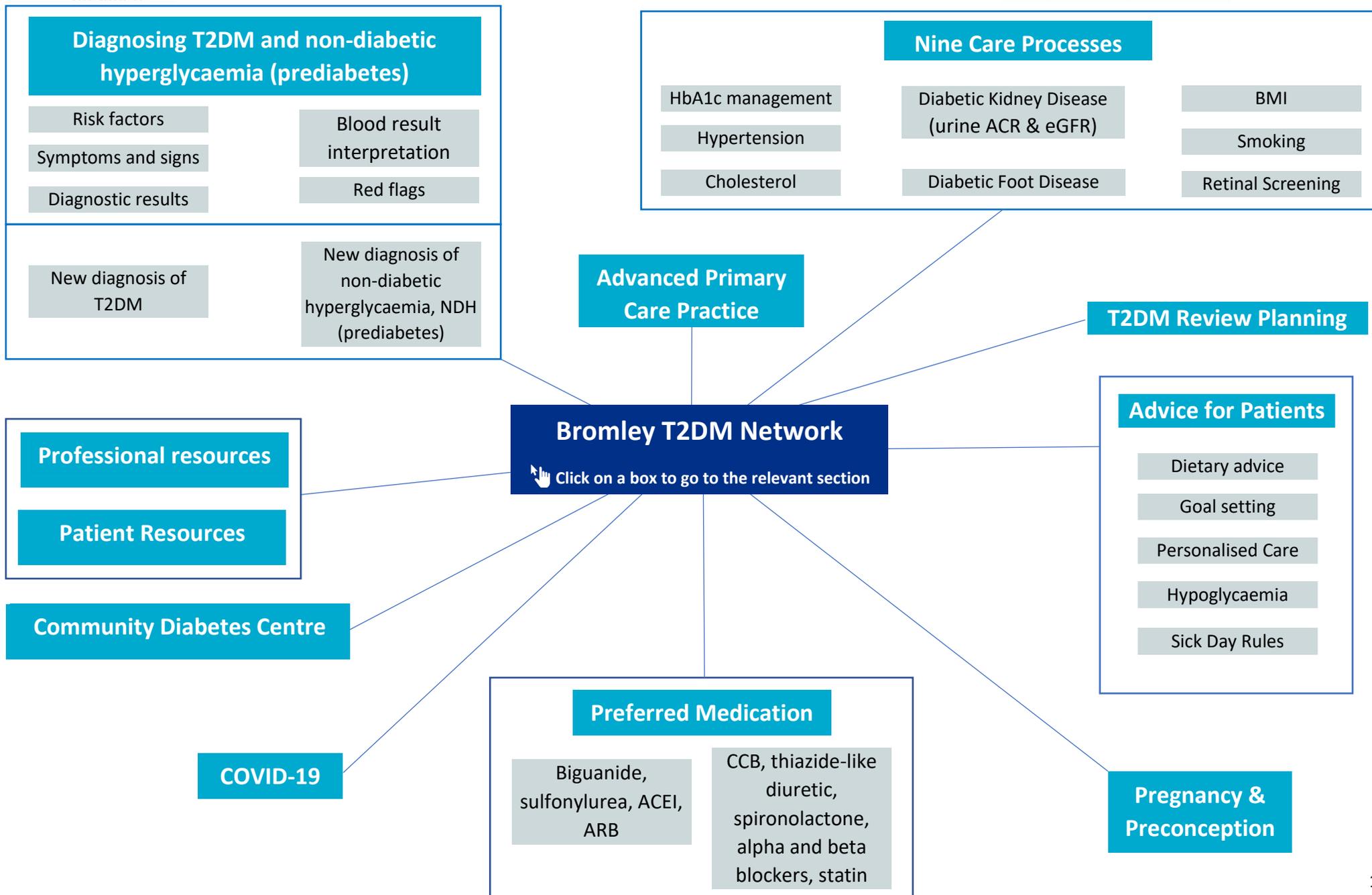


# Type 2 Diabetes Mellitus in Adults

## A GUIDE FOR BROMLEY GENERAL PRACTICE

1. **Lifestyle measures:** reduce weight, increase exercise, reduce alcohol, healthy diet, stop smoking
2. **Blood pressure:** target BP  $\leq 140/80$ mmHg (adjust for age and comorbidities)
3. **Cholesterol:** statin if QRISK2/3  $\geq 10\%$  or history of CVD
4. **Optimise HbA1c** (adjust depending on hypoglycaemic risk and frailty)
5. **Maximise dose of metformin** to 1g BD if possible



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## 1 Bromley Guide for Type 2 Diabetes Mellitus in Adults

### 1.1 Why is type 2 diabetes mellitus (T2DM) important in Bromley?

#### **T2DM is common**

There are over 17,000 adults living with diabetes in Bromley.

