What and why

- Early-onset type 2 diabetes (EOT2D) is defined as that developing in people below the age of 40 years. It is more common in people from ethnic minorities (particularly South Asian) and in the most socioeconomically deprived areas.
- EOT2D has a more aggressive phenotype than older-onset type 2 diabetes. Many people with EOT2D are living with obesity and many have concurrent unmet psychological and social needs.
- Despite this, they are less likely to receive recommended care processes and tend to have higher HbA_{1c} and worse outcomes than people with older-onset type 2 diabetes.
- In response to this, the T2Day programme has been developed in England to provide extended diabetes reviews for adults aged 18–39 years with type 2 diabetes.
- Young people aged <18 years with type 2 diabetes should receive care from specialist multidisciplinary paediatric diabetes teams and should be offered referral if not currently under specialist care.
- This article details the areas that should be covered within an extended review for people with EOT2D. Although these reviews have been specifically funded in England, young adults with EOT2D have high risk wherever they live, and the principles of care should be applied for all.

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Notes on EOT2D reviews

- Reviews are in addition to routine care.
- It is expected that 30 minutes of contact with a suitably qualified healthcare practitioner will generally be required.
- The intent is not for the review to be a “tick-box” exercise; rather, there should be sufficient time to focus on particular unmet needs, guided by the priorities of the person with diabetes.

Complete annual care processes

- ❑ HbA_{1c} (particularly if glucose-lowering medication has changed or last HbA_{1c} was checked >6 months ago)
- ❑ Blood pressure
- ❑ Cholesterol
- ❑ Foot checks
- ❑ Urinary ACR
- ❑ Serum creatinine
- ❑ Weight
- ❑ Smoking status
- ❑ Reinforce the need to attend retinal screening

Classification of diabetes type – is this type 2 diabetes?

- ❑ Consider features that do not fit with EOT2D, for example:
  - Relatively low BMI (although consider lower BMI thresholds in non-white ethnicities)
  - No features of insulin resistance or metabolic syndrome
  - No family history of type 2 diabetes
- ❑ Do not use age, BMI or ethnicity alone to exclude type 1 diabetes (see NICE NG17). Consider type 1 diabetes if one or more of:
  - Ketosis
  - Rapid weight loss
  - BMI <25 kg/m²
  - Personal and/or family history of autoimmune disease
- ❑ Consider MODY if strong family history of diabetes, especially if identified in multiple generations at young ages.
  - Bear in mind that a parent may have been misclassified as having type 1 or type 2 diabetes
  - See national guidelines for eligibility for MODY testing
- ❑ Review classification of diabetes type regularly, as features may develop that indicate an alternative diabetes subtype.
- ❑ If there is concern about misdiagnosis, follow local pathways for further assessment.
  - If type 1 diabetes is strongly suspected, urgently discuss with specialist care – do not delay starting treatment

Contraception and preconception planning

- ❑ Review medications for glycaemia and cardiovascular risk (e.g. statins, ACE inhibitors, ARBs) – contraception should be used if taking potentially teratogenic drugs.
- ❑ Consider all women of child-bearing potential who choose not to use contraception as likely to become pregnant.
- ❑ For women who are trying for pregnancy or likely to become pregnant:
  - Prescribe folic acid 5 mg daily
  - Stop glucose-lowering drugs apart from metformin and insulin
  - If needed, commence insulin initiation in line with local pathways
  - If actively trying for pregnancy, an HbA_{1c} target of <43 mmol/mol may be suggested
  - Follow local pathways for preconception support/review
- ❑ Advise women with EOT2D to urgently notify their GP practice or diabetes team if they have a positive pregnancy test – refer urgently to Diabetes in Pregnancy team for antenatal clinic review within a week to reduce pregnancy risks.

Glycaemia

- ❑ Consider referral to the NHS Type 2 Diabetes Path to Remission Programme or other intensive lifestyle change interventions.
- ❑ An HbA_{1c} target of ≤48 mmol/mol (tighter than the QOF-incentivised target of ≤58 mmol/mol) may be appropriate.
  - The NICE patient decision aid may be helpful when setting targets
- ❑ Due to risk of faster HbA_{1c} progression in EOT2D, recheck HbA_{1c} every 3–6 months until stable on unchanging therapy, and then 6-monthly. Escalate treatment promptly if individualised targets are not met.
- ❑ Review glucose-lowering medications. Consider use of SGLT2 inhibitors and/or GLP-1 receptor agonists for their additional benefits on weight loss and cardiorenal outcomes (not suitable if likely to become pregnant).
- ❑ Offer and support to attend diabetes structured education (e.g. https://www.healthyliving.nhs.uk), even if previously attended.
  - Consider individual needs and preferences and discuss options available

Cardiovascular risk

- ❑ Offer a statin **and** an SGLT2 inhibitor to all with known CVD/heart failure.
- ❑ Offer a statin **and** an SGLT2 inhibitor to all with comorbid chronic kidney disease (note different guidance for each SGLT2 inhibitor; follow local pathway and formulary).
- ❑ Consider an SGLT2 inhibitor in people with EOT2D and any of:
  - Hypertension
  - Dyslipidaemia
  - Smoking
  - Obesity
  - Family history (first-degree relative) of premature CVD
- ❑ Consider using a lifetime CVD risk assessment rather than 10-year QRISK score. Do not rule out atorvastatin 20 mg for primary prevention just because 10-year QRISK3 score is <10% if they have an informed preference for taking a statin or there is concern that risk may be underestimated (see NICE NG238).
- ❑ Offer ACE inhibitor or ARB as preferred first line for hypertension (ARB more suitable if Black ethnicity).
  - Blood pressure targets (NICE NG136): <140/90 mmHg in clinic; or average of <135/85 mmHg on home monitoring
- ❑ Offer smoking cessation support.
- ❑ Avoid SGLT2 inhibitors, statins and ACEis/ARBs if patient is likely to become pregnant.

Weight

- ❑ If not referring to the NHS Type 2 Diabetes Path to Remission Programme, consider other appropriate weight management support, including local service offers.
- ❑ NHS Digital Weight Management Programme is available for people with diabetes and BMI ≥30 kg/m^2 (≥27.5 kg/m^2 in ethnic minorities).
- ❑ Also consider referring to specialist obesity services in line with local pathways.

Psychological wellbeing and unmet social needs

- ❑ Assess concurrent psychological needs and offer appropriate support.
- ❑ Explore unmet social needs and consider if social prescribing and/or other support may be indicated.
- ❑ Consider local opportunities for peer support.