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Measuring patient satisfaction in sexually transmitted infection clinics: a systematic review

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ABSTRACT

Objectives

Measuring patient satisfaction is an important aspect of making services attractive to patients and improving service delivery, and outpatient based clinics are increasingly assessing service quality using patient based outcome measures. No systematic review of patient satisfaction in sexually transmitted infection clinics has previously been performed.

The objectives of the review were:

- To establish how patient satisfaction with sexual health services has been defined and measured
- To identify whether a ‘gold standard’ method exists
- To identify the themes regarded by patients as priorities for delivering a quality service within a sexually transmitted infection clinic setting

Methods

A search of eight electronic journal databases and unpublished data sources was used to identify studies measuring patient satisfaction in a sexually transmitted infection clinic setting. Following initial review of each abstract, data from eligible studies were extracted by two independent reviewers and content analysis used to identify common themes.
Results

18 questionnaire based studies, 9 semi-structured interviews and 4 other studies, including 3 focus groups, fulfilled the selection criteria for inclusion. 3 studies incorporated more than one method of analysis. No common validated method of assessing patient satisfaction was identified. Themes reported to be of greatest importance were the convenience of clinic location, availability of appointments, staff attitude to patients, effective provision of information and maintenance of confidentiality.

Conclusions

This review has identified the need for a validated and standardised approach to assess patient satisfaction in sexually transmitted infection clinics. Comparing studies which have measured satisfaction, clear themes for the provision of a high quality service, from a patient perspective, have emerged. These themes should be incorporated into assessment tools, such as questionnaires, when reviewing service delivery.
INTRODUCTION

Improving sexual health was one of the top six priorities for the UK National Health Service in 2006/2007(1) but on review of a pilot improvement scheme fewer than half of those commissioning services regularly consulted with patients on the quality of sexual health services (1). Ensuring patients are satisfied with their experience of sexually transmitted infection clinics has the potential to increase appropriate use of services, improve compliance with treatment and benefit the relationship between the patient and the service provider. Satisfaction with a healthcare service is dependent on patient expectation and experience, and can be used as a patient based outcome measure in evaluating the quality of clinical care.

Traditionally quantitative surveys, and specifically questionnaires, have been used to record patient experiences in sexually transmitted infection clinics. Focus groups and semi structured individual interviews are used less frequently but can gain a more in-depth view of patients experiences. Assessment is generally done within the clinic setting and it remains a challenge to gain the views of people who have a clinical need but fail to access services.

No systematic review of patient satisfaction in sexually transmitted infection (STI) clinics has previously been published. The systematic analysis of relevant qualitative and quantitative studies can be used to identify best practice in measuring patient satisfaction and to develop new assessment tools based on the identified patient priorities.
The objectives of this review were:

1. To establish how patient satisfaction with sexual health services has previously been defined and measured

2. To identify whether a ‘gold standard’ method exists. A ‘gold standard’ measure of patient satisfaction was defined as having appropriately assessed and reported:
   - reliability (are the results reproducible and consistent)
   - validity (has an assessment been made of what patients consider to be important measures of quality and are they accurately evaluated)
   - acceptability
   - feasibility

3. To identify the themes regarded by patients as priorities for delivering a high quality service within a STI clinic setting

METHODS

Search strategy

A search strategy was developed with the inclusion of a methodology filter to identify all relevant literature (the full search strategy is provided in Web Appendix 1). Databases were searched as follows: AMED 1985 to date, BNID 1994 to date, CINAHL 1982 to date, DHData 1983 to date, EMBASE 1974 to date, Kings Fund 1979 to date, Medline 1950 to date, PsycINFO 1806 to date and the Cochrane library. Searches were performed between April and May 2008. The National Research Register was searched for unpublished and
ongoing research and further research was sought in conference paper indices and NHS health technology assessments. Authors identified were contacted for supporting information.

**Study types**

The studies identified included quantitative (questionnaires and surveys) and qualitative methodologies (focus groups and semi structured interviews). Editorials and opinions of single individuals were excluded.

