Author’s response to reviews

Title: Care professionals’ perceptions of barriers to and facilitators of Partner Notification for Chlamydia trachomatis: A qualitative study

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Author’s response to reviews: see over
Dear Editor,

Thank you for giving us the opportunity to revise our paper and resubmit. We want to thank the Reviewers for their very helpful comments. Following the comments we have revised and improved our paper accordingly; comments are addressed below.

Kind regards,
Kevin Theunissen on behalf of all co-authors

**Point-by-point reply to the comments of the reviewer 1: Dolors Carnicer-Pont**

**Discretionary revisions**

*In background, last paragraph:*

1- “This study examined...... diagnosed with Chlamydia trachomatis (Ct)”

   Where ? in GPs and /or STI clinics?

We addressed this comment by **CHANGING**: “This study examined their barriers and facilitators to PN in young patients who had been diagnosed with Chlamydia trachomatis (Ct)” **INTO** “This study examined the barriers and facilitators of public health care professionals to PN in young patients who had been diagnosed with Chlamydia trachomatis (Ct) and visited the STI clinic for treatment”.

*In methods, recruitment, first paragraph:*

2- Could you explain why 42 care professionals were selected?

STI clinic care professionals from the STI clinic South Limburg provided the interviewers with available contact information from all national STI clinics. The interviewers contacted all nurses on these contact information lists. No selection was made and in total 42 nurses were invited.

For more clarity we **DELETED** the following sentences: “From email addresses of STI clinic care professionals, 42 were randomly selected from available contact information lists” and **CHANGED** it **INTO** “Between March and June 2012, an invitation letter with a short explanation of the study was send to the email addresses of 42 nurses who performed PN at their STI clinic for at least six months.”
Email addresses were obtained from available contact information to the researcher, with contacts covering all 8 Dutch coordinating STI clinics.

**In methods, data collection, last paragraph:**

3- Although semi-structured, the body of the questionnaire should have a number of questions. This number should be mentioned in the paper.

We **CHANGED** the following sentence: “Data were collected using a semi-structured interview protocol which was constructed by expert opinion, a comprehensive review of the literature and (inter)national guidelines” **INTO** “Data were collected using a semi-structured interview protocol consisting out of 17 questions and which was constructed by expert opinion, a comprehensive review of the literature and (inter)national guidelines”

**Minor essential revisions**

**In discussion, recommendations and conclusions:**

4- Since in the results section the findings of perceived organisational barriers are: “no feedback on the effectiveness of PN outcomes and PN techniques used were available” I would expect a more exhaustive proposal to overcome this weakness and make sure that effectiveness of PN can be further evaluated.

We followed the suggestion of the Reviewer and **CHANGED** the following sentences: “Future efforts should also develop ways to provide feedback to staff, which could have a positive effect on their feelings of responsibility and address their feelings of being ineffective. One option, which was mentioned by some of the care professionals and has been identified in the literature [25], is to implement an Internet-based PN system (i.e., e-mail and text messages); this strategy would take advantage of a communication technology that is being increasingly used [26]” **INTO** “Since, no feedback on the effectiveness of PN outcomes and PN techniques used is available future efforts should also develop ways to provide feedback to staff, which in return could have a positive effect on their feelings of responsibility and address their feelings of being ineffective. The frequent absence of recorded PN outcome data could be tackled by a centralized and standardized collection of PN data. Regional and/or national PN reporting systems among all stakeholders who perform PN should be developed to determine for instance notification, test,
positivity and treatment among notified partners. One option, which was mentioned by some of the care professionals and has been identified in the literature [27], is to implement an Internet-based PN system (i.e., e-mail and text messages) which can be used by the client and care professional; this strategy would take advantage of a communication technology that is being increasingly used [28].”

