Of 300 men in Nairobi, Kenya, with culture-proven chancroid, 57% had acquired infection from prostitutes. The majority of infections were acquired in the city of Nairobi. All 10 female source contacts examined had genital ulcers. 13 of 29 female secondary contacts were culture-positive for Haemophilus ducreyi and 10 of these infected women had clinical chancroid. Of 122 prostitutes from the middle and lower social strata, 12 had genital ulcers, 5 of which were culture-positive for H ducreyi, and a further 5 had symptomless genital carriage of H ducreyi. Prostitutes are a major reservoir of H ducreyi in Nairobi. No evidence of transmission of H ducreyi by women without clinical chancroid was detected.