

Stages of the WEBSITE

SPACEforCOPD® ([Figure 1](#)) is an interactive Web-based PR programme that offers a comprehensive package of exercise and education. It was developed following the success of Activate Your Heart which was devised by cardiac rehabilitation specialists at our institution, UHL NHS trust. The programme is password protected; each participant was given their own unique password to access the SPACEforCOPD® programme. All participants were able to record and monitor their exercises and strength training as well as interacting with members of the research team ([Figure 2](#)).

The SPACEforCOPD® programme was structured to guide the user through four stages that each have specific tasks the user needs to achieve before progressing onto the next stage ([Figure 3](#)). Tasks included creating and updating their own short-term goals, completing knowledge tests on COPD and exercising safely, and reading specific topics such as inhaler techniques. The educational reading material includes videos and covers topics such as disease education, managing breathlessness, recognising the signs and symptoms of an exacerbation, energy conservation and diet and healthy eating ([Figure 4](#)).

In Stage 1, participants were asked to do a multiple choice questionnaire to establish their knowledge regarding the principles of exercising safely. A score of 80% was set as a threshold to ensure understanding of these principles. In Stages 2-4, participants were required to record all their exercises, both aerobic and strength, in an exercise diary. During Stage 2, participants were advised to record their aerobic exercise, 5 days out of 7. The intensity of the exercise was based on their performance on the baseline ISWT and ESWT exercise tests and prescribed at 85% of baseline performance. In Stage 3, as well as completing 5 out of 7 days of aerobic exercise, patients were asked to also start their resistance training, completing 3 strength sessions in a week. Finally, in Stage 4, participants were required to maintain both the aerobic and strength components of the exercise programme for a further 2 weeks. There was also interactivity around stress management, knowledge and smoking cessation, if appropriate. For smokers, a cost calculator was developed that would calculate how much the user had spent or saved since starting the programme. This was delivered along with advice and support to stop smoking.

Other features embedded within the SPACEforCOPD® programme included a forum where patients were also able to share views and experiences with other programme users, a blog, and a frequently asked questions section. The forum was monitored and moderated, as necessary, by the research team. In addition patients were able to communicate privately with the research team via the Ask the Expert messaging facility.

The research team members were provided with individual passwords to access the administration section of the programme; this allowed them to view and monitor individual patients' progress and view patient login data. Patients' were contacted once a week via email or phone to discuss how they were progressing, any issues or barriers to them not continuing the programme.

All data captured on the programme were encrypted to safeguard patient confidentiality.

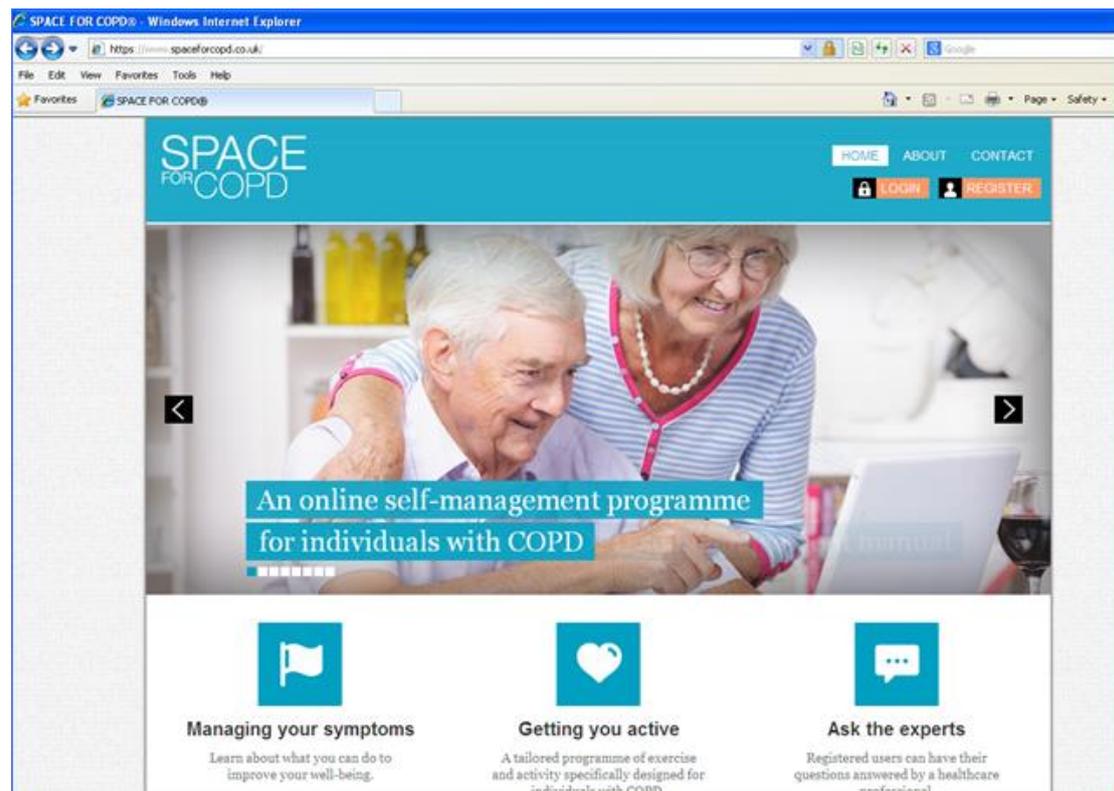


Figure 1. SPACE for COPD website homepage

MY PROGRESS

EXERCISE DIARY >> **STRENGTH DIARY** >>

Your Latest Exercise Entries **Latest Weekly Exercise**

8:10 Walking Wed 28th Aug 2013
 8:00 Walking Tue 27th Aug 2013
 7:50 Walking Mon 26th Aug 2013
 7:40 Walking Sun 25th Aug 2013
 7:30 Walking Sat 24th Aug 2013