In discussion, last paragraph:

5- “The interviews made.......no uniform guidelines,..” There are ECDC and CDC guidelines that although have some differences they should be mentioned and Referenced

We followed the suggestion of the Reviewer and CHANGED the following sentence: “The interviews made also clear that there are no uniform guidelines about PN, a barrier also reported among GP’s [7]. These sub-optimal guidelines may lead to misconceptions about best practice, roles and responsibilities [7].” INTO “It was underlined by the results of this study that national and international guidelines about PN contain only general recommendations [26,27,28]. Guidelines do not specify which motivational strategies to use, which PN procedure to follow, or which referral strategy is preferred and how to actually do it. Lack of specific instructions was also reported as a barrier among GP’s [7]. Sub-optimal guidelines may lead to misconceptions about best practice, job roles and responsibilities [7].”

In conclusion:

6- Not sure that this study can be named “national” since doesn’t seem to have enough sample exhaustivity

We followed the suggestion of the Reviewer and DELETED the word “national” and ADDED the words “among Dutch STI clinics”. We changed the sentence into: “The results of this study among Dutch STI clinics provide insight into the challenges and facilitators at the care professional, patient and organisational levels which focus mainly at the steps 2,3 and 4 of PN, i.e., identify, notify, test, treat and educate sex partner(s).”

In conclusion:

7- “Providing feedback”: is it another way to say evaluated? How do you propose to do the evaluation of effectiveness of PN?

Please, see answer comment 4
Point-by-point reply to the comments of the reviewer 2: Gill Bell

Major revisions

Abstract, introduction:

1- The abstract states that PN in the Netherlands is sub-optimal. This is not mentioned in the paper itself and no evidence is presented.

Thank you for the comments. We agree with the Reviewer. No evidence is available due to the absence of outcome measures of the PN process in the Netherlands. We therefore **CHANGED** the sentence **INTO**: “Yet, data about the effectiveness of PN in the Netherlands are lacking. To inform PN, current study assessed among care professionals in the STI clinic setting their perceived barriers and facilitators regarding the management of PN in young patients diagnosed with Chlamydia trachomatis (Ct).”

Abstract, conclusion:

2- The conclusion in the abstract is too vague and should be replaced by wording from the conclusion in the paper.

We agree with the Reviewer and **DELETED** the following sentences: “and can be used to optimise PN in order to protect the vulnerable community, i.e. by improving the identification, notification, testing, treating and educating of sexual partners” “STI clinics need to clarify and act upon their aim of protecting the community to enable them to optimise PN and reach their fullest potential in the management of STI (i.e., Partner Notification)” and **REPLACED** them with the following sentence: “To overcome barriers and maintain facilitators and thereby optimise PN, efforts should be made to concentrate more on the public health care goals of STI clinic practice and focusing especially on their aim of protecting the community.”

3- Motivational Interviewing is not explained and seems to be misunderstood. There is a contradiction between ‘motivational interviewing’ and a ‘directive motivational style’ which is not recognised or explored in the discussion. Motivational interviewing is a guiding, as opposed to directing style – see
We agree with the Reviewer. And in line with the definition of Rollnick et al., 2008: “Motivational interviewing is a directive client-centred counselling style for eliciting behaviour change by helping clients to explore and resolve ambivalence” some wording in this manuscript may be confusion. To recall, all nurses stated to be all trained in motivational interviewing, which they felt to be an advantage. However, some care professional apply Motivational Interviewing better then others. Almost all, only informed the client about PN, because they emphasis on the care and treatment of the individual index patient and found PN the responsibility of the client and their sex partner(s). Only one nurse stated to discuss PN with the client and was directive in helping the client to really examine and resolve the ambivalence between notifying a sex partner or not. The following CHANGES are made:

**Abstract, introduction, results:**

“Other facilitators for PN included time, one-on-one consultations and interviewing skills (i.e. motivational interviewing)” CHANGED INTO “Other facilitators for PN included time, one-on-one consultations, interviewing skills (i.e. motivational interviewing) and a directive helping style”

“The care professionals expressed an emphasis on the care and treatment of the individual index patient rather than discussing PN and motivate them to engage in PN” CHANGED INTO “The care professionals expressed an emphasis on the care and treatment of the individual index patient rather than discussing PN and motivate and help them to engage in PN”.

