Sexually Transmitted Infections

Editorials

Contact tracing—where do we go from here?

Since it was developed in the United States in the 1930s contact tracing, also known as partner notification, has come to be regarded as a key element in the control of sexually transmitted infections (STIs) and has been implemented in many parts of the world.[1 2] The sexual partners of individuals with STI or HIV infection are notified, counselled on their exposure, and offered medical services.[3] Sexual partners may be informed by the index patient (partner referral), a healthcare worker (provider referral), or a conditional approach, where initial partner referral is followed by provider referral after an agreed interval. Partner referral involves a health education interview with the index case possibly supplemented by contact slips; provider referral involves healthcare workers telephoning, writing to, or visiting contacts. Possible benefits include reduction in morbidity in the contacts through earlier treatment; reduction in the transmission of STIs by contacts through treatment and health education; and gaining insight into patterns of spread.

Sexual health services now face critical appraisal, both from purchasers of services and from non-specialists who are screening for STIs in areas such as primary care and family planning clinics. What evidence is there for the benefits of contact tracing? How should contact tracing evolve to meet the needs of these new patient groups, who may be asymptomatic, unsuspecting of infection, and unprepared to approach partners?

Is contact tracing an effective intervention? The evidence from published studies is generally supportive but mixed. It is possible to bring significant numbers of partners with previously undiagnosed STI, both bacterial (for example, gonorrhoea and syphilis[4]) and viral (for example, HIV[5]), into contact with health services through contact tracing. However other studies have found contact tracing to be only partially successful especially when index cases deny having sufficient information to contact partners. In a report on contact tracing for infectious syphilis in Florida, only 2236 (19.8%) out of 11 272 potentially exposed partners were located mainly due to insufficient information being provided by the index cases.[6] Potterat[7] argued that this disappointing outcome might have resulted from poorly trained and motivated staff working in a difficult environment where many patients were using "crack" cocaine with consequent hypersexuality.

Hard evidence on other outcome measures is scarce. It has not been proved that contact tracing results in a decrease in the prevalence of STIs at the community level although this is not surprising given the difficulty in establishing accurate community prevalences[8] for STI let alone demonstrating clear changes in response to interventions. It has not been shown in a randomised controlled trial that contact tracing results in positive behavioural change although uncontrolled observations have suggested that contact tracing for HIV may lead to a reduction in the number of sexual partners of both HIV infected and uninfected contacts.[5] Completing a particular contact tracing process does not equate to a successful outcome. Ramstedt *et al* found that although there was better adherence to protocols for contact tracing for chlamydial infection in women over time in Gothenburg, Sweden, the overall reinfection rate by their regular partners did not fall.[9]

There is a lack of good evidence on the cost effectiveness of contact tracing. In an analysis of a hypothetical cohort Howell *et al* showed that contact tracing for chlamydial pelvic infection would be cost effective provided at least 11% of the named female partners of male index cases, or 43% of the named male partners of female index cases, received treatment.[10] These thresholds might not be met in all population groups; Oh *et al* could only verify that 27% of the male partners of adolescent females with chlamydial or gonococcal infection had received treatment following contact tracing.[11] Howell *et al* only addressed the direct costs of pelvic infection and ignored the benefits of preventing further transmission, thus probably underestimating the true cost effectiveness of contact tracing. No study of the cost effectiveness of contact tracing for HIV has been published. Reports giving figures for its cost suggest it is a relatively expensive way of identifying new cases of HIV infection.[12] For example, three papers from the United States published in the period 1991–3 reported costs per new case of HIV infection identified in the range $1625–3205 (at contemporary prices) through partner notification.[13–15] This should not be taken as suggesting that it is not cost effective given the high, and rising, costs of caring for cases.

If we accept that contact tracing is useful in the control of STIs, how is it best done in the field? Again there is less evidence than we would like. In a systematic review of contact tracing published in 1994 Oxman *et al* identified only eight comparative studies of methods in contact tracing which they believed to be methodologically strong.[16] They found little evidence to indicate which approach was superior for syphilis, gonorrhoea, or chlamydial infection although one good study showed provider referral to be

more effective than patient referral in contact tracing for HIV.[17] A subsequent study found no difference between conditional referral and provider referral strategies for syphilis.[6] Oxman *et al* also remarked that none of the studies had attempted to measure any of the potential negative psychosocial effects of contact tracing such as anxiety, or the precipitation of domestic violence, or inquired of those traced as to the most acceptable method of approach. It has been shown that patient referral can work well for long term partners but casual sexual contacts are traced better by provider referral.[18]

If and how contact tracing is done outside STI clinics is poorly documented. In a Scottish primary care audit only 13% of patients diagnosed as having chlamydia attended specialist services for contact tracing.[19]

How should contact tracing develop in the future? Firstly, we must attempt to evaluate the processes used in a more systematic manner in order to convince critical non-specialists of the value of contact tracing. Given the almost universal agreement on, and implementation of, this intervention in STI services it is surprising how many basic questions remain unanswered. Secondly, contact tracing services must adapt to meet the challenges of community screening. Acceptability of methods becomes much more important when a large proportion of infections are unsuspected and threaten the stability of long term relationships. The expertise required for successful contact tracing needs to be made available in non-specialist areas—for example, through closer liaison with specialist sexual health services. This area should therefore provide fertile ground for clinical research studies in the future.