Click the button to the right to submit your latest exercise to your diary. **UPDATE**

STRENGTH DIARY

Your Latest Entry **Latest Weekly Exercise**

Arms (Kg) Legs (Kg)

Click the button to the right to submit to your strength diary. **UPDATE**

MY GOALS >> **SYMPTOM DIARY** >>

You have no goals yet. Please read about [goal setting](#) and then [create some](#).

It has now b change from
 Thu 23rd Jan Worsened Symptom
 Wed 16th Jan Worsened Symptom

UPDATE YOUR S'...
 If you feel unwell l your symptom diar

CREATE A NEW GOAL
 Click the button to the right to create a new goal for you to complete in the future. **CREATE**

STRESS >> **SMOKING** >> **KNOWL**

4/10 on 21/12/2012
 Your stress level is down -6 since your last update.
 (0 = No stress / 10 = Very stressed)

UPDATE YOUR STRESS LEVEL
 Drag the slider to your current level
 SUBMIT

£1,176.70 SPENT
 on smoking since 01/05/2013

UPDATE YOUR HABIT
 Click the button below if you've started smoking again. **UPDATE**

You have loc your combin

Last page view **How to get strong**
 (Exercise > How to ge

LEARNING MATE
 Influence how wel with our extensive

Your Profile
 > Your personal area where you can follow and update your progress through the SPACE FOR COPD® programme.

EXERCISE DIARY

ADD NEW ENTRY

1. DETAILS OF YOUR EXERCISE

Exercise Type: Walking, Cycling, Dancing, Gym, Rowing, Swimming, Other

Date: dd/mm/yyyy

Your Difficulty Rating: 0 = very easy, 10 = almost impossible.

Duration of continuous exercise: mins, secs

Make sure all the details above are correct and click the 'Submit' button to save the entry. **SUBMIT**

SECTIONS:
 > Programme Summary
 > Personal Details
 > Tests & Questionnaires
 > Your Goals
 > Exercise Diary
 > Strength Diary
 > Symptom Diary
 > Stress Levels

Figure 2. Recording details of exercise and strength training

SPACE FOR COPD® My Dashboard Learning Material Forum Blog FAQs Ask the Expert Search GO

Welcome Emma
 You are currently on **Week 163** of your programme

Emma Chaplin (Logout)
 Current Stage: 1 2 3 4
 (since 29/01/2014)

STAGE TWO

1 Watch: Intro to Stage 2

2 Task: Set Exercise Target

4 View: My Learning List

6 Task: Set a Goal

3 Task: Complete 1 week in your Exercise Diary

5 View: Inhaler Technique

MY PROGRESS

EXERCISE DIARY >> **STRENGTH DIARY** >>

Your Latest Exercise Entries Latest Weekly Exercise Your Strength Diary will be available

Figure 3. Part of the dashboard showing what tasks need to be completed in Stage 2

SPACE FOR COPD® My Dashboard Learning Material Forum Blog FAQs Ask the Expert Q Search GO

Emma Chaplin 1 2 3 4 (Logout)

Learning Material

> All information regarding the lungs, medication, breathing control and emotional support can be found here.

Index Exercise Lifestyle Breathing Stress & Emotions Sources of Support Patient Stories Glossary

Last page read: [Healthy eating](#) (Lifestyle > Healthy eating)

Exercise



MORE TOPICS

- [Setting your goals](#)
- [Exercise: How to get fitter](#)
- [How to stay fit](#)
- [Setting your walking speed](#)
- [How to get stronger](#)
- [Choosing fit and your hobbies](#)

Lifestyle



MORE TOPICS

- [Saving your energy](#)
- [Healthy eating](#)
- [Diet and feeling unwell](#)
- [Sex and your lungs](#)
- [Smoking: advice on giving up](#)
- [Travelling and your lung disease](#)

MY LEARNING LIST

By the end of Stage 4 you must have read all of the topics in 'My Learning List' to complete the task in your programme (a tick will appear when a topic has been read).

[Click here to learn about 'My Learning List'](#)

Essential List

- 1 Your Breathing
Managing days when you feel unwell
- Your Breathing
Controlling your breathing

Personal List

- Exercise
Exercise: How to get fitter
- Exercise > Exercise: How to get fitter
Why should I exercise?
- Exercise > Exercise: How to get fitter
What is the difference between activity and exercise?

Figure 4. Reading material section