Reviewer's report

**Title:** Comparison of two methods for assessing diabetes risk in a pharmacy setting in Australia

**Version:** 2  **Date:** 15 June 2014

**Reviewer:** Ines Krass

**Reviewer's report:**

This is an interesting study which provides additional support for the feasibility of screening for T2 diabetes risk in the community pharmacy setting. On the basis of qualitative interviews with pharmacy staff the authors suggest that this constitutes evidence to consider the AUSRISK preferable to RBGT as a case detection strategy in pharmacy. It is arguable given the lack of cost effectiveness evaluation and absence of follow up data on uptake of referrals that this constitutes evidence.

There are a number of issues in the structure and content of the manuscript that require emendation.

**Major compulsory revisions**

**Specific comments under each section**

**Abstract**

Lines 32-35 objective specifies a comparison between the two methods, AUSDRISK and RBGT but does not specify what is actually being compared – reading the manuscript it appear that the comparison focuses on several issues:

1) Rates of identification of “high” risk individuals
2) Rates of referral to GPs
3) Sensitivity and specificity
4) Ease, convenience and cost of implementation in the pharmacy

These need to be specified and the methods need to refer back to each objective.

Objective 2 should come first since it is the first finding reported in the results section.

The objectives in the introduction lines 110-113 also need to be modified.

**Background**

Lines 76-77 – provide more references to support the statement “a number of intervention programs…….” – currently there is only one citation.

Lines 84-88 – please elaborate the reason why the risk test used by Krass et al was not comprehensive – it predated the availability of the AUDRISK.

**Methods**
High Risk participants

The clinical guidelines for general practitioners referred to in this section do not specify stratification based on level, rather they define levels at which further investigation (OGTT) is recommended. Please explain why this nomenclature of “high risk” was adopted.

Lines 147-148 “whether a referral to a general practitioner had been recommended by the pharmacy staff.”

Lines 137-140- Pharmacy staff were instructed to ………

One of the points of comparison between the 2 methods was the rate of referral provision. I assume that this was obtained from the log documentation – however it is also possible that referral were given verbally and not documented – this should be mentioned in the discussion.

There needs to be information about the training that was provided to pharmacies undertaking the screening in both arms.

Data analysis – 150-154

This section needs to be expanded? – were the data tested for normality? What hypotheses or comparison are being made – in relation to the level of significance p<0.05?

What comparison was made using the Chi Squared test? Were any other significance tests used?

Lines 166-178 – Qualitative or feasibility …..

As previously noted the authors have not mentioned this as an objective of the study

A copy of the interview should be provided as an appendix? It is unclear which questions were closed and which were open ended – without a copy of interview guide it is difficult to assess the results.

What analysis was conducted using survey monkey? In the results section only themes and subthemes are presented with no supporting verbatim quotes from the original data. This is inadequate given that the authors draw certain inferences from these data.

Results

The results are reported mainly on the basis of the whole tested cohort whereas the stated objective that a comparison of the AUSDRISK and RBGT. This goes to the issue of lack of clarity in the objectives.

The authors have been selective about which findings to highlight in the test. For example they note the higher rates of referral for the AUDRISK group but do not mention that the rate of refusal of the AUSDRISK alone was higher than the combined method. The latter may be important in the overall effectiveness of the screening method and should be mentioned in the results text. As previously
mentioned, it may also be the case that the rates of actual referral are underestimated in that verbal referral may have taken place, not captured in the log documentation.

Ultimately, however, what counts is the rate of uptake of referral and this is unknown from this study.

Discussion
Overall the discussion is well written and acknowledges the limitations of the study.

However lines 340 – 348 which state
The additional qualitative data provided evidence to support the use of the AUSDRISK only instead of RBGT. The RBGT and AUSDRISK approach (Group 1) required more staff time and resources. Infection control procedures, additional training and the extra consumables required for RBGT make it less cost-effective and more invasive for participants.

This paragraph needs to be modified to reflect the limitations of the study design; it may be more cost effective but for whom? The health care system, the pharmacists? No formal cost effectiveness evaluation was conducted. Moreover no original data has been provided to support these inferences. No consumer feedback sought?

Figures – need numbering and titles

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

N/A