Author's response to reviews

Title: The added value of chlamydia screening between 2008-2010 in reaching young people in addition to chlamydia testing in regular care; an observational study.

Authors:

Geneviève AFS van Liere (genevieve.vanliere@ggdzl.nl)
Nicole HTM Dukers-Muijters (nicole.dukers@ggdzl.nl)
Jan EAM van Bergen (JvanBergen@soaaids.nl)
Hannelore M Götz (hm.gotz@Rotterdam.nl)
Frans Stals (f.stals@atriummc.nl)
Christian JPA Hoebe (christian.hoebe@ggdzl.nl)

Version: 3
Date: 9 October 2014

Author's response to reviews: see over
Dear editor,

Thank you for giving us the opportunity to revise our manuscript.

We also want to thank the reviewers for their very useful and helpful comments, that we have all addressed in our revised manuscript and in our point-by-point reply. We hope that our comments are satisfactory. Please contact me in case there are questions.

Sincerely,

On behalf of coauthors,

Geneviève van Liere.

Genevieve.vanliere@ggd.nl
Reviewer's report

Title: Matching participants in a systematic chlamydia screening programme with patients seen by a sexually transmitted infections clinic, general practitioners, or medical specialists: an observational study of the added value of systematic chlamydia screening programme in reaching young people.

Version:2 Date:28 August 2014

Reviewer: Caroline van Gemert

Reviewer's report:

Major compulsory revisions:

1. The years and setting should be included in the title.
   Thank you for this suggestion, the title was rephrased; ‘The added value of chlamydia screening between 2008-2010 in reaching young people in addition to chlamydia testing in regular care; an observational study.’.

2. The title is very long and describes the methods. It would be clearer if it directly related to the objective of the study.
   Please see our response to comment 1.

3. The year of the intervention should be specified in the abstract.
   The sentence was rephrased; ‘Internet-based Chlamydia Screening Implementation (chlamydia screening programme) was introduced in the Netherlands in 2008-2010 to detect and treat asymptomatic infections and to limit ongoing transmission through annual testing and treatment of Chlamydia trachomatis in young people.’.

4. The abstract introduction does not describe the rationale for the research.
   The abstract introduction was rephrased; ‘This population-based screening may be less effective when addressing individuals who are already covered by regular care, instead of addressing a hidden key population without chlamydia testing experience in regular care.’.

5. The study design in the abstract should be more clearly described “observational study” is very vague.
   Thank you for noticing this in the abstract. A sentence was rephrased; ‘This observational matching study included all chlamydia tests performed in subjects aged 16-29 years in eastern South Limburg in the Netherlands (population 16-29 years: 41,000) between 2006-2010… The study population included all participants who were tested at least once for chlamydia by the chlamydia screening programme. Participants were included at their first chlamydia screening participation.’.
Due to restriction of words we have not elaborated on the study design in the abstract. However, in the methods section sentences were rephrased for more clarity on the study design and matching procedure. Please see our response to comment 7.

6. The introduction needs significant work. The research problem has not been clearly articulated and the background to the research was very vague.

We thank the reviewer for her suggestions to improve the clarity of the introduction. The following sentences were added considering the comment: ‘To understand and interpret the outcome of chlamydia screening, knowing who takes part in the chlamydia screening programme is essential [8]. By assessing the totality of chlamydia testing practices, it becomes clear whether the chlamydia screening programme reached persons already served by regular care or a hidden key population without chlamydia testing experience in regular care. Chlamydia screening would become less effective when reaching those who were already tested by regular care. Therefore chlamydia screening should target this hidden key population to prevent chlamydia sequelae in individuals and to diminish further spread of chlamydia in the population additional to the efforts in regular care. Publications assessing the totality of chlamydia testing practices including additional chlamydia screening in a programme, addressing the second keystone are limited [9], as such an assessment is frequently hampered by unavailability of data or unmatchable data sources. Therefore the rationale of this study was to bridge this gap and evaluate this second keystone by using a near complete large data collection of matched test data sources in the target region for the chlamydia screening programme.’.

7. In the introduction, the description of population-based internet chlamydia screening was not well described and it was not clear who was targeted, how and when. Another study has been referenced however the authors should include this vital information as background.

