Reviewer's report

Title: THE EFFECT OF A CLINICAL DECISION SUPPORT SYSTEM ON PROMPTING AN INTERVENTION FOR RISKY ALCOHOL USE IN A PRIMARY CARE SMOKING CESSATION PROGRAM: A CLUSTER RANDOMIZED TRIAL

Version: 0 Date: 26 Jun 2019

Reviewer: Jochen Gensichen

Reviewer's report:

IMPS-D-19-00106

Minian N et al. "The Effect of a Clinical Decision Support System on Prompting an Intervention for Risky Alcohol Use in a Primary Care Smoking Cessation Program: A Cluster Randomized Trial"

Major Revision:

In their article, Minian et al. report findings from a cluster-randomized trial including 221 primary care clinics (110 clinics randomized to intervention, 111 clinics randomized to control) across Ontario, Canada, implementing the Smoking Treatment for Ontario Patients (STOP) smoking cessation program. The aim of the trial was to assess whether the addition of a web-based Clinical Decision Support Systems (CDSSs) - designed to prompt practitioners in real time to conduct Screening, Brief Intervention, and Referral to Treatment (SBIRT) with patients who are drinking above recommended alcohol consumption guidelines - influences the probability of practitioners delivering a brief intervention to their eligible patients attempting to quit smoking compared to those practitioners who did not receive a prompt during the clinical encounter. This study contributes to implementation science by showing that the provision of a CDSS may not increase practitioner adherence to guidelines but may improve practitioner performance once they adhere to them.
General remarks:

From the abstract, Minian et al. want to examine if the addition of a CDSS influenced practitioner delivery of a brief intervention with treatment-seeking smokers who were drinking above recommended alcohol consumption guidelines, compared with practitioners who do not receive a CDSS prompt. The intervention in this study targeted primary care patients who were cigarette smokers who sought help via their clinic to quit smoking, reduce smoking, or maintain an existing quit attempt, and who were drinking above Canadian Cancer Society (CCS) guidelines. The authors used a generalized estimation approach for fitting logistic regression using a population-averaged method. All analyses followed an intention-to-treat approach in which clusters were analyzed in the intervention arm to which they were originally assigned and participants that in which they enrolled. The authors achieved their set aim, reporting that a CDSS may not increase the likelihood of practitioners offering an educational alcohol resource; however, it might change the way practitioners offer the resource, increasing patients' acceptance of the resource.

In detail:

Title

The title is rather long and unwieldy; maybe the authors can find a shorter, catchier title.

Abstract, results section:

From figure 1, 15,222 patients were screened for alcohol use; please correct or explain the difference. Furthermore, the results reported in this section of the abstract refer to the patients who were enrolled. Thus, I suggest to rephrase this section as follows: "From the 15,222 patients screened for alcohol abuse, 5715 were enrolled in the study."

Abstract, conclusion:

The authors write "A CDSS may not increase the likelihood of practitioners offering an educational alcohol resource, though it might change the way practitioners offer the resource. However, in the conclusion of at the end of the paper the write: "This large study (...) shows that the provision of a CDSS may not increase practitioner adherence to guidelines but may improve practitioner performance once they adhere to them".
"Practitioners' performance" is not the same as "the way practitioners offer". Since the authors use "practitioners' behaviour" in the discussion, I would suggest to use it in the conclusions as well (behaviour towards…)

Main text:

Background section:

- Page 5, lines 49 and 54: "integration is critical given the substantial gap" and "practitioners non-adherence has been identified as one of the most critical gaps": week style (word repetitions); please change 2nd sentence, e.g. "issues, obstacles or barriers" instead of "gaps".

- Page 6, line 70: Please give examples in which clinical settings CDSS has been shown to be effective. Are there other references than Bright et al?

- Page 6, lines 78-81: "A cluster randomizes trial…” This is not part of the introduction/background, but should be moved to the method section

- Page 6, lines 81-82: I strongly advise against the use of the acronym COMBAT. COMBAT is already used and a registered trial (although completed): https://urldefense.proofpoint.com/v2/url?u=https-3A__clinicaltrials.gov_ct2_show_NCT01838863&d=DwIF-g&c=vh6FgFnduejNhPPD0fl_yRaSfZy8CWbWnlf4XJhSqx8&r=hPPEyZbOxUiv5aU_i6VDVg0BvNvaLoMYXhq_BeVmVj8&m=cDjNSE9zNp7EAvVZ7mZ08SdcTO9lrD6hI92wQhKRZyo&s=GoJQQbKk7KVPQGi5UjbPSXhRsBLTL6K2yHrx8vAJocI&e=
Publication to COMABAT trial in Lancet: Moore HB et al. Plasma-first resuscitation to treat haemorrhagic shock during emergency ground transportation in an urban area: a randomised trial. Lancet 2018, online first

- Connected to my previous comment: Did the authors register their trial? If so, please mention the trial registration.

Method section:

Clinic randomization:
- Page 8, lines 134/135. I do not understand: How can clinics be NOT blinded to randomisation assignment and yet NOT be informed of their allocation?

Sample size determination
- Page 11, line 204: missing a spacebar "to be 5.308".

Statistical methods:
- Page 12, line 212: please use "sex" instead of "gender". How did the author find out about members of First Nation? Did the authors consider a sub-analysis with First Nation Members only? Did the authors consider interaction analyses?

Discussion:
Page 14, line 272: Reference 40 is superscripted

Limitations:
The authors address the limitations of the study.
Tables and figures:

Tables and figures are informative and clear.

Literature:

The literature is comprehensive.

English:

The English is good.

Level of interest
Please indicate how interesting you found the manuscript:

An article of importance in its field

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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Please complete a declaration of competing interests, considering the following questions:

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