**Participant types**

The populations included were patients seeking care from any clinical setting offering dedicated STI testing. Only health care services free at the point of delivery were included in the review. Any health care provision requiring payment or where a UK standard of care was not available (defined as health care provision in a lower than middle income country as defined by the World Bank) were excluded as not being generalisable to a UK based population. Studies looking at views of service providers, or predominantly based on the opinions of potential (rather than actual) service users were also excluded. Eligibility criteria are described in more detail in web appendix 2.

**Exposure types**

Studies were included that assessed the views of users of STI testing services. Studies from clinics providing only contraception services were excluded as were services delivered within an alternative specialist clinic, except where a dedicated STI testing service was also available. Evaluations
of sex education programmes or interventions focussed on medical education were excluded.

**Outcome types**

Any technique used to assess patient satisfaction was included. No language restriction was applied and unpublished data was sought. Articles reporting satisfaction as a secondary outcome were excluded if they only evaluated a single aspect of service provision.

**Quality of studies**

Although the use of quality criteria in qualitative studies is difficult to interpret, quality assessments were used for both qualitative and questionnaire based studies. For questionnaires a critical appraisal checklist of 21 items was used(2), and for qualitative research the CASP (Critical Appraisal Skills Programme) criteria(3) incorporating 27 items were adopted. A quality assessment checklist was created by the review team and applied to each study to record a numerical value (web appendix 3). To reflect the subjectivity of qualitative data the numerical value was replaced by a rating score: ‘++’ indicating greater than ten points on the checklist, and ‘+’ less than ten.

**Data extraction**

A data extraction proforma was drafted, reviewed, piloted and refined by the review team (web appendix 4). Two reviewers independently extracted data from the articles and any disagreements were resolved following discussion.
Data synthesis

Articles were subdivided according to study methodology and summarised using thematic headings, which emerged during content analysis.

RESULTS

122 articles were selected by title. 68 articles were excluded after abstract review and a further 26 articles were excluded after full text review. The 28 remaining articles were included for data extraction, and references from these were reviewed for further relevant studies but no additional articles were identified. Of the 28 articles, 18 were questionnaire based, 9 utilised semi-structured interviews, 3 were focus group studies and one study used professional patients (3 studies used more than one methodology).

Questionnaire based studies

Study Design

16 of the questionnaire studies were UK based, 1 study surveyed the patients attending STI clinics in Bulawayo, Zimbabwe (4) and 1 study was based in Baltimore, USA (5), both supplying free access to health care (Table 1). Surveys were predominantly performed in a dedicated STI clinic setting although one study delivered the questionnaire to clients in a youth club clinic.(6)

The size and duration of the studies varied greatly with the largest including 2636 patients from 12 different clinics. (7) Kinn repeated their survey after 12
months (8) and Opaneye collated 200 responses each year over a period of two years. (9)

Three studies used a verbal format to deliver the questionnaire in an interview setting. (4; 5; 10) Response rates were recorded in all but 5 studies (9; 11-14) and ranged from 8% to 100% (Table 1).

Study Quality
A validation process was described in 5 studies, (5; 8; 11; 14; 15) with 3 of these adapting pre-existing questionnaires, but no study used a comprehensive approach to questionnaire design incorporating patient input, and an assessment of validity, acceptability, feasibility and reliability.

Outcomes
The predominant themes incorporated into the questionnaires were convenience of attending the clinic, staff attitudes, patient confidentiality and appropriate provision of information (Table 2). Issues of convenience included location of the clinic, ‘no longer in a convenient location’ being cited as a reason to leave the service. (13) Melville reported that 39% of people questioned ‘felt that the service should be within 6-10 miles of their home’.

