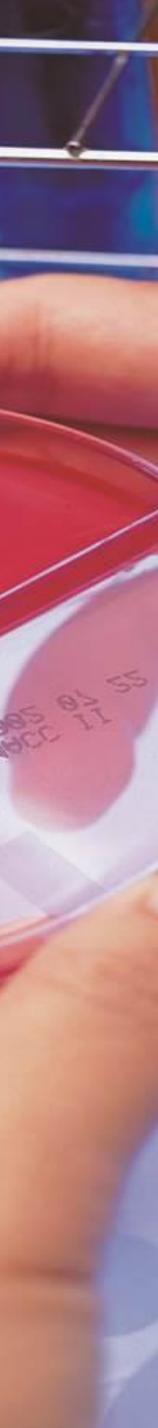


魅力魔法師~

陳玥君、康家維、顏珮蓁



臨床情境

在一群中年（45-60歲）有輕度至中度慢性阻塞性肺病（COPD），肺功能FEV1為預測值（50%-80%）的病人中，醫療團隊正在討論是否應先以肺康復治療（包括運動訓練、呼吸肌訓練、教育）作為初期主要治療，與直接以長效支氣管擴張劑起始治療相比。

請參賽者探索：對於這樣病人族群，肺康復治療相比直接使用長效支氣管擴張劑，是否能在降低急性加重次數、改善生活品質、延緩肺功能惡化方面取得較佳成效？並評估於台灣教學醫院內部實施的可行性

背景介紹

類型	判別標準
正常	FVC, FEV1 都 > 大於80%預測值 而且FEV1/FVC > 70% 而且MMEF, FEF50%, FEF75% 都要>65%預測值
大致正常 或可能是 小氣道疾病	FEV1/FVC > 70% 而且MMEF, FEF50%, FEF75% <65%預測值 或FVC, FEV1 在正常值下限
阻塞性	FEV1/FVC < 70% 或是FEV1/FVC > 70% 預測值, 但是支氣管擴張試驗陽性
限制性	FEV1/FVC > 70% 而且 FVC 或 TLC < 80% 預測值
混合性	同時存在阻塞性或限制性的改變 即FEV1/FVC < 70% 而且FVC(或TLC), FEV1都 <80%預測值

類 型	FEV1 % 預測值符合下列條件之一
輕度 Mild	≥ 70%
中度 Moderate	60~69%
中重度 Moderately severe	50~59%
重度 Severe	35~49%
非常嚴重 Very Severe	< 35%

FVC : 強制呼氣量 Forced expiratory volume

FEV1 : 一秒內強制呼氣量 Forced expiratory volume in one second

Ming-Lin HO

肺功能檢查判讀標準

背景介紹

UpToDate® pulmonary rehabilitation

Register Sign in

< Back **Pulmonary rehabilitation**

Topic Graphics (7)

Outline

- SUMMARY AND RECOMMENDATIONS
- INTRODUCTION**
- DEFINITION

AUTHOR: Bartolome R Celli, MD
SECTION EDITOR: James K Stoller, MD, MS
DEPUTY EDITOR: Paul Dieffenbach, MD

[Contributor Disclosures](#)

All topics are updated as new evidence becomes available and our [peer review process](#) is complete.

Literature review current through: **Oct 2025**.
This topic last updated: **Nov 05, 2025**.

背景介紹

Patient assessment

- Anxiety and depression
- Inhaler technique
- Comorbidities



Program components

- Upper limb training
- ACT for bronchiectasis
- ACT for cystic fibrosis
- Structured education
- Individualized education
- Self-management training
- Goal setting
- Physical activity counselling
- Smoking cessation support
- Individualized action plan for frequent exacerbators
- Home exercise program (aerobic/resistance) to maximize gains in exercise performance during the program
- Maintenance exercise training



Method of delivery

- Center-based assessment by a health care professional at discharge
- Delivery of alternative models to increase program access
- Shared decision making between patient and health care professional to choose the appropriate model
- Programs delivered in a community (non-hospital) setting
- Regular contact between health professionals and the patient
- Access to a multidisciplinary team
- Team includes a health professional with expertise in exercise prescription and progression for patients with comorbidities



Quality assurance

- Evidence of efficacy should be available for any model deployed
- Evidence of effectiveness should be available for any model deployed
- Health care professionals should be trained to deliver digital/technology based solutions if used within the program
- If more than one model of pulmonary rehabilitation is offered, staff should be trained in shared decision making
- Programs should document their Standard Operating Procedure for each model that is offered



背景介紹

The screenshot displays the UpToDate website interface. At the top, the UpToDate logo is on the left, followed by a search bar containing 'Long-Acting Beta-2 Agonists'. To the right of the search bar are icons for a grid, a 'Register' button, a 'Sign in' button, and a hamburger menu icon. Below the search bar, the page title 'Stable COPD: Initial pharmacologic management' is centered. On the left side, there is a navigation menu with 'Topic Graphics (8)' at the top, followed by 'Outline' and a list of sections: 'SUMMARY AND RECOMMENDATIONS', 'INTRODUCTION' (highlighted in green), 'ASSESSING DISEASE PATTERN AND SEVERITY', and 'Symptoms and risk of exacerbations'. The main content area on the right contains the following text: 'AUTHORS: MeiLan King Han, MD, MS, Mark T Dransfield, MD', 'SECTION EDITORS: James K Stoller, MD, MS, Umur Hatipoğlu, MD, MBA', and 'DEPUTY EDITORS: Zehra Hussain, MD, FACP, Paul Dieffenbach, MD'. Below this is a link for 'Contributor Disclosures'. To the right of the author information, there is a text box stating: 'All topics are updated as new evidence becomes available and our peer review process is complete.' and 'Literature review current through: Oct 2025. This topic last updated: Jun 23, 2025.'

