The historical role and education of nurses for the care and management of sexually transmitted infections in the United Kingdom: 1 Role

K Miles

Nurses have been involved in the management of sexually transmitted infections (STIs) well before the era of Florence Nightingale. Their role has varied from that of the technician, almoner, counsellor, and doctor’s assistant, to one in which they are able to provide first line management of STIs in nurse led clinics. However, changes to the role of the nurse have not been entirely through choice. It appears that nurses have often been called upon in times of crisis and need—their role often evolving only through demand for services and personnel. Barriers to developing the role of the nurse continue to exist as we move into the 21st century. From Lock hospitals to specialised genitourinary medicine clinics, this historical review looks at how the role of the nurse has evolved over the past 150 years and suggests how past lessons can help enhance the contribution nurses will make to the future of STI management and control.

The history of sexually transmitted infections (STIs) and their associated control efforts in the United Kingdom during the 19th and 20th centuries have been well documented. However, the involvement of nurses is less clear. This is the first of two papers presenting the historical role and education of nurses in the field of genitourinary medicine (GUM) over the past 150 years.

The review was conducted using journal and textbook publications and source documents from the Wellcome Institute for the History of Medicine Contemporary Medical Archives Centre and the Public Record Office in Kew, London. The findings are presented in chronological order of events and/or publication.

WET NURSES AND LOCK HOSPITALS: 19th CENTURY

Early references to the term “nurse” in conjunction with “venereal disease” are not identified immediately with the nursing profession, as we now know it. The word “nurse” originates from the Latin word *matre*, to nourish, or suckle. Nursing was not publicly recognised as a profession until 1860 when Florence Nightingale opened the first school of nursing at St Thomas's Hospital, London. Possibly this is why one of the earliest references to the term “nurse” is cited in the context of venereal disease transmission, rather than actual “nursing” involvement in the treatment and management of venereal disease. Mahon (1808) reviewed writings of venereal disease transmission from the beginning of the 15th century until the middle of the 18th century. He quoted a number of authors who claimed they had evidence that the transmission of venereal disease occurred from the newborn to the nurse following breast feeding, and vice versa.

None the less, there is evidence of nursing involvement, as we now know it, in venereal disease management before the era of Nightingale. The women (patients) had a more permanent contact with the matron who was responsible for the day to day management of the [Manchester and Salford Lock] hospital. At first the hospital committee experienced difficulty in finding a trustworthy woman and in 1827 the matron had to be dismissed after it was discovered that “women of notoriously bad character had been found drinking in the kitchen” and the matron had been “seen in a house of ill fame, singing in the company with very dissolute characters.”

Also before Nightingale, evidence of a nurse administering treatment for venereal diseases was cited in 1848 when a nurse was dismissed for overenthusiastic use of mercurial ointment (to treat syphilis), causing damage to the life of a patient.

In central London, records of nurses being employed at St Peters Hospital for Stone (1860–1960) date from 1864, followed by the employment of a matron in 1876. At this time, the hospital was reported to have trouble retaining nurses because of poor wages and lack of educated women.

The London Lock Hospital in Soho (1746–1952) also employed a matron and two nurses. Male nurses supplied the needs of the few male inpatients from the 1890s, while male orderlies looked after the outpatients department. In the early 1900s, the huge number of outpatients (20 000–30 000 per annum) overwhelmed the system, but the rebuilding of Dean Street in 1912 brought the departments up to date and allowed much of the treatment to be undertaken by nurses and orderlies. In general, the passage of sounds and prostatic massage were left in the hands of the male nurses.
MORALISING AGAINST THE SEXUALLY PROMISCUOUS: EARLY 1900s
Following a presentation to the International Congress of Nurses in 1909, Dock, an American nurse, wrote a manual for nurses with the chief purpose being “to reiterate the social significance of the venereal diseases and the crusade upon which women should enter in regard to them.” This text, as with the vast majority of medical texts of the time, was obsessed with the notion of prostitution and its control.

POST ROYAL COMMISSION: 1916
On the 12 July 1916, the local government board produced regulations on the organisation of medical measures against venereal diseases. Although this document discussed the role and responsibilities of the medical officer of the clinic, the role of the nurse was not made explicit.

The early 1900s also saw an abundance of medical texts describing the venereal diseases. The vast ranges of remedies were presented and many authors wrote numerous editions. One text written by a doctor “more especially for nurses and midwives” also duplicated the medical texts of the time. Although the book intended to provide “suitable instruction” to nurses, of the total of 54 pages, the term “nurse” was only used in the preface and conclusion where the education of nurses was discussed.

