Title:	**Lung volume reduction surgery (LVRS) - February 2001**
Agency:	Medicare Services Advisory Committee (MSAC) Commonwealth Department of Health and Ageing GPO Box 9848 Canberra ACT 2601 Australia **http://www.msac.gov.au**
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Aim

To assess the safety and effectiveness of the procedure and under what circumstances public funding should be supported for the procedure.

Conclusions and results

Safety	Safety data on morbidity and mortality differ widely, although one trial recently reported 30 day mortality for LVRS at 16% compared to no deaths in the control group. In addition to the standard risks of lung surgery, there is the specific risk of prolonged air leak (45% of cases studied with 4% requiring reoperation).
Effectiveness	Limited data doesnot make it possible to determine whether LVRS is clinically effective in the long-term. Twelve month outcome data demonstrate that LVRS does not improve mortality or lung function, but it does appear to improve symptoms of chronic emphysema and quality of life.
Cost-effectiveness	There is insufficient information to determine cost-effectiveness of LVRS.

Recommendations

1. Funding not be supported for this procedure until overseas clinical trial data is available;
2. Surgeons who wish to continue performing this procedure should seek in principle approval from hospital ethics committees or equivalent; and
3. Patients should be informed of the risk of the procedure.

Method

MSAC conducted a systematic review of the biomedical literature from 1998 to April 2000 using biomedical electronic databases, the Internet and international health technology agency websites. The two primary sources of information were:

1. a systematic review by the University of Birmingham in 1999; and
2. a systemic review of Australian Safety and Efficacy Register of New Interventional Procedures-Surgical (ASERNIP-S) in 1998.

Assessment of clinical effectiveness relied heavily on one controlled randomised trial (Geddes et al) and one controlled trial (Licker et al) that compared patients with LVRS and those receiving standard medical treatment or pulmonary rehabilitation. One UK study (Young et al) that also examined cost-effectiveness was considered as a possible framework for evaluation.

Further research

Four trials are ongoing and should report within the next two years: NETT (USA), CLVR (Canada), OBEST (USA), Lomas et al. (UK) and VOLREM (Sweden).

Prepared by the Centre for Clinical Effectiveness, Australia