Author's response to reviews

Title: Dutch women in midwife-led care at the onset of labour: which pain relief do they prefer and what do they use? A prospective multi-centre cohort study

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Author's response to reviews: see over
September 15, 2013

Dr Cecily Beck
BMC Pregnancy and Childbirth

Dear Mrs. Dr Beck,

I am pleased to resubmit our paper entitled ‘Dutch women in midwife-led care at the onset of labour: which pain relief do they prefer and what do they use?’ to BMC Pregnancy and Childbirth for your consideration.

This study is a quantitative study which included 1511 Dutch midwife-led care (pregnant) women and is the first study into women’s preferred use and actual use of pharmacological pain relief during labour in the Netherlands.

Many pregnant women are concerned about the pain of labour, and about how they can deal with such pain effectively. Involvement in decision making and the ability to choose between different methods of pain relief contributes to childbirth satisfaction. Little is known about women’s preferred use and actual use. Also little is known about women’s socio-demographic and personal associated characteristics with women’s identified preferred use of and actually used pharmacological pain relief.

We framed the paper in terms of current evidence supporting management of labour pain and recommend that in their daily practice, care providers should discuss the unpredictability of the labour process and the fact that actual use of pain medication often does not match with women’s preference prenatally.

We gave our response in italic per item between the texts of the feedback of the reviewers.

The revised manuscript has been read and approved by all the authors (de Jonge, Hutton and Lagro-Janssen). We look forward to hearing from you.

Yours faithfully,

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Reviewer's report

Title: Pain medication during labour: which pain relief do women prefer and what do women use? Part of a prospective multi-centre cohort study

Version: 2 Date: 3 June 2013
Reviewer: Wendy Christiaens

Reviewer's report:

General comments
1. Is the question posed by the authors well defined? Yes.
2. Are the methods appropriate and well described? No, see detailed comments below.
3. Are the data sound? Yes.
4. Does the manuscript adhere to the relevant standards for reporting and data deposition? Yes.
5. Are the discussion and conclusions well balanced and adequately supported by the data? The conclusions are supported by the data, but the discussion is not well balanced. See detailed comments below.
6. Are limitations of the work clearly stated? Representativity (hence generalisability to the Dutch population) is not discussed.
7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished? Yes.
8. Do the title and abstract accurately convey what has been found? No. See detailed comments below.
9. Is the writing acceptable? As I am not a native speaker, I feel not well placed to evaluate the language, but I have included some suggestions in the detailed comments below.

Detailed comments
Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)
1. In the abstract I miss information regarding the mode of data collection: survey (drop off or face to face interview), how many questionnaires at which point(s) in time etc. Mentioning (in the abstract) multi-level analysis to control for the clustering seems less important to me.
Thank you very much for your constructive feedback and your effort and time to review our article.

In order to clarify the mode of data collection to the reader of our ‘Abstract’ we added to the ‘Method’ section of the ‘Abstract’:

‘Our study sample consisted of 1511 women in primary care who completed both questionnaire two (from 34 weeks of pregnancy up to birth) and questionnaire three (around six week post partum). These questionnaires were presented either online or on paper.

We deleted from the abstract the sentence about the multi-level analysis.

2. p. 6, line 19: Several purposive sampling methods exist. Which one has been used? Was it a kind of quota sample? More detail about the sampling procedure (at the level of midwifery practices) would be interesting.

To clarify to the reader how we made use of purposive sampling we added in the ‘Method’ paragraph:

We approached twenty of the 519 primary care practices in the Netherlands and invited them to participate in this study. We purposively selected practices using three stratification criteria: region: north, middle, south; level of urbanisation: urban, rural or combined urban/rural; practice type: dual or group practice. The approached practices received a brochure with information on the study and were visited by two members of the DELIVER research team who explained the study in further detail. If a practice declined participation, a replacement was found taking region, urbanisation and practice type into account. Ultimately, fourteen practices declined participation, mostly because of time constraints.

