Supplementary Material

Epidemiological impact of public health interventions against diabetes in Qatar: mathematical modeling analyses

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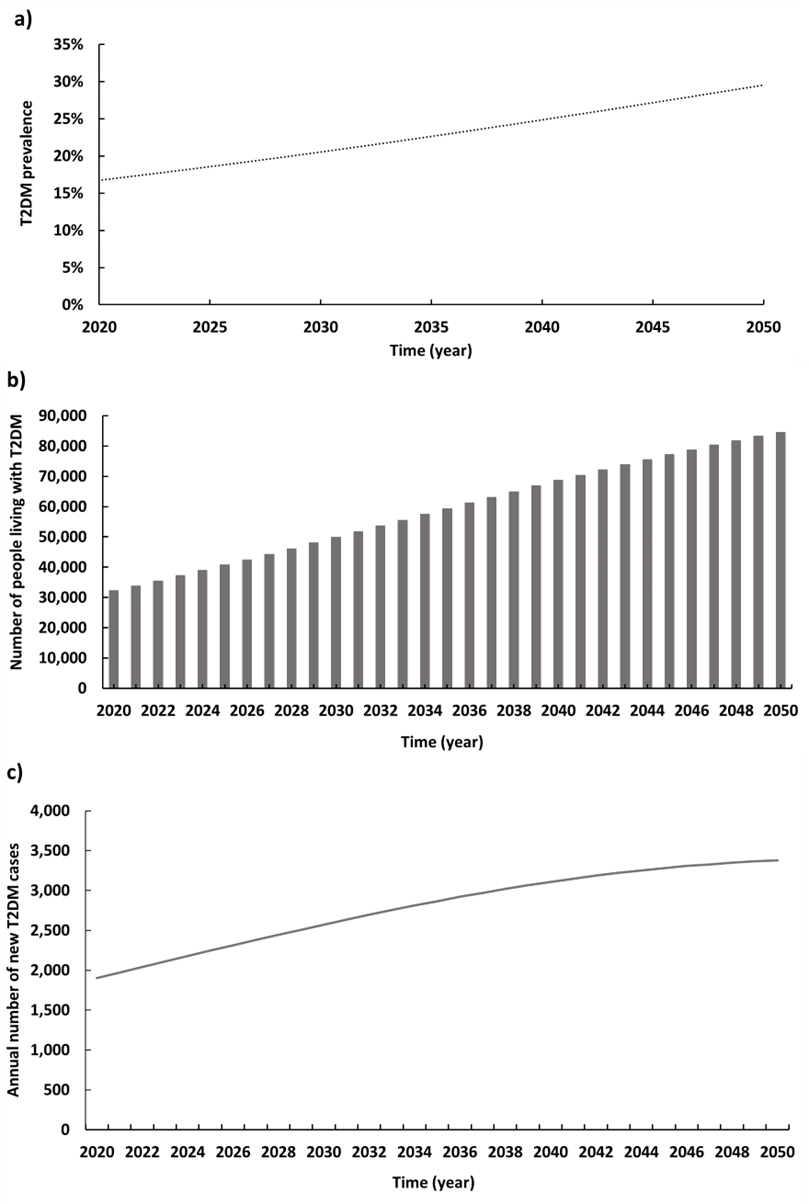
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# Table S1. The model’s assumptions in terms of parameter values.

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| --- | --- | --- | --- | --- |
| ***Assumption*** | ***Age group*** | ***Parameter value (95% CI)*** | | ***Reference*** |
| **Male** | **Female** |
| Number of age compartments in the model (each for 5 years; *a*) | - | 20 | 20 | - |
| Relative risk of developing T2DM if obese | All | 6.48 (5.17–8.13) | 8.38 (5.46–12.85) | [29](#_ENREF_29) |
| Relative risk of developing T2DM if current smoker | All | 1.42 (1.34–1.50) | 1.33 (1.26–1.41) | [30](#_ENREF_30) |
| Relative risk of developing T2DM if physically inactive | 15–69  70–79  ≥80 | 1.45 (1.37–1.54)  1.32 (1.25–1.40)  1.20 (1.14–1.28) | 1.45 (1.37–1.54)  1.32 (1.25–1.40)  1.20 (1.14–1.28) | [31](#_ENREF_31) |
| Relative risk of developing T2DM if obese and smoker | All | 9.20 (6.93–12.20) | 11.15 (6.88–18.12) | Calculated based on[29](#_ENREF_29),[30](#_ENREF_30) |
| Relative risk of developing T2DM if obese and physically inactive | 15–69  70–79  ≥80 | 9.40 (7.08–12.52)  8.55 (6.46–11.38)  7.78 (5.89–10.41) | 12.15 (7.48–19.79)  11.06 (6.83–18.12)  10.06 (6.22–16.45) | Calculated based on[29](#_ENREF_29),[31](#_ENREF_31) |
| Relative risk of developing T2DM if smoker and physically inactive | 15–69  70–79  ≥80 | 2.06 (1.84–2.37)  1.87 (1.68–2.17)  1.70 (1.53–1.97) | 1.93(1.73–2.17)  1.76 (1.58–1.99)  1.60 (1.44–1.80) | Calculated based on[30](#_ENREF_30),[31](#_ENREF_31) |
| Relative risk of developing T2DM if obese, smoker, and physically inactive | 15–69  70–79  ≥80 | 13.34 (9.49–19.28)  12.15 (8.66–17.65)  11.04 (7.90–16.03) | 16.16 (9.43–27.90)  14.71 (8.60–25.55)  13.37 (7.84–23.19) | Calculated based on[29-31](#_ENREF_29) |
| RR of mortality in T2DM as compared to the general population | 20–29  30–39  40–49  50–59  60–69  70–79+ | 3.70  3.30  1.95  1.65  1.62  1.40 | 5.95  5.61  3.41  2.73  2.08  1.78 | [1](#_ENREF_1),[34](#_ENREF_34) |

Abbreviations: T2DM = Type 2 diabetes mellitus.

# Figure S1. Projected evolution of the T2DM epidemic among Qataris between 2020-2050. A) T2DM prevalence. B) Number of people living with T2DM. C) Annual number of new T2DM cases.



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