

Sexually transmitted infections in primary care: a need for education

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SUMMARY

General practitioners and practice nurses require the clinical skills that will enable them to detect sexually transmitted infections in the context of a shift to having no, or insidious symptoms. They need to be able to confirm the diagnosis and have clear models for management and referral. Primary care and genitourinary medicine need to work more closely together to increase mutual understanding and clarify the issues which surround referral and attendance. Sexual health risk assessment through the investigation of sexual history is a helpful way forward in both differential diagnosis and in targeting sexual health promotion and care. Many aspects of these clinical skills are specific to the primary care context. There is a need for improved undergraduate, post-graduate, and in-service training. Multidisciplinary educational approaches are ideal for the subject of sexual health. Primary care groups offer a potential way forward to help develop quality in primary care and some are developing health improvement programmes that aim to address sexual health issues.

Keywords: sexual health risk assessment; sexually transmitted infections; sexual history; genitourinary medicine.

Introduction

SEXUALLY transmitted infections (STIs) have effects that range far beyond pain and discharge. Hepatitis B and HIV can kill. Most STIs increase the risk of transmission of HIV.¹ Several infections can be vertically transmitted (including chlamydia, herpes, gonorrhoea, and HIV). STIs cause pelvic inflammatory disease. Some strains of human papilloma virus are implicated in cervical cancer. These preventable infections are costly to treat and, in the United Kingdom (UK), rates of some infections are rising.²

Both the nature of STIs, and our understanding of them, have changed. In this paper we suggest that primary health care teams in the UK, general practitioners (GPs), and practice nurses in particular now have an unavoidable role in the diagnosis, management, and prevention of sexually transmitted infections. In this paper we explore the educational needs of practice nurses and GPs in relation to the diagnosis, management, and prevention of sexual infections. While focusing particularly on the UK, we acknowledge that this may also be the case in other developed countries where medical services incorporate both genitourinary medicine (GUM) clinics and family doctors.

Symptomatic infections

The need for GPs and practice nurses to be able to diagnose STIs is a relatively recent phenomenon.³ Until perhaps 20 years ago, STIs could be characterised as having short incubation periods leading to severe symptoms that affected the genital area — with syphilis as the important exception to the rule. It was comparatively easy for an infected person to identify their need to attend a GUM clinic — one of the few parts of the National Health Service (NHS) accessible without referral by a GP. If patients did present in primary care, diagnosis was likely to be simple for the GP on the basis of the symptoms and clinical findings alone: patients could be appropriately referred to a GUM clinic without investigation. Asymptomatic infection was not really considered. GPs could practice adequately with minimal (or no) training in STIs.

Over the past two decades, however, the clinical picture has changed. Chlamydia and HIV infections have come to the fore. Both are characterised by having long incubation periods and episodes without symptoms. These infections also produce insidious and low-grade symptoms, not necessarily related to the genitals. People with these symptoms may be less likely to consider the possibility that an STI is the cause: therefore they may present to their GP rather than to a GUM clinic. However, many GPs may not recognise an STI as a possible cause of symptoms such as dysuria, menorrhagia, conjunctivitis, arthritis, or glandular fever-like illness. In order to work through the process of differential diagnosis GPs require more than clinical factual knowledge about symptoms of STIs. They also require an ability to take sexual histories; and an understanding of and an ability to perform appropriate investigations.

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Risk assessment

Users of GUM clinics are those at risk of STIs.⁴ However only a minority of those at risk attend GUM clinics.⁴ By contrast the great majority of adults will access primary care in any one year.⁵ General practitioners are therefore likely to encounter patients from across the risk spectrum for infection, including many at no risk. Thus a risk assessment, in the form of a sexual history, becomes a key clinical skill for GPs in the process of differential diagnosis.

Taking a sexual history in primary care necessitates a different approach from the GUM context. Many GUM patients will be expecting questions about sex, unlike a patient with a persistent conjunctivitis — or seborrhoeic dermatitis — who presents to their GP. Most GUM attenders will have understood that an STI is a possibility for them — in primary care, many patients exposed to an STI may not have considered themselves at risk. Considerable skills may be needed by the GP to raise such a possibility and strategies need to be learned by both GPs and their teachers.