#### **T2DM is underdiagnosed**

QOF prevalence data shows that T2DM in Bromley was underdiagnosed in 2019-2020. This is likely to be a greater issue following COVID-19 (60,000 missed or delayed diagnoses of T2DM across the UK between March and December 2020).<sup>1,2</sup>

#### **T2DM is a risk factor for mortality with COVID-19**

23,698 people with COVID-19 died in hospital in England up to 11th May 2020 and 31% of these people had T2DM.<sup>3</sup>

#### **T2DM is preventable and treatable**

Management of non-diabetic hyperglycaemia and risk factors can reduce the risk of developing T2DM. Primary care intervention with weight management, glycaemic control, lipid lowering, blood pressure control and smoking cessation reduces complications, morbidity and mortality for patients with T2DM.<sup>4,5,6,7,8</sup>

#### **There is scope to enhance patient care in Bromley**

Bromley can improve care by better addressing all Care Processes as measured by the National Diabetes Audit. Urine albumin:creatinine ratio measurement and foot checks offer the greatest scope for improvement.

- 2019/2020 51% T2DM patients had all 8 Care Processes checked<sup>9</sup>
- 2020/2021 23% T2DM patients had all 8 Care Processes checked<sup>10</sup>

## 1.2 Diagnosing T2DM and non-diabetic hyperglycaemia (prediabetes)

### 1.2.1 Risk factors for T2DM <sup>11, 12</sup>

#### Modifiable risks

- Obesity
- Inactivity
- Drug treatment e.g. long-term corticosteroids
- Metabolic syndrome (hypertension, dyslipidaemia, fatty liver, central obesity, thrombotic tendency)



You can calculate T2DM risk using the Emis QDiabetes (Data Entry Template)

#### Non-modifiable risks

- Age
- Ethnicity: increased for Asian, African, and Afro-Caribbean
- History of gestational diabetes
- Family history of type 2 diabetes
- History of coronary heart disease or stroke
- Polycystic ovarian syndrome
- Serious mental illness
- COVID-19 infection may precipitate a diabetes diagnosis <sup>13</sup>

### 1.2.2 Symptoms and signs of T2DM <sup>14</sup>

- Most patients are asymptomatic
- Polydipsia and polyuria
- Weight loss (more common in type 1 diabetes)
- Recurrent infections
- Tiredness
- Blurred vision
- Acanthosis nigricans (type 2 diabetes)

### 1.2.3 Diagnostic results for HbA1c and glucose measurements

Test	Non-diabetic hyperglycaemia (prediabetes) <sup>15</sup>	Diabetes <sup>14</sup>
HbA1C	42-47mmol/mol (6-6.4%)	≥ 48mmol/mol (6.5%)
Fasting glucose	5.6-6.9 mmol/l	≥ 7mmol/l
Random glucose	N/A	≥ 11.1 mmol/l



#### Diagnose diabetes if:

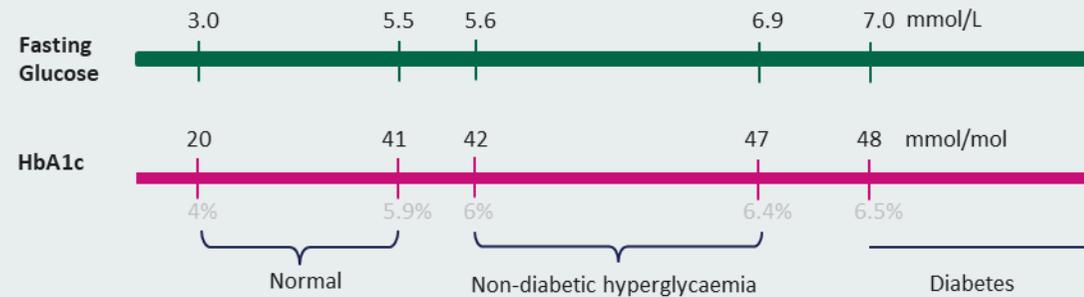
Symptomatic *and* 1 diagnostic result

OR

Asymptomatic *and* 2 diagnostic results

## Diagnosing T2DM and non-diabetic hyperglycaemia (prediabetes) continued

### 1.2.4 Blood Result Interpretation



- If initial result is within the diagnostic range, repeat the same test, as soon as possible - **do not delay** (it is good practice to repeat the test even if symptomatic).
- If repeat test is normal, monitor regularly for development of diabetes (use clinical judgement to decide on frequency of monitoring).
- Transient severe hyperglycaemia can occur with acute infection, trauma, circulatory or other stress and is not diagnostic of T2DM in these scenarios.
- HbA1c should be used with caution in conditions with abnormal red blood cell turnover/abnormal haemoglobin type (including haemoglobinopathy, severe anaemia, altered red cell life-span e.g. post-splenectomy, recent blood transfusion, chronic kidney disease).
- HbA1c may underestimate hyperglycaemia in the following conditions and other tests should be considered for diagnosis: pregnancy, symptoms <2months, <18 years, end-stage renal disease, HIV infection and acute pancreatic damage.

