PostScript

LETTERS

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HIV transmission among men who have sex with men through oral sex

While the risk of transmission through oral sex for men who have sex with men (MSM) is low, discrepancies remain between study findings and there is uncertainty about the exact degree of risk.[1]

Between July 2001 and September 2003, a total of 4150 MSM were newly diagnosed with HIV infection in England, Wales, and Northern Ireland and reported to the Communicable Disease Surveillance Centre in London. Reports for 1359 cases received during this time included the question ''Does the patient believe himself to have been infected through oral sex?'' The remaining 2791 cases had only laboratory reports or earlier clinician report forms where this question was not asked.

The oral sex question was answered for 688 (50.6%) of the 1359 cases, of which for 625 (90.8%) the response was no, and yes for 63 (9.2%) cases. For 671 cases this information was not recorded even though the question was included on the form.

All 63 cases where the patient believed himself to have been infected with HIV through oral sex were further investigated by a discussion with the clinician or healthcare provider. From these further discussions during the follow up, 27 (42.8%) cases were believed to have been infected from unprotected anal intercourse. Of the remaining 36 cases, 16 (2.3%) claimed to have had only oral sex as their risk for acquiring HIV, with 20 (2.9%) cases always reporting protected anal sex but unprotected oral sex. Previous negative testing history and HIV status of partners was taken into account when discussing possible HIV risk with clinicians or healthcare providers.

It is difficult to quantify oral sex risks and this could be an obstacle to accuracy[1–3]; none of these individuals were re-interviewed for this study and risk was assessed by clinician and note review only. There may be recall difficulties surrounding condom use, including whether they were used, or if used, coming off or splitting, or brief anal-penile contact that was not considered relevant or remembered. In addition, there was limited information about whether ejaculation had occurred or about breaks in the oral mucosa. However, 16 cases reported no anal sex and 20 cases reported only protected anal sex and unprotected oral sex. In total this represents 5.2% of those MSM reports where the question was answered. We are aware that, for half, the question was not answered, and if we classified those reports as not infected through oral sex, then 2.6% (36 of 1359) were probably infected through this route. The indication given by these UK surveillance data is that oral sex carries a small but real risk.

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The correct approach to modelling and evaluating chlamydia screening

A recent systematic review of economic evaluations suggests that screening for genital chlamydia infection is ''cost effective.''[1] We are concerned about how the authors reached this conclusion since the reviewers did not take into account the fact that *Chlamydia trachomatis* is infectious. The methodological problems arising from this fundamental flaw raise questions about the validity of the conclusion.

The correct model to use in the evaluation of an infectious disease must be capable of encompassing all its effects, including the potential for transmission. Bernoulli first reported such transmission dynamic models in the 18th century.[2] The wide misuse of static, as opposed to transmission dynamic, models has been noted in the economics literature on vaccination programmes,[3] but the message has been slow to transcend to the economics literature on sexually transmitted infections, with a few notable exceptions.[4] In the case of screening for genital chlamydia, someone who is successfully treated might be re-infected; the benefits of treatment in preventing long term sequelae will be lost, and the person could continue to infect others. If they are successfully treated without re-infection, however, they will not transmit infection. Since the two possibilities have opposing effects on the number of cases, the direction of change in the cost effectiveness ratio is uncertain; it could overestimate or underestimate the true cost effectiveness. Economic evaluations that do not incorporate these effects are, therefore, very unlikely to model the outcomes of a chlamydia screening programme accurately.

Although the use of objective criteria to assess the quality of identified papers was praised in a recent *STI* editorial,[5] the checklist used by Honey *et al*[1] is outdated and was not applied appropriately for an infectious disease. This led the authors to include papers whose results might be unreliable. The use of more recent and widely used guidelines, which ask questions about the choice of model type and the justification for the key parameters on which the model is based,[6] may have drawn attention to the problems of static models. Furthermore, the review included studies that used ''cost per case detected,'' which is an inadequate outcome for screening programmes because it does not take into account resource implications associated with the course of action taken by individuals after case detection.

We have recently concluded our own systematic review of economic analyses of screening programmes for genital chlamydia infection, as part of the ongoing Chlamydia Screening Studies project (ClaSS). While the majority of studies we identified had used an incorrect modelling approach, we did identify a full economic evaluation that had used a dynamic model to evaluate chlamydia screening. This was identified by Honey *et al*. but excluded because they thought that it did not fulfil their inclusion criteria.[1]

We propose that all future economic evaluations of chlamydia screening should use a dynamic modelling approach. A consensus panel to develop guidelines for the conduct of economic evaluations of interventions for sexually transmitted infections could take this recommendation into account.[6]

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Conflict of interest: The authors are all members of the Chlamydia trachomatis Screening Studies (ClaSS) Working Group. Part of the remit of this group is to conduct a systematic review of economic studies of *Chlamydia trachomatis* screening and to construct a model with which to evaluate the cost effectiveness of chlamydia screening.

