Health seeking behaviour and the control of sexually transmitted disease

HELEN WARD,1 THIERRY E MERTENS,2 AND CAROL THOMAS3
1Department of Epidemiology and Public Health, Imperial College School of Medicine at St Mary’s, London, UK, 2Division of Policy, Planning and Evaluation, World Health Organization, Geneva, Switzerland, and 3Department of Applied Social Science, Lancaster University, UK

What people do when they have symptoms or suspicion of a sexually transmitted disease (STD) has major implications for transmission and, consequently, for disease control. Delays in seeking and obtaining diagnosis and treatment can allow for continued transmission and the greater probability of adverse sequelae. An understanding of health seeking behaviour is therefore important if STD control programmes are to be effective. However, taboos and stigma related to sex and STD in most cultures mean that gaining a true picture is difficult and requires considerable cultural sensitivity. At the moment relatively little is known about who people turn to for advice, or about how symptoms are perceived, recognized or related to decisions to seek help. It is argued that such knowledge would assist programme planners in the development of more accessible and effective services, that studies of health seeking behaviour need to include a combination of qualitative and quantitative methods, and that studies should include data collection about people who do not present to health care facilities as well as those who do. A pilot protocol for studying STD-related health seeking behaviour in developing countries is briefly presented.∗

Introduction

The control of sexually transmitted disease (STD) is recognized as a global priority (World Bank 1993). HIV is a cause of premature death, and most cases are the result of sexual transmission. Other sexually transmitted diseases cause considerable morbidity, particularly in relation to the reproductive health of women, and are also associated with increased transmission of HIV (Cameron et al. 1991; Jessamine et al. 1990; Nsubuga et al. 1990; Grosskurth et al. 1995). STD programmes are frequently being integrated with broader AIDS programmes in an attempt to address these significant public health problems (Piot and Tezzo 1990). Many STDs, such as syphilis, gonorrhoea and urethritis can be diagnosed and treated, and yet millions of cases in the world are left untreated leading to continued transmission and serious sequelae.

Established epidemiological wisdom suggests that an important way to address the combined problem of sexually transmitted disease and HIV control is through an integrated programme which improves the availability and accessibility of health services, trains primary health care workers in simple diagnostic and management procedures for sexually transmitted disease (including syndromic algorithms) and their prevention, screens for sexually transmitted disease in pregnant women, raises awareness about sexually transmitted disease and its transmission in the general population, and targets sexually transmitted disease prevention and care programmes at vulnerable groups.

The quality and accessibility of services clearly plays a role in attracting people with, or at risk of, STD (Mertens et al. 1994). However, social stigma around issues of sexual activity and sexually transmitted diseases will have a major influence on patterns of presentation to health care services. In order to increase the proportion of people with sexually transmitted disease who seek effective treatment and counselling, programme planners need to know more about factors that influence health seeking behaviour in relation to sexually transmitted diseases.

A better understanding of lay knowledge and health-related behaviours associated with sexually transmitted disease could assist through helping to direct health education initiatives and public health communication programmes, encouraging the involvement of alternative health care providers (e.g.
traditional healers, pharmacists, injectors) in programmes, improving the quality of public and private services, and through removing or reducing barriers to presentation to health clinics.

In this paper we discuss why knowledge of health seeking behaviour is important for control programmes, briefly review what is currently known about STD-related health seeking behaviour in developing countries, consider conceptual approaches to understanding health seeking behaviour in general, examine some methodological issues in assessing STD-related health seeking behaviour, and report on a protocol for assessing this behaviour.

Epidemiology of sexually transmitted disease

The standard epidemiological model for STD (Yorke et al. 1978; Anderson 1989) defines the basic reproductive rate ($R_0$) of an STD in a population as a function of the efficiency of transmission $\beta$ (the average probability of transmitting infection from an infected individual to a susceptible person), the average rate of acquisition of new sexual partners in the population $c$, and the average duration of infectiousness $D$. The standard model suggests that these act in a simple multiplicative way: $R_0 = \beta c D$.

Control programmes can be looked at in relation to this model, as shown in Table 1. Interventions directed to reducing any of the parameters should be of use in reducing the incidence of STD. The major interventions currently target rate of partner change through prevention campaigns, and rate of transmission (through the use of condoms and other barriers). Theoretically, therefore, reducing the duration of infectiousness should also be of major importance in STD control.