**Results, paragraph care professionals barriers:**

“However, nearly all care professionals expressed to be more committed to curing the (index) patient rather than interviewing this patient about PN and helping them to notify (i.e. by themselves or by a staff member) sex partners of their exposure to an STI” CHANGED INTO “However, nearly all care professionals expressed to be more committed to curing the (index) patient rather than interviewing this patient about PN and helping them to notify (i.e. by themselves or by a staff member) sex partners of their exposure to an STI”.

Rollnick, Miller and Butler (2008)Motivational Interviewing in Health Care [good bibliography of outcome studies].
Results, care professional facilitators:
“In line with this scope it was notable that one care professional mentioned that her professional role was to convince people to perform PN and take over control when necessary; therefore she used a more directive interviewing style towards patients. As a result of this intensive PN approach, she was often asked by patients to notify sex partners on their behalf” **CHANGED INTO** “In line with this scope it was notable that one care professional mentioned that her professional role was to convince people to notify their partners and to use a more directive helping style towards patients. As a result of this intensive PN approach, she was often asked by patients to notify sex partners on their behalf”

Discussion, first paragraph:
We **CHANGED**: “a directive interviewing style” **INTO** “a directive helping style”.

Discussion:
“One care professional in this study used a more directive interviewing style when discussing PN compared to the other professionals. She is asked by almost half of her patients to notify sex partner on their behalf (i.e. provider referral). This intensive and directive PN approach is found more effective [4,11] and is thus important in the management of re-infections and the screening and testing of sex partners. However, the approach is labour intensive and a combination of different PN methods is therefore recommended in the literature [11]” **CHANGED INTO** “Although Motivational Interviewing was mentioned as facilitator among care professionals, there are differences in how well such techniques are applied; differences may be age-related by experience-years or personal attitude. Almost all care professionals in our study merely informed the client about PN, while only one care professional discussed PN and used a more directive helping style in examine and resolving problems during PN. Notably, this care professional was asked by almost half of the patients to notify sex partner on their behalf (i.e. provider referral). Provider referral is found more effective [4,11] and is thus important in the management of re-infections and the screening and testing of sex partners. However, the method is labour intensive and a combination of different PN methods is therefore recommended in the literature [11].”
Discussion, recommendation:

4- No evidence / argument is presented to support recommendation that MI training should be maintained.

Thank you for this comment. We ADDED the following sentences: “When professionals are better trained to motivate clients to notify sex partners and are more supportive in helping clients in the notification process (i.e., provider referral) sex partner’s recall will increase [4,5,11,23,26].”

Manuscript:

5- There are numerous misuses of English. As pointed out in previous review, the term ‘sexual anamnesis’ is never used and would not be understood: ‘sexual history’ is the usual term.

Thank you for this comment. We REPLACED the word anamnesis for history and other misuse are corrected. We improved the language and hope it is satisfactory.

Manuscript:

6- The structure of the paper needs attention – some quotes appear to be in the wrong place (e.g. p9).

Thank you for this comment. We DELETED the following quotes or parts of quotes.

Page 9: “I will never discuss Partner Notification when a partner is there. No, I will ask them for a separate consultation”.

Page10: “I prefer the client to notify.... you take the decision to have sex and decide together to take the risk”.

Page12: “I notice that people find it difficult when I start talking about it [PN]. I think most of them do not care what will happen to the other person; they only care about their own treatment”.

Page13: “I notice that people find it difficult when I start talking about it [PN]. I think most of them do not care what will happen to the other person; they only care about their own treatment”. 
Results, paragraph care professional facilitators:

7- The interviewees who were more proactive in securing provider referral agreements were both in their 50s. Need some discussion on why there might be age-related differences in attitudes / working methods.

Thank you for this comment. One of the care professionals (no. 10) was more proactive in securing provider referral agreements (page 11). We agree with the reviewer that their might be a age-related differences we included the following sentence in the discussion:” Although, Motivational Interviewing was mentioned as facilitator among care professionals, there are differences in how well such techniques are applied; differences may be age-related by experience-years or personal attitude.”