背景介紹

Initial management of newly diagnosed COPD

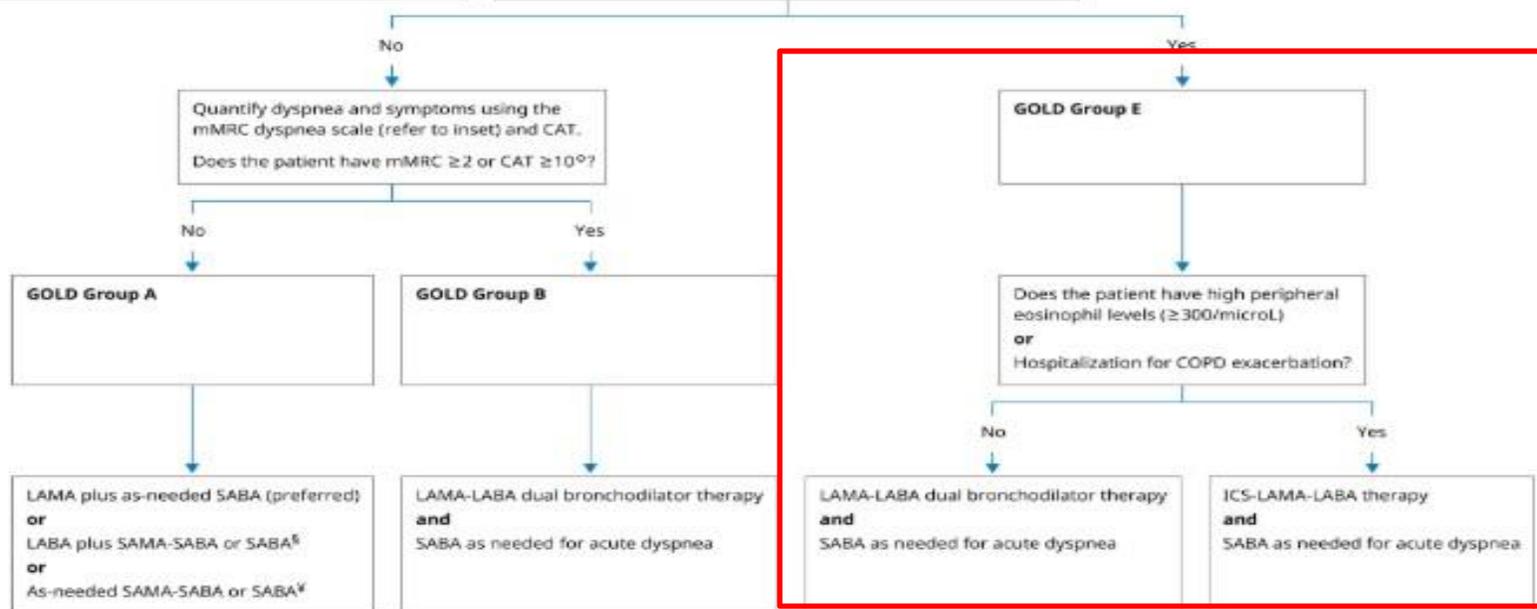


mMRC dyspnea scale	
Grade	Description of breathlessness
0	I only get breathless with strenuous exercise
1	I get short of breath when hurrying on level ground or walking up a slight hill
2	On level ground, I walk slower than people of the same age because of breathlessness or have to stop for breath when walking my own pace
3	I stop for breath after walking about 100 yards or after a few minutes on level ground
4	I am too breathless to leave the house or I am breathless when dressing

New diagnosis of COPD*

- Recommended general and preventative care for all patients:
- Avoidance of smoking and other risk factors
 - Influenza, pneumococcal, COVID-19, and RSV[®] vaccinations
 - Regular physical activity
 - Short-acting bronchodilator as needed for acute dyspnea (refer to below for selection)
 - Regular review of correct inhaler technique
 - Assessment of hypoxemia and hypercarbia for long-term oxygen and/or noninvasive ventilation

Has the patient had 2 or more moderate exacerbations^A or at least 1 hospitalization for COPD exacerbation in the past year?



根據臨床情境產生的PICO-1

	PICO / 關鍵字	MeSH 同義詞	中文關鍵字
P	Chronic Obstruction Pulmonary Disease	Pulmonary Disease, Chronic Obstructive Bronchitis, Chronic Pulmonary Emphysema	慢性阻塞性肺病 慢性支氣管炎 肺氣腫 肺阻塞
I	Pulmonary rehabilitation		肺復健
C	long-acting bronchodilator		長效支氣管擴張劑
O	Lung function Adverse Drug Reaction		肺功能 藥物不良反應

治療/預防型問題

診斷型問題

預後型問題

傷害/病因型問題

根據臨床情境產生的PICO-2

	PICO / 關鍵字	MeSH 同義詞	中文關鍵字
P	Chronic Obstruction Pulmonary Disease	Pulmonary Disease, Chronic Obstructive Bronchitis, Chronic Pulmonary Emphysema	慢性阻塞性肺病 慢性支氣管炎 肺氣腫 肺阻塞
I	Pulmonary rehabilitation		肺復健
C	Usual care		常規治療
O	Lung function Adverse Drug Reaction		肺功能 藥物不良反應