3. In addition it would be interesting for the reader to know more about the characteristics of the midwifery practices. The authors could for example add a table describing the characteristics of each practice, this way the reader has also an idea of the numbers in each category.

Our aim was to cover the variety of midwifery practices throughout the country. In order to be more specific about the characteristics of the midwifery practices we added ‘(table 1a)’ at the end of the sentence ‘We purposively selected:……...
(table 1a). Table 1a is added at the end of our article.

4. What were the inclusion criteria? Which criteria did midwives use to invite women to the study?

In order to be more precise about which criteria midwives used to invite women to the study, we added in our Method paragraph (instead of the sentence ‘Participation was restricted to women who spoke Dutch, English, Turkish or Arabic’): ‘Midwives invited all women in their practices who spoke Dutch, English, Turkish or Arabic’.

We described all the inclusion criteria of our study sample at the end of the section ‘study population’ of the method paragraph: ‘For this study, all women with singleton pregnancies who were in midwife-led care at the onset of labour and who completed both questionnaires two (from 34 weeks of pregnancy until delivery) and three (around six weeks after delivery) were selected. We excluded women who did not meet the criteria for midwife-led care at the onset of labour. Thus we excluded women who were referred to obstetrician-led care during pregnancy; gave birth before 37 weeks and 0 days or after 42 weeks and 0 days gestation; were referred for prolonged rupture of membranes (> 24 hrs without being in active labour). Women who had an induction of labour or planned Caesarean section start labour in obstetrician-led care and were therefore not included in our sample.

5. What impact does the exclusion of women referred to obstetrician-led care have on the results? Can they be referred because of fear of labour pain?

Women who fear labour pain may be referred for consultation to an obstetrician, but are not usually referred to secondary care during pregnancy. We clarified this in ‘background’ paragraph at the end of pg.4 and the beginning of pg.5: ‘Women who fear labour pain and who have decided that they will choose medicinal pain relief before going into labour may be referred by their midwife for a consultation with the obstetrician in order to discuss their labour pain management. However, usually these women will start their labour in midwife-led care and they will make arrangements with their midwives that they will be referred for pain medication as
soon as labour starts [17].

6. You do not claim representativity and the focus on women in midwifery led care at the onset of labour is not a problem, but this focus should be clear to the reader from the beginning of the article. For example the focus on midwifery led care could perhaps be integrated in the title of the article?

We agree with the reviewer to be more specific in the title about our focus on women in midwife-led care and changed the title into:
‘Dutch women in midwife-led care at the onset of labour: which pain relief do they prefer and what do they use?’

7. The paragraph describing the variables used in the study is badly written. Here you can find some suggestions, but I think it also needs restructuring: first comes a paragraph about socio-demographic and personal characteristics in which each variable is described. Next paragraph about birth and pain relief related variables, again with a clear description of each variable. Now we don’t know anything about how the question(s) about pain relief was( were) formulated, nor the answer categories if there were any.

In order to be more specific about the variables that we used in our study we described all the individual variables and restructured this paragraph in the Method section as advised by the reviewer,

‘Women reported their date of birth; age was subsequently categorized into ‘under 25’, ‘from 25 to 35’ and ‘over 35’. Women’s highest level of education was recoded into low (no education, only primary education or lower vocational education), medium (only secondary school education or medium vocational education) and high (college, university or post-graduate education). Women were asked about the country of birth of both parents. Women’s ethnicity was based on the definition used by Statistics Netherlands, which considers someone to be of non-Dutch ethnicity if at least one of the parents was born in a country other than the Netherlands. If the parents were born in two different countries, then the mother’s country of birth is considered the ‘country of origin’. Finally, women reported their number of children,
which was then dichotomized into ‘primiparous’ and ‘parous’.

Planned place of birth (home or hospital) was taken from the perinatal registration form of the Netherlands Perinatal Registry which was filled in by the midwife during pregnancy.

