

**e-Table 1. Methodological Quality of Included Studies**

Study	Adequate Sequence generation	Allocation Concealment	Blinding	Jadad Score
Soffler 1985	Unclear	Unclear	No-high risk	2
Carter 1986	Unclear	Unclear	No-high risk	2
Bower 1988	Unclear	Unclear	No-high risk	2
Braun 1992	Unclear	Unclear	No-high risk	2
McDonald 1995	Unclear	Unclear	Yes-low risk	4
Roberts 1996	Yes-low risk	Yes-low risk	No-high risk	3
Rooyackers 1997	Yes-low risk	Yes-low risk	Unclear	2
Tiep 1997	No-high risk	No-high risk	No-high risk	1
Cuvelier 2002	Unclear	Unclear	No-high risk	2
Eaton 2002	Unclear	Unclear	Yes-low risk	4
Tiep 2002	No-high risk	No-high risk	No-high risk	1
Emtner 2003	Yes-low risk	Unclear	Yes-low risk	5
Chatila 2004	No-high risk	No-high risk	No-high risk	1
Fuhrman 2004	Unclear	Unclear	No-high risk	2
Nonoyama 2007	Unclear	Unclear	Yes-low risk	4
Janaudis-Ferreira 2009	Yes-low risk	Unclear	Unclear	3
Strickland 2009	Unclear	Unclear	No-high risk	2
Palwai 2010	Unclear	Unclear	Yes-low risk	4
Moore 2011	Yes-low risk	Yes-low risk	Yes-low risk	5
Casaburi 2012	Yes-low risk	Yes-low risk	No-high risk	3
Dyer 2012	Yes-low risk	Yes-low risk	No-high risk	3
Marti 2013	Yes-low risk	Yes-low risk	Unclear	2
Ringbaek 2013	Yes-low risk	Yes-low risk	Unclear	3

## Supplementary Method 1

### Search Strategy –Clinical and Device Efficacy

- chronic obstructive pulmonary disease/
- copd.mp.
- smoking-related lung disease\$.mp.
- lung emphysema/
- exp bronchitis/
- (chronic respiratory adj (disease or disorder)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
- (chronic obstructive lung adj (disease or disorder)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
- (chronic obstructive pulmonary adj (disease or disorder)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
- (chronic obstructive airway adj (disease or disorder)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
- (chronic obstructive respiratory adj (disease or disorder)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
- chronic ventilatory failure.mp.
- 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11
- oxygen therapy/
- exp ambulatory care/
- 13 and 14
- ((ambulat\$ or portable or supplemental or O2) adj2 (oxygen or therap\$)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]
- 15 or 16
- 12 and 17

## Supplementary Method 2

### Search Strategy –Cost effectiveness

- chronic obstructive lung disease/ (67861)
- copd.mp. (37001)
- smoking-related lung disease\$.mp. (97)
- lung emphysema/ (14765)
- exp bronchitis/ (45660)
- (chronic respiratory adj (disease or disorder)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (1569)
- (chronic obstructive pulmonary adj (disease or disorder)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (34872)
- (chronic obstructive lung adj (disease or disorder)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (68620)
- (chronic obstructive airway adj (disease or disorder)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (337)
- (chronic obstructive respiratory adj (disease or disorder)).mp. [mp=title, abstract, subject headings, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword] (106)
- chronic ventilatory failure.mp. (92)
- or/1-11 (130339)
- oxygen therapy/ (19975)
- exp ambulatory care/ (38150)
- 13 and 14 (123)
- ((ambulat\$ or portable or supplemental or O2) adj2 (oxygen or therap\$)).mp. (9268)
- 15 or 16 (9324)
- 12 and 17 (932)
- cost benefit analysis/ (65629)
- cost effectiveness analysis/ (90660)