



# Transforming long term condition care in the NHS

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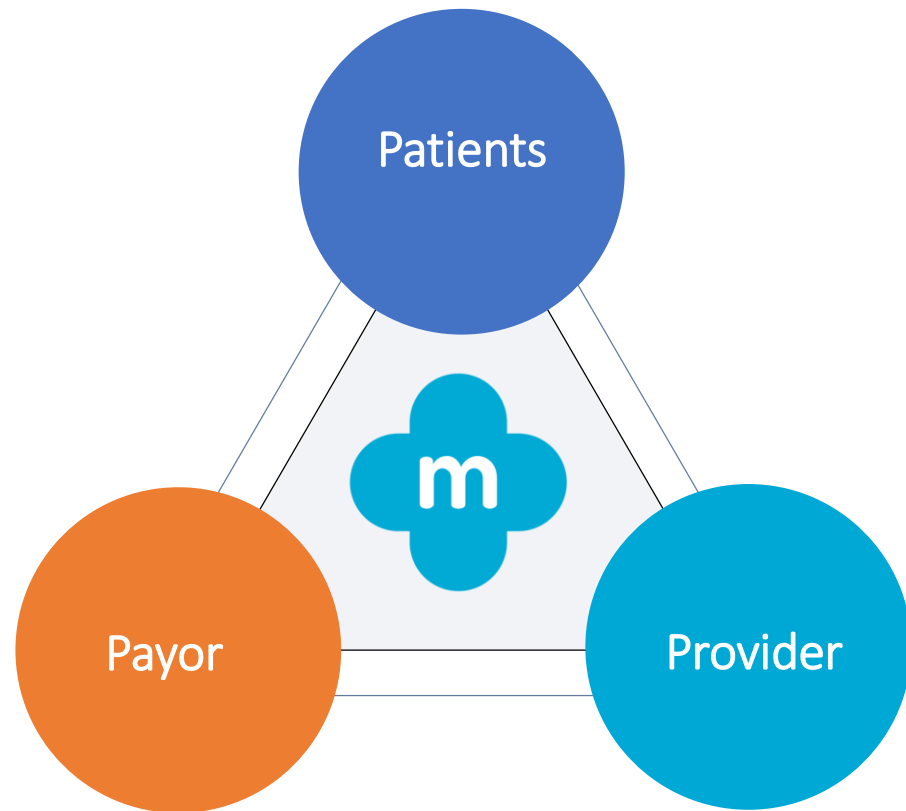
# Who are my mhealth?

We are a clinically led software company that develops and deploys Apps which help patients and clinicians to manage long term conditions.

We are working in partnership with over 100 CCGs in NHS England and several health boards in Scotland and Wales to digitally transform LTC care.

Our platform improves outcomes and reduces healthcare costs by engaging, educating and empowering patients and enabling clinical teams to deliver new models of care, at a population scale.

# Value for Customers



## Patients

- Improved access / empowerment
- Better outcomes / reduced complications
- Right care, first time, every time

## Providers

- Increased productivity / efficiency
- Delivery of new models of care / hit targets
- New revenue streams / enhanced reimbursement
- Contingency