NATIONAL COUNCIL FOR COMBATING VENEREAL DISEASE: POST FIRST WORLD WAR
In February 1919, the Medical Committee of the National Council for Combating Venereal Disease (NCCVD) considered providing facilities for the early preventative treatment of VD. Such early treatment facilities were to be attached to public conveniences, in large towns, or clinics and the staff would consist of trained orderlies and nurses who would administer early treatment [urethral/vaginal irrigation] as “first aid,” passing on all necessary cases to the medical officer.

However, at the same time, although sympathetic to the initiative of the nurse, the nursing role was scrutinised in so far as providing advice to patients:

The Honorary Adviser of the National Union of Trained Nurses had written reporting to the National Council [NCCVD] the case of a member of their union, a health visitor, who, when in attendance on an infant suffering from some form of venereal disease had advised the father to seek treatment. The doctor to whom the father went had complained to the health authority of the action taken by the nurse. With regard to the special case the committee registered their sympathy with a public servant being involved in the public interest of patients. However, when the matter was brought to the notice of the Health Authority, it was stated that the father had been informed of the disease and had refused to seek medical treatment.

The role of the nurse in “early treatment centres” later extended so they were able to render early treatment on an “emergency” basis. However, the patient was then to be referred to the medical officer of the centre and “under no circumstances what ever should any further treatment of any sort be given for the same risk of infection by such a nurse.”

Following the Royal Commission the organisation of specialist venereal clinics became topical. These clinics were to employ nurses, preferably male, but in most civilian hospitals at the time male nurses were difficult to obtain. Therefore, as a rule, female nurses attended both male and female patients.

In 1923, the Report of the Committee of Inquiry on Venereal Diseases recognised the importance of educating the community to prevent disease by giving repeated personal instruction and warning to patients attending venereal clinics “must always devolve mainly on the doctors, but that it might well be supplemented by trained social workers…” (point 24: p 8). Although the mere suggestion of another professional giving advice had moved on from the 1917 VD act preventing anyone other than a duly qualified medical practitioner being allowed “to offer to give or give any advice in connection with the treatment thereof,” nurses did not feature in this report.

RECOGNISING NURSES’ CONTRIBUTION TO VD CONTROL: 1920s
In a 1928 text for nurses and others engaged in the treatment of venereal diseases, it was acknowledged that:

By its influence on family life the nursing profession could be of much more assistance in the fight against venereal diseases that it has been in the past (preface) . . . the study of venereal disease still received little attention in a doctor’s training, and even less in a nurse’s. (p 6)

The potential of the nurse to provide public health information—warning patients of cleanliness with regard to baths and WC seats, was recognised. However, it was also stressed that:

or must she [the nurse] take to herself the task of telling a patient that he has venereal disease, even if the patient suspects the condition and has asked her opinion . . . If, however, he has no medical adviser, she may be able to help further by suggesting one with experience in the diagnostic and treatment of VD or by referring him to a venereal clinic. (p 28)

Other roles of the nurse were explored, one with reference to the medicolegal issues and role of consent in the context of the nurse acting as an impartial witness:

A mistress cannot demand the examination of a servant. This request is occasionally made in cases of suspected pregnancy by the worried mistress, the doctor being asked to examine the breast during real or pretend examination of the chest . . . if the nurse plays the part of the impartial witness . . . her position is a very insecure one legally. (p 31)

The same text also presented the nurse’s role in the intravenous treatment of syphilis with arsenic. “The nurse must see that the injection needles are kept in order. They must be sharp . . . the surgeon inserts the needle into the vein, and when satisfied that it is correctly placed in the lumen, he may ask the nurse to release the tourniquet” (p 73-4). The “surgeon” conducted urethral irrigation for acute infection in men, but the nurse or attendant was to be “guided” as to whether to perform irrigation for prophylaxis. In subacute cases of gonorrhoea in women “the nurse may carry out the following treatment once a day: – the vulva is thoroughly cleansed with potassium permanganate . . . a C usco’s speculum is passed into the vagina . . . irrigation of the cervical canal may be carried out . . .” (p 155) Although this text demonstrated some progress in the role of the nurse, confusion was still apparent, as was a clearcut rationale for who did what and when.