### 1.2.5 Red flags at diagnosis (atypical presentations)



**New diabetes and unexplained weight loss or HbA1c >85mmol/mol**

Consider type 1 diabetes, ketosis-prone T2DM, latent autoimmune diabetes in adults (LADA) or other diabetes types. Seek specialist advice.



**New diabetes and unexplained weight loss and >60 years**

Consider 2 week wait referral to Upper GI for suspected cancer of pancreas. <sup>16</sup>

## 1.3 Actions following diagnosis of non-diabetic hyperglycaemia and T2DM

### 1.3.1 New diagnosis of non-diabetic hyperglycaemia, NDH (prediabetes)

Offer structured education, covering nutritional and physical activity support, with strategies and tools to help make change.

Offer annual review to include: HbA1c + the **Vital 5**: BP, BMI, smoking status, mental health and alcohol intake.



Code as 'non-diabetic hyperglycaemia'



REFER

ROP - Diabetic Medicine / Referrals

**Walking Away from Diabetes**

2 sessions over 1 month: online and telephone

**National Diabetes Prevention Programme**

13 sessions over 12+ months: online and telephone

### 1.3.2 New diagnosis of T2DM

Support patients to reach an understanding of the diagnosis, implications and what they can do to care for themselves.

Emphasise to patients and carers that structured education is integral to their care.

Offer referral to a Structured Education Programme (QOF: within 9 months of diagnosis).

Monitor annually and manage as per all **9 Care Processes**:

- HbA1C, BP, cholesterol, urine ACR, foot check, smoking status, BMI, eGFR (serum creatinine), retinopathy screen.

Emphasise the importance of managing the 9 Care Processes and how this can reduce the risk of diabetes complications.

- Use Diabetes UK Information Prescriptions to support personal care (can be downloaded into EMIS).

Agree a clear review date.



Code as 'type 2 diabetes mellitus'



REFER

ROP - Diabetic Medicine / Referrals

**DESMOND**

Patients can self-refer to DESMOND or other structured education but self-referral does not count towards QOF:

[diabetesbooking.co.uk](http://diabetesbooking.co.uk) T2DM courses

### 1.3.3 Patient Resource: Diabetes UK

Diabetes UK [www.diabetes.org.uk](http://www.diabetes.org.uk) is a national charity which provides information, support, and advocacy for people with diabetes and their families.

Has a confidential helpline.

Hosts an online community for peer support.

Has a wide range of education and information [patient resources](#).

## 1.4 Routine Care in T2DM: Nine Care Processes

### 1 HbA1c: check 3-6 monthly until target is reached then every 6 months

Target  $\leq 48$ mmol/mol (6.5%).<sup>17</sup>

Target  $\leq 75$  mmol/mol (9%) if moderate/severe frailty (QOF).<sup>18</sup>

➤ Unless taking a drug that could cause adverse low sugars/hypos e.g. gliclazide, insulin.

Target  $\leq 53$ mmol/mol (7%) if on a drug that could cause low sugars/hypos.<sup>17</sup>

### 2 Blood pressure

QOF  $\leq 140/80$ mmHg (excludes those with moderate or severe frailty).<sup>18</sup>

NICE  $\leq 140/90$ mmHg under 80years;  $\leq 150/90$ mmHg over 80 years;  $\leq 130/80$ mmHg if CKD.<sup>19</sup>

### 3 Cholesterol<sup>20</sup>

**Primary prevention:** Atorvastatin 20mg OD if QRisk2/3  $\geq 10\%$  after addressing modifiable risk factors.

QOF target excludes those with moderate or severe frailty.

**Secondary prevention (history of CVD):** Atorvastatin 80mg OD.

Women of childbearing age need contraception during statin treatment and for 1 month afterwards. Statins should be discontinued for 3 months before attempting to conceive.

### 4 Renal function and urine albumin:creatinine ratio

Measure serum eGFR and urine albumin:creatinine ratio (urine ACR). *Advise against meat consumption 12 hours before blood test.*

Consider chronic kidney disease (CKD) if eGFR  $< 60$  ml/min/1.73m<sup>2</sup> and/or urine ACR  $\geq 3$  for more than 3 months.

