POWERbreathe® Medic

How POWERbreathe Medic will save the NHS money and resources as a gross operating gain per annum.

The table below summarises the use of healthcare resources by patients with asthma and COPD in a PCT serving 250,000 people:

Relative impact of asthma and COPD on average UK health district

	Hospital admissions	Inpatient bed days	General practice consultations
Chronic bronchitis, emphysema and COPD	680	9,600	14,200
Asthma	410	1,800	11,900

From: Calverley P. Lung Report III. British Lung Foundation.p14, 2006.

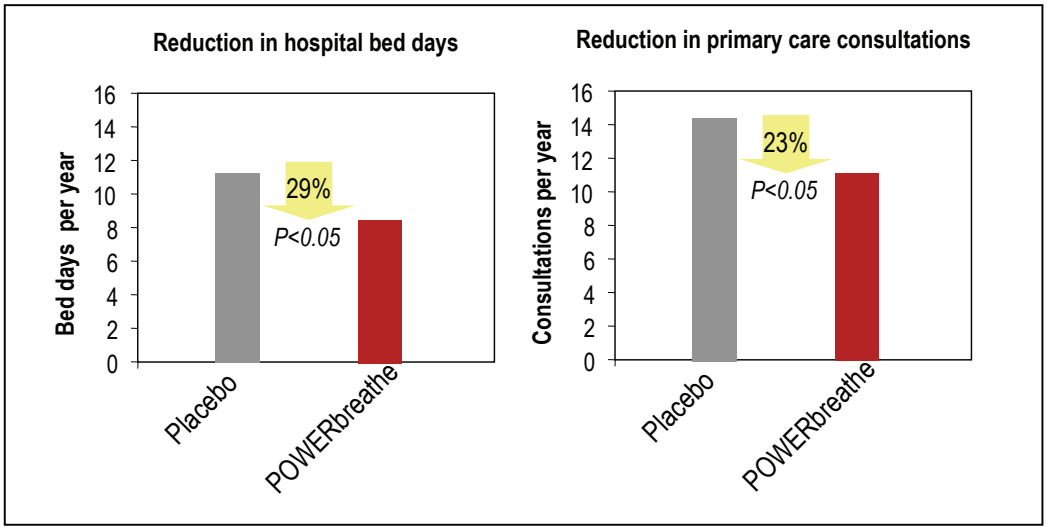
COPD

Accordingly to Professor Peter Calverley (Lung Report III. British Lung Foundation), in the average PCT serving 250,000 people, there will be 14,200 GP consultations per year for chronic obstructive pulmonary disease (COPD), and 9,600 inpatient bed days. Patients with COPD frequently develop exacerbations, leading to major healthcare utilisation repercussions. Exacerbations, especially those that result in hospitalisation, are the main cost driver in COPD. In 2001/02 hospital costs alone amounted to £587 million of NHS spending.

Reducing length of hospital stay is an NHS productivity indicator. The 2006/07 National Tariff for an admitted patient with COPD is £161-167 per day. The average length of hospital stay for a patient with COPD is 8.7 days [1].

The annual cost of inpatient hospital days to a PCT serving 250,000 people is
£1.54 million (9,600 times £161)

In their 2005 study of the benefits of a 12 month programme of POWERbreathe® training, Beckerman and colleagues observed significant reductions in the use of healthcare resources [2].



POWERbreathe® reduced hospital bed days by 29% and GP consultations by 23% compared with placebo.

The potential annual saving to a PCT serving 250,000 people in hospital bed days is
£446,000 (29% of £1.54 million)

Asthma

Accordingly to Professor Peter Calverley (Lung Report III. British Lung Foundation), in the average PCT serving 250,000 people, there will be 11,900 GP consultations per year for asthma, and 1,800 inpatient bed days.

Reducing the number of hospitalizations due to asthma is a Department of Health objective. The 2006/07 National Tariff for an admitted patient with asthma is £183-196 per day.

The annual cost of inpatient hospital days to a PCT serving 250,000 people is
£329,400 (1,800 times £183)

Weiner et al [3] observed an **86% reduction in hospitalisations/emergency room visits** following inspiratory muscles training in moderate/severe asthmatics (from 1.4 to 0.2 per 3 months per patient).

The potential annual saving to a PCT serving 250,000 people in bed days is
£283,000 (86% of £329,400)

The costs of managing asthma with medication are significant. Data from Neville et al. [4] estimates the average annual cost of prescribed asthma medication to be at least £150 (in 1999). According to Asthma UK, the current prevalence of asthma is estimated to be ~10%; thus, a PCT serving 250,000 people contains 25,000 people with asthma.

The annual cost of asthma medication to a PCT serving 250,000 people is
£3,750,000 (25,000 times £150)

In three separate studies, Weiner et al. observed an average **51% reduction in β_2-agonist consumption** (from 3.9 to 1.6 puffs per day)[3, 5, 6] after inspiratory muscle training, and in one study[3], corticosteroid use decreased ~80%.

The potential annual saving to a PCT serving 250,000 people in medication is
£1,875,000 (51% of £3,750,000)

TOTAL POTENTIAL ANNUAL SAVINGS DERIVED FROM POWERbreathe®
Medic prescription per average PCT due to reduced hospital bed days and

medication consumption (<u>not</u> including savings due to reduction in GP consultations) are SUBSTANTAIL –

COPD patients	**£729,000**
Asthma patients	**£2,158,000**
Total	**£2,887,000**

References

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3. Weiner P, Azgad Y, Ganam R, Weiner M. Inspiratory muscle training in patients with bronchial asthma. *Chest*. 1992;102(5):1357-61.
4. Neville RG, Pearson MG, Richards N, Patience J, Sondhi S, Wagstaff B, et al. A cost analysis on the pattern of asthma prescribing in the UK. *Eur Respir J*. 1999 Sep;14(3):605-9.
5. Weiner P, Berar-Yanay N, Davidovich A, Magadle R, Weiner M. Specific inspiratory muscle training in patients with mild asthma with high consumption of inhaled beta(2)-agonists. *Chest*. 2000;117(3):722-7.
6. Weiner P, Magadle R, Massarwa F, Beckerman M, Berar-Yanay N. Influence of gender and inspiratory muscle training on the perception of dyspnea in patients with asthma. *Chest*. 2002;122(1):197-201.