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Haryana state in India, still a low HIV prevalence state

In Haryana, India, with a geographical area of 27 632 square miles, an HIV sentinel surveillance was carried out, on a regular basis (1998–2002), on consecutive serum samples of 400 antenatal clinic (ANC) attendees (three sites) and 250 sexually transmitted diseases (STD) clinic attendees (four sites). This was done for each 12 week period per year as unlinked anonymous testing with one of the ELISA/rapid/simple tests. A sample that was positive with two tests of different assays was considered HIV positive. The other STDs were diagnosed clinically and using appropriate laboratory tests.[1 2]

Of the 7933 men and women who participated in the HIV sentinel surveillance from 1998–2002, 15 (0.3%) of 5200 ANC attendees and 48 (1.8%) of 2733 STD clinic attendees had HIV. Though HIV prevalence is still below 1% among the ANC attendees, a gradual increase over these 5 years has been observed though statistically it was not found to be significant (table 1). With increasing HIV infection among antenatal women, paediatric AIDS is poised to become an important public health problem.[3 4]

The odds ratios (ORs) of HIV infection for men compared to women decreased by age; men aged 20–29 years were nearly thrice as likely as women the same ages to be HIV infected (OR 2.68 (95% CI 1.1 to 6.7)). When we combined the literacy status for both men and women, the HIV prevalence was statistically significant among the literate of more than fifth grade (p value = 0.0416) but was not found to be significant when combined for ANC attendees. School or college education, therefore, does not have any impact on this epidemic. Emphasis has to be given to educate the general public about AIDS.

Among the STD clinic attendees presenting with genital ulcer, HIV reactivity (3.9%, 7/181) and VDRL reactivity (11.6%, 21/181) were found to be statistically significant ($p<0.05$, χ^2 test used). Therefore, in India, where the overall level of HIV is still low, a high level of STDs in certain states makes for a continuing potential for the epidemic to become generalised among all sexually active adults. Differences across the states may just be a matter of time.[4]

As per the sentinel surveillance data in the year 1998, there were seven moderate prevalence states (prevalence among ANC attendees <1% but prevalence among the STD clinic attendees >5%) and 19 states were of low prevalence compared to two states only with moderate prevalence rates and 24 states

Table 1 HIV prevalence rates for the attendees tested in sentinel surveillance programme, 1998–2002

	Antenatal clinic attendees			STD clinic attendees					
	HIV reactive			Men		Women			
Characteristics	%	(No)*	p Value	%	(No)	%	(No)	Men/women ratio (95% CI)	p Value§
Age groups (years)									
15–19	0.3	(383)	ns†	1.8	(113)	0	(57)	−††	ns
20–29	0.3	(4171)	ns	2.5	(756)	0.9	(639)	2.68 (1.1 to 6.7)	0.0272
30–44	0.2	(630)	ns	2.8	(432)	1.3	(547)	2.80 (1.1 to 6.9)	ns
>45	0	(16)	ns	1.5	(132)	0	(57)	−	ns
Sentinel year									
Feb-Mar 1998	0	(400)	ns						
Aug-Oct 1998	0	(400)	ns	3.3	(211)	3.1	(32)	1.06 (0.1 to 0.3)	ns
Aug-Oct 1999	0	(400)	ns	5.7	(123)	0	(10)	−	ns
Aug-Oct 2000	0.08	(1200)	ns	2.2	(274)	2.3	(221)	0.97 (0.3 to 3.1)	ns
Aug-Oct 2001	0.4	(1200)	ns	1.5	(410)	0.7	(454)	2.21 (0.6 to 8.8)	ns
Aug-Oct 2002	0.6	(1600)	ns	2.2	(415)	0.7	(578)	3.13 (1.0 to 10.1)	0.0434
Residence	(2001–2)			(2000–2)					
Urban	0.4	(1573)	ns	1.0	(543)	1.0	(659)	0.87 (0.3 to 2.7)	ns
Rural	0.7	(1227)	ns	2.5	(515)	1.2	(630)	1.99 (0.8 to 4.8)	ns
Population	(2001–2)			(2002)					
Migrant	0.9	(224)	ns	0	(23)	0	(41)	−	ns
Non-migrant	0.5	(2576)	ns	2.3	(392)	0.7	(537)	3.08 (1.0 to 9.9)	0.0469
Literacy status	(2001–2)			(2002)				2002	
Lliterate	0.5	(859)	ns	0	(88)	0.9	(220)	−	ns
Literate till 5th grade	0.6	(524)	ns	3.1	(65)	0.9	(114)	3.51 (0.3 to 37.9)	ns
Literate till 12th grade	0.5	(1173)	ns	2.1	(193)	0.5	(184)	3.81 (0.4 to 33.8)	ns
Graduation not done	0.4	(244)	ns	4.3	(69)	0	(60)	−	ns
Occupation of spouses†	(2001–2)			(2002)					
Business	0.4	(435)	ns	1.8	(56)			−	ns
Industrial and factory workers	0.3	(325)	ns	3.0	(33)	20.0	(5)	0.15 (0.0 to 2.1)	ns
Service	0.2	(539)	ns	1.1	(94)	0	(29)	−	ns
Agriculture and unskilled workers	0.7	(1241)	ns	1.3	(153)	0	(10)	−	ns
Truck/auto/taxi driver	0.6	(160)	ns	16.7	(18)	0	(1)	−	ns
Hotel staff	0	(6)	ns	0	(1)			−	ns
Unemployed	0	(60)	ns	0	(15)	0.6	(522)	−	ns
Students	0	(34)	ns	2.2	(45)	0	(11)	−	ns
Syndrome									
Genital ulcer				2.5	(403)	2.7	(148)	0.92 (0.3 to 2.9)	ns
Urethral/cervical discharge				1.0	(511)	0.9	(1043)	1.13 (0.4 to 3.4)	ns
Genital ulcer and discharge				3.4	(59)	1.5	(66)	2.24 (0.2 to 24.0)	ns
Genital warts				2.4	(85)	0	(32)	−	ns

*Number of attendees.
†Among the antenatal clinic attendees, the majority of the occupations stated are those of the spouses with only occasional women having in that occupation.
p Value >0.05 (ns† = not significant) in all the characteristics (χ^2 test used).
††Men/women ratio (95% CI) couldn't be calculated.
§p Value for test between sexes (χ^2 test used).