Author’s response to reviews

Title: Implementation of Gestational Weight Gain Guidelines - what's more effective for ensuring weight recording in pregnancy?

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Author’s response to reviews:

Many thanks for reviewing our manuscript. We have carefully considered the reviewers’ recommendations and outline the changes incorporated, below. We believe the manuscript is strengthened as a result.

Reviewer reports:

Meredith Graham (Reviewer 1): Given that the authors are unable to compare gestational weight gain across cohorts, it would be helpful to at least present typical rates of excessive gestational weight gain in Australia and compare that to the rate in cohort 3 where there is an adequate enough sample with recorded gestational weight gain.

- Thanks for this comment. We have included data from other research at our hospital and other Australian centres on page 10 and 11. These data are rarely routinely (?)captured) and reported in Australia.

Additional details about the implementation science approach that was used including findings from the surveys that were conducted would significantly strengthen the paper.

- We now include extra explanatory text on pages 4 and 5 that outlines the process in greater detail.
Additional details about the preceding work ahead of the 2014 survey (lines 83-89), whether they impacted gestational weight gain, how many participants used the booklets, etc. could be added to strengthen the paper.

- We have now added that data which was under review at the same time as this manuscript. We are now able to present and reference this information. This has been added on pages 10/11 following the data about GWG requested above.

On line 67, consider rephrasing the last portion of the sentence rely on accurate weight records for timely clinical interventions, such as referral to anaesthetists, for glucose tolerance testing, to dietitian. It is unclear as is.

- Edited, as suggested. This now reads: Further, many clinical guidelines (e.g. IOM, Queensland Health [1, 15]) rely on accurate weight records for timely clinical interventions, such as referral to anaesthetists and dietitians and for undergoing glucose tolerance testing.

Weight being recorded at booking visit should be included only in one table since the % are the same by person and by visit. It seems that it is a better fit in Table 2.

- Apologies for this oversight. We have edited, as suggested.

The mean week of gestation for weight booking is quite late into pregnancy and could mean that women are already on a trajectory by that point to gain excessively. This should be discussed as a limitation.

- Amended, as suggested. We have also discussed the limitation of the late booking – link to accuracy of pre-pregnancy weight. The extra text reads: Furthermore, due the relatively late timing of the women’s booking visit there is the potential for inaccuracies of pre-pregnancy weight reporting. However, it has been demonstrated that there is a high correlation between measured and self-report anthropometry (ref provided). There is also the potential for an unhealthy weight gain trajectory to be established with later bookings which should be addressed in future interventions.
Catherine McParlin (Reviewer 2): Overall this is a really interesting project examining staff behaviour change and implementation of guidelines. Although the current paper just presents the outcomes in terms of the actual recording of weight measurements I am keen to read more about how the implementation science aspect was conducted and would be very interested to see how this change in practice impacts on clinical outcomes and the women themselves.

- Thanks for these comments. We have provided more context in the introduction regarding the Implementation Science approach. We also provide data for a study that has recently been published which we can now reference. This provides information on women’s service engagement and opinions, as well as self-reported gestational weight gain and compares these data with information collected at the service’s inception in 2008. The purpose of this paper was to investigate and report on implementation and subsequent behaviour change. Clinical outcomes including weight measurement remains of significant interest to the authors and is currently being considered for a future, separate paper.

The paper itself is fairly easy to read and understand. I only have a few minor comments which I think could easily be addressed.

1. Page 4 line 95, b) 'staff in-services', what does this refer to? I presume in service training?

- apologies for this short hand. Yes, this means in-service training. We have clarified this phrase.

2. Matrix is first mentioned on page 5 line 113 but you don't explain what this is until line 118. Maybe move the explanation to the first reference to Matrix?

- apologies for this oversight. We have edited the text, as recommended

3. Table 1, Are the pp weights all really 63.0 with almost the same SD?

Yes – these data are correct. We found that interesting too. I think it was a function of such a large data set from a fairly homogenous population.

Just an observation, the women in Australia seem to book late (around 20 weeks), how accurate is the PP weight? I'm sure a lot of women would have been guessing?
Thanks for this observation. As addressed in a point raised by reviewer 1 about the limitations of later bookings, we have included extra text which reads: Furthermore, due the relatively late timing of the women’s booking visit there is the potential for inaccuracies of pre-pregnancy weight reporting. However, it has been demonstrated that there is a high correlation between measured and self-report anthropometry (ref provided). There is also the potential for an unhealthy weight gain trajectory to be established with later bookings which should be addressed in future interventions.