High levels of satisfaction with staff were reported ranging from 80-99%. Specific issues raised included a preference for same sex staff (16) and dissatisfaction with a threatening or unfriendly atmosphere. (4)
Eleven studies included questions regarding confidentiality. Confidentiality and anonymity were ‘judged to be essential to the service’. (13) 40-56% preferred to be called by number rather than by name. (16)(17) The clinic waiting area was identified as potentially problematic for maintaining confidentiality (10) but most patients were comfortable discussing sexual health topics during their consultation. (6;11)

All studies assessing overall satisfaction rated this as high. Potential recommendation to a friend was used as one measure of satisfaction. (4;6;7)
Table 1 Comparison of questionnaire based studies

GUM=genitourinary medicine (primarily STI screening/testing services)  
FPC=family planning (primarily contraceptive services)  
D= Delivery  W= written  V=verbal  Q= quality  Blank cells indicate data not available

<table>
<thead>
<tr>
<th>Study</th>
<th>Population</th>
<th>Size</th>
<th>Response rate</th>
<th>D Format</th>
<th>Validation process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Munday PE 1990(17)</td>
<td>GUM clinic UK</td>
<td>300</td>
<td>100%</td>
<td>W</td>
<td>+</td>
</tr>
<tr>
<td>Rogstad KE 1991(18)</td>
<td>GUM clinic UK</td>
<td>990</td>
<td>99% response 98% completion</td>
<td>W</td>
<td>+</td>
</tr>
<tr>
<td>Hudson M 1992(16)</td>
<td>GUM clinic UK</td>
<td>121</td>
<td>81%</td>
<td>W</td>
<td>+</td>
</tr>
<tr>
<td>Gupta et al 1993(19)</td>
<td>Re-attendees at GUM clinic UK</td>
<td>98</td>
<td>93%</td>
<td>W</td>
<td>+</td>
</tr>
<tr>
<td>Monierio E 1995(7)</td>
<td>12 GUM clinic UK</td>
<td>2636</td>
<td>80-100%</td>
<td>W Likert</td>
<td>+</td>
</tr>
<tr>
<td>Hope et al 1996(20)</td>
<td>5 GUM clinics UK</td>
<td>297</td>
<td>82.5%</td>
<td>W</td>
<td>++</td>
</tr>
<tr>
<td>Opaneye AA 1997(9)</td>
<td>GUM clinic UK 2 years</td>
<td>400 200 each year</td>
<td>W</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Hope et al (13) 2001</td>
<td>GUM clinic compared to HIV clinic UK</td>
<td>389 GUM</td>
<td>Completion rate 36%</td>
<td>W</td>
<td>++</td>
</tr>
<tr>
<td>Mashamba et al 2002(4)</td>
<td>Youth only combined FPC/GUM clinic Zimbabwe Every 3rd user</td>
<td>30</td>
<td>100%</td>
<td>V</td>
<td>+</td>
</tr>
<tr>
<td>Challenor R 2003(11)</td>
<td>8 GUM clinics UK</td>
<td>1747</td>
<td></td>
<td>W Likert</td>
<td>Pre pilot and validation with 20 patients Piloted with 400 patients ++</td>
</tr>
<tr>
<td>Melville et al 2004(10)</td>
<td>Integrated service GUM and FPC UK Women</td>
<td>100 from each clinic</td>
<td>100%</td>
<td>V</td>
<td>++</td>
</tr>
<tr>
<td>Hayter M 2005(6)</td>
<td>Youth club clinics UK</td>
<td>166</td>
<td>66%</td>
<td>W</td>
<td>+</td>
</tr>
<tr>
<td>Mehta et al 2005(5)</td>
<td>2 GUM clinics USA – free clinical services</td>
<td>A – 295  B – 204</td>
<td>A -75%  B -90.8%</td>
<td>V</td>
<td>Validated CAHPS (Consumer assessment of healthcare providers and systems), VRQ (patient visit rating questionnaire) surveys used ++</td>
</tr>
<tr>
<td>Ingram et al 2007(21)</td>
<td>3 GUM clinics UK 1st attendance</td>
<td>153</td>
<td>89%</td>
<td>W</td>
<td>+</td>
</tr>
<tr>
<td>Sheriff K 2007(14)</td>
<td>GUM UK Follow up patients</td>
<td>24</td>
<td></td>
<td>W Likert</td>
<td>Existing questionnaires received input from staff to design the questionnaire. Redrafted several times ++</td>
</tr>
<tr>
<td>Study</td>
<td>Themes</td>
<td>Convenience</td>
<td>Waiting time</td>
<td>Staff attitudes</td>
<td>Confidentiality</td>
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<tr>
<td>Munday PE 1990(17)</td>
<td>Strong preference for evening clinics and late afternoon clinics. More than ¾ wanted an open access system to remain</td>
<td>Strong preference for evening clinics and late afternoon clinics. More than ¾ wanted an open access system to remain</td>
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</tr>
<tr>
<td>Rogstad KE 1991(18)</td>
<td>An appointment system was preferred by 68% of patients and 38% expressed a wish to attend after 5 pm</td>
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</tr>
<tr>
<td>Hudson M 1992 (16)</td>
<td>Clients preferred the more traditional walk in style of service</td>
<td>Clients preferred the more traditional walk in style of service</td>
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<td>Clients preferred the more traditional walk in style of service</td>
<td>Clients preferred the more traditional walk in style of service</td>
</tr>
<tr>
<td>Gupta P et al 1993 (19)</td>
<td>Time of appointment was a cause of concern for a large number of the sample</td>
<td>Time of appointment was a cause of concern for a large number of the sample</td>
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<td>Time of appointment was a cause of concern for a large number of the sample</td>
