PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (**http://bmjopen.bmj.com/site/about/resources/checklist.pdf**) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below.

ARTICLE DETAILS

TITLE (PROVISIONAL)	Induction of labour at 39 weeks versus expectant management in low-risk obese women: study protocol for a randomised controlled study
AUTHORS	Krogh, Lise Qvirin; Boie, Sidsel; Henriksen, Tine Brink; Thornton, Jim; Fuglsang, Jens; Glavind, Julie

VERSION 1 – REVIEW

REVIEWER	Crosby, David National Maternity Hospital, Obstetrics and Gynaecology
REVIEW RETURNED	21-Oct-2021

GENERAL COMMENTS	This is a well written and well structured protocol for a multicentre randomised controlled trial assessing induction of labour at 39 weeks (+ 0-3 days) vs expectant management in women with a pre-pregnancy body mass index of ≥30kg/m2. Please be consistent with BMI units throughout the manuscript. This is worthy of publication and of significant interest to the obstetric community. I look forward to the results.

REVIEWER	Wataganara, Tuangsit Mahidol University, Obstetrics & Gynecology
REVIEW RETURNED	21-Nov-2021

GENERAL COMMENTS	The WINDOW study protocol by Krogh and colleagues prospectively compares the risks of Cesarean section in women with pre-pregnancy BMI >/= 30 kg/m2 randomized to induction of labor vs expectant management at 39 weeks of gestation who deliver at participating delivery centers in Denmark. This is an ongoing study, with active recruitment started in October 2020. The methodology of this study is solid and straightforward, and I may have only a few points for clarification purposes for kind considerations of the authors. In Methods and Analysis; Sites, the number of sites contributing to this trial should have been mentioned. The full-length list can be cited elsewhere. In Methods and Analysis; Randomization, it should have been clearly stated that, if not at the time of eligibility screening at 32 and 38 weeks of gestation, when exactly the randomization take place. A simple statement such as “Eligible women are randomized before 39 weeks of gestation, and before the onset of labour” may be sufficient.

	In Statistical Analysis Plan, the possibility of bias from lack of control or standardization of methods to induce labor, thresholds for emergency Cesarean section, blood transfusion, ICU/NICU admissions among participating sites should have been mentioned. Plans to recognize and handle this type of error with appropriate statistical modeling should have been laid out in advance, if possible. In Trial Oversight; there should have been a mention of pre-determined criteria (i.e. higher rates of specific maternal or neonatal morbidity) at 600-case interval evaluation and audit for the trial to be prematurely terminated, either as a whole or only specific participating sites with their outcomes skewed toward unfavorable outcomes. It is also possible to terminate the trial, or the targeted enrollment can be reduced, once the benefits of induction outweighed the expectant treatment at 600-case milestone.

REVIEWER	Delabaere, Amélie Centre Hospitalier Universitaire de Clermont-Ferrand, obstetrics and gynaecology
REVIEW RETURNED	27-Nov-2021

GENERAL COMMENTS	This subject is really interesting. The main reproach to the ARRIVE study is its USA populations is more obese to the european population. If that is the reason of the success of induction at 39 WG, we must to try the labor induction in specific overweight population.

REVIEWER	Gibreel, Ahmed Mansoura University, Obstetrics and Gynecology Department
REVIEW RETURNED	28-Jan-2022

GENERAL COMMENTS	This is a well-written protocol . In the methodology section, the reader may be confused as this might be a trial comparing induction at 39 week versus no induction at all. I would recomend amending the title to be Induction at 39 w versus 41 week. In the secondry outcome measures, the first one is the mode of delivery, the authors need to explain what they mean in view of the primary outcome measure is cesarean section rate. My understanding is whether women left for conservative managment had spontaneos delivery or induced.

REVIEWER	Youssouf, Nabila London School of Hygiene and Tropical Medicine, EPH
REVIEW RETURNED	31-Jan-2022

GENERAL COMMENTS	Thanks for a well-thought out protocol. All looks in order - just a couple of minor grammatical omissions to be rectified prior to publishing online, in my opinion.

