over half of teens 15–19 years reported having had oral sex with an opposite sex partner. Oral sex is thought by some men who have sex with men to have lower risk for HIV acquisition, and is a prevalent practice in this population. However, the risk of acquiring a given sexually transmitted infection (STI) from oral sex may depend on a number of factors, including the specific STI, particular oral sex practice, prevalence of the STI in the population, and the number of oral sex acts performed. It is difficult to quantify the risk of getting an STI from a specific type of oral sex activity, or compare risks due to specific sex acts, because most people who have oral sex also have vaginal and/or anal sex.

Methods In order to develop public health messages on oral sex and STI risk, we performed a review of the scientific literature to assess the state of current knowledge for risks of seven STIs (including HIV) and six oral sex practices: insertive and receptive fellatio, cunnilingus, and anilingus. Approximately 200 publications between 1979 and 2010 were reviewed; only 65 reported novel findings for one or more of these 42 potential associations.

Results The clearest evidence of risk was found for syphilis (all oral sex practices), chlamydia (insertive and receptive fellatio; receptive anilingus), gonorrhoea (insertive and receptive fellatio), herpes (insertive fellatio; receptive cunnilingus), and HIV (receptive fellatio). For example, for pharyngeal gonorrhoea 4 of 4 studies reported association with receptive fellatio; 1 of 1 study found none for insertive anilingus. Other STI and oral sex associations were less well-studied, or have not been documented. No reports allow direct per-contact estimates, but some facilitate comparisons with non-oral types of sexual contact. A number of studies did not specify whether ejaculation or use of barrier protection was assessed.

Conclusions All oral sex practices are associated with risk of transmission of one or more STIs; however the relations between specific oral sex practices and risk of infection are not well-characterised for several STIs. Despite this, it is important to formulate appropriate public health messages regarding oral sex and STI risk. Future studies should clearly distinguish between specific oral sex practices and consider these factors in sample size determination.