Ideally early morning urine – confirm any raised random urine ACR with early morning sample (due to risk of false positive with random ACR).

If urine ACR  $\geq 3$ , exclude UTI and start an ACEI/ARB even if normotensive.

Identify patients with eGFR  $< 45$  ml/min/1.73m<sup>2</sup> who are at high risk of diabetic kidney disease: Use [OneLondon Diabetic Kidney Disease Risk Stratification](#)<sup>21</sup>

### 6 Foot check

Perform foot check at least annually (more frequently if moderate/high risk).

**Low risk** - Manage in primary care.

**Moderate/high risk** – Refer to Foot Protection Team, Bromley Healthcare Podiatry Service.

**Current active foot tissue damage** – Rapid (same day) referral to MDfT Specialist Foot Team (or A&E during out-of-hours).

**TIME IS TISSUE! If infection is suspected, refer immediately to be seen within 24 hours.**



REFER

ROP - Diabetic Medicine / Referrals/ Podiatry

Select condition requiring referral and you will be guided to the optimum referral pathway

### 7 Body mass index<sup>22</sup>

Overweight: BMI  $\geq 25$ , obese: BMI  $\geq 30$ .

Agree an initial weight loss target of 5–10% of body weight, maximum 1kg/week<sup>17</sup>

Consider treating Asian people with BMI  $\geq 23$ .

Referral options vary with BMI and are automatically selected via the ROP.

### 8 Smoking

Deliver 'Very Brief Advice: ASK ADVISE ACT'. See [Very Brief Advice Training Module](#).

If ready to quit, arrange appointment with practice cessation services or advise self-referral to Stop Smoking London: helpline (0300 123 1044) and [online support](#).

### 9 Retinal screening

Coding a diagnosis of T2DM in EMIS will automatically refer the patient; no GP action is required. Recall is managed by central team but GP should f/u patients who do not attend.

➤ **Additional considerations:** check **mental health** and **alcohol** intake; **immunise**<sup>23</sup> - flu annually, pneumococcal once, COVID-19 as per local/national guidance.

## 1.5 Why is glycaemic control important? <sup>24</sup>

Persistent hyperglycaemia leads to several serious complications and reduced life expectancy. Risk is reduced with good glucose control and this should be emphasised to patients.

### 1.5.1 Macrovascular complications

Atherosclerotic cardiovascular disease  
Myocardial infarction  
Stroke

Peripheral arterial disease  
Heart failure

### 1.5.2 Microvascular complications

Diabetic kidney disease  
Retinopathy

Autonomic neuropathy  
Peripheral neuropathy

### 1.5.3 Foot disease

Ulcers  
Charcot arthropathy  
Osteomyelitis

Deep tissue infection  
Lower limb ischaemia and amputation  
Sepsis

### 1.5.4 Metabolic

Diabetic ketoacidosis  
Hyperosmolar hyperglycaemic state

Dyslipidaemia

### 1.5.5 Erectile dysfunction

Proactively ask about this and explore with patient.

### 1.5.6 Psychosocial

Anxiety  
Depression

Decreased QoL

## 1.6 HbA1c management

See SEL Type 2 Diabetes Blood Glucose Control Pathway <https://selondonccg.nhs.uk/download/11604/> for detailed guidance.<sup>25</sup>

See Section 1.201.20 - Preferred Medication (biguanide, sulfonylurea, ACEI, ARB).

### STEP 1: Person-centred lifestyle changes

Review after 3 months, if HbA1c  $\geq$  48mmol/mol (6.5%)\*, go to Step 2. See Section 1.17 **Advice for Patients**.

### STEP 2: Metformin standard release to maximum achievable dose

Start metformin 500mg OD with/after food & increase by 500mg every 2 weeks until 1g BD if achievable (modified release if GI side-effects).

Review 3 months from dose change, if HbA1c  $\geq$  58mmol/mol (7.5%) go to step 3.

Criteria	On maximum achievable dose of metformin	On medication with risk of hypoglycaemia, e.g. sulfonylurea	Moderate or severe frailty
HbA1c target*	$\leq$ 48mmol/mol (6.5%)	$\leq$ 53mmol/mol (7%)	$\leq$ 75 mmol/mol (9%)

### STEP 3: Gliclazide as 2<sup>nd</sup>-line (1<sup>st</sup> intensification) – guidance under review

Gliclazide dose 40mg-80mg OD to BD with meals. Titrate on pre-meal blood glucose target 4-6mmol/l or individualised BM target or HbA1c.

**Avoid in severe liver dysfunction** and only prescribe under specialist advice if eGFR $<$ 30ml/min. Use with care if eGFR 30 – 60ml/min.

