Reviewer's report

Title: Introduction of a sexual health practice nurse is associated with increased STI testing of men who have sex with men in primary care.

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Reviewer: Kirsty Smith

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This paper describes the effect of the introduction of a sexual health practice nurse on HIV and STI testing in a general practice specialising in gay men's health. It is a very useful addition to the literature on the role of sexual health practice nurses in general practice settings and is novel in regards to the placement of a nurse in a clinic specialising in gay men's health. Although a RCT would be ideal, the study has many strengths including taking into account the pre-intervention screening rates and reported screening rates rather than total tests. Major recommendations are 1) that further description of the clients, clinics and intervention be included, 2) an analysis be undertaken to measure any differences in the demographics and risk behaviour of patients between the two clinics/time periods and adjust for these differences in the primary outcome assessment; 3) include further discussion about translation and generalisability of the findings. These are described in further detail below.

Recommendations

Abstract
1. Methods: Primary outcome needs to be clearly stated. Also need to define ‘complete testing’ — which tests, which anatomical sites, all men who attended, only men who had one of the tests, complete set of tests in a single encounter, or anytime in the period?
2. Results
   a. Mentioned in Clinic B there was no significant increase in testing – need to define if this refers to complete testing, uptake of testing, and if in HIV-negative and/or positive men
   b. The uptake of testing results should be included as this appears to be the primary aim/outcome
3. Conclusion —significant increases in STI testing mentioned, but would be good to clarify that this was an increase in complete testing rather than more men being screened

Background
1. First sentence – needs a reference
2. Would be useful to mention other studies which have examined whether existing practice nurses can increase chlamydia testing in general practice
(Bowden MJA 2008) and also a study in the UK where a GUM health advisor was placed in a general practice clinic to provide advice (Armstrong, STI journal, 2003)

3. The aim of introducing the nurse is not clear from the introduction— to increase the proportion of men tested, to improve the completeness of testing, or both?

4. It may also be useful to reference a paper by Holt et al (ASHM conference 2012) which showed completeness of testing among gay men in Australia is low, due to low uptake of rectal swabs

5. Would be useful to highlight the proportion of gay men attending GPs for STI screening (Gay Community Periodic Surveys and Futures Study reference) and therefore the importance of interventions being conducted in this setting

6. A brief description of the training, roles, medicare eligibility etc of sexual health practice nurses would be useful

Methods

1. Consider adding some subheadings to the methods such as setting, study design, data extraction, analysis

2. Could the authors describe the setting in more detail and compare the two clinics – the size of the clinics, staffing (e.g. did Clinic B have a practice nurse?), who collected pathology, billing (did Clinic B charge additional fees?), location, population seen, operating hours, how funded, affiliations (if any), routine testing practices (self vs clinician collected rectal swabs). Would recommend including a table which shows the differences in the characteristics of these clinics.

3. Could more information about the intervention at Clinic A be provided e.g specific goal/s of the nurse, who paid their salary, funding for the project, did the sexual health nurse promote self-collected swabs?

4. The clinics appear to specialise in gay men’s health, so should the study population be gay men, rather than MSM?

5. First paragraph mentions ‘HIV chronic disease care’ does this mean HIV monitoring, or chronic disease management in those with HIV?

6. The frequency of testing would be another important outcome in high risk men. Although the testing rates were lower in Clinic B and didn’t change, it is possible they increased the frequency of testing in those considered higher risk i.e 2+ tests in high risk men, or 3+ syphilis tests in HIV positive men?

7. 2nd paragraph: suggest rewording this sentence.... ‘Periods 1 and 2, were included to establish whether any changes in testing rates detected were occurring naturally over time …’ to: ‘whether there was a background increase in testing due to other factors…’

8. Could the authors describe where the information on the HIV viral loads used to estimate the HIV-positive MSM was obtained from?