THE NURSE AS ALMONER AND TECHNICIAN: 1940s
In 1944 almoners were being employed to trace and bring to treatment the sexual contacts of those infected with VD. Almoners were often trained VD nurses although the Institute of Hospital Almoners advocated that she should not be a nurse, but a woman trained specifically in the social aspects of disease.

By 1948, the VD nurse in America was encouraged to consider the sanitary and public health point of view and look upon the medical and nursing problems involved, rather than “close to prevent disease of moral and social controversy.” The nurse was now taking on more technical aspects of care, such as the preparation of common drugs, the care of
glassware, needles, and syringes, and the recognition and emergency treatment of various drug reactions. The nurse was encouraged to be observant in the examination of patients and understanding of diagnostic tests, although this remained the responsibility of the physician. The role of administering treatment was now being handed to the nurse and it was quoted that studies showed nurses’ ability to draw blood and give intravenous and intramuscular injections safely and satisfactorily, “equal of the trained medical men” (p 269). Finally, it was the clinic nurse who set the tone of the clinic; who saw that the physicians had the necessary materials; that the patients were not kept waiting.

In addition to the task related role of nurses, the sociological aspect of care was emphasised with the nurse becoming a listener and more understanding towards the patient. However, other texts were clear that providing advice was not the role of the nurse:

The question of how much the patient should be told about their condition depends upon each individual case, and the nurse should refer all questions on the subject to the doctor in charge. (p196)

Further to the roles of nurses and almoners, in 1952 a venereologist group committee conducted a questionnaire regarding the use of social workers. This led to recommendations that social workers be an integral part of the VD service. This was followed by a circular issued by the assistant secretary to the British Medical Association (BMA) regarding social workers in VD centres. Two letters were then received by the BMA stating that the sister in charge of the VD clinic carried out all social work duties. At the same time a letter, also concerned about the introduction of more social workers into clinics, was received by an Essex County Hall Health Department. It was felt that the (nurse) health visitor would be more appropriate to carry out this role.

RETAINING VD NURSES IN THE SPECIALTY: 1950s

In 1952, the provision of an extra allowance for nurses working regularly in VD clinics was considered necessary, not because these nurses were engaged in the management of infectious disorders, but “in the interest of venereal services as a whole.” The pay award to retain nurses in the speciality was justified by the unique role of the trained VD nurse:

It is necessary too that she can perform semi-specialised operations such as giving injections, taking blood specimens and passing vaginal specula, painlessly and with a speed that can only be imperative so that patients are not kept waiting . . . in addition she has to have a knowledge of clerical procedures . . . handling of confidential notes and of pathological specimens and the recording of their results.

The origins of the salary increase appear to have come from recommendations to the Ministry of Health by the Venereologist Group of the BMA. The Venereologist Group of the BMA corresponded with the Royal College of Nursing (RCN) for a £20 per annum allowance for VD nurses. The RCN responded suggesting that “the general feeling was that there did not appear to be a case for nurses in VD service being remunerated on a different scale from nurses in any other specialised field.”

However, the correspondence from the RCN occurred after the Ministry of Health had set out detailed agreements reached by the Nurses and Midwives Whiteley Council as part of the general revision of hospital nurses’ salaries. The Nurses and Midwives Council revised rates of remuneration for nurses employed in fever hospitals, in sanatoriums, tuberculosis hospitals, and in the treatment of venereal diseases. The correspondence of the time highlighted the need to offer additional payment to sanatoriums and fever nurses so to retain these nurses in the specialties where stigma and fear of disease led to low recruitment. There was no reasoning or mention as to why venereal disease nurses were entitled to an additional allowance, only an assumption that there were similar recruitment and retention issues to that of the fever and tuberculosis units.

During the same period, medical venereologists were facing similar retention problems. Between 1953 and 1957, Ministry of Health correspondence recorded the difficulties in recruiting consultants to the specialty of venereology. Following the substantial decrease of VD in the 1950s and subsequent reduced attendance at clinics, there was a decreased interest in venereology leading to a suggestion that the specialty be combined with dermatology. This was opposed, as was the suggestion that general practitioners take on the treatment and management of venereal diseases. The Medical Society for the Study of Venereal Diseases (MSSVD) prepared a memorandum for the Ministry of Health entitled “Venereology and the Future.” This provided justification of the separate existence of the specialty of venereology. Nurses, however, did not feature in this document.