Women were asked whether they had a preference in terms of pain management during labour and, if so, what would be their preference in terms of medication; pethidine, remifentanyl, epidural or no medication. In the questionnaire, women were informed that they would have to be referred to obstetrician-led care if they would choose to use pharmacological pain relief.’

8. The framing of the question is also important in terms of what was actually measured. Thompson and Sunol (1995) for example distinguish between ‘predicted expectations’ and ‘ideal expectations’. Predicted expectations take practical and situational restrictions into account, while ideal expectations refer to aspirations, preferences and desires in an ideal world. So, I am interested to know whether women interpreted the question as a preference taking the context into account or as an ideal. In the first case, a women planning a home birth, could not have answered pharmacological pain relief, while in the second case, she could because for her a home birth with an epidural would be the ideal well knowing that this is not possible. Did the authors check this kind of patterns in the data? If yes, how were they handled? (Thompson, A.G.H., & Sunol, R. (1995). Expectations as determinants of patient satisfaction – Concepts, theory and evidence. International Journal for Quality in Health Care, 7, 127–141.)

We agree with the reviewer that the nature of what ‘preference’ actually meant to women should be discussed. We added this information to the discussion paragraph: ‘Surprisingly, only 25.3% of the women who expressed prenatally that they preferred some method of medicinal pain relief during labour actually used a medicinal method. It might be that women’s preferences regarding medicinal pain relief are unmet by their care-providers. Although a multidisciplinary Dutch guideline states that women who request pain medication should receive this, it is possible that not all professionals adhere to this recommendation. Since research has shown that
women’s involvement in decisions on the use of pain relief contributes to childbirth satisfaction [12], further studies are needed into the decision making process regarding pain relief in the Netherlands. On the other hand, it is also likely that women take into account different scenario’s that may occur during labour as formulated before. Medicinal pain relief during labour does not seem to be a dichotomous choice for women but to comprise a continuum of choices.

The next text is inserted in the discussion paragraph at the end of the section ‘Women’s preferences regarding medicinal pain relief’;

‘They might plan to stay at home without medicinal pain relief as long as labour progresses well. However, at the same time women might choose for medicinal pain relief if labour is more difficult than anticipated. This finding is in line with the interview study of Klomp et al. [17]. In this qualitative study most women expressed prenatally that they did not want to make use of medicinal pain relief during labour but at the same time they had thought of their preferred method in case they would need some pain medication after all.’

9. Table 2: I am not used to this kind of presentation with crude and adjusted OR. However I noticed quite a difference between the crude and adjusted OR of ethnic background. How should this be interpreted? In table 4 the same accounts for the Ors for planned place of birth and parity.

The difference between adjusted and crude OR shows that the association becomes weaker or stronger when we take into account the confounding factors.

10. The authors do not take a critical stance towards the Dutch maternity care system or the care providers side of the story. More specifically I think the discussion section would benefit from a discussion about whether the finding that only one quarter of the group preferring pharmacological pain relief, actually experienced pharmacological pain relief, might be an indication of an unmet need. I doubt that women have just changed their mind. Perhaps it is more likely that they did not get what they wanted because they had little control over the decision about pain relief, or because it was not available. This should at least be a recommendation for further research.
We discussed this issue at point 8: ‘Surprisingly, ....... after all’

Involvement in decision making and satisfaction with the experience of childbirth is mentioned in the background section, so it would be nice to feedback to this.  

We discussed this at point 8: ‘...Since research has shown that women’s involvement in decisions on the use of pain relief contributes to childbirth satisfaction [12], further studies are needed into the decision making process regarding pain relief in the Netherlands’.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct).