治療/預防型問題

診斷型問題

預後型問題

傷害/病因型問題

根據臨床情境產生的PICO-1

	PICO / 關鍵字	MeSH 同義詞	中文關鍵字
P	Chronic Obstruction Pulmonary Disease	Pulmonary Disease, Chronic Obstructive Bronchitis, Chronic Pulmonary Emphysema	慢性阻塞性肺病 慢性支氣管炎 肺氣腫 肺阻塞
I	Pulmonary rehabilitation		肺復健
C	long-acting bronchodilator		
O	Lung function Adverse Drug Reaction		

依情境選擇PICO-

- ✓ 影響後續醫療決策
- ✓ 影響治療意願
- ✓ 是患者目前最在意的問題

■ 治療/預防型問題

□ 診斷型問題

□ 預後型問題

□ 傷害/病因型問題

檢索策略-提升檢索效率

首先以『P』、『I』做搜尋，再依據結果加入關鍵字及同義詞

P	AND	I	AND	C	AND	O
Chronic Obstruction Pulmonary Disease		Pulmonary rehabilitation		long-acting bronchodilator		

限定搜尋範圍	Full text、Within 5 years、Human species
限定研究類型	Systematic review、Meta-Analysis、Randomized Controlled Trial
限定語言地區	English、Chinese (台灣本土文獻)

搜尋Ovid Embase

'chronic obstruction pulmonary disease' AND 'pulmonary rehabilitation' AND 'long-acting bronchodilator'

Search > Mapping ▾ Date ▾ Sources ▾ Fields ▾ Quick limits ▾ **EBM** ▴ Pub. types ▾ Languages ▾ Gender ▾ Age ▾ Animal ▾ Search tips ▾

Evidence Based Medicine Clear page selections Collapse

Cochrane Review Controlled Randomized
 Systematic Review Review
 Meta Analysis

Print view | Export | Email **Combine** > using And Or Collapse

g bronchodilator'	0
g bronchodilator'	0
tion' OR 'lung rehabilitation') AND 'long-acting bronchodilator'	4
dex miner	
elling	
ditional synonyms	
n on spelling variants	
applied to your search	
ation years searched	

輸入關鍵字、適當使用布林邏輯

『AND』、『OR』

Chronic Obstruction Pulmonary Disease

AND Pulmonary rehabilitation AND long-acting bronchodilator

限定適當限定適當文章類型 『Systematic Reviews、Meta-Analysis』

限定適當搜尋範圍

限定 『Full text』 有全文可供評讀

限定 『5年』 內之文章

— Title Abstract Keyword Chronic Obstruction Pulmonary Disease

— AND Title Abstract Keyword Pulmonary rehabilitation

— AND Title Abstract Keyword long-acting bronchodilator

(Word variations have been searched)

+ Clear all

Search limits Send to search manager Run search

輸入關鍵字、適當使用布林邏輯

『AND』、『OR』

Chronic Obstruction Pulmonary Disease

AND Pulmonary rehabilitation AND long-acting bronchodilator

限定適當限定適當文章類型 『Systematic Reviews』、『Meta-Analysis』

限定適當搜尋範圍

限定 『Full text』有全文可供評讀

限定 『5年』內之文章

Special Collections
0

Clinical Answers
0

Chronic Obstruction Pulmonary Disease in Title Abstract Keyword AND
long-acting bronchodilator in Title Abstract

Search	Actions	Details	Query	Results	Time
#7	...	>	Search: ((long-acting bronchodilator) AND (Pulmonary rehabilitation)) AND (Chronic Obstruction Pulmonary Disease) AND ((y_5[Filter]) AND (meta-analysis[Filter])) Filters: in the last 5 years, Meta-Analysis	1	22:37:08
#6	...	>	Search: ((long-acting bronchodilator) AND (Pulmonary rehabilitation)) AND (Chronic Obstruction Pulmonary Disease) Filters: in the last 5 years, Meta-Analysis	1	22:36:20
#5	...	>	Search: ((long-acting bronchodilator) AND (Pulmonary rehabilitation)) AND (Chronic Obstruction Pulmonary Disease) Filters: in the last 5 years	1	22:36:14
#4	...	>	Search: ((long-acting bronchodilator) AND (Pulmonary rehabilitation)) AND (Chronic Obstruction Pulmonary Disease) Filters: in the last 5 years, Meta-Analysis	8	22:36:10
#3	...	>	Search: long-acting bronchodilator	3	22:35:59
#2	...	>	Search: Pulmonary rehabilitation	8	22:35:51
#1	...	>	Search: Chronic Obstruction Pulmonary Disease	104,523	22:35:39

輸入關鍵字、適當使用布林邏輯

『AND』、『OR』

OR AND OR AND OR

限定適當限定適當文章類型『**Systematic Reviews**、**Meta-Analysis**』

限定適當搜尋範圍

限定『**Full text**』有全文可供評讀

限定『**5年**』內之文章



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輸入『P』、『I』、『O』及適當同義詞，並搭配各資料庫限定或 filter 之功能

0 results

0 results

168 results

選擇『5年內』之文章

0 results

0 results

21 results

選擇『Systematic Review、Meta-Analysis』之文章

0 results

0 results

1 results

選擇『符合臨床問題』之文章

0 results

0 results

1 results

Meta-Analysis

> Postgrad Med J. 2024 Sep 22;100(1188):721-729. doi: 10.1093/postmj/qgae054.