MINISTRY OF HEALTH AS A BARRIER TO PROGRESS: 1953

In 1953, there was a suggestion from a county medical officer that to prevent further cases of congenital syphilis, midwives should be instructed to take blood (for Wassermann reaction) if the family practitioner was unwilling to do so. The Ministry of Health responded:

After careful consideration we have come to the conclusion that it would be dangerous to make such a general statement in answer to Dr Fraser’s letter . . . whilst we have no objection to a midwife carrying out venepuncture at a hospital . . . we think it unwise to encourage midwives to undertake this procedure . . . remote from medical oversight. Further we think it might be skating on thin, ethical ice to encourage midwives, acting independently of doctors, to send blood specimens direct to the laboratory.

In the United States, the picture of nurse involvement in the control of venereal diseases was somewhat different. At a 1954 conference for nurses on the public health aspects of venereal diseases in North Carolina, the fluctuating pattern of nursing service in VD was acknowledged. During the first world war, public health nurses actively contributed to controlling the high incidence of VD. Towards the end of this war, funds were cut and the extent of nursing input changed. The faltering interest in VD was not revived until 1935 when VD control intensified, therefore needing more personnel. However, there was a shortage of nurses and the “VD investigator” assumed a greater responsibility for activities previously undertaken by nurses. Following the second world war, the incidence of VD decreased. VD investigators were no longer required, and nurses resumed this role. The conference was then in a position to discuss how nursing should plan meeting challenges in the control of VD, the focus being more oriented towards community case finding. By 1956, planning for the venereal disease content of basic nursing curriculum in Boston was based on the nurse’s core functions of case finding, case holding and follow up, nursing care, teaching, and interviewing of the patient.

Back in the United Kingdom at the Seamen’s Dispensary in Liverpool (1924–91), all of the non-medical staffing of the clinic consisted of male orderlies until 1955. Two state enrolled nurses (male) were then employed, but a charge nurse was not appointed until 1957 and a record clerk until 1963. Before this, the nurses undertook all clerical duties.

HEALTH PROMOTION AND THE NURSE—A FORMAL AFFILIATION: MID-1950s

By 1956, the role of giving advice to patients had moved from the remit of the doctor to include the nurse. Although the
nursing staff to a large extent was responsible for “nursing technique,” preparing syringes and assisting the doctor during examination, teaching patients about the prevention of VD, and further explanation of the doctor’s recommendations became the sister’s duty.  

It was with great foresight that Ryle-Horwood, a state registered nurse holding a venereal disease certificate from the Royal College of Nursing, stated: It is obvious that, at the moment, the total potential contribution of nurses to venereal disease control is far from being realised. Until even more interest in these problems can be obtained from the authorities responsible for nursing and allied training, so that they can utilise every opportunity, we are losing a vast part of the services of a profession which could be a vital force in attaining our ultimate objective—the eradication of venereal diseases from this country. (p 4) 

During the 1960s the momentum for a less restrictive environment in which the nurse could provide education and advice to patients was sustained. However, the nurse's role to assist the doctor remained explicit: 

Whilst the patient is undressing, the nurse should make sure that the trolley contains everything the doctor will require for his examination . . . when the examination is completed . . . the nurse changes the sheet in readiness for another patient. (p 119) 

The nurse’s role in collecting male specimens was also clarified. Nurses collected urethral swabs, and although digital examination of the prostate and pelvis was usually carried out by the doctor, “in certain cases the nurse may be requested to do the test” (p 129). The nurse prepared the patient and assisted the doctor during urethroscopy, lumbar puncture, and proctoscopy. The nurse was also able to dispense treatment prescribed by the doctor. 

Another text for nurses in the VD specialty was published 2 years later. Unfortunately, this text added little to the development of GUM nursing practice as “techniques that are an everyday part of the nurse’s work were omitted in order to allow more details to be given of methods peculiar to the investigation and treatment of the VD patient.”

**NURSES HINDERING ROLE PROGRESS: 1972** 

The nursing texts of the 1950s and 1960s had progressed to promoting the information and advice giving role of the nurse. However, in a 1972 text written by a senior nursing officer, this role seemed to regress to the pre-1950s attitude, suggesting that only the doctor could give the patient information. The book also makes reference to the nurse as the doctor’s assistant, although for male patients the nurse usually took the tests. However, for the first time in any of the VD texts, microscopy was described as a nursing role. 