</tr>
<tr>
<td>Monteiro E 1995 (7)</td>
<td>Most common cited difficulty in attending the clinic was taking time off work</td>
<td>Most common cited difficulty in attending the clinic was taking time off work</td>
<td>Most common cited difficulty in attending the clinic was taking time off work</td>
<td>Most common cited difficulty in attending the clinic was taking time off work</td>
<td>Most common cited difficulty in attending the clinic was taking time off work</td>
</tr>
<tr>
<td>Hope VD and MacArthur C 1996(20)</td>
<td>41.6% had taken time off work or studies to make time to come to the clinic</td>
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</tr>
<tr>
<td>Openeye AA 1997(9)</td>
<td>97.5% felt the amount of time spent in clinic was appropriate</td>
<td>97.5% felt the amount of time spent in clinic was appropriate</td>
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</tr>
<tr>
<td>Hope SC et al 2001(13)</td>
<td>No longer in a convenient location would be a reason to leave the service</td>
<td>No longer in a convenient location would be a reason to leave the service</td>
<td>No longer in a convenient location would be a reason to leave the service</td>
<td>No longer in a convenient location would be a reason to leave the service</td>
<td>No longer in a convenient location would be a reason to leave the service</td>
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<tr>
<td>Convenience</td>
<td>Waiting time</td>
<td>Staff attitudes</td>
<td>Confidentiality</td>
<td>Stigma</td>
<td>Information</td>
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<td>-------------</td>
</tr>
<tr>
<td><strong>Mashamba A and Robson E 2002 (4)</strong></td>
<td>Inconvenient opening hours noted by 7%</td>
<td>100% satisfied with waiting times</td>
<td>7% dissatisfied with atmosphere of the centre. Dissatisfaction included threatening and unwelcome atmosphere</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Kinn S, Macdonald C et al 2003 (8)</strong></td>
<td>Services were much easier to find in 2001 – (after integration)</td>
<td></td>
<td>72% thought that the service was sufficiently confidential</td>
<td></td>
<td>Method of obtaining results was not satisfactory. Waiting time for results was not acceptable</td>
</tr>
<tr>
<td><strong>Challenor R 2003 (11)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Miles K 2003 (15)</strong></td>
<td></td>
<td>Scores for specific attributes of interpersonal relationship Nurse 4.37/5 Doctor 4.24/5 (p=0.11)</td>
<td></td>
<td></td>
<td>Scores for provision of information 4.5/5 nurse led 4.29/5 doctor led (p=0.015)</td>
</tr>
<tr>
<td><strong>Melville CRS, Bigrigg A and Nardwani R 2004 (10)</strong></td>
<td>39% felt the service should be within 6-10 miles of their home. 35% prepared to travel no more than 5 miles</td>
<td></td>
<td>Waiting area was not discreet enough – concerns that private information might be overheard</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Convenience</td>
<td>Waiting time</td>
<td>Staff attitudes</td>
<td>Confidentiality</td>
<td>Stigma</td>
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<td>--------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Mehta SD, Zenilman JM and Erbelding EJ 2005 (5)</td>
<td></td>
<td></td>
<td>Almost all patients reported that the clinic staff were helpful and courteous 99% and 97%</td>
<td></td>
<td>Almost all patients reported that the clinician listened, showed respect and spent enough time with them</td>
</tr>
<tr>
<td>Hayter M 2005 (6)</td>
<td></td>
<td></td>
<td>90% agreed staff treated them respectfully when they used the clinic</td>
<td></td>
<td>90% felt able to ask all their questions in the consultation</td>
</tr>
<tr>
<td>Ingram J and Salmon D 2007 (21)</td>
<td>35% waited up to 30 minutes to be seen</td>
<td>The welcoming and responsive nature of the staff helped young people feel comfortable</td>
<td>22 people commented that privacy was what they liked best about the service</td>
<td></td>
<td>6 people commented 'not judging' as what they liked best</td>
</tr>
<tr>
<td>Sheriff K 2007 (14)</td>
<td>18% stated that on some occasions they had been unable to attend their appointment. 87% found appointment times convenient</td>
<td>100% were seen within 30 minutes of the appointment time</td>
<td>33% were offered a chaperone to be present</td>
<td></td>
<td>41% expressed a strong preference to be contacted by telephone with their results whether negative or positive.</td>
</tr>
<tr>
<td>Perry C and Thurston M 2008 (12)</td>
<td>93% agreed/strongly agreed that the service was in the right place.</td>
<td>86% agreed that the opening hours were acceptable 85% agreed that they were seen quickly</td>
<td>99% agreed that the staff were friendly</td>
<td>90% agreed that the conversations they had were private</td>
<td>96% agreed that they were happy with the information, help and support given</td>
</tr>
</tbody>
</table>