Results:

8- Barriers to provider referral do not appear to have been adequately explored during interview- possibly because the researchers had limited understanding of PN before constructing the interview guide. This missed opportunity cannot now be rectified.

We understand this comment. The researchers based their interview guide on expert opinion, a comprehensive review of the literature and (inter)national guidelines on PN. They explored the barriers to and facilitators of PN among care professionals in current practice. As current practice focussed on client referral and few nurses applied provider referral and did not expect the need to do so, very few barriers in provider referral were mentioned. We agree that a more thorough exploration of this issue may have been useful.

Discussion:

9- No discussion of what use has been made of the findings since the study was completed.

Thank you for this comment. We ADDED the following sentences: “Since the results of this study had become clear, discussions have taken place among care professionals about their emphasis on patient care rather than public health and about the absence of outcome measures to determine effectiveness. Nationally,
there is an ongoing public debate about these issues and the professional community has been informed. Currently, national PN protocols are being re-written and regional PN reporting systems are developed, taking into account the findings in this study.”

**Point-by-point reply to the comments of the reviewer 3:** E. Jennifer Edelman

**Major Suggested Revisions**

**Introduction:**

1- The abstract states that “PN is suboptimal in the Netherlands” but this is not further mentioned or described in the introduction but key to the rationale of the paper. Please clarify what is known about current implementation practices and how it is suboptimal.

Thank you for the comments. We agree with the Reviewer. Currently, no evidence is available due to the absence of outcome measures of the Chlamydia PN process in the Netherlands. We therefore changed the sentence into: “Yet, data about the effectiveness of PN in the Netherlands are lacking. To inform PN, current study assessed among care professionals in the STI clinic setting their perceived barriers and facilitators regarding the management of PN in young patients diagnosed with Chlamydia trachomatis (Ct).”

**Methods, design and setting:**

2- Please describe basic characteristics of the STI clinics and major differences between sites (number of patients seen, type of population, setting) that might be relevant for PN implementation.

Thank you for this comment. Unfortunately, no regional data is available on number of patients seen for chlamydia screening, type of population or setting. In the Netherlands data is accessible on a national level and are coded. We **INCLUDED** the following sentence: “In the Netherlands, in total 133.585 consultations were carried out by the Dutch STI clinics (8 coordinating clinics) in 2013 yielding 15.767 Ct diagnoses of which 61% in those younger than 25 years of age.”
Methods, design and setting:

3- Please describe the job role of the STI care professional to help the reader understand how PN fits into their other responsibilities.

Thank you for this comment. We ADDED the following sentences: “Alongside, PN care professionals also perform sexual health consultations, STI testing, treatment and education. Their professional role description explains the inherent public health scope as being the task to protect the community as a whole (i.e. sex partners).”

Methods, design and setting:

4- Please describe how RATS guidelines were chosen over others (i.e. COREQ: Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care, 19(6), 349-357. doi: mzm042 [pii]10.1093/intqhc/mzm042

Thank you for this comment. The RATS guidelines were recommended by the BMC editorial team.

Methods, recruitment:

5- Please clarify recruitment strategy – where was this list of email addresses obtained? Were only nurses recruited or other care professionals?

Thank you for this comment. We CHANGED the word care professional into nurse in the following sentence: “Between March and June 2012, an invitation letter with a short explanation of the study was send to the email addresses of 42 nurses”. AND we ADDED the following sentence: “Between March and June 2012, an invitation letter with a short explanation of the study was send to the email addresses of 42 nurses who performed PN at their STI clinic for at least six months. Email addresses were obtained from available contact information to the researcher, with contacts covering all 8 Dutch coordinating STI clinics.”

Methods, recruitment:

6- Information about the characteristics of the participants should be in the results section instead of the methods.

Thank you for this comment. We DELETED the characteristics of the participants in the method section and MOVED them to the result section.
Methods, recruitment:

7- The comment that all participants were trained in motivational interviewing is confusing – is this part of the study? or just as part of their job training? I am unclear.