The following sentences were added; ‘Systematic population-based internet chlamydia screening was initiated in 2008 and aimed to improve case finding to prevent sequelae and to reduce population prevalence by annual testing and treatment of people aged 16-29 years in three regions in the Netherlands. After a postal invitation, home sampling kits for urogenital testing (urine or vaginal swab) could be requested through a website (www.chlamydiatext.nl). Treatment and partner notification were done by the GP or at a STI clinic [5]. The rationale for the chosen approach in the chlamydia screening programme were based on existing evidence for screening programmes, costs, flexible communication, easy adaptation of the screening in time and the possibility of easy expansion to other geographic areas in the future [6]. Moreover, acceptability of the screening method using internet was high [7].’.

Details about the chosen stepped wedge design were added to the methods section; ‘The intervention was implemented by means of a stepped wedge design, with sequential roll out to geographical clusters of potential participants in a randomly determined order over time so that, by the end of the three year study period, each cluster had been invited at least once. The stepped wedge design was chosen to be able to evaluate participation and effectiveness over several rounds of screening. In three screening rounds from 2008-2010, all men and women aged 16-29 years who were listed in the study area’s municipal population register (n=41,000, 2010) were sent an invitation letter.’.
8. The rationale for targeting 16-29 year olds was not clearly established. This requires work, as well as a brief review of evidence for different strategies for targeting young people to establish a rationale for using internet-based recruitment strategies. 

Thank you for this suggestion. Sentences were added/rephrased; ‘Chlamydia is the most prevalent treatable sexually transmitted infection worldwide and has major public health consequences, especially in young women[1]. Early detection and treatment is warranted to limit the spread of infection and to reduce sequelae in infected individuals. A possible complication is pelvic inflammatory disease, where Chlamydia trachomatis ascends to the upper genital tract and causing tubal factor infertility and ectopic pregnancy. In the Netherlands the regular care for testing and treatment of chlamydia is provided by general practitioners (GPs), sexually transmitted infections (STI) clinics and after referral by medical specialists (mainly gynaecologists)[4]. Thus regular care providers are GP’s, STI clinics and medical specialists. Systematic population-based internet chlamydia screening was initiated in 2008 and aimed to improve case finding to prevent sequelae and to reduce population prevalence by annual testing and treatment of people aged 16-29 years in three regions in the Netherlands. The choice for targeting 16 to 29-year-olds in the additional chlamydia screening programme was based on the highest burden of chlamydia infection among these young people [2, 3].’

For a brief review of evidence for different strategies for targeting young people to establish a rationale for using internet-based recruitment strategies please see our response to comment 7.

9. The focus on the Dutch screening program should be limited in the introduction; because it has not been fully described, the vague descriptions of the program reduce the impact of the introduction. It is suggested to focus on setting the scene for why chlamydia screening is warranted in the Netherlands, and the reason for internet-based screening before describing what indicators will be addressed in the paper.

Thank you for the possibility in explaining more about the Dutch chlamydia screening. In response to comment 7, sentences were added to provide more background information on the Dutch screening. See response to comment 7.

10. The introduction notes that “Participation rates in the Dutch the chlamydia screening programme were relatively low and decreased over time from 16% to 11%, excluding screening in regular care”; this is very vague. What years was a decrease observed, and regular care has not yet been defined (which is should the Dutch system should be explained in brief). In any case, the discussion about screening rates in the Dutch program and UK programs should be removed from the introduction as it is not directly concerned with the main topic of the paper to look at newly reached men and women.

Thank you for this suggestion, the sentences about participation rates were removed.

11. The authors state in the introduction that “the effectiveness of population-based screening could be negatively affected by reaching persons already served by regular care”; this isn’t clear as to what the negative effect is and why it is important.
Thank you for your suggestion. We added several sentences to make this clearer. Please see our response to comment 6.

12. Some of the writing throughout the paper is not academic and vague; for example “It is important to know who takes part in the chlamydia screening programme” – why is this? It might be obvious but it is important to be clear in purpose for each sentence. 

*The sentences were rephrased, please see our response to comment 6.*

13. The study design was not clearly defined in the methods section.

14. “Randomised stepped wedge approach”; this should be described in brief. It is not clear if and why randomisation was done as all young people in a study areas register were invited to participate – or was this done to identify the regions for selection?