VERSION 1 – AUTHOR RESPONSE

Reviewer 1	
This is a well written and well structured protocol for a multicentre randomised controlled trial assessing induction of labour at 39 weeks (+ 0-3 days) vs expectant management in women with a pre-pregnancy body mass index of ≥30kg/m2. Please be consistent with BMI units throughout the manuscript.	The comment is very relevant. We have added BMI units throughout the manuscript as suggested.
This is worthy of publication and of significant interest to the obstetric community. I look forward to the results.	We thank the reviewer for the positive evaluation of our study.
Reviewer 2	
The WINDOW study protocol by Krogh and colleagues prospectively compares the risks of Cesarean section in women with pre-pregnancy BMI >/= 30 kg/m2 randomized to induction of labor vs expectant management at 39 weeks of gestation who deliver at participating delivery centers in Denmark. This is an ongoing study, with active recruitment started in October 2020. The methodology of this study is solid and straightforward, and I may have only a few points for clarification purposes for kind considerations of the authors.	We are very glad for the positive evaluation of our study and we are pleased to clarify the purposed points. Please see below.
In Methods and Analysis; Sites, the number of sites contributing to this trial should have been mentioned. The full-length list can be cited elsewhere.	We appreciate the relevant suggestion and have inserted the number of recruiting sites. The text now reads: *"Recruitment will take place at eleven Danish delivery departments with an in-house neonatal intensive care unit. Recruiting sites are listed at ClinicalTrials.gov."* Please see page 4, lines 2 to 3.
In Methods and Analysis; Randomization, it should have been clearly stated that, if not at the time of eligibility screening at 32 and 38 weeks of gestation, when exactly the randomization take place. A simple statement such as “Eligible women are randomized before 39 weeks of gestation, and before the onset of labour” may be sufficient.	We are glad to have this comment and we have rephrased the description of the randomization as follows: *"Before 39 weeks of gestation, and before the onset of labour, women who give informed consent are randomised to one of the two interventions (…)"* Please see page 4, lines 40 to 41.
In Statistical Analysis Plan, the possibility of bias from lack of control or standardization of methods to induce labor, thresholds for emergency Cesarean section, blood	In Denmark all delivery departments adhere to national guidelines for labour induction. The methods for induction are similar at 39 to 42 weeks of gestation.

transfusion, ICU/NICU admissions among participating sites should have been mentioned. Plans to recognize and handle this type of error with appropriate statistical modeling should have been laid out in advance, if possible.	Furthermore, if methods to induce labour, threshold for emergency Caesarean section, transfusion or ICU/NICU admissions should differ between sites, this is taken care of by stratification by site during the randomization procedure. For these reasons, we designate the trial as a pragmatic trial and have chosen not to control between-sites differences in the clinical management of the women. We have made elaborations in the text which now reads: *"Site stratification is used to take into account that sites could differ in participant characteristics and in the clinical management."* Please see page 4, line 42 and page 5, line 1.
In Trial Oversight; there should have been a mention of pre-determined criteria (i.e. higher rates of specific maternal or neonatal morbidity) at 600-case interval evaluation and audit for the trial to be prematurely terminated, either as a whole or only specific participating sites with their outcomes skewed toward unfavorable outcomes. It is also possible to terminate the trial, or the targeted enrollment can be reduced, once the benefits of induction outweighed the expectant treatment at 600-case milestone.	There is no statement of pre-determined criteria in the manuscript since we do not have any formal stopping criteria. Our independent DMEC have met and considered the need for a formal statistical stopping rule. Their decision was that this was not appropriate in view of other considerations, such as balance of risks and benefits, internal consistency of results, external evidence, and the likelihood that results would alter practice, that they need to take into account. To reassure the reviewer, we can confirm that the members of the DMEC are well aware of the dangers of both early stopping and over continuation. We have made clarifications in the text which now reads: "*No formal stopping criteria are pre-defined.*" Please see page 9, line 7.
Reviewer 3	
This subject is really interesting. The main reproach to the ARRIVE study is its USA populations is more obese to the european population. If that is the reason of the success of induction at 39 WG, we must to try the labor induction in specific overweight population.	We thank the reviewer for the positive acknowledgement towards our study and we agree on the point of view.