Other authors of the time also reiterated the point of resuming sexual intercourse post infection: 

Patients often talk to nursing staff about their condition and its prognosis. Although such questions are dealt with sympathetically and intelligently, we have an inflexible rule never to advise a patient about resuming sexual relations. This decision is for the doctor alone to make for he, after all, bears the ultimate responsibility.

**CLARITY IN ROLES: MID-LATE 1970s** 

Although throughout the 1970s nurses were still required to work as doctors’ assistants, the movement for nurses to take on more proactive and multifaceted roles in the VD clinic had begun: 

In the space of one session, the nurse (he or she) can, depending on the size of the clinic, be acting as receptionist, clerk, child-minder, social worker, laboratory technician, doctor’s assistant, family planning adviser, statistician, dispenser, marriage counsellor and telephonist. The nurse was often perceived by patients as “an emotional dustbin, someone on whom to unburden their guilt, shame, embarrassment, remorse or aggression.” The education and counselling function of the VD nurse was also clarified and the nurse was allowed to give advice regarding contraception. The nurse could take specimens from men, perform microscopy, assist in research projects, and “need no longer be merely a chaperone.” The microscopy role of the VD nurse was later supported by the development of a self instructional training package at Sheffield VD clinic in conjunction with the Joint Board for Clinical Nursing Studies. 

In 1978, 95 consultants from 189 GUM clinics in England and Wales were surveyed on the facilities and diagnostic criteria in sexually transmitted disease clinics. It was reported that consultants often delegated some of the duties normally carried out by medical staff to appropriately trained nurses. The delegated duties ranged from seeing and advising patients, examining and diagnosing, to “prescribing” treatment. 

Although the role of the nurse had started to extend, the scope of the nurse’s work was dependent not only on the size of the clinic, opening hours, diagnostic facilities, and number of staff, but also on the consultant’s overall policy as to the extent of nurse involvement.


In 1987, the first comprehensive study of the duties and delegated tasks that nurses in GUM clinics could perform or already performed was reported. The duties of nurses were divided under five headings: clerical and administrative; statistical returns; patient care; clinical duties (the extended role of the nurse); and advisory. The “extended role” of the nurse consisted of taking sexual histories, examining patients and taking genital tests, performing microscopy, and prescribing treatment. 

One year later the Monks report highlighted the considerable rise in the workload of GUM clinics and the potential inefficient use of doctor consultation time. This report recommended that staffing levels and roles, especially those of nurses and doctors, should be examined. 

Allen and Hogg pursued this recommendation in 1993. This study reported how the role of nurses varied from clinic to clinic and even within clinics. Microscopy, cryotherapy, venepuncture, female examination, and “extended” roles were asked about specifically. More than half of the nurses interviewed said that the nursing staff in their clinic could take on more responsibilities. The main reason preventing nurses from taking on more responsibilities, such as counseling, taking sexual histories, taking tests on new and follow up patients, doing cytology smears, giving test results and educating patients, was the clinic consultant who governed what nurses did, or did not, do, in the clinic. The second reason was simply lack of time and, finally, some nurses felt that they were not sufficiently trained or experienced enough to take on the extra responsibilities. However, only 39% of the medical staff thought that nurses could take on more responsibilities compared with 56% of the nurses. When asked whether nurses could run specific clinics without the medical staff being present, 67% of nurses and 62% of doctors thought this possible. The study recommended that serious consideration should be given to the extension or introduction of nurse run clinics or sessions.

**BARRIERS TO EXTENDED NURSING ROLES: 1997** 

Four years later, despite the findings and recommendations by Allen and Hogg, resistance regarding the move to integrate
nurse led clinics was recognised by a commissioned review of the work of 21 London clinics.6
The authors remarked that the development of nurse led clinics was likely to “depend on doctors attitudes to nursing rather than nurses' choice” (p 14).
In the face of this resistance, nurse led services were, none the less, soon to feature in the routine services of London clinics.12