Umeclidinium plus vilanterol versus fluticasone propionate plus salmeterol for chronic obstructive pulmonary disease: a meta-analysis of randomized, controlled trials

Chunjuan Zhai¹, Fen Wang², Ruie Xu³, Xia Sun⁴, Wenbin

Affiliations + expand

PMID: 38652265 DOI: 10.1093/postmj/qgae054

- 符合PICO
- 發表於2024年
- 為Meta of RCT

嚴格之評讀工具



Validity (效度)
研究設計和研究方法的探討

Importance (重要性)
研究結果的分析

Practice (應用性)
研究結果的應用

CASP Systematic Review Checklist
CASP 系統性文獻回顧檢核表

Question 1

Did the review address a clearly focused question ?
此回顧是否問了一個清楚、明確的臨床問題？

Umeclidinium plus vilanterol versus fluticasone propionate plus salmeterol for chronic obstructive pulmonary disease: a meta-analysis of randomized, controlled trials

Chunjuan Zhai ¹, Fen Wang ², Ruie Xu ³, Xia Sun ⁴, Wenbin Ma ⁵, Li Wang ¹

Affiliations + expand

PMID: 38652265 DOI: 10.1093/postmj/qgae054

Abstract

Purpose: Umeclidinium plus vilanterol (UMEC/VI) is an inhaled long-acting muscarinic antagonist/long-acting beta2-agonist (LAMA/LABA), recently approved as once-daily therapy for chronic obstructive pulmonary disease (COPD). This meta-analysis aimed to evaluate the efficacy and safety of UMEC/VI compared with fluticasone propionate plus salmeterol.

Methods: A systematic search was conducted by a trained medical research librarian in MEDLINE, EMBASE, Cochrane Central Register of Controlled Trials (CENTRAL), and Chinese Database (CBM) for randomized controlled trials comparing UMEC/VI with FP/SA. Two reviewers independently assessed the risk of bias and extracted data. The primary outcome was 0-24 h weighted mean (wm) forced expiratory volume in the first second (FEV1), trough FEV1. The secondary outcomes were other lung functions, symptoms, quality of life, and safety.

評讀結果

P	COPD
I	
C	LAMA/LABA
O	Lung function

Yes

No

Unclear

Question 2

Did the authors look for the right type of papers?

作者是否收納適當的研究類型？

Selection criteria

All RCTs investigating the efficacy and safety of UMEC/VI compared with FP/SAL in adult patients diagnosed with COPD (age ≥ 18 years) were included.

Outcomes of interest

The primary endpoints were 0–24 h weighted mean (wm) forced expiratory volume in the first second (FEV1) on Day 84 and trough FEV1 on Day 85.

The secondary endpoints included:

Other lung function parameters: peak FEV1 0–6 h (on Days 1 and 84), time to onset on Day 1 (defined as the increase in 0–6 h post-dose FEV1 ≥ 100 ml above baseline), proportion of patients achieving an increase in FEV1 ≥ 100 ml above baseline at 5 min post-dose on Day 1, proportion of patients achieving an increase in 0–6 h post-dose FEV1 $\geq 12\%$ and ≥ 200 ml above baseline on Day 1, proportion of patients achieving an increase in trough FEV1 ≥ 100 ml above baseline on Day 85, 0–24 h wmFVC, trough FVC, 0–6 h wmFVC (on Days 1 and 84).

Symptomatic endpoints and health outcomes: rescue medication use and rescue-free days, the Transition Dyspnea Index (TDI), the St George's Respiratory Questionnaire (SGRQ) for patients with COPD, the EuroQol-5D (EQ-5D) questionnaire, and the COPD Assessment Test (CAT).

Safety evaluations: adverse events (AEs) and COPD exacerbations.