**Blank cells indicate information not assessed in study or information not available**
Semi structured interviews

Design
In 9 studies, semi structured interviews were performed by a researcher on a one-to-one basis to identify emerging themes. Seven studies were UK based and 2 administered in South African clinics. (22;23)

The populations studied using a semi structured interview technique were from STI clinics, a youth club based clinic (6), a city centre pharmacy clinic (24) and an Accident and Emergency based clinic. (25) The number of patients interviewed ranged from 10 (23) to 76. (26)

Quality
Seven of the nine interview studies scored highly on the quality assessment measure.

Outcomes
Themes identified by patient interviews were similar to those explored in the questionnaire-based surveys. (Table 3)

Location was a major factor that motivated sex workers to use one clinic.(23) Opening hours were raised as a significant issue, with clients expressing dissatisfaction with limited evening opening (27) and finding it difficult to take time off work to attend the clinic. (25) None of the studies concluded that waiting time within the clinic was a significant issue.
The interviewees reported high satisfaction with staff attitudes towards patients. Evans stated that the key to users experience was their perception as to whether they had been treated with respect and in a non-judgemental manner. (27) In the more informal settings that were evaluated, the patients suggested that the standard of care and professionalism of staff were not compromised by informality. (24)

Confidentiality was raised as an issue in 5 studies (6;21;24;26;27). All highlighted the need for a confidential service, and the reception area and waiting room were areas of potential concern. (26)

In the semi structured interviews more clients raised stigma as a potential problem. Patients felt uncomfortable when attending a sexual health service and some would have liked more emotional support. (26) High levels of satisfaction were reported using a more informal approach in an outreach clinic. (21)