The significance of health seeking behaviour can be seen in this context. Delays in symptom recognition and seeking care can increase the incidence of disease. In contrast, reducing the time between onset of infection and cure, through improved utilization (through, for example, increased accessibility) of services and education about symptom recognition, could play an important part in STD control. A randomized controlled trial of improved STD treatment in rural Tanzania demonstrated a 40% reduction in the incidence of HIV in the intervention group (Grosskurth et al. 1995). The effect was considered to be primarily due to a reduction in the duration of STD in males achieved through improved access to services (Laga 1995). Effective partner notification which reduces the duration of infectiousness in partners should also contribute to STD control.

Other influences include self treatment with antibiotics or other methods. Self treatment using inadequate methods may prolong the period of infectiousness prior to presentation for effective treatment, and can also lead to the development of resistant strains.

Development of STD control programmes

There are many constraints on the development of an effective sexually transmitted disease control programme, ranging from a lack of resources and political will to the specific and hidden nature of the diseases. Stigma can result in a general lack of awareness and education about the significance of different symptoms, and a limitation on the sources of lay help and advice. Insensitive responses to people seeking professional advice will further obstruct help seeking, as will legal measures requiring enforced registration, partner notification or treatment (World Health Organization 1991; Day and Ward 1994).

Table 1. The effect of different interventions on the standard model of STD transmission

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Prevention level</th>
<th>Effect on model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce number of sex partners</td>
<td>1°</td>
<td>$1c^*$</td>
</tr>
<tr>
<td>Safer sex (condoms, non penetrative sex)</td>
<td>1°</td>
<td>$1\beta$</td>
</tr>
<tr>
<td>Early treatment</td>
<td>2°</td>
<td>$1D + 1\beta$</td>
</tr>
<tr>
<td>Partner notification</td>
<td>1° and 2°</td>
<td>$1D$ (in contact)</td>
</tr>
<tr>
<td>Palliative care</td>
<td>3°</td>
<td>?? $1\beta$ (anti-viral treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>?? $1D$ (prolong life)</td>
</tr>
</tbody>
</table>

* key: $R_0$ basic reproductive rate of an STD in a population
$\beta$ the average probability of transmitting infection from an infected individual to a susceptible person
$c$ the average rate of acquisition of new sexual partners in the population
$D$ the average duration of infectiousness
Each of these influences on the transmission of STD suggests possible directions for control programmes, highlighting the need for a broad knowledge base for planners. If antibiotics are sold over the counter, for example, pharmacists should be involved in developing and using effective management protocols which include encouraging men to tell partners to seek treatment. If women are reluctant to discuss genital problems with a man, female doctors or nurse practitioners can be made available to diagnose and treat STD. An assessment of STD-related health seeking behaviour may find that women and men have little knowledge of symptoms that may occur with an STD, and this topic may then be introduced into health education programmes through schools. If legal obstacles are found to reduce contact with STD services these should be removed.

Health seeking behaviour and sexually transmitted diseases

Health seeking behaviour can be defined as any activity undertaken by individuals who perceive themselves to have a health problem or to be ill for the purpose of finding an appropriate remedy. This definition borrows from Kasl and Cobb's (1966) definition of 'illness behaviour'. Health seeking behaviour should be distinguished from the broader concept health behaviour, defined by Kasl and Cobb as any activity undertaken by individuals who see themselves as healthy for the purpose of preventing disease or detecting it in an asymptomatic stage.

In any cultural context, a precondition of most health seeking behaviour is recognition of symptoms. Of key significance, therefore, is the way in which symptoms are interpreted by the individuals affected and by those around them – the meaning the 'symptoms' have, the attribution of cause, and the beliefs held about appropriate and effective treatments (Mechanic and Volkart 1961; Scambler et al. 1981; Morrell and Wade 1976; Wadsworth et al. 1971; Ingham and Millar 1979; Calnan 1987).