*Thank you for your comments 13 and 14 to add clarity about our methods section. See the reply to comment 7.*

15. The year of the population number referenced should be included in the methods section when describing the register.

*We addressed this comment in our reply to comment 7 adding the year of the population number referenced.*

16. Why were data not matched to the registry in the same way for the STI and GP clinics compared to the GP and medical specialists?

*Thank you for this comment to add clarity about our methods section. Sentences were added; ‘Data from GPs and medical specialists were uniquely matched on personal level by part of the last name, month of birth, year of birth, sex, and postal code. Part of the test records had identical part of the last name, month of birth, year of birth, sex, and postal code. These records were considered to belong to the same individual, and were matched to the identical municipal population register record. A ranking order was assigned to all matched records from GPs and medical specialists (medical laboratory) for sensitivity analyses. Data from the STI clinic were all matched uniquely to the register based on the whole name and date of birth (figure 1).’.*

17. And how might this bias the results?

*Sentences were rephrased in the discussion; ‘This study has several limitations. First, it consists of not 100% uniquely matched data but 91%. The last 9% was matched using test records with identical markers from GPs and medical specialists. This slight inaccuracy might have introduced some bias and could lead to an underestimation of the proportion new participants. However, we expect this bias to be negligible as a sensitivity analysis on uniquely matched data revealed similar results.’.*

18. What does the author mean that people were matched by person-date - is this date of birth?

*Sentence was rephrased; ‘The basis for data matching was the municipal population register, which included men and women aged 16-29 years who were invited for and tested in the*
chlamydia screening programme. Data from GPs and medical specialists were matched to the register on personal level by part of the last name, month of birth, year of birth, sex, and postal code.

19. The probabilistic matching and choice of match is unclear. A ranking order was assigned, but how were matches then chosen for inclusion?
Thank you for this comment to add clarity about our probabilistic matching which we addressed in the response to comment 16 where we added sentences to be clearer.

20. Was there a cut-off?
Please see our response to comment 16.

21. The study population needs to be clearer; was it any person who was screened at least once for chlamydia in either the CSI or GP or STI clinic, etc? Earlier in the methods, it appears that the study population is “Three data sources were used for all the men and women aged 16-29 years who were tested for chlamydia in the study area between 2006 and 2010” however it is then defined as “Participants were included at their first chlamydia screening test within CSI.” It is not clear then why data from 2006 were included (as described previously in the methods). I assume this was to determine if CSI participants had a previous record of STI testing at a GP or STI clinic, but this is not clear and should be revised.
Sentences were rephrased; ‘The study population included all participants who were tested at least once for chlamydia by the chlamydia screening programme. Participants were included at their first chlamydia screening participation.’.

22. The number of people included in the analysis (as well as how this number was finally reached) should be presented in the results, not the methods. There are several additional places where results are included in the methods and this should be revised in detail, including the number of missing data and the proportion of previous tests conducted within 3 months.
Sentences containing results were moved from the methods to the results as suggested by the reviewer; ‘Participants who were 16 years old at the first chlamydia screening (n=72) were excluded from analysis because there were no previous testing data available from regular care providers. The study population comprised 5323 participants (figure 1).’.
‘Of all previous tests, 2.7% (n=28) were tested within 3 months before chlamydia screening participation.’.

23. The methods state that tertile age groups were used, and thus the n within should be roughly even however this isn’t the case as 40% of were aged 25-29 years whilst ~25% were aged <21.
Thank you for noticing this in the table. The tertile distribution was established before restriction to the study population. This includes the exclusion of participants who were 16 years old at the first chlamydia screening (n=72). This could have caused a reduction in the youngest age group. We ask the reviewer for advice on the classification of age groups.
24. There seems to have been two questionnaires: one that assessed risk and therefore assigned eligibility to receive the screening test kit, and a second that was optional and collected additional info. This needs to be clearer throughout (particularly in the results when comparing people that completed a questionnaire or not – I assume the authors mean the latter questionnaire); in particular the types of questions that were asked in the second questionnaire and the methods for data collection.

Thank you for this suggestion. Sentences were rephrased; ‘In our study area South Limburg, eligibility for chlamydia testing within the chlamydia screening programme depended on an individual’s chlamydia risk score. This risk score was based on answers to an eight-item risk questionnaire (i.e. age, place of residence, education level, condom use at last intercourse, number of lifetime sex contacts, ethnic background, having a new sexual partner in the last 6 months and symptoms) [10]. When a person was eligible, home sampling kits for urogenital testing could be requested through a website (www.chlamydiatest.nl). Chlamydia screening participants could provide additional data via an optional electronic general questionnaire (hereafter questionnaire).’.