1. I feel somewhat uncomfortable with the sentence: “It may be useful for care providers to assist women in keeping an open mind towards the approach to pain management that they will require in labour.”

a) The message is not quite clear to me... are care providers recommended to be open to women’s preferences whatever they are (for or against pain relief), or to discourage women to use pain relief, or to encourage women to use pain relief, or to encourage women to be open to their care provider about their wish to have pain relief?

b) Does this sentence suggest that asking for pain relief is pretty much considered as ‘not done’ by some care providers in some care contexts?

c) ‘That they will require’ gives a remarkable twist to the sentence. I am not sure how to interpret it. It seems to suggest that women should not decide too much in advance and just wait and see how the delivery goes. But perhaps I am reading too much between the lines here. Please clarify.

We agree with the reviewer that this sentence can be misinterpreted. To be more specific, we changed this part into:

‘With regard to counselling for labour pain management, care providers should discuss the unpredictability of the labour process. Labour can be easier or more difficult than anticipated. This can help women to have realistic expectations towards labour pain management.’
2. p. 5; Line 9: “continuous support of the care-giver”. I would suggest to add the partner, or leave the caretaker (professional or informal) unspecified and say continuous support tout court.
We agree with the reviewer and deleted the care-giver.

3. p. 6 line 11: ‘their preferred use and…” I would reformulate this into ‘their prenatal preferences regarding pain relief and actual use of…”.
We agree and reformulated the sentence.

4. p. 7, line 19: Data on…. Were used in the analyses as …”?
We reformulated into ; data of … were used in the analyses as independent variables…”

5. p. 7, line 23 at the end: the level of education…. Not the highest level of education. Highest can be deleted from the sentence.
We deleted ‘highest’

6. p. 8; line 4, a ‘ is lacking after parous.
We inserted after ‘parous’ a ‘.

7. P. 8, line 7: “Women were asked to express which preference they had if they would use pharmacological pain relief during labour”. I am not a native speaker, but this sentence does not sound right. I would reformulate… e.g.: women were asked to express their preference regarding pain relief during labour.
We agree and in order to be more precise, we reformulated the sentence into: ‘Women were asked whether they had a preference in terms of pain management during labour and, if so, what would be their preference in terms of medication; pethidine, remifentanil, epidural or no medication’.
In the questionnaire, women were informed that they would have to be referred to obstetrician-led care if they would choose to use medicinal pain relief.

8. Next sentence… I would replace ‘told that they would have to be referred to …’
by ‘informed about referral to obstetrician-led care if ….’

We agree and replaced ‘told’ by ‘informed’

9. Next sentence “for the analyses regarding women who used their preferred method of pain relief, age and….”.

We agree and reformulated as advised.

10. p. 8, line 16, “no method at al”

We made the suggested changes’.

11. p. 9, line 5, We used (needs a capital).

We changed ‘w’ into capital ‘W’

12. P. 9, line 14: reformulate sentence into ‘…2398 individuals filled in both the second and third questionnaire”.

We agree and changed as advised.

13. p. 9, line 16, figure 2 should probably be figure 1.

We changed ‘fig.2’ into ‘fig.1’

14. P. 9, line 21 reformulate ‘… some method of pharmacological pain relief.”

Instead of some method of pharmacological method of pain relief.

We reformulated as advised.

15. Since women who did not prefer pharmacological pain relief may have preferred to use non-pharmacological pain relief or no pain relief at all, I would suggest to rename the category which is now called ‘non-pharmacological’ into for example ‘no or non-pharmacological pain relief’, also in the tables, because this is quite confusing.

We agree with the reviewer that this can be quite confusing. We studied women’s preferences for pharmacological pain relief and women’s used pharmacological pain relief. If women did not have a preference for or did not use pharmacological pain relief they belong to the ‘no medication’ group. For this reason, we changed the label of ‘pharmacological pain relief’ into ‘medicinal pain relief’ and the label of ‘non-
pharmacological pain relief” into ‘no-medication’. We changed the labels in all text, and also in all tables.