## Payors

- Reduced costs / risk
- Medical intelligence

# Key Differentiators



Multiple  
conditions



Clinically led  
transformation



Platform for  
disruption

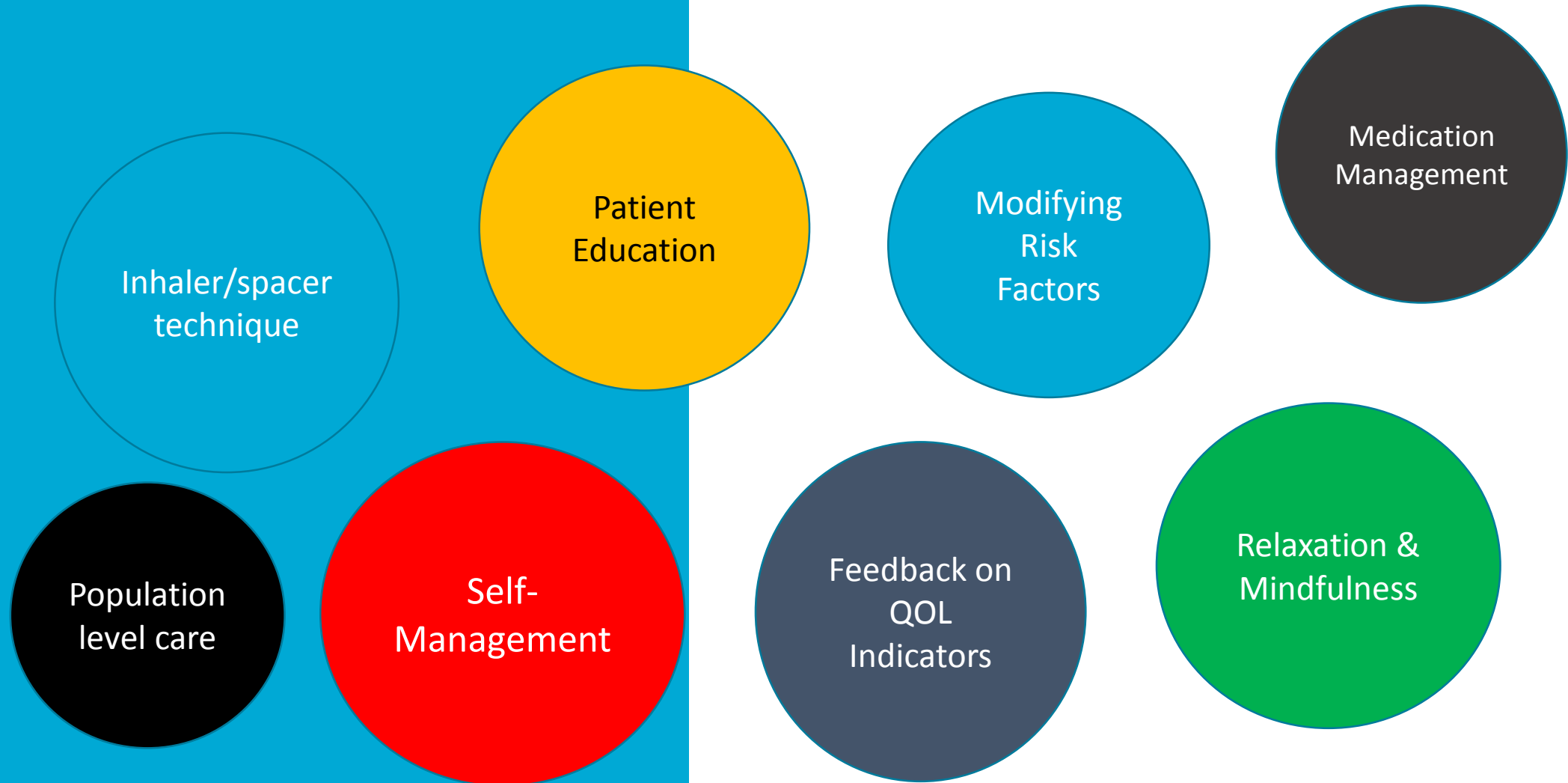


Published  
evidence



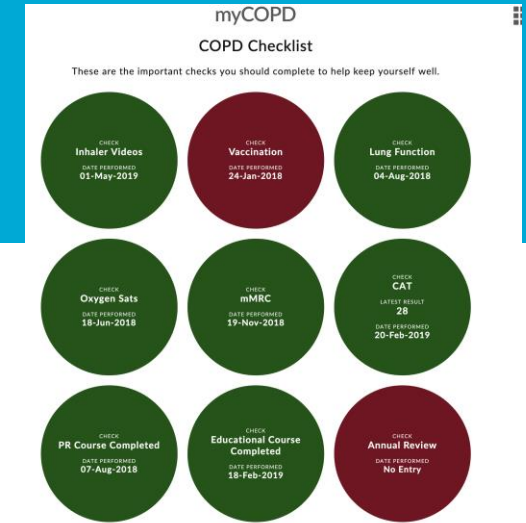
National  
deployment

It's about doing the simple things well



# Simple checklist

- For all 4 main long-term conditions
- Simple messages – turn those circles green
- Align to key checks required at annual review
- Can be monitored remotely by HCPs
- Patients receive nudges via notifications



