

# Sex and sample size

A preliminary analysis of data obtained during Britain's first large national survey of sexual attitudes and lifestyles has lately been published.<sup>1</sup> This survey was designed to estimate the size of the HIV epidemic and to collect data that could be used to formulate effective preventive strategies. The results suggest that certain groups of the general population report high numbers of sexual partners. It remains possible, therefore, that a heterosexually transmitted HIV epidemic could occur in the UK. Longitudinal surveys to assess temporal trends in sexual behaviour are essential, and ideally such surveys should gather information about HIV status and risk behaviour. To monitor heterosexual transmission and to measure seroconversion rates, it may be more effective to follow cohorts of young single individuals who report high numbers of sexual partners.<sup>2</sup> However, it is also necessary to monitor risk behaviour changes in the general population. It would obviously be extremely costly to repeat a large-scale national sex survey (this one had a sample size of 18 876) every few years, so can risk behaviour changes be monitored with a much smaller sample size?

I compared some results of this national survey with results of a 1987 pilot study for the national survey. The sample size of the pilot study was 780 individuals, and the results have been analyzed and discussed in detail elsewhere.<sup>2,3</sup> I compared mean values for two sexual behavioural variables (the reported number of sexual partners in the past 5 years, and in the past year) for the two studies, because the frequency distributions of these risk behaviours are very skewed and the means are very sensitive to skewness (hence, if the frequency distributions are very different, then the means would also be expected to be considerably different).<sup>2,3</sup> Mean values for the two variables are surprisingly similar (table), even though the sample size of the pilot study was only about 1 in 25 of the sample size of the full survey. These results suggest that it may be possible to monitor temporal changes in certain risk behaviours in the general population by obtaining data from a fairly small sample of individuals every few years.

	SEXUAL PARTNERS IN SURVEYS			
	<u>Men</u>		<u>Women</u>	
	National	Pilot	National	Pilot
Mean # partners in past 5 years	2.6	2.9	1.5	1.3
Mean # partners in past year	1.2	1.1	1.0	0.9
Sample size	8384	337	10 492	443

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1. Johnson AM, Wadsworth J, Wellings K, Bradshaw S, Field J. Sexual lifestyles and HIV risk. *Nature* 1992; 360:410-12. 2. Blower SM. Exploratory data analysis of three sexual behaviour surveys: implications for HIV-1 transmission in the UK. *Philos Trans R Soc Lond (Biol)* 1993; 339:33-51. 3. Blower SM, Anderson RM, Wallace P. Loglinear models, sexual behaviour and HIV: epidemiological implications of heterosexual transmission. *J Acquir Immune Defic Syndr* 1990; 3:763-72.