‘Data on sex, age, and test result were available for all participants, data on same-sex behaviour, symptoms and number of sex partners in the past six months were only available for participants who filled in questionnaire.’.

25. With regards to the matching process, it is not clear if previous STI testing by a regular care provider was based on matched data or self-report. The inclusion of data from GP and STI clinic data suggests it was based on matching, however the methods infer that it was based on self-report. Previous testing requires further description to; was it based on STI testing or could it also be for presentation at an STI clinic but no testing?

Thank you for noticing this in the text. Sentences were rephrased based on this comment; ‘Data from the STI clinic were retrieved from our public health STI clinics’ medical records comprising confirmed test results.’

‘At the first chlamydia screening participation, we assessed whether participants were previously tested by one or more regular care providers between 2006-2010 based on matched data.’

Please also see our response to comment 24.

26. “Age, sex, nationality, test result and newly reached participant were compared between participants with and without questionnaire using Chi square test” – why was this done? It isn’t clear why based on the objectives of the paper.

Sentence was rephrased; ‘To test for possible self selection bias, age, sex, nationality, test result and newly reached participant were compared between participants with and without questionnaire using Chi square test.’.

27. The results presented in the methods should be moved to early in the results section so readers are appropriately orientated to the number of records from each source.

We follow the reviewers suggestion to move the results presented in the methods. Sentences were added; The STI clinic database comprised 4821 young people (16-29 years), the GP and hospital database comprised 16,717 young people. In total 41,000 young people were invited
for chlamydia screening, 5395 participated at least once (13.2%). Participants who were 16 years old at the first chlamydia screening (n=72) were excluded from analysis because there were no previous testing data available from regular care providers. The study population comprised 5323 participants (participation 13.0%). Of all test records matched from GPs and medical specialists with the chlamydia screening participants in the municipal population register (n=1287), 87.6% (n=1127) were matched uniquely, 10.7% (n=138) were matched probabilistic 1 on 2, 1.6% (n=21) were matched probabilistic 1 on 3, and 0.1% (n=1) was matched probabilistic 1 on 4. Data from the STI clinic were all uniquely (1 on 1) matched based on first name, last name, date of birth, sex, and postal code (n=422). In total, 90.6% (1549/1709) of data were uniquely matched (1 on 1) (Figure 1).

28. The overall proportion of invited young people that were screened should be reported early in the results (5323 of 41,000 people?) this helps assess the generalizability of the data. We follow the reviewer’s suggestion, please see out response to comment 27.

29. The use and interpretation of data comparing participants who completed the second questionnaire is still not clear why do we care who completed the second questionnaire, and how does it relate to the research question?

29. 'To assess the association between newly reached participant and determinants from the questionnaire, the second analysis was restricted to participants with a questionnaire. Assessed determinants included age, sex, nationality, sexual preference, symptoms, number of sex partners in the past six months and test result. To test for selection bias, age, sex, nationality, test result and newly reached participant were compared between participants with and without questionnaire using Chi square test.'.

30. “In restricted analyses including questionnaire data…” – do the authors mean that restricted analyses were restricted to participants with complete second questionnaire data or that there were additional restricted analyses?

30. ‘Logistic regression analysis was performed: being a newly reached participant was used as the outcome to assess the association with the determinants age, sex, nationality and test result. To assess the association between newly reached participant and determinants from the questionnaire, the second analysis was restricted to participants with a questionnaire. Assessed determinants included age, sex, nationality, sexual preference, symptoms, number of sex partners in the past six months and test result.’.

31. The second paragraph of the discussion is not clear it reports that other studies using matched data have looked at outcomes after a chlamydia test, but then asserts that the results are valid because it is linked to a municipal register. The point of this paragraph is not clear. Thank you for mentioning this. The paragraph was rephrased as follows; ‘Our study adds to these previous studies by using the municipal population register which covers the entire population young people in one geographic region. This enabled assessing the totality of chlamydia testing, which was previously unknown [9].’.
32. The discussion as to why newly reached participants were young men with fewer sex partners than participants previously tested was weak. There is a significant body of evidence to suggest that young men traditionally have lower testing rates than females, and also that people with more sex partners are more likely to attend STI clinics. The point that the screening program reaches a new yet important group is still valid, but it should be discussed within context of previous research.