Consider alternative to gliclazide, especially if BMI $>$ 35, frail elderly or concern regarding hypoglycaemia e.g. Group 2 driver.<sup>26</sup> Alternatives may include: gliptins, SGLT-2 and pioglitazone – check for contraindications.

Review after 3 months - if HbA1c  $\geq$  58mmol/mol (7.5%)\* go to step 4.

### STEP 4: Third agent needed, considering insulin or contra-indications to metformin or gliclazide? (2<sup>nd</sup> intensification)

See SEL T2DM Blood Glucose Control Pathway <https://selondonccg.nhs.uk/download/11604/> for guidance. Specialist advice can be obtained by referring to the [Community Diabetes Centre](#).

### Additional considerations

\*Individualise targets and goals. The QOF target for patients with moderate or severe frailty is  $\leq$ 75 mmol/mol (9%).

Rescue therapy: if blood glucose is very high and/or symptomatically hyperglycaemic, seek specialist advice to consider a regime for rapid reduction of blood glucose. Specialist advice is available from the Bromley Community Diabetes Centre (see Section 3.1 - [Community Diabetes Centre](#)).

If a patient is not achieving their HbA1c target with the steps above:

- Reinforce lifestyle advice, including diet.
- Check adherence with antidiabetic drug treatment.

If patient achieves a lower HbA1c than their target without hypoglycaemic effects:

- Encourage them to maintain it.
- Consider alternative reasons for low HbA1c, including deteriorating renal function and sudden weight loss.
- Review medication.



**REFER (Community Diabetes Centre)**

**ROP - Diabetic Medicine/Referrals/BHC Diabetes Service Referral Form**

Community Diabetes Referral Form (Bromley Healthcare Diabetes Service)

## 1.7 Diagnosing Hypertension <sup>19</sup>

### 1.7.1 Measuring blood pressure

#### Clinic BP readings

- Measure sitting BP and standing BP after 1 minute.
- If significant postural drop ( $\geq 20$  systolic), treat to target on the standing BP.
- Confirm diagnosis with ambulatory blood pressure monitoring (ABPM) or home blood pressure monitoring (HBPM).

#### Home BP readings

- Corresponding HBPM measure are 5mmHg lower than clinic measures.
- Ensure accurate BP machine and advise to record two BP readings every morning and evening for 7 days.
- Disregard the first day's readings and take an average of all other readings.
- Signpost patients to [British Heart Foundation advice](#); send as an AccuRx link.



#### REQUESTING ABPM

ROP – Cardiology / Diagnostics / (12 lead ECG/24ECG/24hBP/ (Community Service))

### 1.7.2 BP thresholds for initiating antihypertensives in patients with T2DM

Hypertension	Clinic BP (confirm with ABPM/HPBM)	ABPM/HBPM	Under 80	Over 80
Stage 1	Systolic 140-159 Diastolic 90-99	Systolic 135-149 Diastolic 85-94	Discuss starting treatment	Consider treatment if clinic BP>150/90*
Stage 2	Systolic 160-179 Diastolic 100-119	$\geq 150/95$	Offer treatment	Offer treatment*
Stage 3 (severe hypertension)	$\geq 180/120$	-	Same day referral if symptomatic/retinal haemorrhage/papilloedema/AKI/suspected pheochromocytoma, otherwise request urgent ABPM and investigate for target organ damage** (including ECG, urine dip, renal function, fundoscopy). Review within 7 days or sooner if target organ damage is confirmed and treat if persistent hypertension.	

Discuss lifestyle interventions for all hypertension stages (including healthy, low sodium diet; regular exercise; reduced alcohol and caffeine intake; smoking cessation).

\* Use clinical judgement with frailty and multimorbidity.

\*\*Target organ damage: damage to organs such as the heart, brain, kidneys and eyes. Examples are left ventricular hypertrophy, chronic kidney disease or hypertensive retinopathy.

## 1.8 Hypertension Management<sup>19</sup>

### 1.8.1 Antihypertensive medications – stepwise

See SEL Hypertension Guidance for Primary Care: <https://selondonccg.nhs.uk/download/11532/>

BP review recommended at least annually, or more frequently when clinically indicated.

Drugs to avoid at conception/in pregnancy include ACEI/ARB/thiazide or thiazide like diuretic (increased risk of congenital abnormalities). NICE advises: Stop ACEI/ARBs and change medication (preferably within 2 working days of notification of pregnancy). Offer alternatives: labetalol (if no CI e.g. asthma), nifedipine or methyldopa. Can remain on amlodipine if already prescribed. Target BP  $\leq$  135/85 mmHg. Offer aspirin 75 - 150mg OD from week 12 of pregnancy.<sup>27</sup> All patients with diabetes who are pregnant or contemplating pregnancy should be referred for specialist care: see Section 1.19 Diabetes, Preconception & Pregnancy.

