

## PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (<http://bmjopen.bmj.com/site/about/resources/checklist.pdf>) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

### ARTICLE DETAILS

<b>TITLE (PROVISIONAL)</b>	Mapping of modifiable barriers and facilitators with interdisciplinary chronic obstructive pulmonary disease (COPD) guidelines concordance within hospitals to the Theoretical Domains Framework: a mixed method systematic review protocol
<b>AUTHORS</b>	Issac, Hancy; Moloney, Clint; Taylor, Melissa; Lea, Jackie

### VERSION 1 – REVIEW

<b>REVIEWER</b>	Ian Yang The University of Queensland Australia
<b>REVIEW RETURNED</b>	15-Dec-2019

<b>GENERAL COMMENTS</b>	<p>Thank you for inviting me to review this interesting paper.</p> <p>Adherence to and uptake of clinical guidelines remains an issue in practice.</p> <p>This protocol for a scoping review describes a planned study to identify barriers to use of COPD guidelines. Strengths of the protocol include good rationale for this type of study, and clear demonstration of proposed methodologies.</p> <p>Major comments:</p> <p>Background: The Background section provides detailed rationale for undertaking this study. Whilst the individual commentaries within this lengthy background section are useful, the series of paragraphs could be more structured, to help with logic flow. To achieve this, for clarity and ease of reading, it would be helpful to have a topic sentence at the start of each paragraph (e.g. add a topic sentence or statement of principle to those paragraphs currently starting with: The Global Initiative..., Overington et al ....., McCarthy et al.....; there are some paragraphs that already have a topic sentence, making the paragraph easier to follow).</p> <p>Search strategy: The search strategy for papers focuses solely on studies undertaken in relation to ED admissions. The authors should provide further justification for this, including why a broader population of studies (e.g. barriers to use of guidelines for inpatients admitted to hospital, just ED treatment) will not be included in this study.</p> <p>Outcomes: The outcomes are broadly described, and an example is given for a</p>
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	<p>data extraction table. Are there specific outcomes that the authors plan to address, or will each paper be extracted in different ways, based on the outcomes with the individual paper?</p> <p>TDF: How will the Theoretic domains framework contribute, in practical terms, to the data synthesis approach?</p> <p>Minor comments:</p> <p>Typographical changes:</p> <p>Page 3, line 8: Suggest change global COPD X guidelines to global COPD guidelines</p> <p>Page 4, line 1: 'originally launched and mould by international leading experts in 1997' – suggest replace 'mould' with another word</p> <p>Page 4, line 4: Australian Lung Foundation - should read Lung Foundation Australia</p>
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<b>REVIEWER</b>	Gianni Virgili University of Florence, Italy
<b>REVIEW RETURNED</b>	16-Jan-2020

<b>GENERAL COMMENTS</b>	<p>This is a broad-scope and very useful review. My main point is about data collection on context and type of guideline. In the introduction, the Authors make reference to the COPD X guideline and to the Australian setting. However, studies are not limited to a specific country or ED setting, and no limitation for guideline type is reported. I suggest more details are given on data that could be extracted regarding the type of guideline and how it was implemented in the ED setting. In fact, while COPD guidelines seem to be well-established according to the authors' background, at least some discussion on the possible implications of guideline structure and implementation would be useful. Can you give more details on how these issues fit into the TDF domains regarding barriers and facilitators? Do you think the study data extraction form should include details on guideline type and its implementation or maintenance? Maybe a more structured data extraction could help you plan the review in more detail, together with some guidance on and pilot testing of quality assessment.</p>
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### VERSION 1 – AUTHOR RESPONSE

Reviewer Comments	Authors response
<p>Reviewer 1- Ian yang</p> <ul style="list-style-type: none"> <li>R1. Topic sentence at the start of each paragraph (e.g. add a topic sentence or statement of principle to those paragraphs currently starting with: The Global Initiative..., Overington et al ....., McCarthy et al.....; there are some paragraphs that already have a topic</li> </ul>	<ul style="list-style-type: none"> <li>R1. Thank you, all three paragraphs have now been revised with topic statements in the background</li> </ul>