16. In the results section a clear distinction should be made between three categories:

- Women preferring no pain relief
- Women preferring non-pharmacological pain relief
- Women preferring pharmacological pain relief

In addition in comparisons it must be clear which group is compared to which group.

We agree with the reviewer that this part was confusing. For this reason we made new labels as described at point 15 in order to be more specific about our research question.

17. Title: ‘preferred use of pharmacological pain relief’ is not clear.

We agree and reformulated the title of the paragraph in the discussion section into: ‘Women’s preferences regarding medicinal pain relief’.

18. Title: ‘using the preferred pharmacological pain relief and associations with age, level of …’ is not clear.

We agree and reformulated the title of the paragraph in the discussion section into: ‘Use of medicinal pain relief’.

19. p. 11, line 3-4: compared to women who were parous, … when they had preferred to.” I do not understand this sentence.

We reformulated the sentence into: ‘Primiparous women were more likely to use their preferred method of pharmacological pain relief compared to parous women.’

20. p. 11, line 21: feel less secure? Instead of be less secure.

We reformulated ‘be less secure’ into ‘feel less secure’.

21. p. 14, line 2: Our large study do provides…

We reformulated; ‘Our large study provides..’ into ‘Our large study provides…’;
Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

1. The title seems to suggest that the paper is only about women who labored with pain relief. I would recommend the author to broaden the scope and include women who labored without pain relief, which is in fact the large majority in the population subject to this study. For example: Dutch women’s preferences and experiences with pain medication during labour.

*We agree with the reviewer and changed our title into:*

‘Dutch women in midwife-led care at the onset of labour: which pain relief do they prefer and what do they use?’

2. I do not understand why planned place of birth was derived from the perinatal registration form instead of being asked in the questionnaire.

*In the questionnaires, women were not asked about their planned place of birth because we knew we could get this information from routine registration data.*


*Thank you for your advice regarding this reference, we added the reference in the background section (new ref.13).*

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**
No conflict of interest.
Reviewer's report

Title: Pain medication during labour: which pain relief do women prefer and what do women use? Part of a prospective multi-centre cohort study

Version: 2 Date: 6 June 2013
Reviewer: Paloma Toledo

Reviewer's report:
This prospective multi-center cohort study by Klomp et al evaluates analgesic preferences and actual use patterns of 1,511 women who were part of a larger study (the DELIVER study). The authors used univariable and multivariable logistic regression methods to evaluate demographic and clinical characteristics that were associated with intended and actual use of labor analgesia. The authors found that very few women preferred pharmacologic pain relief, and only 15% of the women surveyed used pharmacologic pain relief. Ethnic background and planned place of birth were associated with preferred use of pharmacologic pain relief, and place of birth and parity were predictive of use of pharmacologic pain relief. This study is very unique in that it is a relatively large cohort from the Netherlands, which, in contrast to the United States has a culture of natural childbirth. I do have some questions and methodological issues that I will outline below by section.

Mandatory compulsory revisions:
Introduction:
1. I am a practitioner in the United States, and as such, am unfamiliar with the analgesic options that are available to patients who choose to deliver at home. Could the patient receive intravenous opioids if they opted for a home birth or epidural analgesia? From the way the introduction is written, it seems that all patients who are desirous of pharmacologic analgesia (I am assuming you mean opioid and neuraxial analgesia) would need to deliver in a hospital. As such, I don’t understand why the second multivariable model (actual analgesia use) would include patients who opted for a home birth as it seems that these patients could not have chosen to use this method of analgesia. This could affect the outcome of analgesic use if the choice of home birth precludes some or all of
these options. 

Thank you very much for your constructive feedback and your effort and time to review our article.

Women in the Netherlands can not receive intravenous opioids when they deliver at home (equally, when they deliver in hospital with their own midwife). Women have to be referred to obstetrician-led care if they need medicinal pain relief, we described this in the background section.