\*For black African/Caribbean family origin use ARB instead of ACEI (as increased risk of angioedema with ACEI in this patient group).

Step 1	ACEI or ARB* ramipril/lisinopril or losartan
Step 2	ACEI or ARB* + CCB or thiazide-type diuretic ramipril/lisinopril or losartan + amlodipine or indapamide
Step 3	ramipril/lisinopril or losartan + amlodipine + indapamide
Step 4	<b>Uncontrolled on optimal doses - regard as resistant hypertension.</b> Repeat ABPM/HBPM, assess for postural hypotension, discuss adherence. If good renal function and potassium $\leq$ 4.5mmol/L, consider adding low dose spironolactone. If potassium > 4.5mmol/L +/- reduced renal function, consider alpha blocker (doxazosin) or beta-blocker (atenolol/bisoprolol) +/- seeking specialist advice.



#### REFER

ROP - Cardiology/ Referrals/ Hypertension  
Outpatient review or Advice and Guidance

### 1.8.2 Blood pressure targets for hypertension management in diabetes

QOF	$\leq$ 140/80mmHg (excludes moderate or severe frailty)
NICE: <80 years	$\leq$ 140/90mmHg (clinic), $\leq$ 135/85mmHg (ABPM/HBPM)
NICE: $\geq$ 80 years	$\leq$ 150/90mmHg (clinic), $\leq$ 145/85mmHg (ABPM/HBPM)
NICE: CKD	120-129/80mmHg

## 1.9 Lipid Management<sup>20</sup>

### 1.9.1 Cardiovascular risk assessment

Management of cardiovascular risk factors is essential to prevent and reduce macrovascular complications of diabetes.

- Perform baseline bloods (non-fasting lipid profile, LFT, TFT, HbA1c, renal function).
- Record weight, smoking status, BP.
- Calculate QRisk2/3 score except in CKD/albuminuria or familial hypercholesterolaemia.



You can calculate QRisk2 using the EMIS QRisk2 Data Entry Template

QRisk3 is an update of QRisk2 with new parameters and will be available on Emis in due course

### 1.9.2 Cardiovascular risk management

For all patients, consider education and lifestyle interventions to modify CVD risk and use shared-decision making to consider risk vs benefit of therapy. Initiate lipid lowering therapy according to the following two sections.

#### 1.9.3 Primary prevention of cardiovascular disease

- If QRisk2/3  $\geq 10\%$  or patient has CKD: start **atorvastatin 20mg OD** or rosuvastatin 10mg OD.
- Calculate baseline non-HDL level (total cholesterol minus HDL cholesterol) and again after 3 months.

Non-HDL level	Non-HDL decreased $\geq 40\%$ from baseline	Non-HDL not decreased $\geq 40\%$ from baseline
Action	Review annually	Check adherence to medication, dose timing, adverse effects/intolerance/hesitancy & diet/lifestyle interventions. Consider up-titration to maximum dose of statin (atorvastatin 80mg OD or rosuvastatin 20mg OD). If intolerant to higher dose, consider adding ezetimibe 10mg OD. If intolerant to any dose of statin, start ezetimibe 10mg OD and refer to Lipid Clinic. If still not achieving $\geq 40\%$ reduction, refer to Lipid Clinic.

Refer to [Lipid Management Pathway for South East London](https://selondonccg.nhs.uk/download/12704/) for more detailed guidance: <https://selondonccg.nhs.uk/download/12704/>

#### 1.9.4 Secondary prevention of cardiovascular disease

- Offer daily, high dose, high intensity statin (**atorvastatin 40-80mg OD** or rosuvastatin 20mg OD) if history of CVD (including MI, angina, stroke/TIA, peripheral vascular disease, abdominal aortic aneurysm).
- Calculate baseline non-HDL level (total cholesterol minus HDL cholesterol) and again after 3 months.

Non-HDL level	Decreased $\geq 40\%$ from baseline	Not decreased $\geq 40\%$ from baseline
Action	Review annually	Check adherence, dose timing, adverse effects/intolerance/hesitancy & diet/lifestyle interventions. Ensure on maximum tolerated dose of statin and consider adding ezetimibe 10mg OD and review in a further 3 months - if non-HDL has not decreased $\geq 40\%$ from baseline, refer to Lipid Clinic.