<p>sentence, making the paragraph easier to follow).</p> <ul style="list-style-type: none"> <li>• <b>R2. The search strategy for papers focuses solely on studies undertaken in relation to ED admissions. The authors should provide further justification for this, including why a broader population of studies (e.g. barriers to use of guidelines for inpatients admitted to hospital, just ED treatment) will not be included in this study.</b></li> <li>• <b>R3. Outcomes: The outcomes are broadly described, and an example is given for a data extraction table. Are there specific outcomes that the authors plan to address, or will each paper be extracted in different ways, based on the outcomes with the individual paper?</b></li> <li>• <b>R4. TDF: How will the Theoretic domains framework contribute, in practical terms, to the data synthesis approach?</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>R2. Thank you, after further review on this point, the authors have decided to broaden the scope and population of this study to include all studies that report on COPD guidelines (GOLD and COPD X plan) adherence in ED and inpatient units.</b></li> <li>• <b>The title is now changed to “ Mapping of modifiable barriers and facilitators with interdisciplinary chronic obstructive pulmonary disease (COPD) guideline concordance within the hospitals to the Theoretical Domains Framework: a mixed method systematic review protocol</b></li> <li>• <b>Inclusion criteria will now include all studies that report on COPD guidelines (GOLD &amp;COPD X plan) concordance or adherence or compliance in ED and inpatient units. Primary care and community care adherence will not be included in this study</b></li> <li>• <b>R3. Data extraction table is now adapted to measure main recommendations by COPD X plan guidelines as outcomes.</b></li> <li>• <b>R4. Authors have attempted to clarify and articulate this better in the background with reference study on guidelines concordance (systematic review</b></li> </ul>
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<ul style="list-style-type: none"> <li>• R5. Page 3, line 8: Suggest change global COPD X guidelines to global COPD guidelines</li>   <li>• R6. Page 4, line 1: 'originally launched and mould by international leading experts in 1997' – suggest replace 'mould' with another word</li>   <li>• R7. Page 4, line 4: Australian Lung Foundation - should read Lung Foundation Australia</li> </ul>	<p>stroke guidelines adherence to TDF). Preliminary search of topic showed lack of knowledge, skills, environmental and beliefs of health professionals contribute to lack of concordance. Similar systematic review on guideline concordance study have utilised TDF to provide clinical behaviour change recommendations</p> <ul style="list-style-type: none"> <li>• TDF has been specifically used in systematic reviews to assist in recommendation of better implementation strategies in par with clinical behaviour change techniques (see revised table 1)</li>   <li>• Current literature states clinician and interdisciplinary staff behaviour being a major factor to lack of concordance. Including TDF in this review will assist authors to map modifiable behaviour and provide behavioural change recommendations to increase guidelines concordance. Mapping modifiable determinants will provide significant utility for intervention development. TDF table in the appendices is now adapted to reflect and explain this further</li>   <li>• R5. Thank you, this now addressed</li>   <li>• R6. This word is now changed to 'developed'</li>   <li>• R7. Australian lung foundation now changed to The lung</li> </ul>
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	foundation Australia
<p><b>Reviewer 2- Dr. Gianni Virgili</b></p> <ul style="list-style-type: none"> <li>• <b>R1. Data collection on context and type of guideline. In the introduction, the Authors make reference to the COPD X guideline and to the Australian setting. However, studies are not limited to a specific country or ED setting, and no limitation for guideline type is reported. I suggest more details are given on data that could be extracted regarding the type of guideline and how it was implemented in the ED setting.</b></li>   <li>• <b>R2. Do you think the study data extraction form should include details on guideline type and its implementation or maintenance? Maybe a more structured data extraction could help you plan the review in more detail, together with some guidance on and pilot testing of quality assessment.</b></li>   <li>• <b>R3. More details on how these</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>R1. Thank you for this good point, Authors have clarified this further in the inclusion and exclusion criteria</b></li>   <li>• <b>Report will include an emphasis on GOLD guidelines and Australian national guidelines concordance as this report intend to provide recommendations toward global and national implementation strategies in Australia, However studies will not be limited to any country.</b></li>   <li>• <b>R2. Thank you, Authors have now reviewed data extraction table to include type of guideline, context as in ED or inpatient units, main recommendations of guidelines concordance, implementation method and intervention sustainability measures (eg. electronic, clinical pathway, education) (see table.3)</b></li>   <li>• <b>Thank you for this great thought. In order to ensure validity and reliability of data extraction tool and quality assessment of studies. We piloted 5 studies into data extraction tool and quality assessment tool and adapted relevant extraction points.</b></li> </ul>

<p>issues fit into the TDF domains regarding barriers and facilitators?</p> <ul style="list-style-type: none"> <li>• R4. Possible implications of guideline structure and implementation would be useful</li> </ul>	<ul style="list-style-type: none"> <li>• R3. Authors have attempted to articulate this better in the background and data synthesis section how theoretical domains framework assist in choosing clinician behaviour change technique to provide recommendation on intervention strategies</li> <li>• Preliminary search of topic showed lack of knowledge, skills, environmental and beliefs of health professionals contribute to lack of concordance. Similar guideline concordance study on stroke have utilised TDF to provide clinical behaviour change recommendations for better implementation (see revised table.1)</li> <li>• TDF allows researchers to explore, understand and target clinician behaviour change interventions to provide recommendations to improve concordance</li> <li>• R4. This is now added as an extraction point in data extraction table ( see table. 3)</li> </ul>
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**VERSION 2 – REVIEW**

<b>REVIEWER</b>	Ian Yang The Prince Charles Hospital and The University of Queensland, Australia
<b>REVIEW RETURNED</b>	24-Feb-2020

<b>GENERAL COMMENTS</b>	Thank you – the authors have satisfactorily addressed all of my comments.
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<b>REVIEWER</b>	Gianni Virgili University of Florence, Italy
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<b>REVIEW RETURNED</b>	07-Mar-2020
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<b>GENERAL COMMENTS</b>	The manuscript has been adequately revised regarding the type of guidelines to be included, implementation issues and data extraction.
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