Reviewer's report

Title: Pedobarography as a clinical tool in the management of diabetic feet in New Zealand: a feasibility study

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Reviewer: Belinda Ihaka

Reviewer's report:

This is a very important issue in New Zealand which deserves further exploration particularly in terms of orthotic manufacture, prescription and patient reported outcomes (compliance or adherence). This article is generally written well, but requires consideration of minor comments prior to publication.

Study sample clearly defined - the study sample were clearly defined, and the sample rate was high in the high risk population. Great representation of Maori and PI population.

Measurement protocol for the pedobarographic measurements were explained and accurate, however, there were two different testing mechanisms and subjects were exposed to one or both. If the aim of the feasibility study is to evaluate which application of pedobarographic measurement is most useful to inform clinicians about dynamic plantar pressure, then some explanation regarding the difference between barefoot and in-shoe measurements would be helpful. Some context from the clinicians regarding their measurement choice would have also been valuable, for example, the clinicians ask for information on barefoot plantar pressures (single condition) directly over ulceration sites, yet all of the participants wore shoes to their appointments. Is there information that provides [%] of participants that ulcerate barefoot vs. footwear conditions? i.e Patient #1, 5, 6, 10, 12, 16, 17,18 etc). Following this, the authors mention debridement of callous as a form of off-loading - something to consider for the larger trial is a comparison between other off-loading techniques (or some mention here) in terms of plantar pressure reduction (debridement, hosiery, footwear).

Were the self-reported patient experience post-test questionnaire validated? How were the questions developed and was there any chance of bias considering it was the research team that asked the questions? An explanation of 'normal clinic time' would also be helpful here, as the
authors state that this was not interrupted because the pedobarographic measures were performed after the clinics so the second aim of the study is not relevant. In the supplementary information, two patients usually have assistive devices, yet they performed the tests unaided. Is this an accurate measure of their plantar pressures during their normal daily activities? The authors assume plantar pressure differences would occur i.e. a reduction when using assistive devices. Does this mean an over-estimation of plantar pressure could occur if this protocol is adopted in future studies? Also, this may require ethical consideration.

Throughout this article there are consistent simple grammatical errors that need to be adjusted as an example, Background line 11 ……surface of the foot. [8] (the fullstop should occur after the reference).

Abstract line 7: "management" rather then "prevention" as you state that this information is valuable in people with / without ulcers

line 28: diabetic patients - having diabetes does not define a person, perhaps "person with diabetes"

Background line 5 page 3: there is more recent work which would cover references 6 - 8 - 9 Boulton [2013] The pathway to foot ulceration….

line 17: non-diabetics to people without diabetes

line 22: references in sequence

Line 38: remove "big toe"

Line 42: reference sequence

Line 63: define 'offloading orthoses versus 'standard orthoses
Line 15 page 4: reference for 'some evidence'.

Line 24: if pedobarography has the highest degree of specificity in identifying those AT-Risk of developing ulceration (i.e. those who currently do not or who have not ulcerated?), then could the authors revise Line 43 page 15

Methods, page 6 & 7: have the pedobarography measurements (step method) been validated previously?

Discussion Line 17: remove capitulation of Discussion

Line 53: [%]

Line 1 page 15: is the supplementary information regarding the 'usefulness' of the pedobarographic information able to be presented by low- moderate- high risk- categories?

Line 25: if the role of screening is to inform, then how the information is delivered rather than the measurement itself is 'harmful'.

Line 9, page 17: check JFAR for rules regarding formatting direct quotes

Line 17: reference required - Patton 2014?

Line 42: you state future investigations regarding compliance for footwear / offloading devices, yet patient behaviour was not looked at here. Patients attended appointments were all wearing footwear however.

Line 41 page 18: remove 'chronic' footwear behaviour.
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