Thank you for this valuable suggestion, the discussion was rephrased accordingly; ‘In this study, newly reached participants turned out to be more often men, young (<21 years), and had had fewer sex partners compared to participants previously tested by regular care. This is important since men are usually harder to reach in screening programmes [16]. A possible explanation for this could be that men prefer testing in non-clinical settings such as postal testing kits and internet based screening [18]. In England only 15% of young men were tested for chlamydia last year in contrast to 35% of young women [19]. A qualitative study examining the barriers and facilitators of offering chlamydia testing in general practitioners (GPs) and practice nurses revealed that women have more consultations and it is easier to raise sexual health issues within the type of consultations women are seeking. Moreover, awkwardness and embarrassment were reported in raising chlamydia testing with men [20]. Another study found that GPs are reluctant to test young people for chlamydia in absence of urogenital symptoms [21]. Altogether, internet based screening could be helpful to stimulate especially young men [22]. Younger age is known to be associated with testing positive for chlamydia [8, 19], this makes young people a target group to reach in chlamydia screening. New participants had fewer sex partners, an explanation could be that people with more sex partners are more likely to attend STI clinics [23].’

33. Regular care and strategies to promote STI testing in regular care may bias results; the paper does not describe regular care in the Netherlands however any health promotion strategies (general or priority population targeted) in the local area should be considered may influence previous testing and will certainly influence the generalizability of the results nationally or to other countries.

A sentence was added in the introduction; see our response to comment 8.

And in the discussion; ‘In this study, all chlamydia tests were collected: by regular care (GPs, STI clinic and medical specialists) and by intervention (chlamydia screening). There was no specific promotion of chlamydia testing during the chlamydia screening period that could have biased our results [5].’

34. Comparison with other countries screening programs is weak as it doesn’t fully discuss differences in recruitment methods and the sample frames or cost. Reference has been made to a UK program however the comparison between this and other programs needs strengthening. The use of a registry for all young people in a region varies considerably to other screening programs and this should be considered in greater detail.

35. The overall participation rate of the screening program was roughly 13% (5000 participants among 40000 eligible); this low participation rate also impacts on the generalizability of the results.
Thank you for comment 34 and 35. We acknowledge these limitations in the discussion, a sentence was added; We have to acknowledge that the generalizability of our results might be confined as screening programmes in different countries vary widely because of differences in recruitment methods, sample frames and participation rates.’.

36. The text included in figure 1 (on page 16 of the PDF) is not needed as it is presented in the methods
Thank you for this suggestion, we deleted the text included in the figure. The N and % were kept in the figure for clarity.
Minor revisions

1. Line 76: delete ‘the’ between Dutch and chlamydia
   Thank you for noticing this typo. We followed the suggestion of reviewer #1 and deleted that paragraph in the introduction.

2. Line 78: Reference is made to UK screening but the authors should state England not UK. NB health is devolved in the UK.
   Ø I ask the authors to change their text to read ‘In England…’
   We follow the reviewer’s suggestion and changed ‘UK’ into ‘England’ throughout the manuscript.

3. In the introduction section, it would be helpful for there to be some more engagement with existing literature, particularly on adequate levels of participation and how this is linked to population prevalence. What are adequate levels? What are the issues with this, such as focusing on women, rather than screening men and women, to reduce costs (as in England)?
   Thank you for this suggestion. According to comment 10 of reviewer #1 we removed the sentences about participation rates. In the discussion the following sentence was added:
   ‘We have to acknowledge that the generalizability of our results might be confined as screening programmes in different countries vary widely because of differences in recruitment methods, sample frames and participation rates.’

4. Line 82: publications are mentioned but no references were given. It would be helpful to readers to have a few of these key references.
   References were added to the sentences, as suggested by the reviewer; ‘Publications assessing the totality of chlamydia testing practices including additional chlamydia screening in a programme, addressing the second keystone are limited [10, 11], as such an assessment is frequently hampered by unavailability of data or unmatchable data sources.’.

5. Line 182: who is meant by minor? Please specify.
   The sentence was rephrased for clarification; ‘Participants, including minors (16-18 years-old) of age, provided written consent to participate in this study, including consent for further research.’.