Attendance at diabetes courses  
3%



# myCOPD

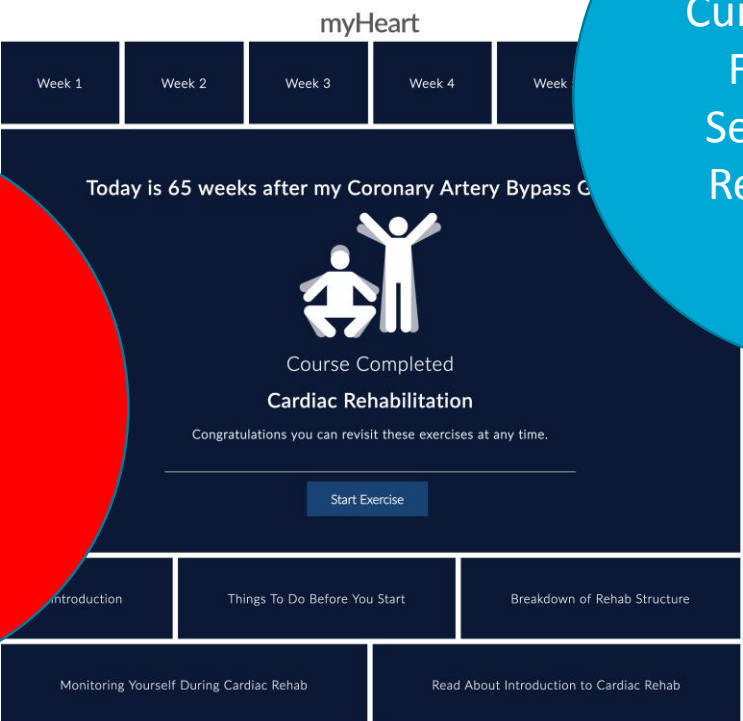
## Week 1 Exercise Program

Attendance at PR Classes  
3%



Current Average Face to face Service Model Results for UK

Capacity for cardiac rehabilitation  
<50%



Inhaler technique  
10%

# Activation

87% of UK COPD population has access to device & internet (ONS 2018)

UK app Activation rates 44% across all CCGs- ie logged on and fully registered and using

- However range from 30-98%- differentiator is the introduction
- Nudges helpful – text alert raised rate from 40-90% in one region
- New AP UI with nudges should increase this significantly
- In study in Scotland, up to 2 nudges increase activation from 50-77%!

App usage-

- Pulmonary Rehab study – 12 week programme - 77% Completion rate (BMJ Open 2017)
- Hospital discharge population ( no previous internet use) 85% activation rate- 50% continued use at 3 months- 4.9 times per week- RESCUE
- RWE- embedded in NHS services – Essex 72% completed 12 week programme (compared to 40% without myCOPD)
- West Lothian 86% activation rate and 70% using at least once per week



# myAsthma



Helping you achieve a healthy and independent lifestyle.

- ✓ Expert education on all aspects of your Asthma care
- ✓ Functions that enable you to monitor your Asthma
- ✓ Videos on how to get the best from your inhaler
- ✓ Localised pollution, pollen and weather forecasting

Now available on the Apple, Google Play App Store and NHS Apps Library



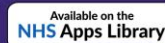
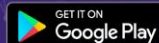
# myDiabetes



Helping you achieve a healthy and independent lifestyle.