To clarify to the reader our results about the women who planned to give birth at home and who at the same time expressed their preferred use of medicinal pain relief we added in the discussion paragraph:

‘….. It might be that women may take into account different scenarios that may occur during labour. They might plan to stay at home without medicinal pain relief as long as labour progresses well. However, at the same time women might choose for medicinal pain relief if labour is more difficult than anticipated’

2. In the 7th line of page 5, consider rephrasing the sentence that starts with “Dealing with pain…” to something more on the lines of, “Labor pain management can be achieved through…” as the way it is currently written sounds colloquial.

In order to sound less colloquial we changed this sentence into: ‘Labour pain can be managed through …..’

Methods:

1. Consider changing the word clients to participants throughout the text. 

We agree with your comment to use the same word throughout the text for the participants of the study and that the term ‘clients’ is controversial. We decided to change the word clients or the word participants throughout the text into (pregnant) women.

2. What was the content of the three questionnaires? Is it possible to make them available as an appendix or an online supplement? There may be other variables that you want to include from the survey depending on the content of the survey.

To clarify to the reader we added the questionnaires as ‘Additional file’.

We described more clearly how questions about pain relief were asked in the
'Methods' section:

In the prenatal questionnaire, women were asked whether they had a preference in terms of pain management during labour and, if so, what would be their preference in terms of medication; pethidine, remifentanil, epidural or no medication [Additional file 1]. In the postnatal questionnaire, women were asked whether they used any method of medicinal pain relief during labour and, if so, what method of medication: pethidine, remifentanil, epidural or no medication [Additional file 2].

3. Were patients who ultimately delivered via cesarean delivery included or excluded from the sample?

All women in midwife-led care at the start of their labour were included. If women were referred during labour and ended up with a caesarean section, they would be in our sample, but planned cesarean sections were excluded.

To clarify to the reader, we added in the exclusion criteria in the 'Method' section: ‘………..Women who had an induction of labour or planned Caesarean section start labour in obstetrician-led care and were therefore not included in our sample.’

4. How is level of education categorized? You may want to use the actual cut-offs used to define the educational levels, as this would improve your external validity.

In order to be more specific about the actual cut-offs that we used to define the educational level we added in the ‘Method’ paragraph:

Women’s highest level of education was recoded into low (no education, only primary education or lower vocational education), medium (only secondary school education or medium vocational education) and high (college, university or post-graduate education).

5. Just to clarify, if I am born in the Netherlands, but my mother is Cuban and my father is from the Netherlands, I am considered non-Dutch? I would think that culturally I would be Dutch since I was born and raised in the Netherlands, and probably speak Danish and not Spanish, since my mother is living in the Netherlands. I realize that this is not your definition, but you may want to reanalyze your data using country of birth to define Dutch/non-Dutch as the Statistics Netherlands definition seems overly exclusive.
We agree with the reviewer that that our definition might be overly exclusive, each definition has pros and cons. However, it is common for Dutch researchers to use the definition of Statistics Netherlands.

6. How was the question on pharmacological pain relief asked? Was this a yes/no question, or were they given choices and asked if they planned on using any/all of the options? This has implications for the data analysis.

As described in question 1, we added:

‘In the prenatal questionnaire, women were asked whether they had a preference in terms of pain management during labour and, if so, what would be their preference in terms of medication; pethidine, remifentanyl, epidural or no medication [Additional file 1]. In the postnatal questionnaire, women were asked whether they used any method of medicinal pain relief during labour and, if so, what method of medication: pethidine, remifentanyl, epidural or no medication [Additional file 2].

7. You may want to include your model discrimination and fit indices in your methods and results.

Thank you for your suggestion.

We added the Nagelkerke R square in both table 2. ($R^2=10\%$) and table 4. ($R^2=18\%$). R squares in observational studies of 10% to 20% may be interpreted as reasonable [Twisk, 2010]. The aim of our study was to estimate the independent association between certain variables (age, education level, parity, ethnicity, and planned place of birth) and the dependent variables. These independent variables were predetermined.