Informed consent to investigate

Even after a careful history and examination, it may not yet be clear to which specialty the patient should be referred — if referral is appropriate at all. Laboratory investigations may need to be carried out. In contrast with a GUM clinic, primary care patients may be less likely to understand that they are being tested for a sexually transmitted infection. One advantage of sexual history taking is that in the process it will usually clarify for the patient the need for such investigation as the next stage of their management (less commonly there is a mutual decision not to test). Patients should then also be in a position to understand the significance of an STI diagnosis.

Appropriate investigation and sample techniques

The issues which surround testing for sexually transmitted infections in primary care are complex. The relative advantages and disadvantages of the tests available are reviewed elsewhere,⁶ but further work is needed on the suitability of tests for diagnostic use in the community. There is a need for evidence of the effects on the sensitivity of tests, of the storage of assay reagents, and the storage and transport of specimens. Tests available to GPs are usually determined by their routine microbiology laboratory, which may be more or less concerned about the appropriateness of an investigation for use in primary care.

Sampling techniques need to be taught to maximise detection of infections. Published evidence suggests that GPs are not using tests for STIs appropriately.⁷⁻⁹

There has been a proliferation of tests available to detect chlamydia⁶ and one study compared the use of two tests in the community.¹⁰ GPs need clear information as to the positive and negative predictive values of the test they use, some of which — such as chlamydia culture — may vary from laboratory to laboratory. Some of these questions will be clarified by ongoing pilot programmes of chlamydia screening, although the most cost-effective tests used for screening may not be the most appropriate tests for diagnosis or case detection.

In clinical practice in primary care tests which have comparatively high false positive rates have different implications from the GUM context when working with people who may not consider themselves at risk of STI it is helpful if the doctor can be certain that, when a test is positive, an infection is

indeed present. Also, tests suitable for a high prevalence GUM setting may be less appropriate for a low prevalence primary care population.

The detection of asymptomatic STI

There is a great deal of literature on formal approaches to screening,¹¹⁻¹³ particularly in relation to chlamydia, and we do not explore this here. Even if chlamydia screening programmes are instituted, those who decline screening, and those with newly acquired infection — which may be asymptomatic — will initially be an important group for primary care. Clinicians need to be alert to opportunities to detect chlamydia, HIV, and hepatitis B in primary care attenders.

Practice nurses and GPs provide a range of services which impinge on, or directly relate to, sexual health. These include cervical screening, new patient checks, travel advice, young people's clinics, the provision of contraception (sometimes including free condoms), and antenatal care. Many of these consultations should involve sexual history taking to assess risk of infection; for example, in choosing appropriate contraception, or in advising international travellers.¹⁴ If a history reveals very high risk of infection, then a clinician may take the opportunity to offer a test — for example for chlamydia, hepatitis B, or HIV. The value of risk assessments in clinical contexts in primary care hasn't been assessed, although in the context of systematic chlamydia screening a partner history¹⁰ has been found to indicate risk. In our experience in an inner city area, with a high prevalence of STIs and HIV, both strict Muslims and sex workers may be being cared for. The use of careful history taking provides a useful clinical tool and helps to avoid offending patients or making assumptions.

HIV is a great deal less common than chlamydia and is an infection more likely to cause anxiety for the patient and doctor. One study¹⁵ explored GP attitudes to discussion of HIV testing in response to a number of clinical scenarios. The patients described included 'a well homosexual man' and 'a pregnant woman whose husband travels in East Africa'. In fact such scenarios are unrealistic: GPs will often be unaware if a patient is a 'well homosexual man',¹⁶ or indeed someone whose partner travels in an area of high prevalence for HIV. In order to establish these facts, they must be skilled at raising the subject of sexual health out of the blue and then taking histories relevant to HIV risk, before making a judgement about the discussion of an HIV test. This requires a proactive approach, entirely different to the GUM context where sexual histories are routinely taken from all patients.

Issues of antenatal testing for HIV have only been considered in hospital antenatal clinics.^{17,18} However in lower prevalence areas, in the absence of a regional or hospital strategy for antenatal screening for HIV, it may be valuable for individual practices to liaise with community midwives in order to offer HIV tests to their patients. Such practices might include a university practice with a high number of overseas students, or a practice caring for a significant number of intravenous drug users.

A retrospective study of women with HIV recalling their use of primary care provides a glimpse of opportunities lost for HIV detection.¹⁹ There is a great need to normalise HIV testing in primary care in England in the way it seems to have been in Scotland.²⁰ This may only be achieved if GPs, practice nurses, and community midwives can be motivated through a good clinical understanding, coupled with training that addresses the difficulties posed by raising the subject in the primary care context.