Caution is needed in examining health seeking behaviour. Western sociological and sociopsychological research in this area has shown that it is erroneous to adopt simplistic models of health seeking behaviour based on the following rationalistic assumptions: that symptoms of disease or 'risky' behaviours are always identified and/or defined in health terms; that recognition of symptoms will necessarily or automatically result in health seeking behaviour; that health seeking behaviour will always take the form that scientific medicine thinks is most appropriate (Freidson 1970; Zola 1973; Helman 1978; Kleinman 1980; Blaxter and Patterson 1982; Stainton Rogers 1991; Rosenstock 1974; Rosenstock and Kirscht 1979; Wallston et al. 1978).

If it is erroneous to make such assumptions in relation to industrial societies with highly developed and accessible health care systems then, as anthropologists warn us, particular care needs to be taken to avoid transferring simplistic models of health seeking behaviour to developing countries with very diverse cultural, political and economic characteristics. The inappropriateness of adopting rationalistic approaches to health seeking behaviour can be illustrated in relation to STD-related health seeking behaviour in developing countries. There has been a growth in such research over the past decade, particularly in Africa, prompted primarily through concern about the role of STD in the transmission of HIV.

Many STDs are asymptomatic, particularly in women, or have relatively non-specific symptoms. Therefore symptom recognition and consequent action is only one part of the picture; prompts for screening for asymptomatic infection following potentially risky contacts are also important. Who is consulted once symptoms are recognized will depend on pre-existing beliefs about the likely meaning of the symptoms, the efficacy of different approaches (traditional, spiritual, western medical) for such conditions, and the availability and accessibility of the various potential sources of help. Studies in Swaziland, Nigeria and Mozambique suggest that where symptoms are thought to signify natural imbalances, infidelity or some form of spirit intervention, traditional healers may be the most appropriate initial point of contact for help (Green 1992; Piot and Tezzo 1990; O'Toole 1993). However, there is no simple model relating to beliefs and actions; people frequently seek more than one form of health care during the course of an illness. A detailed study of reproductive infections among women by O'Toole (1993) in Nigeria showed that beliefs about STD related to the specific symptoms, with some seen as the result of sexual activity, usually of their husband, while others were considered the result of a 'natural' imbalance. These beliefs related to choices about care, although many of the women interviewed used more than one type of care, including self treatment.
use of traditional healers and modern medical facilities.

Moses and colleagues (1994) report interviews with patients attending urban health centres in Kenya; 27% had sought treatment elsewhere earlier in the same episode of an STD, and these other sources included other public sector clinics (37.7%), private clinics (38.6%) and the informal sector (23.7%). The last group included pharmacists, traditional practitioners and drug peddlers. The authors report:

‘The main reasons given for having sought care in the private medical or informal sectors were convenience of access and perceived greater privacy.’ (Moses et al. 1994: 1949)

People with symptoms of an STD may thus consult a number of healers in turn. The proportion who visit an official health care clinic at some point during their illness is of importance to state-directed treatment and control programmes. This will vary between countries, between rural and urban areas and with the accessibility of such services. Some reports suggest that, in many parts of Africa, only a minority of people with STD consult public facilities (Green 1992). Among adolescent girls in a rural area of Nigeria, over 80% reported a vaginal discharge but few sought treatment (Brabin et al. 1995). In Kinshasa, Zaire, 87% of 1200 prostitutes participating in a survey had signs and symptoms suggestive of an STD in the previous year, but only 32% had visited an official health care facility (Piot and Laga 1991). In contrast, a population-based study in Tanzania found that nearly all men and 90% of women reporting symptoms of STD had sought treatment in the official health sector (Newell et al. 1993). The proportion of people who consult public clinics will vary as their relative accessibility and affordability change. In Kenya the introduction of clinic fees led to a reduction in attendances, and presumably to a shift to other forms of care (Moses et al. 1992).

The proportion of people attending public clinics is affected by the availability of other sources of care. In Tanzania, 7% of patients attending dispensaries over a four and a half year period in Bukoba rural area presented with STDs (United Republic of Tanzania Ministry of Health 1992). A population study in Zimbabwe suggested considerable self-medication with antibiotics when STD was suspected (Nyazema et al. 1992). Respondents reported sharing antibiotics provided for STD with friends for prophylaxis. The authors suggest that this may underlie the growth in drug resistant micro-organisms, and be in part due to the stigma attached to the treatment and management of STD at health centres.