Overall high levels of satisfaction with services were reported from studies using a semi structured interview approach (27).
<table>
<thead>
<tr>
<th>Clinic Access</th>
<th>Staff attitudes</th>
<th>Confidentiality</th>
<th>Stigma</th>
<th>Information</th>
<th>Overall satisfaction</th>
<th>Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evans et al 1996(27) GUM clinic UK N = 76</td>
<td>‘others expressed dissatisfaction with the limited evening opening’ – ‘lack of drop-in services and access to specific doctors’</td>
<td>The key to users experience was the extent to which they felt they were treated with respect and in a non-judgemental manner</td>
<td>‘Anonymous, confidential, non-judgmental and more convenient than GP services’</td>
<td>Some women expressed anxiety about walking out the door of the clinic – would have liked more support or time before leaving</td>
<td>‘Many people emphasised their initial difficulty in finding out about it...’ Most felt a need for greater publicity and outreach</td>
<td>++</td>
</tr>
<tr>
<td>McAllister et al 2002(24) GUM clinic/city centre pharmacy N = 66</td>
<td>No one was unhappy with the location of the service Most clients were happy with opening times</td>
<td>They acknowledged the standard of care and professionalism of staff - not compromised by informality</td>
<td>Most significant factor influencing the use of the service was the greater anonymity afforded</td>
<td>Evidence that the offer of free and readily available information provides an incentive to young people to attend services</td>
<td>All but one stated they would recommend the service to a friend</td>
<td>++</td>
</tr>
<tr>
<td>Kane et al 2003(28) GUM or FPC UK N = 25</td>
<td>Time spent in clinic was of less concern than receiving thorough care</td>
<td>Young people identified respectful and non-judgemental attitudes of staff as a strength</td>
<td>Young people stressed the value of a confidential service. Recreational environment may discourage young people from attending</td>
<td>Young people did not feel embarrassed</td>
<td>Evidence that the offer of free and readily available information provides an incentive to young people to attend services</td>
<td>++</td>
</tr>
<tr>
<td>Hayter M 2005(6) Youth club clinics UK N = 20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shabungu et al 2005(22) FPC South Africa 1st time attendees N = 40</td>
<td>90% of clients were satisfied with the time they waited</td>
<td>80% of clients were treated with respect</td>
<td></td>
<td></td>
<td>Majority expressed satisfaction with the services provided</td>
<td>++</td>
</tr>
<tr>
<td>Stadler et al 2006(23) Mobile STI clinic South Africa Sex workers N = 10</td>
<td>Location was a major factor that motivated sex workers to use the clinic</td>
<td>An important factor was the relationship between clinic staff and the sex workers. Atmosphere of openness and honesty</td>
<td></td>
<td></td>
<td>Direct bearing on knowledge and awareness of health and risk</td>
<td>+</td>
</tr>
<tr>
<td>Evans et al 2007(26) GUM clinic UK N= 16</td>
<td>Clients preferred to attend the community STI service as access was easier. Reasons for satisfaction included proximity of the clinic</td>
<td>6 clients expressed a need for more emotional support</td>
<td>10 clients expressed specific concerns with confidentiality in the reception area and waiting room</td>
<td>Greater privacy – with separate male and female waiting areas and being called by number rather than name preferred. Most felt uncomfortable when attending sexual health services</td>
<td>All clients said they were satisfied with the service they had received</td>
<td>++</td>
</tr>
<tr>
<td>Ingram et al 2007(21) 3 GUM or outreach UK 1st attendance only N = 15</td>
<td>‘anxious if they had to wait several days to be seen’</td>
<td>Value the friendliness, discretion and approachability of staff – medical, nursing and reception</td>
<td>It is a shame that there is only one room in reception.</td>
<td>Treated like an adult and were not embarrassed or ashamed to discuss things.</td>
<td>Availability of accurate information was valued. Young people were able to ask for information on a range of topics</td>
<td>+</td>
</tr>
</tbody>
</table>
Clients found it difficult to take time off work. Clients stressed they would like to attend immediately if they suspected they may have contracted something.

93% of attendees did not tell employers that they were attending because they would have felt stigmatised.

