**Supplemental Digital Content Table 3: Quality assessment of case-control studies.**

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| **Citation** | **STI case definition accurate (1)** | **Representativeness of cases (1)** | **Control selection (1) and definition (1)**  | **Comparability of cases and controls in design or analysis (2)** | **Ascertainment of HC (3)** | **Same ascertainment method for cases and controls (1)** | **Comparable non-response rate for cases and controls (1)** | **Total score****Quality rating:**High (8-10)Medium (5-7)Low (<5) |
| Harris 2009 [36] | 1 | 0 | 2 | 1 | 2 | 1 | 0 | **7** (Medium) |

Rating criteria: *STI definition accurate:* separate estimates for different types of STIs provided using test for pathogen (1 point); *Representation of cases*: consecutive or obviously representative series of cases; *Control selection & definition:* a) controls are sampled independent of HC use and from same source population of cases (1 point); b) if cases are first occurrence of outcome, then controls stated to have no history of outcome. If cases have new (not necessarily first) occurrence of outcome, then controls with previous occurrences of outcome of interest are not excluded (1 point); *Comparability of cases and controls in design or analysis*: a) adjusted analyses are performed (1 point); b) study controls for condom use or negligible differences reported in adjusted in unadjusted models (1 point); *Ascertainment of HC:*  a) separated estimates for different types of HCs (1 point); b) HC use is assessed more than once at intervals <6 months (1 point); c) HC ascertainment is through structured interview blind to case-control status (1 point); *Same ascertainment method for cases and controls:* yes or no (1 point); *Comparable non-response rate:* equivalent rate demonstrated for both groups (1 point).