The availability of multiple sources of care, combined with uncertainty about symptoms, stigma surrounding STD and direct problems of access and affordability may lead to considerable delays in diagnosis and treatment. Over 80% of patients seeking STD treatment in Ethiopia had had symptoms for over a week, with 40% already on some form of treatment (Feleke et al. 1990).

A non-clinic sample of sex workers in Ethiopia found that the majority of the women (97.7%) had sought medical care in the public of private sector at some point, but at the time of interview almost half the women reported having symptoms, most of them for one week or more, and had not sought care (Desta et al. 1990). A clinic study of Zulu patients with donovanosis reported that ulcers had been present for over 28 days in 55.4% of the men and 46.3% of the women (O’Farrell 1993).

In a Kenyan clinic study, 42% of patients had been symptomatic for more than a week, and 23% for over two weeks (Moses et al. 1994). The main determinant of a longer time to presentation was to have previously sought treatment elsewhere, including other public or private medical clinics, or the informal sector. Men who reported having recently purchased sex, and women who were selling sex, were likely to present to a health centre earlier than others.

Such delays are likely to lead to an increased probability of long-term complications and to continued transmission. People will not necessarily abstain from sex when they notice symptoms: in one study 36% of patients with genital ulcers, mainly due to donovanosis and secondary syphilis, continued to have sex after noticing the ulcers (O’Farrell et al. 1992). A study of patients attending for STD treatment in Kenya found that 12% of men and 38% of women reported having had intercourse on one or more occasions since their symptoms began (Moses et al. 1994).

**Health seeking behaviour in context**

This brief outline of aspects of STD-related health seeking behaviour in selected developing countries suggests a complexity and cultural specificity of the
Pathway model, which describes the steps of the process from recognition of symptoms to the use of particular health facilities. This method attempts to identify a sequence of steps, and looks at social and cultural factors which affect this sequence. This has been primarily an anthropological approach, with qualitative methods of investigation. The second is the determinants model, based on a more bio-medical and quantitative approach where the focus is on outlining a set of determinants (Figure 1) which are associated with the choice of different kinds of health service. Both models are helpful and illustrate the fact that both qualitative and quantitative approaches will be needed to better understand health seeking behaviour (Manderson and Aaby 1992; De Koning and Martin 1996).

Research methods

What is clear from the literature in the fields of medical sociology, health psychology and anthropology is that a broad conceptual framework of health seeking behaviour is required to inform investigation and intervention in STD control, a framework which encompasses processes and factors at the individual and socio-cultural levels, as well as geographical/spatial, demographic, economic and organizational factors. It is this multi-level and multi-factorial approach which has informed the development of a draft WHO protocol for assessing STD-related health seeking behaviour in developing countries by two of the authors of this paper (HW, TEM), reported in the next section.

Particularly important questions for any investigation of STD-related health seeking behaviour to cover include: the systems of lay knowledge which inform the interpretation of particular symptoms; the perceived threat of disease; the extent to which symptoms disrupt family, work and other social activities; the availability of treatment resources, physical proximity, psychological and monetary costs of taking action (including costs, time, money, effort, stigma, social distance, feeling of humiliation and the like); beliefs in the efficiency of recommended health care (itself related to beliefs about the cause of the disease). It should be noted, however, that ‘between culture’ variation is only one dimension, with considerable, often greater, ‘within culture’ variation in response to particular symptoms or states.
If an accurate picture of health seeking behaviour is to be built up, careful attention needs to be given to the cultural sensitivity and appropriateness of data collection methods and research methodologies more generally. The taboo and stigmatized nature of STD in most cultures (as well as the frequent repression of discussion about sexuality) will mean that gaining a 'true' picture of health seeking behaviours is particularly difficult and requires considerable cultural sensitivity.

The danger inherent in the use of inappropriate research methods is illustrated by Kaona and colleagues (1990). They reviewed the use of traditional social survey methods in a study about biomedical and ethnomedical health service use in a rural area in Zambia and concluded that the results were 'highly questionable'. Over 80% of 218 respondents had reported seeking treatment at either a clinic or the hospital in the last 8 months despite the fact that the nearest hospital was 90 km away and other facilities were not easily accessible. The authors suggest that the survey respondents were using traditional healing methods but, knowing of the researchers' hostility towards traditional medicine, had given false information about their health seeking behaviours.