- ✓ Expert education on all aspects of your diabetes care
- ✓ Functions that enable you to monitor your diabetes
- ✓ Help to reduce your risk of serious long-term complications
- ✓ Exercise program

Now available on the Apple, Google Play App Store and NHS Apps Library



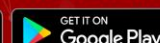
# myHeart



Helping you achieve a healthy and independent lifestyle.

- ✓ Expert education on all aspects of your heart care
- ✓ Functions that enable you to monitor your heart
- ✓ Functions that enable you to monitor and manage your risk factors
- ✓ Online exercise program

Now available on the Apple, Google Play App Store and NHS Apps Library



# myCOPD



Helping you achieve a healthy and independent lifestyle through self-management.

- ✓ Expert education on all aspects of your COPD care
- ✓ Functions that enable you to monitor your COPD
- ✓ Videos on how to get the best from your inhaler
- ✓ Online pulmonary rehabilitation class

Now available on the Apple, Google Play App Store and NHS Apps Library

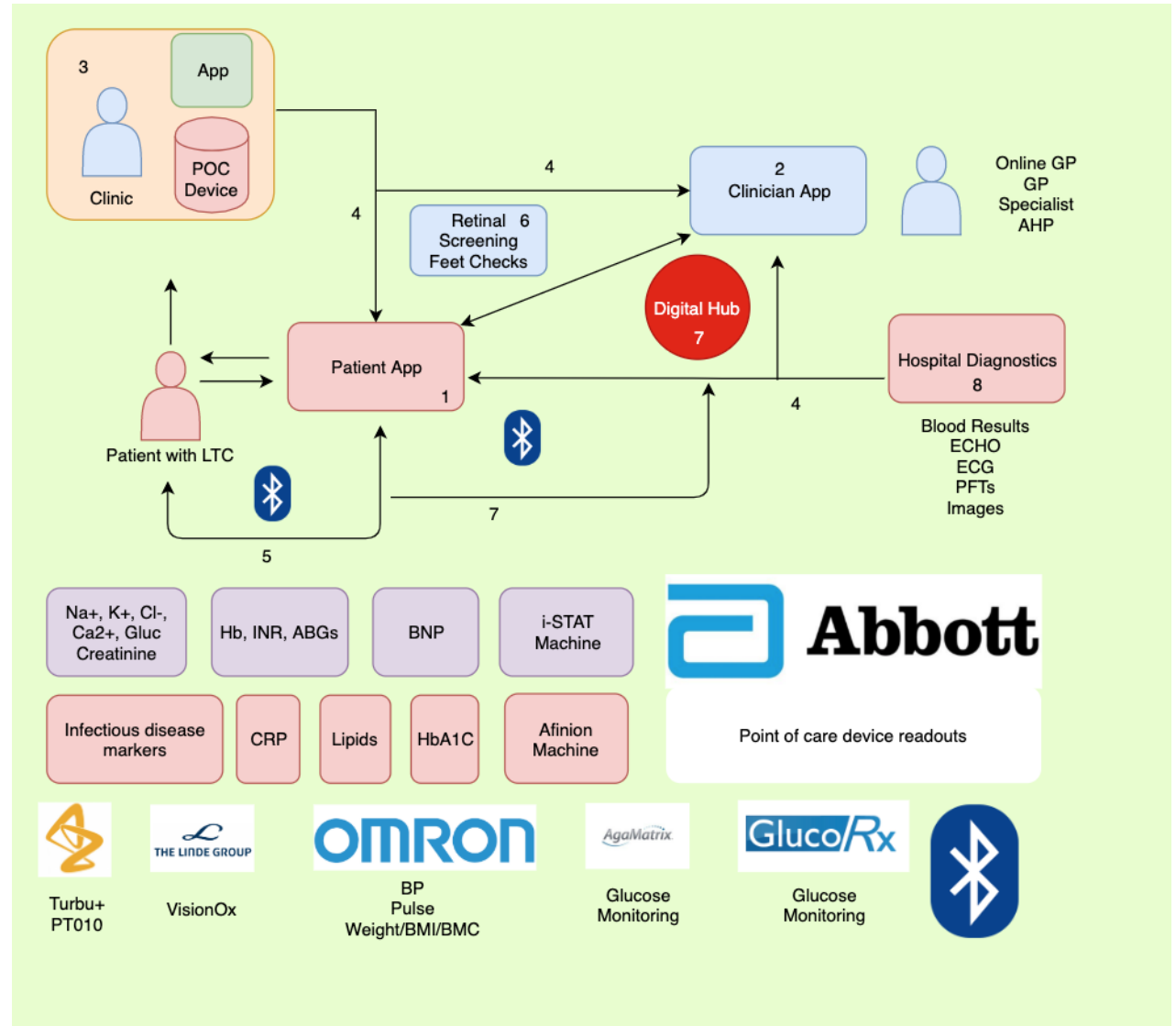


We are the only multiple morbidity/rehabilitation platform  
MHRA Registered CE Marked and approved by the NHS





# Integrated pathways



Open Access

Research

## BMJ Open Online versus face-to-face pulmonary rehabilitation for patients with chronic obstructive pulmonary disease: randomised controlled trial

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► Prepublication history and additional material are available. To view these files, please visit the journal online (<http://dx.doi.org/10.1136/bmjopen-2016-014580>).

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### ABSTRACT

**Objective** To obtain evidence whether the online pulmonary rehabilitation (PR) programme 'myPR' is non-inferior to a conventional face-to-face PR in improving physical performance and symptom scores in patients with COPD.

**Design** A two-arm parallel single-blind, randomised controlled trial.

**Setting** The online arm carried out pulmonary rehabilitation in their own homes and the face-to-face arm in a local rehabilitation facility.

**Participants** 90 patients with a diagnosis of chronic obstructive pulmonary disease (COPD), modified Medical Research Council score of 2 or greater referred for pulmonary rehabilitation (PR), randomised in a 2:1 ratio to online (n=64) or face-to-face PR (n=26). Participants unable to use an internet-enabled device at home were excluded.

