

Online Only Supplemental Material**Supplemental Table S1. Original Diabetes Population Risk Tool (DPoRT) Algorithm¹****Males:**

$$\mu = 10.3062$$

- 0.3629 × hypertension
- 0.3483 × heart disease
- 0.5697 × non-white ethnicity
- 0.0585 × smoker
- + 0.1884 × attended post-secondary
- + 0.1173 × top income quintile
- 0 × (BMI < 23 & age < 45)
- 0.5520 × (23 ≤ BMI < 25 & age < 45)
- 0.9521 × (25 ≤ BMI < 30 & age < 45)
- 1.7162 × (30 ≤ BMI < 35 & age < 45)
- 2.3310 × (35 ≤ BMI & age < 45)
- 1.3602 × (BMI < 23 & age ≥ 45)
- 1.6537 × (23 ≤ BMI < 25 & age ≥ 45)
- 2.0563 × (25 ≤ BMI < 30 & age ≥ 45)
- 2.5513 × (30 ≤ BMI < 35 & age ≥ 45)
- 2.9353 × (35 ≤ BMI & age ≥ 45).

$$\text{Scale} = 0.7994$$

Females:

$$\mu = 10.5777$$

- 0.4098 × hypertension
- 0.4528 × non-white ethnicity
- 0.1477 × immigrant
- + 0.1939 × attended post-secondary
- 0 × (BMI < 23 & age < 45)
- 0.7432 × (23 ≤ BMI < 25 & age < 45)
- 1.1521 × (25 ≤ BMI < 30 & age < 45)
- 1.8479 × (30 ≤ BMI < 35 & age < 45)
- 2.0562 × (35 ≤ BMI & age < 45)
- 1.5832 × (BMI = missing & age < 45)
- 0.7100 × (BMI < 23 & 45 ≤ age < 65)
- 1.2338 × (23 ≤ BMI < 25 & 45 ≤ age < 65)
- 1.8357 × (25 ≤ BMI < 30 & 45 ≤ age < 65)
- 2.3742 × (30 ≤ BMI < 35 & 45 ≤ age < 65)
- 2.6631 × (35 ≤ BMI & 45 ≤ age < 65)
- 2.1988 × (BMI = missing & 45 ≤ age < 65)
- 1.5956 × (BMI < 23 & age ≥ 65)
- 1.6144 × (23 ≤ BMI < 25 & age ≥ 65)
- 1.9830 × (25 ≤ BMI < 30 & age ≥ 65)
- 2.2148 × (30 ≤ BMI < 35 & age ≥ 65)

- 2.6448 × (35 ≤ BMI & age ≥ 65)
- 2.4209 × (BMI = missing & age ≥ 65).

Scale = 0.8419

$$m = \frac{\log(\text{follow-up time in days}) - \mu}{\text{scale}}$$

$$p = 1 - \exp(-\exp^m)$$

Number of diabetes cases = p * survey weights

References

1. Rosella LC, Lebenbaum M, Li Y, Wang J, Manuel DG. Risk distribution and its influence on the population targets for diabetes prevention. *Preventive medicine*. 2014;58:17-21.

Supplemental Table S2. Observed vs. Predicted Number of Incident Diabetes Cases (2009-2018)

	NHIS	NHIS + Correction Factor	DPoRT Original	DPoRT Updating			
				Intercept Recalibration	Logistic Recalibration	Model Extension (Insurance)	Model Extension (Ethnicity)
	Observed Cases		Predicted Cases				
Total	15,414,818	19,268,523	19,480,568	16,962,887	35,673,366	37,074,992	41,636,738
Sex							
Males	7,434,543	9,293,179	10,566,256	11,496,762	7,560,204	7,433,133	17,909,864
Females	7,980,275	9,975,344	8,914,313	5,466,125	28,113,162	29,641,859	23,726,874
Ethnicity							
White	9,076,029	11,345,036	11,286,433	11,564,077	24,185,367	25,281,810	31,346,650
Non-White	6,310,124	7,887,655	8,186,150	5,398,810	11,487,999	11,793,182	10,290,089