Refer to [Lipid Management Pathway for South East London](https://selondonccg.nhs.uk/download/12704/) for more detailed guidance: <https://selondonccg.nhs.uk/download/12704/>

## 1.9.5 Referral to Lipid Clinic

Patients with very high levels of cholesterol/triglycerides, a positive family history or in whom target levels cannot be achieved with maximal doses of statin & ezetimibe, should be considered for referral to the Lipid Clinic: see [Lipid Management Pathway for South East London \(https://selondonccg.nhs.uk/download/12704/\)](https://selondonccg.nhs.uk/download/12704/) for referral criteria.

Prior to referral to Lipid Clinic, identify, manage and reassess potential secondary causes of hyperlipidaemia such as uncontrolled diabetes mellitus, obesity, excess alcohol consumption, untreated hypothyroidism, proteinuria and some medications, for example, thiazide diuretics and ciclosporin.



### REFERRAL TO LIPID CLINIC

SEL Lipid Clinic	Lipidologist for referrals	Contact Details
<b>GSTT</b>	Prof AS Wierzbicki/Prof MA Crook	via Choose & Book or <a href="mailto:gst-tr.diabetesandendocrine@nhs.net">gst-tr.diabetesandendocrine@nhs.net</a>
<b>KCH</b>	Dr Nandini Rao	via Choose & Book or to book an appointment/query re appointment/blood test request forms Tel: 02032994181 or email: <a href="mailto:Laura.Gonzalez@nhs.net">Laura.Gonzalez@nhs.net</a>
<b>PRUH</b>	Dr Nandini Rao	via Choose &Book or <a href="mailto:kch-tr.br-referrals@nhs.net">kch-tr.br-referrals@nhs.net</a>
<b>LGT</b>	Prof MA Crook	via Choose & Book or <a href="mailto:tlh-tr.LewishamReferrals@nhs.net">tlh-tr.LewishamReferrals@nhs.net</a> or endocrinology at QEH: lipidology clinics at the Bromley diabetes centre, Outpatients QEH: Tel 02088364969

## 1.10 Diagnosing and Managing Diabetic Kidney Disease: eGFR and Urine Albumin/Creatinine Ratio <sup>28,29</sup>

### 1.10.1 What is diabetic kidney disease and why is it important?

Diabetes is the commonest cause of chronic kidney disease (CKD) and end-stage renal disease (ESRD).

- Microalbuminuria is usually the first sign of diabetic kidney disease.
- CKD is an independent risk factor for cardiovascular disease.



**Intervention can prevent/reduce progression of renal disease**

### 1.10.2 Diagnosing chronic kidney disease (CKD)

#### Annually:

- Request urine albumin: creatinine ratio (ACR) testing – early morning void wherever possible.
- If *random* urine ACR is raised, confirm result with early morning sample in case of a false positive result.
- Exclude UTI if ACR is raised.
- Measure serum creatinine to calculate eGFR (no meat for 12h before the test).

**Do not adjust eGFR for ethnicity** as this is no longer recommended and may lead to underdiagnosis

#### Diagnose and treat chronic kidney disease if:

- Persistent\* reduction in kidney function (eGFR < 60 ml/min/1.73m<sup>2</sup>)  
*and/or*
- Persistent\* microalbuminuria (urine ACR ≥ 3mg/mmol).

\*For three months or more – repeat initial test after 3 month interval.

### 1.10.3 Managing diabetic kidney disease

- **Aim for a systolic blood pressure of 120-129 mmHg and diastolic less than 80 mmHg.**
- Start a low-cost ACEI/ARB even if normotensive (ramipril or losartan) or up-titrate existing dose to achieve the maximum tolerated dose, depending on contraindications, cautions, and drug interactions (see Section 1.20).
- **Do not co-prescribe ACEI & ARB.**
- Optimise blood glucose control.
- Advise on SICK DAY RULES (see Section 1.18).
- If not on a statin, offer atorvastatin 20mg once a day, irrespective of lipid profile.
- Provide patient education resources (see Diabetes UK: Diabetic nephropathy (kidney disease)).

### 1.10.4 Referral to Renal Clinic (SEL Nephrology Service)

**Referral criteria:** eGFR < 30ml/min, sustained decrease in eGFR of 15ml/min or 25% decrease, ACR ≥ 30mg/ml with haematuria, ACR > 70mg/ml in spite of optimal diabetes management, poorly controlled hypertension with co-existing CKD 3-5, known or suspected rare/genetic cause of CKD, suspected renal artery stenosis.



**REFER**  
**ROP – Nephrology / Referrals**  
**For AKI: ROP – Acute / Referrals / Acute Referral Form**

## 1.11 Diabetic Foot Disease: Risk Stratification and Management

### 1.11.1 Why is diabetic foot disease important?

- Diabetic foot disease is a significant cause of disability and amputation.
- Early detection and intervention can prevent progression to severe disease.