Incidental diagnoses of STI may be made in primary care. This is usually through cervical cytology results, although GPs need to be aware that false positives for some STIs can occur in this situation.²¹ Additionally diagnosis may be made through chlamydia tests performed on urine samples that have shown sterile pyuria. Clinicians in primary care need to be able to respond appropriately to these opportunities for clinical care and patient education.

Referral to GUM clinics

Referral to GUM clinics is not necessarily straightforward. An audit of referral of family planning clinic attenders with chlamydia to a GUM clinic²² identified several problems, including non-attendance of patients at the clinic and self-referral to the GP instead. GPs may not consider GUM referral as necessary for some infections: one study found that only 30% of GPs would refer a woman with genital chlamydia infection.²³ Another study looked at chlamydia-positive patients identified through laboratory data on swabs originating from primary care.²⁴ The low subsequent attendance of these patients at GUM clinics (13%) was considered to reflect low referral rates. In fact research in progress²⁵ suggests that a very substantial proportion of patients referred for any reason to GUM clinics by GPs or practice nurses do not attend: most particularly female patients. In contrast, in some areas the rates of attendance at GUM clinics may be high after diagnosis of chlamydia infection in any clinical context.²⁶ Factors that influence rates of attendance need to be explored. In one audit it appeared that about one-third of GUM clinic attenders might have been, at least informally, referred from primary care.²⁷ Should low attendance rates after such referral prove to be the case and be improved then there will be a significant impact on GUM clinic workload.

For any given medical condition, a patient may choose not to be referred, or may not attend the appointment. In either situation, the GP needs to be able to weigh up what the specialist would be likely to offer in each case to see what action is most appropriate. GPs with neither clinical experience of GUM nor relevant teaching on the subject may be unaware of the details of what GUM clinics offer; for example, that contact tracing is conducted for some, but not all, STIs. It is also helpful to know that when one STI is diagnosed patients should be screened for others. There is good evidence that GPs do not appropriately manage STIs.^{7-9,23,24,28-32} However, an absolute rule of referral to a GUM clinic may be unhelpful as a model for the future because the clinical issues as they relate to individual patients are diverse. The care needs of a woman with trichomonas who has been shown to have no other STI, whose partner can be treated by the GP, and who both have a good understanding of the condition and its transmission will sometimes be simple. The care needs of a young man with a complex partner history and gonorrhoea are not. GPs are therefore in urgent need of education that will provide them with a good clinical overview of the management of STIs. The simplistic message 'refer all patients to the GUM clinic' should no longer be considered sufficient education.

The prevention of STI transmission

The likelihood that those at high risk of STI are accessing primary care means that attendance in primary care may present the best or only opportunity for individual sexual health promotion for some.^{4,5} There have been concerns that some members of key groups — such as young people,

men who have sex with men, or those with HIV — may not trust fully the attitudes or confidentiality of primary care.^{33,34} Nevertheless it appears that the great majority of such individuals do access primary care and many consider their GP an important source of information and advice.^{16,33,34} This accessibility represents a great opportunity for sexual health promotion and care.

One study of practice nurses based on self-reported practice revealed great variability in the likelihood of sexual health being discussed with patients in a variety of clinical contexts.¹⁴ However, we need to know more about such discussions and whether they have an impact on health. There is a tacit assumption in much research^{4,35} that a partner history and other features of the history — such as condom use — can usefully estimate the risk of STI. Whether one-to-one advice in the primary care context, based on such a risk assessment, leads to altered health behaviour is not clear.

Support of sexual health promotion may be possible through schemes which provide free condoms to primary care, alongside training and service development. The impact of these schemes is currently unclear, and the only published research relevant to the primary care context³⁶ did not use risk assessment to target sexual health promotion and the provision of condoms. Some primary care groups are developing health improvement programmes that aim to address sexual health issues, but there is a danger that these too will be piecemeal and underfunded. More information is also needed as to how best to resource and support primary care to take on an active role in sexual health promotion and care when clinical time is already under great pressure.