評讀結果

- 收錄符合問題的 cohort studies 文章
- 清楚條列觀察的項目，並標示優先順序

Yes

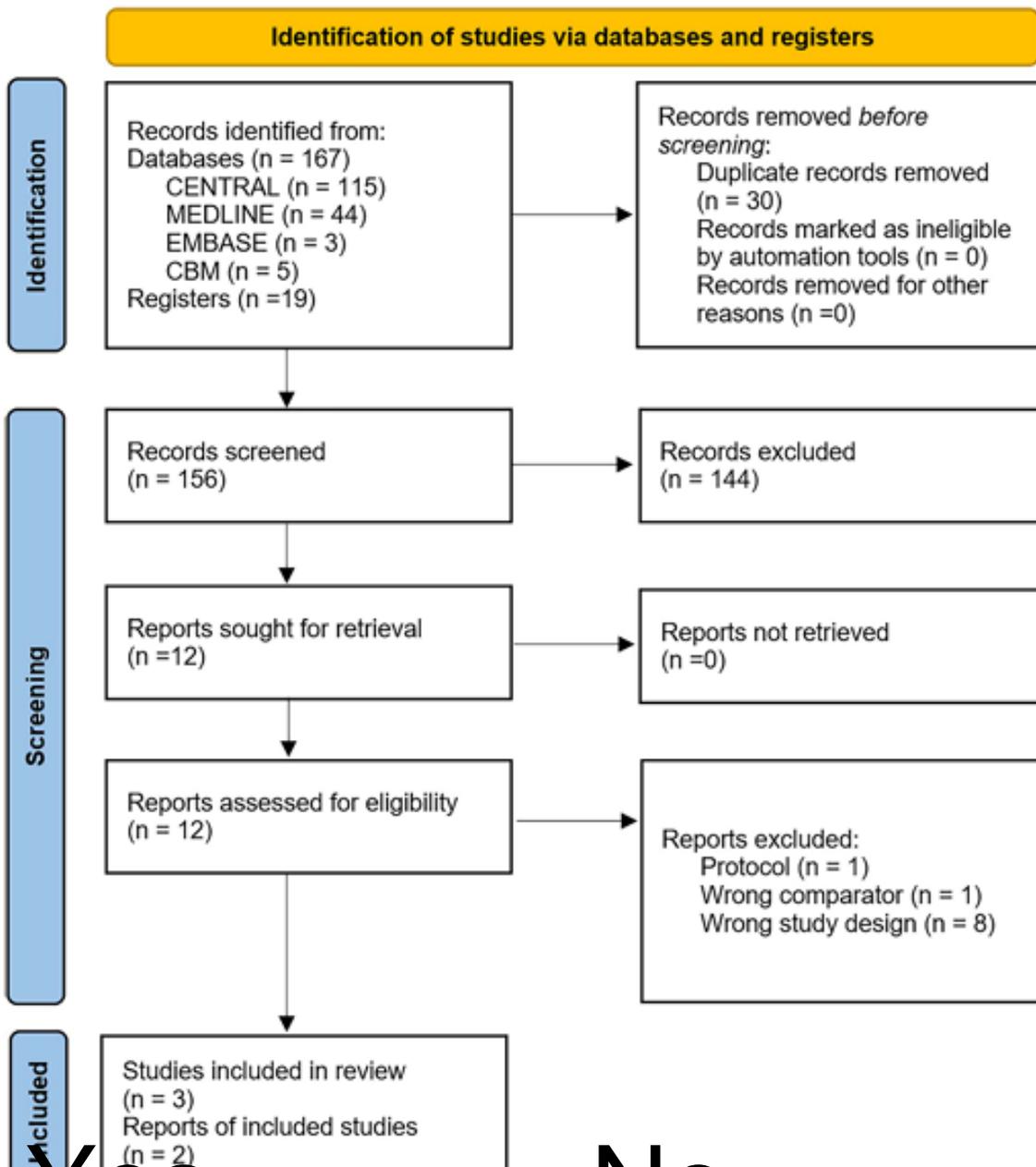
No

Unclear

Question 3

Do you think the important, relevant studies were included?

重要、相關的研究是否皆被納入？



評讀結果

優點:

1. 作者盡可能搜尋各種一級和二級資料庫
2. 列出 flow chart 清楚說明納入、排除理由

缺點:無漏斗圖

Yes
 No
 Unclear

Question 4

Did the review's authors do enough to assess the quality of the included studies?

作者是否有評估收納研究的品質？

Supplementary Table S3 Risk of bias summary

Study	Random sequence generation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective reporting	Other bias
Singh 2015	+	+	+	+	+	+	⚠
Donohue 2015a	+	+	+	+	+	+	⚠
Donohue 2015b	+	+	+	+	+	+	⚠

- Low risk of bias
- Some concerns - probably low risk of bias
- Some concerns - probably high risk of bias
- High risk of bias

■ Yes

□ No

Study selection

Using systematic review software, Covidence, after comprehensive training and calibration exercises, two reviewers (F.W. and R.X.) independently screened the titles and abstracts of the included studies. If necessary, the full texts of trials identified as potentially eligible were thoroughly reviewed to ascertain which studies met the

評讀結果

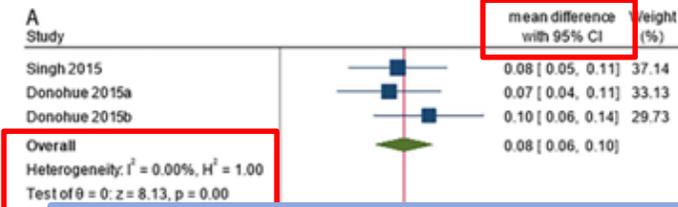
優點:

1. 由兩位作者獨立評讀，不確定者由第三位作者判定
2. 使用 **Covidence systematic review software** 評估試驗偏倚風險

Question 5

If the results of the review have been combined, was it reasonable to do so?

作者是否有把各個研究的結果合併起來？這樣的合併是合理的嗎？



三項RCT，1927位患者，與FP/SAL組相比，
LIMECA/IL組第84天0-24小時wmFEV1較其總右顯

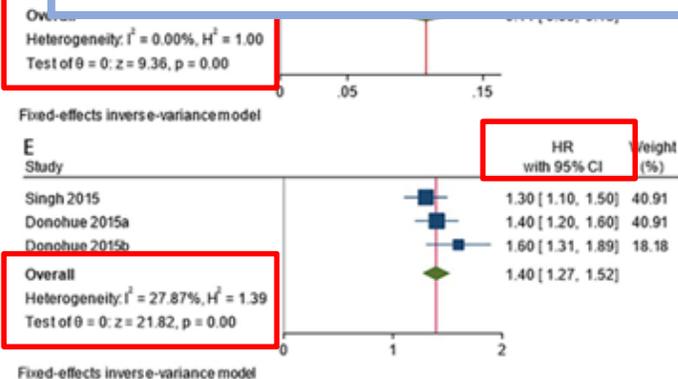
5. If the results of the review have been combined, was it reasonable to do so?

作者是否有把各個研究的結果合併起來？這樣的合併是合理的嗎？

Yes

No

Unclear



Supplementary Table S4.2 Sensitivity analysis by exclusion of any single study

Outcome	Study omitted	Mean difference	95%CI
0-24h wmFEV1 on day 84	1	0.09	0.06,0.11
	2	0.09	0.06,0.11
	3	0.08	0.05,0.10
	Combined	0.08	0.06,0.10
Trough FEV1 on day 85	1	0.09	0.06,0.12
	2	0.09	0.07,0.12
	3	0.09	0.06,0.11
	Combined	0.09	0.07,0.11

任何一項研究或切換至隨機效應模型，均未顯著改變總體。

Figure 2 Forest plot for lung functions: (A) 0-24h wmFEV1 on Day 84, (B) trough FEV1 on Day 85, (C) peak FEV1 0-6h on Day 1, (D) peak FEV1 0-6h on Day 84, (E) time to onset on Day 1. Abbreviations: wm, weighted mean; FEV1, forced expiratory volume in the first second

Question 6

What are the overall results of the review?

