



Progress and benefits

The project was piloted in 30 PCTs during 2004/05. During Winter 2005/06 the service was implemented across 35 PCTs with 35,000 patient packs sent to PCTs for onward distribution to patients with COPD and 2,000 clinician packs sent to participating health professionals.

A Department of Health funded evaluation of COPD health forecasting was carried out by the London School of Hygiene and Tropical Medicine over the winter of 2004/05. The evaluation report was published in June 2006 and concluded that:

“the predictability of week to week variation in risk of COPD admission offers the basis for improving the management of COPD patients through forecast-responsive care pathways.”

DH / LSHTM report June 2006

Further assessment of the outcomes of the service was undertaken during 2005/06, with the PCTs taking part reporting substantial reductions in admissions in practices using the service.

In addition, a survey of patients showed that 78% thought the patient pack was useful and 68% thought that the COPD health forecasting service had improved their lives.

Met Office
FitzRoy Road Exeter EX1 3PB United Kingdom
Tel: +44 (0)1392 885680 Fax: +44 (0)1392 885681
Email: enquiries@metoffice.gov.uk
www.metoffice.gov.uk



Produced by the Met Office © Crown copyright 2006 06/0251
Met Office and the Met Office logo are registered trademarks

Health Forecasting for COPD

Clinician's guide

Produced jointly by the NHS and Met Office



Health forecasting and anticipatory care

There is a strong association between COPD hospital admissions and the natural environment. COPD **health forecasting** and **anticipatory care** have been developed by the Met Office and NHS to improve patients' quality of life and reduce the risk of unplanned NHS contact, including emergency hospital admissions.

The **health forecast** is based on a model developed by the Met Office to predict the risk of COPD exacerbations. The main triggers are:

- cold temperatures;
- virus load;
- humidity;
- boundary layer;
- seasonal variation.

The forecasts also take into account real-time data obtained each day from GP out-of-hours surgeries and regular updates from NHS Direct, so that current hospital admissions and NHS workload can be quantified.

Anticipatory care is the action that is triggered by a COPD health forecast, which aims to reduce an adverse event.

Converting risk into action

The COPD health forecast is issued twice weekly for the week ahead and the risk is presented as being either 'normal' or 'elevated' based on standard deviations from the annual mean. A forecast of 'elevated' risk triggers anticipatory care for patients with COPD.

90% of COPD admissions, occurring at peak times during the winter, are of patients who had no previously recorded hospital admissions over the last 12 months. This suggests that to harness the full potential of health forecasting by delivering anticipatory care on the basis of a forecast of risk, these low risk patients should be targeted.

Anticipatory care may take the form of a phone call or visit to patients to emphasise the recommended steps (interventions) they can take to prevent an exacerbation. These interventions are evidence-based and developed under guidance from the COPD Advisory Group.

Calls to patients can be made by clinical or non-clinical staff and may even be out-sourced to out-of-hours call centres or NHS Direct. Alternative methods of contacting patients, such as by text, automated telephone call or email, are also being explored.

Each subscribing PCT receives:

- COPD patient packs which include two thermometers, a poster, a credit card-sized *aide memoire* of the early symptoms of a COPD exacerbation and practical advice to reduce the likelihood of an exacerbation;
- clinician's training folder containing summarised evidence supporting the project, a quick reference guide, NICE guidelines (approved by the COPD Advisory Group) and a list of the relevant Read codes;
- twice-weekly forecast of COPD admission risk;
- access to advice from a readily-available clinician and the COPD Advisory Group;
- learning from similar projects throughout England;
- assistance in the collection of data to monitor the COPD health forecasting project and measure its benefits.

Training is also available for PCT leads and clinicians.