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Sexually transmitted infection in the elderly

"Age brings changes at 70 just as at 17. But you never outgrow your need for intimate love and affection."[1]

There is little medical literature concerning sexually transmitted infection in the elderly. The paucity of published information may reflect the low clinical workload this population generates within genitourinary medicine (GUM) services, but also suggests a more general lack of interest in the sexual health of elderly patients.

This degree of scientific neglect reflects the attitudes of medical practitioners and those of the patients themselves. The older generation may have grown up with the belief that sex was something improper or unmentionable. They are often uncomfortable sharing this aspect of their lives which, as a topic, may have been rarely discussed in the past with either peers or healthcare professionals. In direct contrast, the contemporary media project sex and sexuality in a way that encourages discussion and debate. Articles addressing modern sexuality emphasise appearance, fitness, and most predominantly youth. These articles are mostly written by, for, and about the young and tend to neglect issues relating in the same context to an elderly population.

To confound matters further, medical practitioners can be uneasy discussing a topic that is infrequently encountered in their clinical practice. The idea of a sexually active elderly person compels us to sexualise and consider the sexual needs of our own older relatives, including our parents. We are also then forced to project our own sexuality into the future and consider the accompanying physical and mental compromise.

When Johnson and colleagues published *Sexual Attitudes and Lifestyles* in 1994 the upper age limit for those surveyed was 59 years.[2] The reason given for this limit was related to the measurement objectives of the survey. These included contraception, infertility, and unwanted pregnancy, all of which are of little personal concern to the elderly.

The elderly population's lower risk of sexually transmitted infection directly relates to a number of factors including a tendency towards mutually monogamous relationships, and death or incapacity of spouse leading to reduced frequency of partnered sex.[3] For example, in these data from the United States which included patients aged 18–89 years, the percentage of those who were sexually inactive by the age of 80 years was 50% for men and 95% for women.[3] It is reasonable to think that these figures will be similar in

other equally long lived populations. In addition, it is recognised that only 10% of patients with sexual dysfunction consult a doctor suggesting a substantial health problem among younger members of the population which is even greater among older people.[3] When older people do present to GUM clinics it is often with multifactorial problems involving concurrent medical conditions, drug therapy, and psychosexual issues (see letter, p 379). Erectile failure is generally accepted to be one of the commoner dysfunctions. This assumption is strengthened by the current demand for the new clinically effective oral medication for erectile failure.[4] This product may increase sexual activity and possible sexually transmitted infection risk in a previously inactive population; those who may be consulted by these patients should be prepared for a change in their demands and diseases. Treatment for other conditions, however, may be medically suboptimal when patients' own perceptions and wishes for therapy conflict with those of their doctors. This is seen particularly in genital malignancy when issues relating to quality and length of life arise.[5]

The elderly population is not generally considered at risk of HIV infection. One author describes the stereotypic elderly individual as a "heterosexual, monogamous, drug-free grandparent".[6] This is clearly not the case in Florida, as reported by Nadler *et al*, who reviewed all HIV related medical admissions over 60 years of age in two veterans' hospitals over a 1 year period. They found 50% of such patients were in conventional high risk categories.[6] Furthermore, El-Sadr and Gettler found an HIV antibody prevalence of 5% in a retrospective analysis of all admissions over 60 years of age to a New York State hospital in patients who were not previously known to be HIV seropositive.[7] It is important that the complications of HIV infection are considered in the differential diagnosis of disease presentation in the elderly, especially as the natural history of HIV infection in this population is characterised by a more rapid progression and shortened survival after an AIDS diagnosis.[8]

A proportion of older people are sexually active and at risk of acquiring sexually transmitted and other lower genital tract disease. Information on the topic of sexual health should not exclude the elderly either by its availability or presentation. A sensitive approach to targeting information via agencies frequently used by this population may help to inform the population, destigmatise the topic, and facilitate GUM service attendance. Specialist clinics should be easily accessible to the elderly and be perceived as welcoming, and capable of managing the sexual health needs of the elderly population.

Only by encouraging the elderly population to access GUM services may important epidemiological questions relating to their sexual behaviour be asked and information subsequently used to develop public health strategies.

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