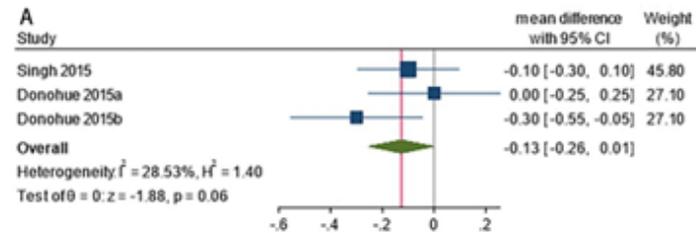
這篇回顧呈現了什麼結果？

主要結果-

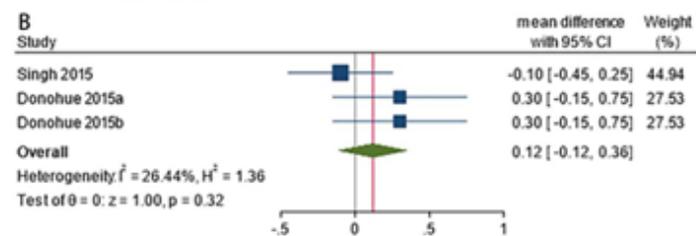
症狀控制和健康狀況

95% CI -0.26 至 0.01 , P=0.06 , I² =28.53%

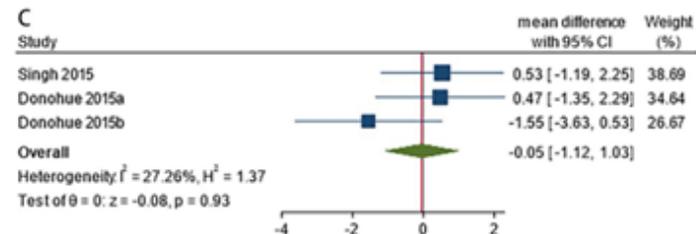
，未顯著差異。



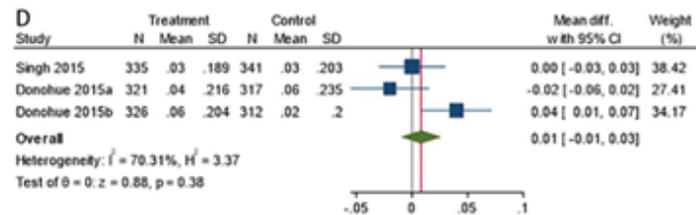
Fixed-effects inverse-variance model



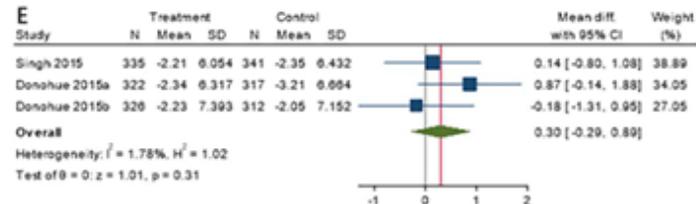
Fixed-effects inverse-variance model



Fixed-effects inverse-variance model



Fixed-effects inverse-variance model



Fixed-effects inverse-variance model

Figure 3 Forest plot for symptomatic endpoints and health outcomes:

(A) rescue-medication use, (B) TDI, (C) SGRQ, (D) EQ-5D, (E) CAT.
 Abbreviations: TDI, Transition Dyspnea Index; SGRQ, St George's Respiratory Questionnaire; EQ-5D, EuroQol-5D; CAT, COPD Assessment Test

次要結果-

安全性：三個RCT，均報告不良反應和嚴重不良反應。

不良反應 (**RR 0.96** , **95% CI 0.84至1.09** , **P=0.52** , **I²=0%** , 證據等級低) (圖4)。

嚴重不良反應 (**RR 0.96** , **95% CI 0.55至1.67** , **P=0.88** , **I²=44.03%** , 證據等級極低) (圖4C)。

藥物相關嚴重不良反應 (**RR 1.00** , **95% CI 0.17至5.75** , **P=1.00** , **I²=0%** , 證據等級極低) (圖4D)。

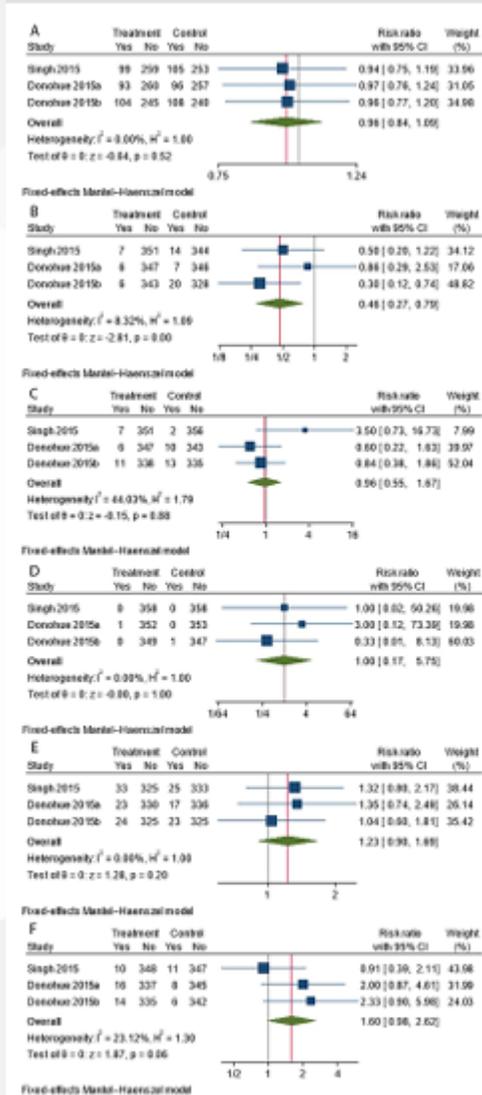


Figure 4 Forest plot for safety: (A) adverse effects, (B) drug-related adverse effects, (C) SAEs, (D) drug-related SAEs, (E) headache, (F) nasopharyngitis

Table 2. Grade evidence profile of UMEC/VI versus FP/SAL for COPD.