6. Line 203: there is a ‘the’ missing between ‘and’ and ‘majority’.
   The sentence was rephrased; ‘Two thirds of participants were women, and the majority had Western nationality (>95%).’.

7. Line 233: insert ‘of’ so that the sentence reads: The proportion of chlamydia….
   The sentence was rephrased; ‘The proportion of chlamydia positive tests was comparable in newly reached participants (4.8%, 204/4298) versus participants previously tested at an STI
clinic (3.6%, 11/304), by GPs (5.2%, 17/328), by medical specialists (3.7%, 7/187), or by a combination of providers (5.3%, 11/206) (P=0.82).

8. Line 263; perhaps change to ‘the entire population of young people.’

We follow the reviewer’s suggestion. ‘Youngsters was replaced by ‘young people’ throughout the manuscript; ‘Our study adds to these previous studies by using the municipal population register which covers the entire population young people in one geographic region.’.

9. Line 275, capitalise English national screening programme and also insert chlamydia (i.e., English National Chlamydia Screening Programme (NCSP)).

Thank you for this suggestion. The sentence was rephrased; ‘Previous studies analysed participants in the English National Chlamydia Screening Programme (NCSP) and part of the Dutch chlamydia screening programme.’.

10. Line 277 and also line 308, again UK is being used when England is meant. Please change to England. (Please note that these words cannot be used interchangeably as they are not referring to the same thing. The United Kingdom consists of four nations: Northern Ireland, Wales, Scotland and England. Only England has a screening programme.)

We changed ‘UK’ into ‘England’ throughout the manuscript. Please see also our response to comment 2.

11. Perhaps an obvious (but still worth mentioning) limitation is that not everyone can access the internet, so others will have been missed.

We follow the reviewers suggestion, a sentence was added in the discussion; ‘In a postal non-response study, no indications were found that participation in the screening was hampered by limited access to the internet [6].’.

12. Line 315, I would like you to be a bit more specific about what you mean by ‘impact’?

The sentence was rephrased; ‘This study contributes to understanding the impact of chlamydia screening in reaching previously untested young people.’.

13. Line 322: Perhaps ‘Data from the STI clinic’ would work better than ‘of’?

Sentences were rephrased; ‘Sentence was rephrased; ‘Data from the STI clinic, the chlamydia screening programme, GPs and the hospital were matched at individual level to the municipal population register.’.

‘Previous studies also matched data from sexually transmitted infections/medical conditions diagnosed in several care settings to assess the proportion positives [10], births [14], ectopic pregnancies [14, 15], and reproductive capacity [15] after a chlamydia test.’.


Sentence was rephrased; ‘Data from the STI clinic, the chlamydia screening programme, GPs and the hospital were matched at individual level to the municipal population register.’.
15. In the discussion, I would like to see more prominence given to the finding of having reached men, by referring to other literature and engaging with the issue of men’s preferred preference (maybe?) for non-medical approaches to chlamydia screening – postal testing kits being picked up from high street stores, to workplace urine-based screening, to Internet screening. Men are not being reached with clinic approaches: GPs are reluctant to speak to young people if there’s no urogenital symptoms (see McNulty et al.’s work and also Lorimer et al 2014); men prefer non-clinic (Lorimer et al 2009…but Saunders et al 2012 contradicts this!). So, where does this leave us in terms of reaching men and not submitting one sex to tests and surveillance (Duncan & Hart, 2001)? I think this issue needs more engagement in the paper.

Thank you for providing references. We follow the reviewers suggestion and elaborate on having reached men in the discussion; ‘In this study, newly reached participants turned out to be more often men, young (<21 years), and had had fewer sex partners compared to participants previously tested by regular care. This is important since men are usually harder to reach in screening programmes [16]. A possible explanation for this could be that men prefer testing in non-clinical settings such as postal testing kits and internet based screening [18]. In England only 15% of young men were tested for chlamydia last year in contrast to 35% of young women [19]. A qualitative study examining the barriers and facilitators of offering chlamydia testing in general practitioners (GPs) and practice nurses revealed that women have more consultations and it is easier to raise sexual health issues within the type of consultations women are seeking. Moreover, awkwardness and embarrassment were reported in raising chlamydia screening with men [20]. Another study found that GPs are reluctant to test young people for chlamydia in absence of urogenital symptoms [21]. Altogether, internet based screening could be helpful to stimulate especially young men [22].’.