**Main outcome measures** Coprimary outcomes were 6 min walk distance test and the COPD assessment test (CAT) score at completion of the programme.

**Interventions** A 6-week PR programme organised either as group sessions in a local rehabilitation facility, or online PR via log in and access to 'myPR'.

**Results** The adjusted mean difference for the 6 min walk test (6MWT) between groups for the intention-to-treat (ITT) population was 23.8 m with the lower 95% CI well above the non-inferiority threshold of -40.5 m at -4.5 m with an upper 95% CI of +32.2 m. This result was consistent in the per-protocol (PP) population with a mean adjusted difference

### Strengths and limitations of this study

- This study explored the efficacy and safety 'myPR', a novel method for delivering pulmonary rehabilitation by online support compared with conventional face-to-face delivery in classes using a randomised controlled trial to explore whether the online programme was non-inferior to the standard model.
- Due to the nature of the intervention, only patients with access to the internet at home could be included in the study.
- Further limitations of this study include the limited sample size, and the absence of long-term follow-up. Larger studies are required to explore the health-economic benefits of this model and applicability in different healthcare settings.

function, increasing symptoms and functional limitation over time.<sup>1</sup> Pulmonary rehabilitation (PR) is a non-pharmacological intervention at the core of management of COPD, aimed at reducing the burden of symptoms by increasing exercise tolerance and improving self-management. With an established evidence-base, PR has

BMJ Open: first published as 10.1136/bmjopen-2016-014580 on 17 July 2017. Downloaded from <http://bmjopen.bmj.com/>

# Strong evidence base of efficacy

# Core components



Symptom and QOL reporting



Customisable self-management tools



Medicine management



Weather and air pollution reports



Track and modify risk factors



Comprehensive education course



Evidence based online rehab



Sophisticated clinician interface

## Referral and assessment

12 Face-to-Face sessions with myCOPD  
as adjunct

Hybrid (6 F2F, 6 digital sessions)

