## Supplementary Tables

Table S1: Average results from 1000 simulations of the Case 2A scenario with varying levels of evaluation sensitivity and specificity. Values are presented as "mean (standard deviation)" calculated across simulations. Incidences are presented as percents. Note that the true incidences are 10 percent for both groups, and the true relative risk is 1.

| Sensitivity | Specificity | Percent cases diagnosed (X = 0) | Percent cases diagnosed (X = 1) | Estimated incidence (X = 0) | Estimated incidence (X = 1) | Estimated relative incidence (X = 1 vs X = 0) |
|---|---|---|---|---|---|---|
| 1.0 | 1.0 | 55.8 (0.7) | 81.1 (0.6) | 5.6 (0.1) | 8.1 (0.1) | 1.45 (0.035) |
| 1.0 | 0.7 | 55.9 (0.7) | 81.2 (0.6) | 5.8 (0.1) | 9.3 (0.1) | 1.59 (0.036) |
| 0.7 | 1.0 | 39.1 (0.7) | 56.8 (0.7) | 3.9 (0.1) | 5.7 (0.1) | 1.45 (0.042) |
| 0.7 | 0.7 | 39.1 (0.7) | 56.8 (0.7) | 4.2 (0.1) | 6.8 (0.1) | 1.64 (0.045) |

Table S2: Average results from 1000 simulations of the Case 2B scenario with varying levels of evaluation sensitivity and specificity. Values are presented as "mean (standard deviation)" calculated across simulations. Incidences are presented as percents. Note that the true incidences are 7.5 percent for the X = 0 group and 15 for the X = 1 group, giving a true relative risk of 2.

| Sensitivity | Specificity | Percent cases diagnosed (X = 0) | Percent cases diagnosed (X = 1) | Estimated incidence (X = 0) | Estimated incidence (X = 1) | Estimated relative incidence (X = 1 vs X = 0) |
|---|---|---|---|---|---|---|
| 1.0 | 1.0 | 66.6 (0.8) | 75.4 (0.5) | 5.0 (0.1) | 11.3 (0.1) | 2.26 (0.053) |
| 1.0 | 0.7 | 66.6 (0.8) | 75.4 (0.5) | 5.7 (0.1) | 12.4 (0.1) | 2.16 (0.046) |
| 0.7 | 1.0 | 46.6 (0.9) | 52.8 (0.6) | 3.5 (0.1) | 7.9 (0.1) | 2.26 (0.066) |
| 0.7 | 0.7 | 46.7 (0.8) | 52.8 (0.6) | 4.2 (0.1) | 9.0 (0.1) | 2.12 (0.056) |