Thank you for this comment. We CHANGED the comment into the following sentence: "All followed training in Motivational Interviewing (MI), which was part of their job education program."

Methods, data collection:

8- Did the interviewers have training or prior experience with qualitative measures?

Thank you for this comment. We ADDED the following sentence: "Both interviewers were affiliated at the Public Health Service South Limburg and University of Maastricht and had been trained in conducting semi-structured interviews and qualitative analyses. PS is a medical student and KT an experienced researcher."

Methods, data collection:

9- Was the interview guide piloted prior to implementation?

Thank you for this comment. The interview guide was piloted among young people. We ADDED the following sentence: "Furthermore, the interview protocol was piloted among young people before implementation."

Methods, data collection:

10- Did the interview guide focus specifically on PN for Chlamydia specifically or PN in general?

Thank you for this comment. The interview guide is specially on PN for Chlamydia. As outlined in the introduction of this paper: “Chlamydia is the most common STI in young patients, who have consistently high rates of risky sexual behaviour and, in terms of reproductive morbidity, potentially bear the largest burden of STI sequelae”. Therefore, we ADDED the following sentence: “All questions related to Chlamydia.”
Methods, analyses:

11-As interpretation of data varies based on the inherent biases of the researcher, please describe the expertise of the researchers completing the analysis.

Thank you for this comment. We ADDED the following sentence in the methods, data collection section: “Both interviewers were affiliated at the Public Health Service South Limburg and University of Maastricht and had been trained in conducting semi-structured interviews and qualitative analyses. PS is a medical student and KT an experienced researcher.”

Methods, analyses:

12-Please explicitly describe when codes were applied to the transcripts and how coding was approached (i.e. open coding)?

Thank you for this comment. We CHANGED and ADDED the following sentences: “Furthermore, transcripts were explored by PS and KT to become familiar with the data and to identify initial themes. Participant’s answers were assigned to these themes and when necessary initial themes were redefined. Next to this, associations within themes and explanations were sought.” INTO “Furthermore, several transcripts were explored by PS and KT to become familiar with the data after which open coding was applied. Codes were then grouped into categories in an iterative process, till no additional codes emerged. Eventually, categories and codes were applied to subsequent transcripts. A spreadsheet was used, which also included illustrative quotes, to find associations within categories and explanations were sought.

Methods, analyses:

13- Was participant confirmation conducted, where the participants were able to provide feedback on the findings? If not, this should be added as a limitation.

Thank you for this comment. No participant confirmation was conducted, we therefore added this information in the limitation sections of this manuscript. We ADDED the following sentence: “Finally, the results of this study were not presented to the participants for confirmation. Nevertheless, at the end of each interview participants were given the opportunity to ask questions and/or give comments concerning the interview.”
Results, sample characteristics:

14-Describe characteristics of the study participants, including age (with mean and SD or range rather than "mid 20s to mid 50s"); gender; race/ethnicity; years in practice (if known), etc. Consider presenting as a table.

Thank you for this comment. Unfortunately, we only know the gender and age range of the participants. We CHANGED "mid 20s to mid 50s" INTO "between 24 and 55 years”

Results:

15-The themes are currently underdeveloped – it would be more informative and significantly enhance the quality of the paper for them to be expanded upon into statements that capture the essence of the quotes. Rather than stating that there are "care professional barriers,” what was the theme that emerged regarding these barriers? For example: “Care professionals focused on individuals rather than public health; moreover, care professional focus varied by subgroups” or a similar statement would elevate the quality of the reporting of the current results.

Thank you for this comment. The structure of the manuscript including figure 1 is based on barriers and facilitators, because of clarity and uniformity of the manuscript and the purpose of this study: “This study examined the barriers and facilitators of public health care professionals to PN in young patients who had been diagnosed with Chlamydia trachomatis (Ct) and visited the STI clinic for treatment”. The results and discussion section and figure1 are divided into these barriers and facilitators to provide the reader with a structured overview in every section of the manuscript.