An alternative approach to the standard health survey is presented by Merrill Singer and colleagues (1989) in relation to reproductive illness behaviour in Haiti. They used a door-to-door survey in a selected neighbourhood to identify common reproductive complaints: in-depth interviews were carried out with women who lived in the surveyed neighbourhood or were encountered as outpatients at the local hospital in order to gather information on reproductive history, help-seeking strategies, and beliefs about aetiology and treatment; and the full range of biomedical and folk health-care providers (doctors, nurses, health department officials, spiritual healers, herbal healers, and midwives) were questioned about their treatment of reproductive illness.

Singer et al. (1989) suggest that through gaining 'therapeutic narratives', that is, participant's commentaries on illness progression, help-seeking resort and related events, they were able to gain insight into the complex relationship of 'traditional' and 'modern'
Health seeking behaviour and STD

Table 3. Outline of the protocol

<table>
<thead>
<tr>
<th>Overall Aim</th>
<th>Summary of methods</th>
<th>Expected outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>The study will attempt to obtain information on STD health seeking behaviours to answer the following key questions:</td>
<td>Four sub-studies will be carried out:</td>
<td>The purpose of answering these key questions is to be able to outline points for intervention, including:</td>
</tr>
<tr>
<td>• what genital and non-genital conditions are believed to be STDs (to provide a local taxonomy of STDs);</td>
<td>• <strong>Sub-study 1:</strong> Review of current knowledge</td>
<td>• appropriate education about STD (what they are, how to recognize them, their causes, the need for effective treatment);</td>
</tr>
<tr>
<td>• who is at risk of STD locally;</td>
<td>• <strong>Sub-study 2:</strong> Key informant interviews</td>
<td>• availability of effective treatments for STD;</td>
</tr>
<tr>
<td>• what options are available for health care when a person has an STD;</td>
<td>• <strong>Sub-study 3:</strong> Focus group discussions and/or individual interviews with groups assessed as having increased risk (from sub-studies 1 &amp; 2)</td>
<td>• dissemination of information about health care facilities for STD;</td>
</tr>
<tr>
<td>• when a person has a condition believed to be an STD what do they do and where do they seek help;</td>
<td>• <strong>Sub-study 4:</strong> Interviews with people with STD</td>
<td>• improvements in the organization of such facilities (location, costs relative to other forms of health care, opening times, waiting times, staff attitudes).</td>
</tr>
<tr>
<td>• what are the main influences on people's decisions about where to seek help.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The answers to these questions will be used to inform practical proposals about improving STD care.

Medical systems. Their interviews with medical professionals revealed a tendency to discount the ideas and understandings of their patients as irrational, backward and irrelevant, based on the assumption that ‘traditional’ medicine was static. In contrast, the authors found that ‘traditional’ healers frequently developed and adapted their practice. Where patients believe that honest and open discussion of their health complaints with a physician is ‘more likely to elicit scorn than sympathy’ (Singer et al. 1989), they learn to say what they think the physician wants to believe. This too has important implications for the study of health seeking behaviour.

Such research indicates the value of qualitative research methods in elucidating health-related meanings, beliefs and behaviours among lay people. Qualitative research methods are, in fact, essential if an understanding of the pattern of decisions and actions in relation to STD is to be developed. However, qualitative methods alone are insufficient. A sophisticated model of health seeking behaviour also requires other information requiring quantitative methodologies: information on demographic, socioeconomic, socio-cultural and the spatial distribution of STD and of health care practitioners and facilities (both modern and traditional).

The nature of the relationship between traditional and modern medicine in STD control is crucial. Attitudes towards traditional medicine will have an important impact on the effectiveness of control programmes. As Pillsbury noted in 1978:

‘In many cases prejudice on the part of health planners against traditional . . . aspects of their own cultures has precluded understanding of traditional therapies . . . [However] health care for the rural and urban poor cannot be satisfactorily provided without a basic understanding of the traditional and other local practices of the intended beneficiaries and the value and belief systems that underpin health-related behaviour.’

