

## 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>	Management of hyperglycemia in persons with non-insulin-dependent Type 2 Diabetes mellitus that are started on systemic glucocorticoid therapy: a systematic review
<b>AUTHORS</b>	Tatalovic, Milos; Lehmann, Roger; Cheetham, Marcus; Nowak, Albina; Battegay, Edouard; Rampini, Silvana

## VERSION 1 - REVIEW

<b>REVIEWER</b>	Dr Laura Bonnett Medical Statistician, University of Liverpool, UK
<b>REVIEW RETURNED</b>	11-Jan-2019

<b>GENERAL COMMENTS</b>	<p>Many thanks for updating your systematic review in light of previous comments by reviewers. The review is much improved in my opinion. There is still an outstanding issue - the abstract does not match the results and discussion section. Also, for me (as a non-clinician) the introduction fails to adequately describe the clinical context.</p> <p>Particular comments are as follows:</p> <ol style="list-style-type: none"><li>1. Abstract - Ensure that the results and conclusions presented here match with the results and discussion of the review. In particular, update the abstract to mention that a BBI regimen can be favoured in persons with DM initiated on glucocorticoid therapy.</li><li>2. Introduction - For me the paragraphs do not link. Therefore, consider adding additional sentences to better describe the links between the concepts. It is also unclear how this justifies the need for the review that you have undertaken.</li><li>3. Study Selection - Break the opening paragraph into several smaller paragraphs to improve the clarity.</li><li>4. Ensure all abbreviations are defined e.g what is OHA and what is BGI?</li><li>5. Discussion - Standard practice within systematic reviews is usually to exclude studies whereby the patient group of interest cannot be separated from a wider group. The authors have explained a potential benefit of the chosen approach but I suggest that they also explain that it is not common practice.</li><li>6. PRISMA Checklist - Meta-analysis was not undertaken so I believe that page numbers for items 21 and 22 are the wrong way around.</li></ol>
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<b>REVIEWER</b>	Aperez hospital sant pau
<b>REVIEW RETURNED</b>	26-Jan-2019

<b>GENERAL COMMENTS</b>	There are no major issues in the new version of paper. The manuscript is well-written
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## VERSION 1 – AUTHOR RESPONSE

Comments Reviewer #1: Laura Bonnett

Overall comment: Many thanks for updating your systematic review in light of previous comments by reviewers. The review is much improved in my opinion. There is still an outstanding issue - the abstract does not match the results and discussion section. Also, for me (as a non-clinician) the introduction fails to adequately describe the clinical context.

We thank you for your comment. We address each point in the comments below.

Comment 1: Abstract - Ensure that the results and conclusions presented here match with the results and discussion of the review. In particular, update the abstract to mention that a BBI regimen can be favoured in persons with DM initiated on glucocorticoid therapy.

Response 1: We aligned the abstract with the results/discussion section on you're and Associate Editors comment #1 request (see response #1 to Editorial comment #1) to make the whole paper consistent and coherent.

Comment 2: Introduction - For me the paragraphs do not link. Therefore, consider adding additional sentences to better describe the links between the concepts. It is also unclear how this justifies the need for the review that you have undertaken.

Response 2: We rewrote the introduction on your and Associate Editors comment #1 request (see response #1 to Associate Editors comment #1), emphasizing the rational for the review within the immediate clinical context.

Comment 3: Study Selection - Break the opening paragraph into several smaller paragraphs to improve the clarity.

Response 3: Thank you for this suggestion. We broke the paragraph on study selection in three smaller paragraphs as suggested.

The text in the methods section now reads as follows (page 7-8, line 116-133):

### Study Selection

MT and SKR independently screened a sample of 100 papers by studying the title and abstract according to the selection criteria 'adult persons with preexisting DM that received a glucocorticoid

therapy'. If no abstract was available but the title appeared relevant, MT and SKR reviewed the full-text. One abstract was translated from Japanese.

MT and SKR then evaluated the first 100 papers in consensus to establish the basis for consistent screening of all further papers. MT performed the screening of all papers and SKR independently double-screened a random sample of 10% of all articles. All articles were assigned to one of the three eligibility groups, "Yes", "No" and "Maybe". The "Maybe" group was discussed by MT and SKR for eligibility after full-text review in a consensus conference. Initial review of eligible articles revealed the necessity for modification of the inclusion criterion ' $\geq 20$  mg/d prednisolone-equivalent for  $\geq 5$  days' to 'intermediate or high-dose glucocorticoid therapy' because a large number of articles did not specify exact dosages of glucocorticoids.

MT and SRK independently performed a full-text review of all eligible papers for inclusion, considering the PICOS criteria. Disagreements between reviewers were resolved by consensus. Finally, the reference lists of all included articles were screened for additional eligible papers, guidelines, and review articles.

Comment 4: Ensure all abbreviations are defined e.g what is OHA and what is BGI?

Response 4: We updated the definition of all abbreviations. Thank you for bringing our attention to this.

Comment 5: Discussion - Standard practice within systematic reviews is usually to exclude studies whereby the patient group of interest cannot be separated from a wider group. The authors have explained a potential benefit of the chosen approach but I suggest that they also explain that it is not common practice.

Response 5: We now explicitly mention this as an uncommon practice.

The text in the methods section now reads as follows (page 17, line 334-339):

The present review focused on the population of persons with pre-existing Type 2 DM without prior insulin treatment. However, we included articles with mixed populations, namely persons with Type 2 DM with or without prior insulin treatment and Type 1 DM, because there is an insufficient number of articles with the specific sub-group of interest. We acknowledge that this is not standard practice in systematic reviews.

Comment 6: PRISMA Checklist - Meta-analysis was not undertaken so I believe that page numbers for items 21 and 22 are the wrong way around.

Response 6: You are right. We corrected this. Thank you.

Comments Reviewer #2: Antonio Pérez

Overall Comment: There are no major issues in the new version of paper. The manuscript is well-written

Response: Thank you very much.