Discussion:

16-What are the implications of the study results on implementation of expedited partner therapy?

Thank you for this comment. We INCLUDED the following sentences: “The attention for Expedited Partner Therapy (EPT), where partners are treated without an personal assessment, as an additional approach to partner management has recently increased [29]. Although EPT decreases the number of PN steps and could thereby optimize the PN process, some barriers found in this study could also hamper the
implementation of EPT; examples include the focus on curing the patient and the lack of commitment among patients to sex partner(s). Future studies are needed to map the barriers and facilitating factors in providers and the public regarding EPT.”

MINOR ESSENTIAL REVISIONS

Introduction, last paragraph:

17-Paragraph 3: While I agree that data regarding PN implementation from the public health professional perspective are scarce, there are some data in the context of other STIs. For example, see: Edelman, E. J., Cole, C. A., Richardson, W., Boshnack, N., Jenkins, H., & Rosenthal, M. S. (2014). Opportunities for Improving Partner Notification for HIV: Results from a Community-Based Participatory Research Study. AIDS Behav. doi: 10.1007/s10461-013-0692-9.

Thank you for this comment. We ADDED the above reference and CHANGED the following sentence:” Different barriers to and facilitators of PN in medicine may exist compared to public health, yet data in public health care professionals who perform PN in STI clinics is scarce.” INTO ”Different barriers to and facilitators of PN in medicine may exist compared to public health, yet data in public health care professionals who perform PN in STI clinics is scarce and available data are focused on STI/HIV in general [Edelman et al.,].”

Methods, recruitment:

18-The first and second sentences are redundant; this should be re-written.

We agree with the Reviewer and DELETED the following sentence: “From email addresses of STI clinic care professionals, 42 were randomly selected from available contact information lists”. We CHANGED and ADDED the second sentences (also following the comment 2 of reviewer 1): “Between March and June 2012, an invitation letter with a short explanation of the study was send to the email addresses of 42 nurses who performed PN at their STI clinic for at least six months. Email addresses were obtained from available contact information to the researcher, with contacts covering all 8 Dutch coordinating STI clinics.”
Methods, recruitment:

19-“As saturation was reached. . .” – I believe the authors are referring to thematic saturation here – this should be clarified.

We agree with the Reviewer and CHANGED the following sentence: “As saturation was reached within the sample, no email reminder was send to non-participants” INTO: “As thematic saturation (i.e., point at which no new themes emerge) was reached within the sample, no email reminder was send to the nurses who did not respond to the first invitation email.”

DISCRETIONARY REVISIONS

Introduction:

20-Paragraph 3: Please consider adding information regarding the epidemiology of Chlamydia infection in the Netherlands (e.g. incidence and/or prevalence estimates).

We followed the suggestion of the Reviewer and ADDED the following sentences: ”Chlamydia is the most common STI in tested young patients below 25 years with an estimate of 17% in 2013 in the Netherlands [18]”

Methods, data collection:

21-The authors might consider presenting the interview guide as a text box.

Please, see answer comment 15.

Discussion, recommendations:

22-The authors might consider adding a table to highlight their recommendations to improve PN.

Thank you for this comment. We ADDED the following table in the appendix of the manuscript:

<table>
<thead>
<tr>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide concrete steps in PN guidelines for care professionals how to address the public health goals</td>
</tr>
<tr>
<td>Specifically address PN in motivational interviewing training</td>
</tr>
</tbody>
</table>
Discussion, second paragraph:

23-Collecting data from the perspective of patients and/or partners might be also be considered as a next step for informing PN implementation in these STI clinics

We agree with the reviewer that such data are helpful. We therefore followed the suggestion of the Reviewer and ADDED the following sentences: “Therefore, barriers and facilitators surrounding PN among Ct positive patients and their partners should also be considered when improving PN implementation in practice.”

We hope that our revisions are sufficient. Please let us know if there are other questions.

Kind regards,

Kevin Theunissen on behalf of all co-authors

Dept. of Sexual Health, Infectious Diseases and Environmental Health, Public Health Service South Limburg.