Reviewer’s report

Title: Implementing cardiovascular disease prevention guidelines to translate evidence-based medicine and shared decision making into general practice: Theory-based intervention development, qualitative piloting and quantitative feasibility

Version: 0 Date: 21 Dec 2018

Reviewer: Krystina Lewis

Reviewer's report:

Thank you for the opportunity to review this manuscript. Using both qualitative and quantitative methods, the authors aimed to develop, pilot and evaluate the feasibility of a multi-faceted complex intervention to increase GP's use of Australian cardiovascular disease (CVD) prevention guidelines. There are strengths to this manuscript with potential for contributions to the literature and to the public health issue of overtreatment of low CVD risk patients and under-treatment of high CVD risk patients as a result of current approaches. First, the intervention is grounded in the Behavior Change Wheel which targets patient and GP identified barriers to the adoption of absolute risk for the assessment and treatment of CVD. Second, the authors integrated two evidence-based strategies as key features of their intervention, namely 1) audit and feedback to increase GPs' use of guidelines and change prescribing behaviours, and 2) patient decision aid to improve doctor-patient communication.

However, there are opportunities to strengthen this manuscript. First, greater explanation about how the intervention was developed, its content and its intended use for GPs and patients would be beneficial. Second, more methodological details are required for both the qualitative and quantitative components. Third, the way in which GP/patient and implementation barriers were determined and the differences between the two are difficult to decipher throughout the manuscript.

Background

Page 4, Line 38 - "The current approach to CV prevention…" Suggest re-phrasing to the current recommended approach, as it is my understanding that the recommended approach (absolute risk assessment) is not being used in clinical practice.

The authors highlight the consequences of the current utilized approach vis-à-vis the over and under use of medications. Since CVD prevention (and the authors' intervention) is also focused on lifestyle modifications, could the authors provide a comment on the consequences related to non-pharmacological interventions as well? I suggest it is important to set the stage with the consequences related to both pharmacological and non-pharmacological interventions since the piloted intervention focuses on 9 options that fall within both of these categories.

Page 5, Line 9-10 - "Absolute risk guidelines" - It is unclear whether these are absolute risk guidelines or clinical practice guidelines that recommend an absolute risk approach.
Given the intervention is grounded in the Behaviour Change Wheel (BCW), suggest adding a few sentences describing the framework in greater detail which may be helpful for readers who may not be familiar with it.

The authors attribute GP barriers to the use of absolute CVD risk guidelines to three determinants of behaviour. Please provide a reference for this statement. The source of these determinants is unclear on two levels: 1) the determinants themselves (are these determinants stipulated by the BCW?), and 2) how the three specific determinants (i.e. opportunity, capability and motivation) were determined for the GPs in this context. The authors provide examples of each determinant, but actually defining them would be helpful.


This review was updated in 2018, with changes to the conclusions:

Aim
The proposed interventions aimed to address implementation barriers across opportunity capability, and motivation, yet these are presented as GP/patient behavioral barriers to the use of evidence based CVD guidelines in the background (p.5). The labels "behavioral" and "implementation" barriers seem to be used interchangeably throughout the manuscript, yet I see these as distinctly different. The behavioral barriers are related to the use of absolute CVD risk guidelines, yet are the implementation barriers are related to the intervention or the use of absolute risk? If both are referring to the use of absolute CVD risk, then I suggest make this clearer.

Methods
I appreciate the complexity of this intervention. The supplementary information provided in the appendices is helpful. It would be useful to introduce and further describe Figures 1 and 2 in the text or in an accompanying legend. Greater explanation about how the intervention was developed, its content and its intended use for GPs and patients would be beneficial. Despite numerous reads, I am left somewhat unclear about how this intervention is meant to be used by GPs and by patients. Is it meant as a learning/training tool that GPs use on their own time to exercise their knowledge about prescribing for low, medium and high risk patients (use of hypothetical patients), or it is meant to be used during an encounter with patients? Or both?

Throughout the manuscript, there is emphasis on the benefits of audit and feedback to influence GP's prescribing behaviours. Yet since CVD prevention and management also include non-pharmacological interventions, might there be room to balance out this emphasis to include pharmacological prescribing behaviours and the provision of recommendations for non-pharmacological interventions as well?

A key feature of the intervention is a Patient Decision Aid that shows the effect of different medications and lifestyle interventions on individual CVD risk. What are the options presented in the patient
decision aid? How is this feature intended to be used and accessed by GPs vs patients? What features of this shared decision-making resource were intended to "help GPs communicate guidelines to patients" (p. 6) and which features were intended for patients? What about its role in improving doctor-patient communication?

Page 7 - lines 47-50. What is the difference between psychological capability, physical opportunity, and reflective motivation and the terms used in the background (ie. capability, opportunity and motivation)? Are these any different, and if so how?

Generally, the qualitative piloting and quantitative feasibility methods require greater detail.
Qualitative piloting:
Who delivered the presentation session at GP2017 and who hosted the room stall? How was the interview guide developed? What type of qualitative analysis was conducted? How was the analysis conducted and by whom?

Quantitative feasibility study:
The authors aimed to assess demand and potential efficacy of the intervention. It is unclear how these outcomes were assessed. In the description of the baseline survey, other variables were collected such as use of guidelines and risk calculators, self-efficacy, intended use of website. The follow-up survey repeated these same questions. Yet, it is unclear how these data are related to the demand and potential efficacy feasibility outcomes outlined above.

The authors state that the follow-up surveys were sent in 3 batches. What does this mean, and what is the justification for doing so?

Results
Please begin this section by describing the participants who participated in the qualitative piloting. The number of delegates and GPs who participated in each component of the qualitative study is currently provided in the methods section, but I think this would better fit in results.

Page 10 - Lines 52-57. It is not immediately clear what most common sources is referring to and for whom (particularly as the sentence leads with GPs who had not seen the guidelines).

In the quantitative feasibility study section, results are sometimes presented as proportions (%) and sometimes as n without denominators.

I am not familiar with the way in which the paired t-test results are presented (t71). Further, the CONSORT statement for feasibility trials (2010) states that any estimates of effect should be reported using 95% confidence intervals - not p values - because pilot trials/studies are not powered for testing hypotheses about effectiveness.

Page 11 - lines 47: 26% and 29% of GP feedback - does this represent the proportion of total feedback, or the proportion of GPs? If the latter, suggest removing feedback.

Discussion
On page 13, the authors present GP and patient suggestions for implementation offered in the context of this study that will be addressed in future work. Since these suggestions are findings from this study, I suggest these could appear in the results.
Strengths and Limitations
Nine patients were included in the qualitative piloting, which is a much smaller proportion than the number of GPs who provided feedback. No patients were included in the feasibility study.

Level of interest
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An article of importance in its field

Quality of written English
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