Full digital (home based)

# Hybrid PR - A real world example

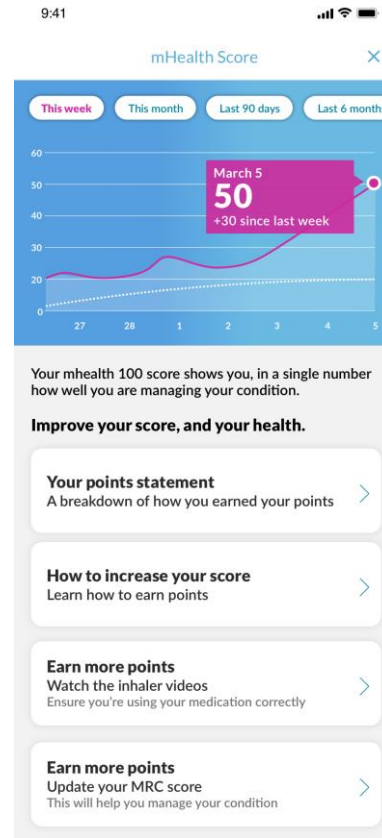
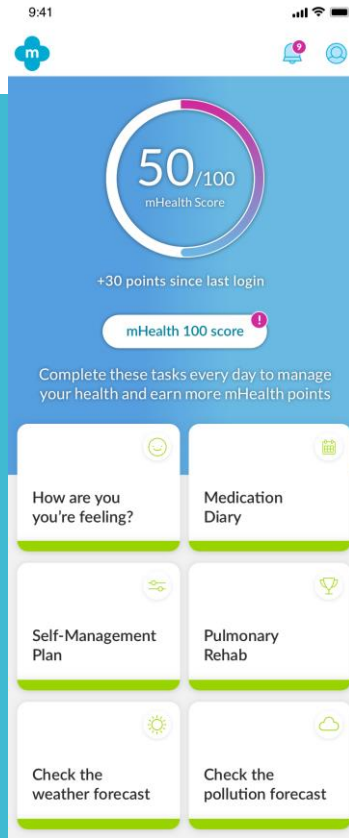
## Results:

Completion rates:  
40% → 72%

6MSWT:  
↑ 105m

CAT score:  
↓ 4.2

Capacity:  
↑ 113%



9:41

How to Increase your mHealth Score

The maximum score you can achieve is 100. Each task has a time period in which it must be completed. If you miss a deadline you'll lose points earned in a previous period from your total score.