Communication recognised as an important factor.
Focus groups

Design

Three studies used focus groups to assess patient experiences within a service. The first was performed in the United Kingdom and included 93 service users of STI clinics and family planning clinics in 13 focus groups.(29) The second was a small study including 15 participants in Alabama, USA (30) with free healthcare at the point of access. A third focus group study was performed in conjunction with one to one interviews specifically aimed at female sex workers in South Africa.(23)

Quality

Using the quality assessment checklist, two of the focus group studies scored highly indicating a good understanding of the methodology and relevance of this approach.(29;30)

Outcomes

Staff attitudes remained an important issue from a user’s perspective. (29) Criticisms identified in the Alabama study were men’s dislike of the front desk employees and the perceived gossipy nature of the clinic. (30)

The importance of efficient clinic infrastructure was noted in the Baraitser study, and providing entertainment within the clinic was suggested as a way of passing the time and also reducing anxiety.(29) The focus groups held in the UK concluded that the issues identified as important to young people were
similar to those for older users,(29) namely confidentiality in the reception area, waiting times, staff attitude and provision of information.(29)

Other methodologies
One study used professional patients to assess patient satisfaction.(31) 40 professional patients participated in 105 visits to STI clinics over a 9 month period.(31) All staff within the clinics were aware that the study was taking place but not aware of the patients’ identity. Each professional patient was paid a fee for their time. The issues raised generally mirrored those identified using other assessment methods. However, half had difficulty finding the clinic and there was a generally poor perception of both the reception and waiting facilities. Also, overall satisfaction scoring was lower than that seen using questionnaires or interviews with ‘fewer than half’ reporting satisfaction with the service.

DISCUSSION
Predominantly three methods were found to have been used to assess patient experiences at STI clinics. Questionnaires were the most common approach, with fewer researchers reporting results from qualitative studies in the form of focus groups or interviews. An additional option, used in a single study, was to evaluate services using ‘professional patients’.

Questionnaire based studies
Questionnaires can be a useful way to measure satisfaction, allowing a large number of patients to be included, and potentially providing a widely
representative view. Careful design is important to ensure clarity, relevance, feasibility and validity. The reliability of results is dependent on good response and completion rates, and the design process needs to include patient input and assessment to ensure that the questions are acceptable and appropriate.

The majority of questionnaire studies identified were self completed by participants with verbal interviews as an alternative(4;5;10) Although verbal delivery can improve participation and completion rates, participants may give less honest feedback if a researcher is present whilst completing a survey. Selection bias can also occur either through the increased participation of those who are particularly dissatisfied with a service, or those who are highly satisfied.

Piloting of a questionnaire helps to refine its content and layout. Pilots were described in only 4 studies.(8;11;14;15) The national NHS outpatient survey is widely used but it has not been validated in a STI clinic population.(32) Patients who attend sexual health services differ from the general outpatient population in age, morbidity, education, ethnicity and socio-economic status, and these factors may limit the validity of the existing national survey. The studies identified in this review did not generally include a specific and robust validation stage in their development. Specifically, the themes for the question topics seldom originated from patients, the questions were not validated to ensure that they actually assessed the target topic, acceptability to patients was not recorded and the feasibility of administering the questionnaire was poorly reported.
**Semi-structured interviews**

Interviews allow patients to be questioned more openly regarding their experiences, with the opportunity to raise issues of importance to them not previously identified. However, ensuring participants are representative of the whole clinic population may be difficult and a limited number of individuals can be assessed using this potentially time consuming and expensive approach. The value of semi-structured interviews is also dependent on the specific interaction between the interviewer and patient.

A robust methodology needs to be applied to ensure interviews deliver clear outcomes. Background information to guide the format of the interview is essential and may take the form of previous work directed at establishing patient experience or literature reviews of published work. Seven of the included studies scored highly for quality using a pre-specified scale. The information obtained from these interviews is therefore of particular value in identifying areas of concern to patients, and can be used to help design future quantitative studies which are able to assess larger numbers of clinic attendees.