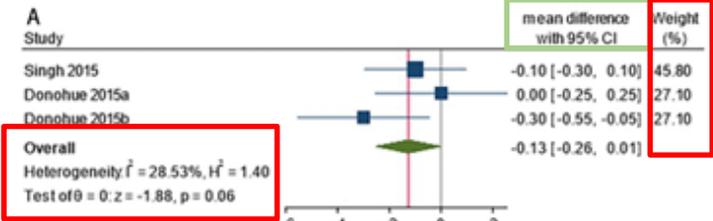
Follow-up period	Number of trials (participants)	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Treatment association (95% CI)		Overall quality of evidence
							MD	95% CI	
0-24 h wmFEV1 on Day 84									
12 weeks	3 (1927)	YES	I ² =0%	NO	NO	NA	0.08 L	0.06 to 0.10	Moderate ^a
Trough FEV1 on Day 85									
12 weeks	3 (1934)	YES	I ² =0%	NO	NO	NA	0.09 L	0.07 to 0.11	Moderate ^a
Peak FEV1 0-6 h on Day 1									
12 weeks	3 (2114)	YES	I ² =36.46%	NO	NO	NA	0.05 L	0.04 to 0.06	Moderate ^a
Peak FEV1 0-6 h on Day 84									
12 weeks	3 (2003)	YES	I ² =0%	NO	NO	NA	0.11 L	0.09 to 0.13	Moderate ^a
Time to onset on Day 1									
12 weeks	3 (2113)	YES	I ² =27.87%	NO	NO	NA	1.40 min	1.27 to 1.52	Moderate ^a
Follow-up period	Number of trials (participants)	Risk of bias	Inconsistency	Indirectness	Imprecision	Publication bias	Treatment association (95% CI)		Overall quality of evidence
							RR	Absolute Risk Reduction	
Adverse effects									
12 weeks	3 (2119)	YES	I ² =0%	NO	YES	NA	0.96 (0.84 to 1.09)	-0.09% (-0.37% to 0.21%)	Low ^{a,b}
Drug-related adverse effects									
12 weeks	3(2119)	YES	I ² =8.32%	NO	YES	NA	0.46 (0.27 to 0.79)	-2.1% (-2.8% to -0.8%)	Low ^{a,c}

UMEC/VI, umecclidinium plus vilanterol; FP/SAL, fluticasone propionate plus salmeterol; MD, mean difference; RR, risk ratio; CI, confidence interval; NA, not applicable. ^aDowngraded one level due to risk of bias. High risk of other bias for all the three included studies, as all these studies were supported by the production manufacturer. ^bDowngraded one level due to imprecision. The CI crossed the zero line. ^cDowngraded one level due to imprecision. The total number of events was less than the optimal information size.

Question 7

How precise are the results?
結果精準嗎？

主要結果-



Sample Size : 三項RCT，1927位患者，樣本數夠大。

95% CI : 沒有跨過1，顯著，有統計差異。
 嚴重不良反應 (RR 0.96，95% CI 0.55至1.67，P=0.88，I² =44.03%，證據等級極低)。

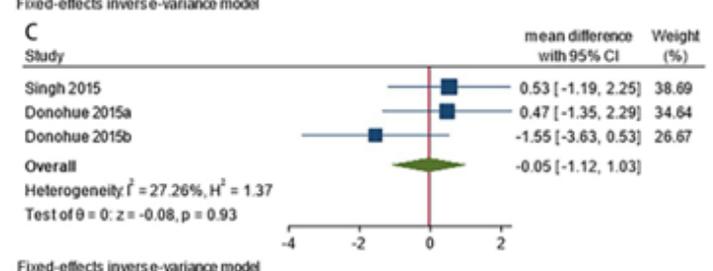
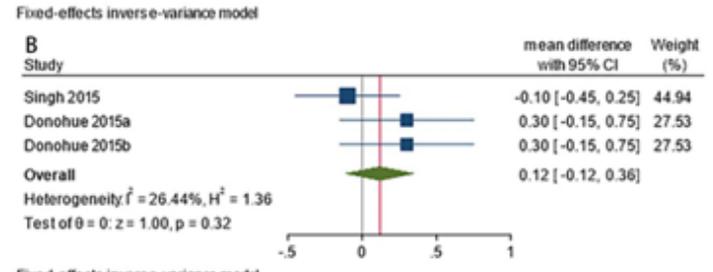
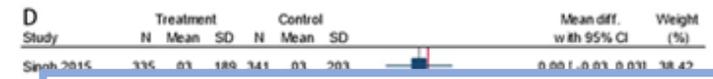


Table 1. Characteristics of studies included in the meta-analysis.