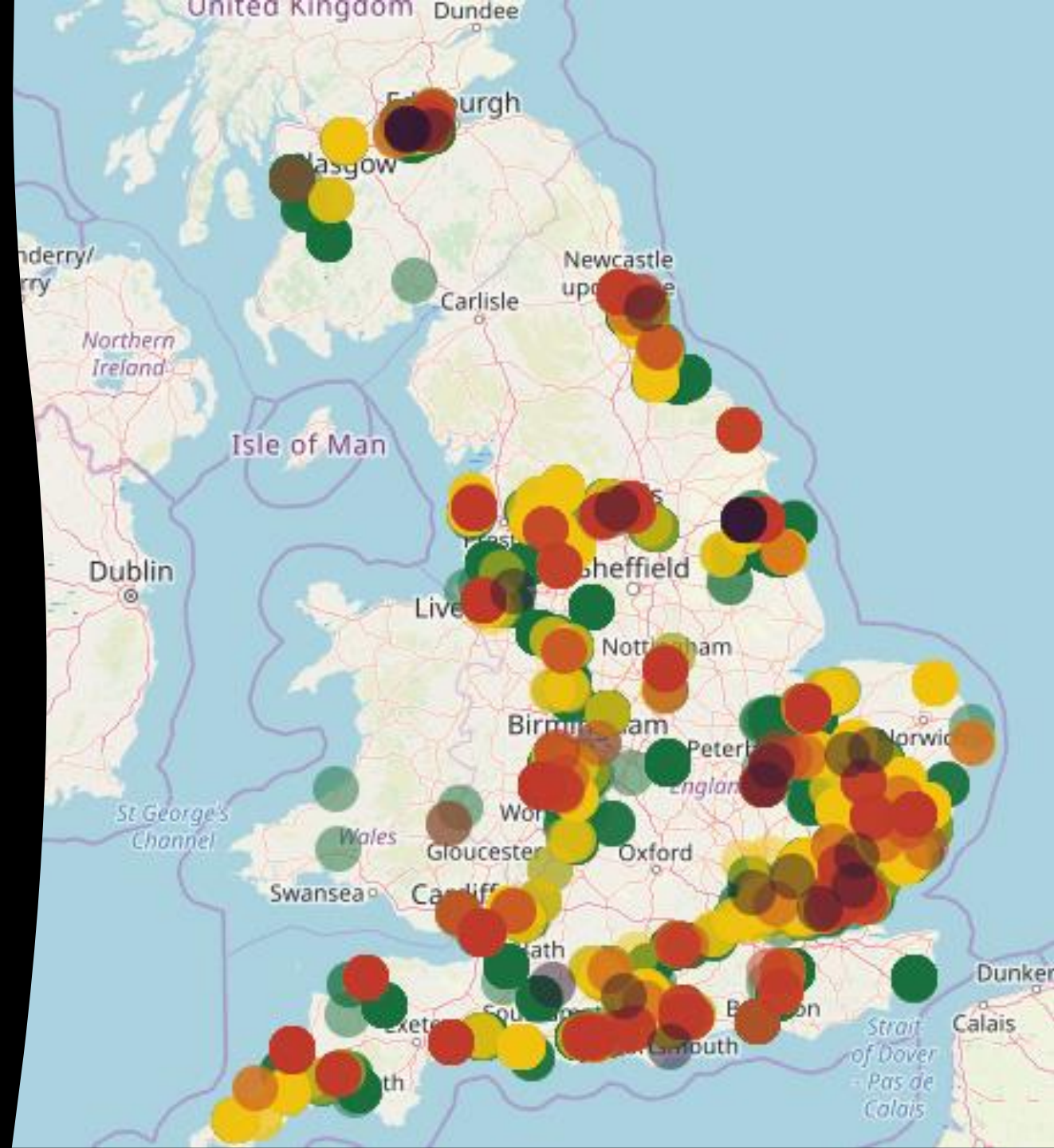
**Earn points by completing the following tasks**

- Enter your symptoms**  
1 point for each symptom score entered during the last 30 days (maximum score of 10)
- Complete your CAT**  
10 points for completing a CAT score in the last 4 weeks
- Watch inhaler videos**  
10 points for watching your inhaler video(s) in the last 8 weeks.
- Complete your educational course**  
10 points for completing your course in the last 6 months. You also get points for watching individual videos. Divide 10 points by the total number of educational videos in your course and you'll be awarded this number of points for every video you watch. For example if there are 13 videos and you watch 2 then the score will equal  $2/13 \times 10 = 1.5$  points.
- Flu vaccine**  
10 points for having your jab in the last 12 months.
- Watched smoking cessation video**  
If you are a smoker and haven't watched the smoking cessation video in the last 3 months you'll lose 20 points.

# Examples of UI in development and gamification

# Exacerbations: Early Detection and Prediction

1. MyCOPD Improves exacerbation recognition
2. Can introduce patient stratification- eg eosinophils into personalised action plans
3. We can model individualised risk
  - Pattern of symptoms
  - Seasonality
  - Temperature and Pollution
  - Connected Inhaler use
4. Population level data- the symptomnet
  - Create an exacerbation prediction model
  - Add value for patients, services and payers
  - USP to evidenced based mandated use





Let's change  
healthcare  
forever

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