To clarify this to the reader we changed the name of table 2 into:“ Association between age, education level, parity, ethnicity and planned place of birth and women’s preference to use medicinal pain relief” and we changed the name of table 4. into: “Association between age, education level, parity, ethnicity, planned place of birth and use of medicinal pain relief method that was preferred prenatally”. We changed the names of the columns of table 2. from ‘crude OR’ into ‘Univariable OR’; from ‘Adj. OR’ into ‘Multivariable OR’. Likewise, we changed the names of the columns of table 4. from ‘crude OR’ into ‘Univariable OR’ and from Adj.OR’ into ‘Multivariable OR’.
Discussion:

1. Is there a cost difference, or any other reason, that someone who wants pharmacologic pain relief would not want to use obstetrician led care or deliver in a hospital?

   All women in primary midwife-led care are low or medium-risk (as documented in Dutch obstetrical guidelines). Women’s preference for medicinal pain relief is not an indication for obstetrician led care. When midwives refer their women (during labour) to obstetrician led care for medicinal pain relief, all maternity care costs will be paid by insurance companies.

   To clarify to the reader our results about the women who planned to give birth at home and who at the same time expressed their preferred use of medicinal pain relief we added in the discussion paragraph (see point 1):

   ‘…… It might be that women may take into account different scenarios that may occur during labour. They might plan to stay at home without medicinal pain relief as long as labour progresses well. However, at the same time women might choose for medicinal pain relief if labour is more difficult than anticipated.’

2. Why did 85% of women who wanted pharmacologic pain relief not receive it?

   Is this a systems issue (analgesia not available to them, or they could not deliver in a hospital for some reason), is this a provider issue in that midwives are resistant to transferring patients to facilities that can deliver analgesia, or is it that patients changed their mind?

   We added this information to the discussion paragraph: ‘surprisingly, only 25.3% of the women who indicated prenatally a preference to use medicinal pain relief during labour actually used a medicinal method. It might be that women’s preferences regarding medicinal pain relief are unmet by their care-providers. Although a multidisciplinary Dutch guideline states that women who request pain medication should receive this, it is possible that not all professionals adhere to this recommendation. Since research has shown that women’s involvement in decisions on the use of pain relief contributes to childbirth satisfaction [12], further studies are needed into the decision making process regarding pain relief in the Netherlands. On the other hand, it is also likely that women take into account different scenarios that
may occur during labour.

We formulated in the ‘Method’ section at the end of the paragraph ‘Women with medicinal pain relief preference and characteristics involved’:

‘They might plan........ difficult than anticipated, (see point 1). This finding is in line with the interview study of Klomp et al. [17]. In this qualitative study most women expressed prenatally that they did not want to make use of medicinal pain relief during labour but at the same time they had thought of their preferred method in case they would need some pain medication after all. Medicinal pain relief during labour does not seem to be a dichotomous choice for women but to compromise a continuum of choices’.

3. Do you have any information on what the multiparous patients used for their prior delivery analgesia? This would likely affect what form of analgesia they use for this delivery.

Unfortunately, we do not have any information of what the multiparous women used for their prior labour analgesia. We would like to add this question when we could repeat our research of labour pain management.

4. The very last paragraph of the discussion seems to repeat much of what has already been stated. Consider editing for brevity.

In order to shorten our conclusion, we changed our conclusion into:

‘In conclusion, even though the prevalence of women preferring medicinal pain relief was low (15.9%), surprisingly, only one quarter of this group actually received pain medication. Of the women who did not express any preference for medicinal pain relief prenatally (84.1%) a small proportion (14.6%) used medicinal pain relief.’

With regard to counselling for labour pain management, care providers should discuss the unpredictability of the labour process. Labour can be easier or more difficult than anticipated. This can help women to have realistic expectations towards labour pain management.

Level of interest: An article of limited interest

Quality of written English: Acceptable
Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests: I declare that I have no competing interest