Reviewer 4	
This is a well-written protocol.	We thank the reviewer for the positive comment.
In the methodology section, the reader may be confused as this might be a trial comparing induction at 39 week versus no induction at all. week.	We acknowledge that the term Expectant Management do not provide much details in itself although it is an established term in the literature e.g. in the ARRIVE study. The term is defined in the methods section clarifying that allocation to Expectant Management means either awaiting spontaneous labour onset or induction if an indication for delivery arises. We have made further clarifications in the text which now reads: *"Awaiting spontaneous labour onset or intervene as usual e.g. induction at a later gestation if an indication for delivery arises."* Please see page 5, lines 13 to 14.
I would recommend amending the title to be Induction at 39 w versus 41	We have rephrased the title also according to the editors suggestion: *"Induction of labour at 39 weeks versus expectant management in low-risk obese women: study protocol for a randomised controlled trial"* Please see page 1, lines 1 to 4.
In the secondary outcome measures, the first one is the mode of delivery, the authors need to explain what they mean in view of the primary outcome measure is cesarean section rate. My understanding is whether women left for conservative management had spontaneous delivery or induced.	We thank the reviewer for drawing our attention to this and recognize the ambiguity in this outcome. We have clarified this point and the text now reads: *"Mode of delivery if not by caesarean section."* Please see page 5, line 31.
Reviewer 5	
Thanks for a well-thought out protocol.	We thank the reviewer for the positive evaluation of our study.
All looks in order - just a couple of minor grammatical omissions to be rectified prior to publishing online, in my opinion.	We have been through the grammars again and hopefully any remaining typos will be caught in the proofreading process.
Editorial comments	
The title is currently not very informative. Please revise your title to indicate the research question, study design, and setting (as well as	We appreciate the suggestion. Please see our reply to Reviewer 4, comment no. 3.

making it clear it's a protocol). This is the preferred format of the journal.	
Please revise the abstract >> ethics and dissemination section to make it clear that The Central Denmark Region Committee on Biomedical Research Ethics approved the study.	We have clarified the Ethics and dissemination section in accordance with the suggestion and the text now reads: *"The Central Denmark Region Committee on Biomedical Research Ethics approved the study."* Please see page 2, line 18.
Please correct the trial registration number. NCT0460385 should be NCT04603859.	We thank the editor for drawing our attention to this. The trial registration number is now corrected as pointed out.
Please ensure all items from the SPIRIT checklist have been accurately completed and included in your submission. For example, please include a model consent form as a supplementary file and refer to this in the methods section when you mention consent. This is requested in item 32. It's not clear why this item, and some other items such as 18, 19 and 23, are not applicable. For help and guidance completing the checklist see: http://www.bmj.com/content/346/bmj.e7586	The items missing from the SPIRIT checklist were all part of a more extended protocol version. They have now been added to the text and the SPIRIT checklist have been updated accordingly. Please find the revised changes in the manuscript: Item 5c: Page 9, lines 40 to 41. Item 18a and 18b: Page 8, lines 4 to 12. Item 19: Page 8, lines 12 to 18. Item 23: Page 8, line 34. Item 25: Page 9, lines 21 to 25. Item 30: Page 9, lines 27 to 29. Item 32: Page 4, lines 10 to 11.
Author comment	
	Going through the manuscript we discovered an error to the reference regarding the Childbirth experience questionnaire (CEQ). We have corrected this and the reference now appear correctly from the reference list. Please see page 11, lines 44 to 45.