Draft protocol for investigating health seeking behaviour in relation to STD

A draft protocol was developed for the assessment of health seeking behaviour. The protocol is available in draft form for field test from the World Health Organization. Its development has been informed by the argument presented in the previous section that a broad multi-level and multi-dimensional conceptual framework for understanding STD-related health seeking behaviours is required. The overview of the protocol is shown in Table 3, with details of each sub-study in Table 4. Outline interview schedules have been developed, but are not presented for reasons of space.
Table 4. Outline of the aims, methods and outcomes of the sub-stages of the protocol

<table>
<thead>
<tr>
<th>Sub-study &amp; aims</th>
<th>Outline of methods</th>
<th>Outcomes</th>
</tr>
</thead>
</table>
| **Sub-study 1. Review of current knowledge** to inform the rest of the studies | Review of published and unpublished material identified through:  
- library search  
- university/library search for unpublished theses  
- local social scientists  
- national AIDS, STD and family planning programmes  
- non-governmental organizations  
- routine data sources | **A description of:**  
- common STDs in the area  
- local names for these STDs  
- prevailing beliefs about STD  
- groups most affected  
- outline of what people do when they have STD  
- range of providers of services  
Inform the design of sub-study 2 (decide on key informants, interview schedules) |
| **Sub-study 2. Key informant interviews**  
To describe local beliefs about local STD, who gets them, where people go for help | Semi-structured interviews by trained field workers with 10-15 people including:  
- community figures who may know who is at risk and where they go, e.g. bar owners, taxi drivers, and leaders of women’s, prostitutes’, army/police, and migrant workers’ organizations.  
- providers of health care, e.g. doctors/nurses (private/public), pharmacists, traditional healers, midwives, traditional birth attendants. | **Enhanced version of outcomes of sub-study 1, with addition of different perspectives.**  
Inform decisions about who to include in sub-study 3, and whether focus groups, individual interviews or a combination would be appropriate. |
| **Sub-study 3. Focus group discussions and/or individual interviews**  
To obtain a range of perspectives on health seeking behaviour and STD among particular social groups | (a) *Focus groups*: from people at risk of STD as agreed in 1/2, e.g.:  
- soldiers  
- factory workers  
- prostitutes  
- bar patrons  
- migrants & business travellers  
- drivers  
- adolescents  
A selection of 8-10 people from the groups, led by a social scientist  
(b) *Individual interviews* of 10-15 people from members of groups as in (a). To explore individual experience narratives.  
- Detailed descriptions of lay-beliefs and practices relevant to STD and health behaviour  
- Outline of main perceived obstacles to use of existing health care facilities and how these may vary by group  
- Individual narratives of previous experience with STD and use of different facilities during that episode | This section should provide practical guidance for planners on the major obstacles to ‘appropriate’ health seeking behaviour. |
| **Sub-study 4. Interviews with people with STD**  
To see how reported actions from previous interviews and groups relate to current behaviour when a person has an STD | Individual interviews with people who have an STD, 15 in each of:  
- public facilities (clinics, hospitals)  
- private facilities (clinics, pharmacies)  
- traditional healers  
- others (as identified in sub-study 2). | **Description of the patterns of health seeking in the context of a specific STD episode.**  
This will add to the practical proposals emerging from the other sub-studies. |
The approach is primarily qualitative, to obtain descriptions of the issues from a number of perspectives. The study could be complemented by a population based survey, but for initial purposes of programme development, determining with precision the frequency of behaviours and beliefs is less crucial than obtaining an overview of the key factors which may influence people’s choice of action and provider when faced with a possible STD. For pragmatic reasons the study focuses on providing practical information for those planning STD control programmes, and is designed to be carried out in a short period of time with relatively limited resources. Eliciting narratives about what people have done when they have experienced symptoms in the past is an important part of the study, and requires that experienced ethnographers be included in the research team.

Conclusion

Health seeking behaviour cannot be understood in isolation from socio-cultural and other factors relevant to health and sex – including pressures to conform to some moral norm, legal repression of certain kinds of sexual activity, absence of sex education, and poor quality health services in general. However, studying what people think and do when they have symptoms associated with an STD could help to address real obstacles to a good control programme, and allow sections of the population to explain the problems from their own perspective which should, if programme planners are willing to act, assist in the control of sexually transmitted diseases and HIV.

Endnote

* The pilot protocol is available from the WHO, Geneva, Switzerland.

References