9. In regards to ‘men with a viral load being classified as HIV positive unless they had a negative HIV antibody test at an earlier visit’, could the authors explain the situation when HIV-negative men would have a HIV viral load? I assume
occasionally in a suspected HIV seroconversion illness? The authors should comment on any misclassification bias that may arise from this and the extent of the issue. If men are incorrectly misclassified as HIV negative but are HIV positive then it may underestimate HIV testing rates.

10. Could the authors please explain why data on throat gonorrhoea were not available?

11. Re following statement (last paragraph): ‘If an individual attended more than once in the same period he was only counted once.’ Does this mean that if he had a test on one occasion, and not another, the former was counted?

Results

1. Some subheadings would be useful: 1) client characteristics at baseline (sample size, median age of men, risk behaviour, previous positive tests, proportion of new and existing clients, reason for presenting- sexual health related or other etc), 2) testing uptake, 3) completeness of testing, etc.

2. In the first paragraphs could authors please clarify if the increases are absolute or relative increases, and add to the methods?

3. I assume the p values in the results related to the differences in the proportion between periods, rather then the % increase. This could be made clearer. For example ‘the proportion tested for syphilis in period 2 was x% compared with x% in period 3 (p<0.05), representing a x% increase.’

4. Although contained in Tables 1 and 2, please add to the text some brief results on the actual proportions at the different clinics, as at Clinic A the % of HIV-positive men having a STI test seems very low, and this issue is mentioned in the discussion

5. One important confounder is that the demographics or risk behaviour of men attending the clinics was different, or these characteristics changed between time periods. The baseline characteristics of the men could be compared in regards to the different clinics and before and after period in Clinic A. If there are differences, they should be adjusted for in assessment of the primary outcome.

6. Could the testing done by the sexual health nurse be analysed separately if available, or at least report what proportion of testing was done by the nurse?

7. In regards to completeness could the results for the individual tests/anatomical sites be added? E.g. were rectal swabs most incomplete at baseline, and then improved the greatest?

8. Could the results of tests be included, specifically in relation to completeness? Did the increase in completeness result in a greater yield of HIV/STIs?

9. Could Tables 1 and 2 be restructured to avoid repetition of ‘period 1,2,3’?

Discussion

1. Mentions in the second paragraph that ‘increased by 1% (p=0.31)’ but not significant. This could be reworded to say ‘no significant change’

2. Could the authors comment on why they think there is a difference in the
baseline testing rates at Clinic A compared with B? Also is the baseline completeness in Clinic A greater than B because of the way the doctors order the test e.g. a common group of tests set up in their patient management system?

3. Could the authors also comment on why they think there was a significant increase in testing in HIV negative men between period 1 and 2 at clinic B and the significant decrease between periods 2 and 3?

4. Describes that among HIV positive MSM, the proportion of men tested for syphilis actually decreased after the sexual health nurse was introduced. However these results aren’t included in the results section.

5. Further discussion about the infections missed due to incomplete testing in other studies in the US could be noted.

6. Mentions the decline in syphilis testing was because of the clinics having a policy prior to the nurse, but does this mean the policy was removed when the nurse was introduced? Could it be because there was a decline in viral load testing and thus less opportunity for syphilis testing in these men?

7. Other than social marketing, are there any other external factors to be considered which may have influenced testing, such as promotion of guidelines, or initiatives undertaken by the doctors which were unrelated to the introduction of the nurse i.e. doctors grouping their pathology so all tests are automatically ordered. For example the paper by Holt et al at ASHM showed a general increase in all gay men in regards to completeness.

8. Was there any assessment of the acceptability of a sexual health practice nurse to the GPs/ clients? If not this should be noted as a limitation. The authors could also refer to any other patient acceptability studies of nurse only sexual health screening clinics.

9. Finally the authors should comment on how this could be translated to other GP clinics in Australia or overseas. For example should practice nurses receive more specialist sexual health training, should more sexual health practice nurses be placed in GP clinics, how would this be funded (is it cost effective for clinics to employ a sexual health practice nurse)?

Level of interest: An article of importance in its field

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 interests