

# The cost-effectiveness of domiciliary non-invasive ventilation in patients with end-stage chronic obstructive pulmonary disease: a systematic review and economic evaluation

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## Plain English summary

### **Cost-effectiveness of domiciliary NIV in patients with end-stage COPD**

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## Plain English summary

Chronic obstructive pulmonary disease (COPD) is a lung condition which is thought to affect about 5% of adults. Patients develop a cough and breathlessness which gets worse over time, and many experience 'flare-ups' (exacerbations), which can lead to a hospital stay.

Non-invasive ventilation (NIV) is a treatment delivered by a small machine with a tight-fitting mask that blows air into the lungs. NIV is often used in hospital, but there may be benefits to using NIV overnight or during the day at home.

We collected all available evidence on the use of home NIV by COPD patients. In the case of patients starting NIV after they leave hospital following an exacerbation, we found a limited number of studies that showed either benefit or no benefit from NIV. At present it is not possible to say conclusively whether or not NIV reduces the chance of future hospital admissions or whether or not it extends life in these patients. Additional studies are currently ongoing.

When home NIV is started in patients who are more stable and have not had a recent exacerbation, the results show a trend towards fewer hospital admissions; however, but this finding is also not conclusive. Some patients may experience benefit but it is not possible at the moment to predict who these patients are.

We have created a mechanism to consider whether or not home NIV represents good value for money for the NHS. All this information will help determine how, when and in which patients to use home NIV, and what future research is needed.



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