LETTER TO THE EDITORS Homefill: better for your patient, better for your pocket?***Phyllis Murphie^a,
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All rights reserved**Dear Sirs,**

Individuals with chronic obstructive pulmonary disease (COPD) who are dependent on long term oxygen therapy (LTOT) via an oxygen concentrator system have restricted mobility outside the home when using currently available ambulatory oxygen (AO) systems. AO facilitates longer periods out of home, increased activity and exercise, and enhanced quality of life, but should only be prescribed following specialist assessment usually by a respiratory physician or specialist respiratory nurse in secondary care.¹⁻⁵

Given an ageing population with chronic disease, there is increased demand for oxygen concentrators plus increased prescribing of AO. In 2007-2008, the cost of home oxygen services in NHS Scotland – where concentrators are managed by a central service and community pharmacies manage AO cylinder services, as compared with England where individual boards manage contracts with a supplier for all aspects – was £7.4 million.⁶

The “Homefill II” system was evaluated using a postal survey in 20 patients with COPD who were already using LTOT. The Homefill system combines an oxygen concentrator with an added reservoir system on top, allowing home refilling of ambulatory cylinders with integral oxygen-conserving headsets.⁷ It permits oxygen delivery only during the inspiratory phase, thus increasing the oxygen supply time by up to threefold and reducing oxygen wastage. Prior to the evaluation, these individuals were all using a standard oxygen concentrator and at least two AO cylinders per week with a separate rented oxygen conserving device.

Two patients died during the evaluation and one patient requested removal of the Homefill system. Seventeen users returned questionnaires and 16 respondents found the Homefill system to be superior and continued to use this system. Six respondents reported leaving the house more frequently because they had access to an unlimited supply of ambulatory oxygen. Greater freedom and confidence were noted, together with reduced transport and fuel costs relating to collection of cylinders from community pharmacies, and there was less concern that they would run out of oxygen.

The weekly cost of oxygen

Homefill II system.

therapy – based on standard concentrator rental, oxygen conserver rental, AO prescribing, and delivery costs in this group – prior to using Homefill was £1,434 (£4,590 if a conserver was not used⁸), versus £333 with the new Homefill system. Over a 1-year period, assuming the same pattern of AO and conserver use in this patient group, pre- and post-Homefill costs would be £74,549 versus £17,326.

In NHS Dumfries & Galloway, 25 individuals are now using the Homefill II system. It is preferred by users, and it offers greater independence and potential for significant financial savings compared with alternative AO provision – particularly if it were to be made more widely available across the UK. This is at a time when efficiency savings are essential for the future of the UK National Health Service.

Conflict of interest

Phyllis Murphie was a member on the panel of the Scottish Government Health Department domiciliary oxygen review 2010 and NHS Dumfries and Galloway were part of a national trial on the Homefill system in NHS Scotland.

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