Study	Registration number	Country	Sample size	Mean age(years)	White (%)	Male (%)	Current smoker(%)	Pre-salbutamol FEV1(L)	COPD ≥ 10 years(%)	Funding
Singh 2015 [19]	NCT01822899	Czech Republic, Denmark, Germany, Hungary, The Netherlands,	716	61.6	100	72	59	1.440	22	GSK company



7. How precise are the results?
 結果精準嗎？

- Yes
- No
- Unclear

Fig (A) Abb Respiratory Questionnaire; EQ-5D, EuroQoL-5D; CAT, COPD Assessment Test

評定證據等級-OCEBM Level of Evidence, 2011

Oxford Centre for Evidence-Based Medicine 2011 Levels of Evidence

Question	Step 1 (Level 1*)	Step 2 (Level 2*)	Step 3 (Level 3*)	Step 4 (Level 4*)	Step 5 (Level 5)
How common is the problem?	Local and current random sample surveys (or censuses)	Systematic review of surveys that allow matching to local circumstances**	Local non-random sample**	Case-series**	n/a
Is this diagnostic or monitoring test accurate? (Diagnosis)	Systematic review of cross sectional studies with consistently applied reference standard and blinding	Individual cross sectional studies with consistently applied reference standard and blinding	Non-consecutive studies, or studies without consistently applied reference standards**	Case-control studies, or *poor or non-independent reference standard**	Mechanism-based reasoning
What will happen if we do not add a therapy? (Prognosis)	Systematic review of inception cohort studies	Inception cohort studies	Cohort study or control arm of randomized trial*	Case-series or case-control studies, or poor quality prognostic cohort study**	n/a
Does this intervention help? (Treatment Benefits)	Systematic review of randomized trials or <i>n</i> -of-1 trials	Randomized trial or observational study with dramatic effect	Non-randomized controlled cohort/follow-up study**	Case-series, case-control studies, or historically controlled studies**	Mechanism-based reasoning
What are the COMMON harms? (Treatment Harms)	Systematic review of randomized trials, systematic review of nested case-control studies, <i>n</i> -of-1 trial with the patient you are raising the question about, or observational study with dramatic effect	Individual randomized trial or (exceptionally) observational study with dramatic effect	Non-randomized controlled cohort/follow-up study (post-marketing surveillance) provided there are sufficient numbers to rule out a common harm. (For long-term harms the duration of follow-up must be sufficient.)**	Case-series, case-control, or historically controlled studies**	Mechanism-based reasoning
What are the RARE harms? (Treatment Harms)	Systematic review of randomized trials or <i>n</i> -of-1 trial	Randomized trial or (exceptionally) observational study with dramatic effect			
Is this (early detection) test worthwhile? (Screening)	Systematic review of randomized trials	Randomized trial	Non-randomized controlled cohort/follow-up study**	Case-series, case-control, or historically controlled studies**	Mechanism-based reasoning

Question 8

Can the results be applied to the local population?

此研究是否可應用到你的病患？

評估適用性

	評讀文獻	臨床情境
P	Chronic Obstruction Pulmonary Disease	Chronic Obstruction Pulmonary Disease
I	Pulmonary rehabilitation	Pulmonary rehabilitation
C	long-acting bronchodilator	Umeclidinium plus vilanterol (UMEC/VI) fluticasone propionate plus salmeterol (FP/SAL)
O	Lung function Adverse Drug Reaction	In conclusion, UMEC/VI, when compared with FP/SAL, demonstrated significant improvements in lung functions with fewer drug-related adverse effects

1. 患者與文獻研究是否相似？

年齡 性別 種族 疾病嚴重度 共病 同時服用其他藥物治療

是

2. 這項檢查在台灣是否可行？

可

Yes

No

Unclear

Question 9

Were all important outcomes considered?

是否所有重要的臨床結果都被考量到?

All the three RCTs used a central randomization schedule generated using a validated computer system. A registration and medication ordering system randomized patients in a 1:1 ration. Randomized patients received either UMEC/VI via the ELLIPTA dry powder inhaler (DPI) and twice-daily placebo (DISKUS2) or via the

DISKUS and once-daily placebo (ELLIPTA DPI) for 12 weeks. So random sequence generation and allocation concealment were deemed adequate in all three studies. Participants, personnel, and outcome assessment were blinded across all three studies which were analyzed on an intention-to-treat basis. However, it's noteworthy that all three studies were supported by the production manufacturer and were assessed high risk in the domain of other bias (Supplementary Table S3).

- 電腦隨機分派
- 雙盲
- intention-to-treat**
· 所有接受隨機分派的受試者都納入分析

■ Yes

No

Unclear

Question 10

Are the benefits worth the harms and costs?

這些好處隨之而來的傷害和花費是否值得？

Conclusion

In conclusion, UMEC/VI, when compared with FP/SAL, demonstrated significant improvements in lung functions with fewer drug-related adverse effects. However, the conclusion was limited by the scarcity of studies and long-term trials.

- UMEC/VI藥物相關不良反應較少
- 在本次審查中，沒有進行正式的成本效益分析，因此無法做出經過驗證的陳述

Yes

No

Unclear

風險利益

	umeclidinium plus vilanterol (UMEC/VI)	fluticasone propionate plus salmeterol (FP/SAL)
效果	改善FEV ₁ 改善支氣管擴張效果強	增加肺炎風險
花費	1000-1200元	700-1600元
健保是否給付	是	是
風險/注意事項	COPD首選	藥物副作用較高

醫病共享決策

實證醫學	患者期待
● 證據等級：CEBM(level 1)	<ul style="list-style-type: none">改善生活品質延緩肺惡化
利弊分析	費用成本
● UMEC/VI藥物相關不良反應較少	<ul style="list-style-type: none">● umecclidinium plus vilanterol (UMEC/VI)1000-1200元● fluticasone propionate plus salmeterol (FP/SAL)700-1600元

回覆病人問題

中度COPD使用長效支氣管擴張劑可以改善生活品質，延緩肺功能惡化

感謝各位評審聆聽