TNT estimates to implement recommended interventions for type 2 diabetes

By Minna Johansson and Victor Montori

Please note that the estimates are rough and should be interpreted with caution.

Time needed to improve the outcome for one person	Time needed to provide the intervention for all eligible in a practice of 2000 people	Time needed as proportion of time available
Not estimated – see below.	45 h for the GP, and 180 h for the nurse, per year, would be needed to provide the intervention to all eligible in a GP practice of 2000 people.	4% of total GP time available with patients (for all causes), and 16% of total primary care nurse time available with patients (for all causes) would be needed to implement the recommendations

How TNT estimates were derived:

Guideline available here:
https://www.nice.org.uk/guidance/ng28

Due to the complexity around the recommended interventions for type 2 diabetes (ranging from education individually and in groups, dietary advice, bariatric surgery, diagnosing and treating hypertension, antiplatelet therapy, blood glucose management, blood glucose lowering drugs, and managing complications), we refrained from estimating TNT_{NNT} for these recommendations. The rationale for estimating TNT for this guideline in this paper was to be able to compare the absolute and relative TNTs with those estimated for the recommendations on *preventing* diabetes type 2 (see below) – and we therefore estimated these two measures only. However, it would be possible for the guideline authors, having access to more information, to estimate TNT_{NNT} for the range of recommended interventions in this guideline.

Time needed to provide the intervention to each person: The guideline does not specify the time needed to provide the wide range of recommended interventions. It is specified that HbA1c should be measured every 3-6 moths until it is stable and thereafter every 6 months. We assume that the GP will see the patient once every 12 months and that the nurse will see the patient twice every 12 months, on average. We assume that each consultation will take 25 minutes for the GP and 50 minutes for the nurse. This assumption is based on the share number of different interventions recommended to be considered at each appointment (including group education from the nurses).

In the evidence review for the NICE guideline, it is specified that 6% of the UK population have diabetes and that 90% of them have type 2 diabetes. This means that 5.4% have diabetes type 2.

The time needed in a GP practice of 2000 people can then be estimated as follows:
5.4% of 2000 = 108 people
GPs will spend 25 min per year for 108 people = 2700 minutes = 45 h
Nurses will spend 100 min per year for 108 people = 10800 minutes = 180 h

The time needed to provide the intervention for all eligible in a practice of 2000 people is then 45 h for the GP and 180 h for the nurse.

This corresponds to:
45/1128 = 4% of total time available for patient care for GPs
180/1128 = 16% of total time available for patient care for nurses