DISCUSSION
Historical research helps us to understand the process of change and provides one way of investigating the dynamics and direction of change.23 Researching the historical contribution of nurses to the field of sexually transmitted infections offers an understanding of the process and politics of innovation and change towards advancing GUM nursing practice.
What this review has shown is that milestones in the evolving role of the nurse have often mirrored the changing epidemiology of STIs and subsequent demand for services and trained personnel. For instance, the rise in STIs after the first world war, and again after the second world war, was followed by calls for the greater involvement of nurses in STI control. Again, as the incidence of STIs rose in the late 1960s and 1970s, so too did the greater involvement and broadening role of the nurse.
A repeating pattern has emerged in the way in which GUM nursing has progressed, or has been allowed to progress. Despite the fact that many texts and policies reiterated over time what nurses could and, more often, could not do, there has none the less, been a pattern whereby nurses have been called upon to take on new roles and responsibilities during times of crisis and need. When existing systems have failed to retain control over epidemics, the nursing profession has been recruited to become more involved, take on new tasks, and assume enhanced roles.
This pattern is not unique to GUM nursing. Similar effects have been seen in mainstream nursing where the effects of professional socialisation with the medical profession,24 gender,25 and professional confidence and self esteem26 have hindered the professionalisation of the nursing workforce.
In recent years this pattern has become apparent once again. Healthcare professionals and the public have recently been warned of yet another upsurge in the incidence of STIs. A Public Health Laboratory Service report on trends in STIs seen in the United Kingdom, indicates GUM clinics are experiencing increasing workloads associated with the rising numbers of STI diagnoses and the provision of other sexual health services, such as HIV testing, counselling, and advice.27 The report emphasises that the burden of many STIs throughout the United Kingdom is substantial. In spite of this, barriers to the progression of the nurse role in GUM services remain.
The National Strategy for Sexual Health and HIV proposes that nurses will have an expanding role as specialists and consultants.28 This is in line with general primary care agendas that propose greater roles for nurses as the first point of contact in the primary care setting.29 However, for true integration and better utilisation of nurses in the management of STIs, it is clear that attitudes need to change and old demarcations specifying what nurses can and cannot do need to be broken down. One of the many challenges for the future of GUM as a specialty is for doctors and nurses to work in partnership to define and develop new and innovative means of utilising existing staff and resources in the best possible way. In addition, nurses need to stop seeing themselves as an oppressed group, be secure in their identity and clear in their direction for the 21st century. Opportunities to advance the nursing role should be seen as a positive career development opportunity that will ultimately enhance future recruitment and retention in the specialty, in addition to improving care outcomes and the range of patient services on offer.

Key messages
• Progress in the role of the nurse has often corresponded with changing epidemiology of STIs
• Barriers to the progression of the GUM nursing role persist

ACKNOWLEDGEMENTS
I would like to thank Barbara Mortimer, UK Centre for the History of Nursing, and Lesley Hall, the Wellcome Institute Contemporary Medical Archives Centre, for their advice and direction; and Danielle Mercey and Robert Power for their valuable comments during the preparation of this paper.
Conflict of interest: none.

REFERENCES
10 Mahon PAO. Important researches upon the existence, nature, and communication of venereal infection in pregnant women and nurses. London: D Jaques, 1808.
24 Turner Warwick W. A handbook in venereal diseases for nurses and others engaged in the outline treatment of these diseases. London: Faber & Gwyer Ltd, 1928.
Historical role and education of nurses in STIs in the UK: 1

New in STI

Nursing Practice

Nurse practitioners have become integral to the delivery of health care in a variety of specialities and in most countries. In recognition of their increasing role in the management of sexually transmitted infections we have opened a new section—Nursing Practice. This section will be edited by Vanessa Griffiths and will reflect the best in STI research either performed by nurse practitioners, or exploring their role in managing sexual health issues. The journal has provided this outlet, but pleads ignorance on how to best develop its potential. Can I invite comment from readers? Remember STI has an international readership.

CPD

Our first stab at interactive Continuous Professional Development (CPD) is now on the web site under Education. It is accessible and free to all. The Royal College of Physicians has informed us that it will count as personal CPD. We urgently need feedback before we extend this pilot. It involved many hours of work by Sarah Edwards, Emma Fox, Richard Lau, and Jonathan Ross. Please write to us with your views using the feedback facility on our web site www.sextransinf.com.

Mohsen Shahmanesh

www.sextransinf.com

The historical role and education of nurses for the care and management of sexually transmitted infections in the United Kingdom: 1 Role

K Miles

Sex Transm Infect 2002 78: 292-297
doi: 10.1136/sti.78.4.292

Updated information and services can be found at:
http://sti.bmj.com/content/78/4/292

These include:

References
This article cites 19 articles, 1 of which you can access for free at:
http://sti.bmj.com/content/78/4/292#BIBL

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/