**Focus groups**

Focus groups explicitly use the interaction within a group to identify and develop relevant themes. Patients attending a sexual health service may be reluctant to be identified due to stigma which could limit participation and lead to selection bias. Focus groups need to reflect views from a representative sample of the population to provide generalisable conclusions.
The focus group studies included in the review did not systematically sample their study populations but all did describe an appropriate design and analytical process.

Although focus groups follow a pre-designed format, several dimensions of care can be studied including overall satisfaction with services delivered.(34) Focus groups can also contribute to the development of quantitative measures of patient satisfaction by providing an understanding of what the research project means to patients.(35)

**Professional patients**

The use of individuals who attend a clinic without a clinical problem but specifically to evaluate the clinic’s performance (professional patients) has the advantage of allowing specific aspects of the service to be assessed and provides standardisation. However, issues of openness, relevance to actual patient experience and interpretation of findings may limit the usefulness of this approach. Concerns may be raised that, over time, the professional patients become less like normal users and less sensitive to the views and concerns of inexperienced service users.(31) Also, as user involvement is thought to be central to service development,(36) the evaluation by non patients raises concerns regarding the validity of results obtained in this way.

**Strengths and Weaknesses**
This is the first systematic review of the measurement of patient satisfaction in STI clinics, and the resulting identification of key themes can help to inform future development of patient derived measures of service quality.

Patients’ assessment of what aspects of a STI service should be prioritised and included when measuring patient satisfaction will vary according to their presenting condition, their sexual health needs and their cultural norms. Restricting the review to services which were focused on STI screening and testing provides a degree of homogeneity but some variation will still exist within the study population which may have influenced the themes identified. The recurrent nature of the themes reported from different study methodologies provides some reassurance but cannot exclude subpopulations of patients who have different priorities. The inclusion criteria identified mostly UK based studies and any extrapolation of the findings to outside the UK should therefore be cautious. It is also likely that some data on patient satisfaction has not been formally published and therefore missed by our search strategy, especially from outside of the UK e.g. needs assessments. Equally, the exclusion of sexual health services where the focus was not on STI diagnosis and treatment means that the findings are not necessarily applicable in non STI clinic settings. Two reviewers independently extracted data from the studies but they were not blinded to the study author or publication type, which could have introduced bias. A quality assessment was made for each included study but this process is less well defined and developed for observation data compared to randomised controlled trials.
Summary

A number of themes were identified which were of particular importance to service users: convenience of the clinic location, availability of appointments, staff attitude to patients, effective delivery of information and confidentiality within the clinic. These areas should be provide a focus for future assessments of patient satisfaction at STI clinics.

Implications for practice and future research

Most of the studies identified in the review reported high levels of patient satisfaction with sexual health services, but further work is needed to ensure this positive reporting correlates with a positive experience. Further assessment of individuals who have not attended sexual health services but may need to do so in the future could be useful to identify barriers to attendance, although the opinions of 'non-patients' may be similar to that of STI clinic attendees(37). There is particularly a need for a standardised approach to measuring patient satisfaction – determining from patients what the central themes of satisfaction should be, designing questions around these themes, testing the questions for appropriateness, validity, acceptability and feasibility, and piloting the questionnaire with an appropriate patient group. None of the studies took this approach and nor was a common assessment method used which makes comparisons between providers, and of the same provider over time, difficult. The review has also highlighted the need for a standardised approach to identify strengths and weaknesses of individual STI clinics. Future work needs to include evaluation of the effect of patient satisfaction on clinical outcomes, assessment of how changes in
service configuration affect patient satisfaction and direct comparisons between different sexual health services.

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RW – development of study protocol; data extraction; manuscript preparation and review
RD - data extraction; manuscript review

Key Messages
- patient satisfaction with sexual health clinics is an important measure of service quality
- no standardised measure of patient satisfaction within STI screening services is currently available
- 5 key domains which are of particular importance to service users were identified
- future assessments of patient satisfaction should incorporate these 5 domains

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