Education and training

We can no longer afford to have GPs and practice nurses to whom STIs are out of sight and out of mind. There is a need for a substantial change in the content and methods of teaching. Undergraduate teaching of genitourinary medicine varies considerably³⁷ and it rarely provides a holistic view of sexual health care. Teaching on STIs should adequately reflect the educational needs of those who may encounter such infections and therefore need to take sexual histories outside the context of the GUM clinic. It appears that education in sexual health for GP registrars is also extremely variable, although there is a lack of published evidence to support this. There is also a great need for training of GPs already in post.^{7-9,23,24,28-32}

Most of the studies on the quality of care in primary care have been dominated by a specialist perspective and have been conducted in specialist journals,^{7,9,28-32} with little sign that there is a desire to collaborate in order to bring about change. There is now an urgent need for work that seeks solutions that are relevant to primary care. A good example of such work introduced communication by letter from GUM clinics to GPs for 80% of self-referred patients.³⁸ This kind of practice will help educate GPs in clinical management and render the clinical burden of STIs more visible to the GPs. Increased collaboration between GUM clinics and primary care is essential, along the lines that have already been achieved in other important clinical fields.

In the United States of America the HIV epidemic has stimulated teaching and training for primary care physicians based around risk assessment and risk reduction counselling.³⁹⁻⁴² An interesting aspect of this has been the use of simulated patients who are individuals trained to respond as patients and who present with symptoms of an STI to participating primary care physicians. This may be coupled with

other interventions, such as the prior provision of written educational material. Sometimes the simulated patient is seen at a pre-arranged appointment and sometimes physicians have agreed to be 'blinded' — unaware of which patient among their real patients is simulated. The simulated patient provides a critique of the physician's history taking and preventive practice, using standardised reports. Such educational interventions improve STI/HIV risk assessment and counselling practice, but clearly come at some cost. They also provide interesting insights into being able to compare self-reported practice with actual practice. It would be interesting to know whether such an educational intervention would be acceptable to doctors elsewhere.

Educational work in primary care has also been taking place in Australia. A training programme for GPs on STIs has been developed, implemented, and evaluated.⁴³ Attitudes to sexual history taking in general practice have also been examined,⁴⁴ producing findings that suggest considerable inhibition among GPs. However, it is likely that the educational needs of GPs in the UK differ, as there is evidence that Australian GPs have a comparatively good factual knowledge of STI diagnosis.⁴⁵

The Chief Medical Officer Expert Advisory Group report on chlamydia¹³ has stimulated discussion of this infection in relation to primary care.⁴⁶ Clinical guidelines on the management of chlamydia in primary care are helpful,⁴⁷ but they may fail if their introduction is not linked with guidance or training on sexual history taking. Whether primary care is ultimately involved in chlamydia screening or not, GPs and practice nurses are likely to need the clinical skills to case detect — as opposed to screen for — genital chlamydia infection for many years.

The traditional division between contraceptive services and services for STIs arose for reasons that were quite comprehensible in the context of the social values of the first half of the 20th century. This division is now recognised as a hindrance to good sexual health promotion and care,^{48,49} although much has yet to change. One profound consequence is that training for primary care retains the specialist divisions — ultimately affecting clinical practice. Work in progress in the UK²⁵ confirms that GPs and practice nurses who have extensive training in contraception have often received none on STIs. Indeed many other aspects of sexual health promotion and care need to be brought together; for example, cervical screening; advice to international travellers; and relevant aspects of health promotion, such as drug and alcohol use. An educational video and workbook on sexual health and sexual history taking in primary care moves away from classifications based on the different sexual health specialities and presents material that is relevant to sexual history taking in the primary care context.⁵⁰ It also reflects the respective roles of GPs and practice nurses. Indeed sexual health promotion and care within a primary care team is an ideal issue to address in a multidisciplinary way, involving all practice staff.

Conclusion

The UK government is now developing a national strategy for sexual health.⁵¹ Such a strategy should help support and develop the role of primary care in sexual health promotion and care. Already, 70% to 80% of contraception in the UK is provided in this context.⁵² Primary care has a geographical coverage that cannot be matched. In addition, for the reasons we have outlined, primary care must be equipped both to manage and prevent STIs if progress is to be made.

Specialist services are essential for the expertise that they

represent and the potential for clinical teaching, research, and advice for GPs that is therefore available. They should also maintain their open access so that patient choice is maintained in this confidential area. However, primary care also plays an important part with its own needs, characteristics, and problems and is currently in need of the urgent attention of both researchers and educators.

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