronous messaging for self-management advice, clinician follow up, equipment issues, scheduling
- provides text notifications for daily PRO completion and messaging. Includes Red-Amber-Green self-management advice and individualised rescue pack, setup by clinician

3. Patient Support Site – this provides core advice

on COPD management including trusted links to content for smoking cessation, inhaler technique, exercise <https://support.nhscopd.scot>



Permissions

Your healthcare provider needs access to some of your data to provide this service. Unchecking these permissions could affect the level of service provided.

Personal information

Uncheck the permissions you do not wish to grant.

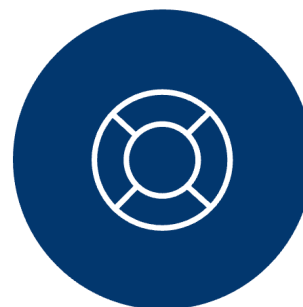
- Your user identifier
- Your user profile information (first name, last name, etc.)
- Your email address

How it works



How are you feeling?

Using an app on your smartphone, tablet or computer, we'll ask you about your symptoms each day. This helps your clinical team to track your health over time, and also helps you manage your condition.



Self-management

You'll have easy access to advice to help manage your COPD, along with information about your medication packs and links to online resources.



Secure messaging

Use the service to securely message your doctors or clinical care team. The NHSScotland COPD Support Service is safe and secure, and your information can only be seen by your healthcare professionals.

FAQ'S

Who can access the Dynamic Scot project service?

The COPD digital support service is available currently only to any NHS GGC and soon to be NHS Lothian Patients with COPD who have access to appropriate internet enabled technology. This can be via a family member or carer. There is no cost incurred (above standard Wi-Fi or 3G/4G internet connection cost) to get access to the app or to send patient-clinician messages.

What Health Boards are involved in Dynamic Scot and what are the project timescales?

NHS GGC and NHS Lothian are the main implementation sites for the project. The project commenced in July 2020 and will complete in August 2021.

What is different about the Dynamic Scot COPD Solution compared with other Remote Health Pathway digital solutions on the market?

The solution is built upon a Health Data Exchange, provided by DHI to NHS Scotland. This is 'digital plumbing' that puts the citizen in the driving seat, allowing them to control the flow of data and to merge their personal data with their clinical records to power new models of care. Dynamic Scot leverages this infrastructure, alongside new heart failure and dermatology services. The infrastructure is also open for use by other remote pathway products to take advantage of the platform capabilities around identity, consent and integrations, and this would in turn ensure that over time a citizen can 'tell their story once' and reuse their personal data across multiple parallel services.

In February 2021, Scottish Health Technologies Group published an Innovative Medical Technology Overview (IMTO) on trial data from NHS Scotland Digital COPD Service from the DYNAMIC project, the precursor to the DYNAMIC-SCOT scale-up project.

[View the Innovative Medical Technology Overview](#)

For more information on the project please contact :

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For more information on the project go to:
www.dhi-scotland.com/projects/dynamic-scot