### 1.11.2 Diabetic foot checks <sup>30</sup>

Patient education and regular foot checks are the foundation of good diabetic foot care.

Feet should be examined at least annually. Face to face examination should include testing using 10g monofilament to detect neuropathy.

Diabetic foot pathology:

- Limb ischaemia
- Ulceration
- Callus
- Infection and/or inflammation
- Deformity
- Neuropathy
- Charcot arthropathy (usually presents as hot swollen joint/foot)
- Gangrene

### 1.11.3 When to refer

The traffic light system on the next page provides a useful guide about when and where to refer.



**Time is tissue!**

**Do not delay referral for diabetic foot problems.**

**Refer immediately to be seen within 24 hours if you suspect foot infection.**



**REFER**

**ROP - Diabetic Medicine / Referrals/ Podiatry**

Select appropriate foot condition and you will be guided to the optimum pathway

Nail cutting services are not available on the NHS. Patients who require help with nail cutting can be signposted to the patient-funded Age UK "Clip It" service:  
<https://www.ageuk.org.uk/bromleyandgreenwich/our-services/footcare/clip-it-clinics/>

### 1.11.4 Patient resources

The following patient information leaflet is available from the ROP (Diabetic Medicine/ Patient Resources / Diabetic Footcare Patient Information) or by clicking the hyperlink: [Diabetes and Looking After Your Feet \(Diabetes UK patient leaflet\)](#).

### 1.11.5 Professional resources



The SEL High Risk Foot EMIS Search is a risk stratification tool for identifying patients at greatest risk of foot disease. The search must be copied to a practice local search folder before it can be run. Find the folder within the *Population Reporting* module of EMIS Web: 'Clinical Effectiveness Group (Shared Folder) / SEL CCG High Risk Foot Search'.

## 1.12 Diabetic Foot Disease: Risk Stratification and Management – Traffic Light System <sup>31</sup>

Risk Level	Definition	Action
<b>Low</b>	Intact foot and at low risk of damage: <ul style="list-style-type: none"> <li>• Normal foot sensation</li> <li>• Palpable foot pulses</li> <li>• No foot deformity</li> <li>• No history of ulceration or amputation</li> </ul>	<b>Continue foot care within primary care setting (GP)</b> <ul style="list-style-type: none"> <li>• Annual Foot Screening to check for tissue damage, neuropathy &amp; circulatory problems –  see here for a video on how to conduct a foot screening: <a href="http://bit.ly/How2FS">http://bit.ly/How2FS</a></li> <li>• Provide patient with verbal information &amp; Low Risk Foot Patient Leaflet: <a href="http://bit.ly/LR_Foot">http://bit.ly/LR_Foot</a></li> </ul>
<b>Moderate</b>	Intact foot but moderate risk of damage: <ul style="list-style-type: none"> <li>• Peripheral neuropathy (i.e. abnormal sensation)</li> <li>• Peripheral vascular disease (i.e. absent foot pulses)</li> <li>• Deformity/lesions</li> </ul>	<b>Refer for foot care within Foot Protection Team</b> <ul style="list-style-type: none"> <li>• Diabetes foot checks and surveillance every six months</li> <li>• Foot check for tissue damage, neuropathy &amp; circulatory problems</li> <li>• Regular podiatry and general foot care</li> <li>• Callus removal, nail care and regular foot care review as per NICE guidelines</li> <li>• Provide patient with verbal information &amp; Moderate Risk Foot Patient Leaflet: <a href="http://bit.ly/MR_Foot">http://bit.ly/MR_Foot</a></li> </ul>
<b>High</b>	Intact foot but high risk of damage: <ul style="list-style-type: none"> <li>• Previous foot ulceration</li> <li>• History of Charcot foot</li> <li>• Patients on dialysis</li> <li>• Previous amputation</li> <li>• Neuropathy and lower limb peripheral arterial disease together</li> <li>• Neuropathy in combination with callus/deformity</li> <li>• Lower limb peripheral arterial disease in combination with callus/deformity</li> <li>• Patients who are: on dialysis, blind, or unable to self-care</li> </ul>	<b>Refer for foot care within Foot Protection Team</b> <ul style="list-style-type: none"> <li>• Diabetes foot checks and surveillance every two — three months</li> <li>• Foot Check for tissue damage</li> <li>• Regular podiatry and general foot care</li> <li>• Callus removal, nail care and regular foot care review as per NICE guidelines similar to the yellow box above</li> <li>• Provide patient with verbal information &amp; High Risk Foot Patient Leaflet: <a href="http://bit.ly/HR_Foot">http://bit.ly/HR_Foot</a></li> </ul>
<b>Active</b>	Current active foot tissue damage: <ul style="list-style-type: none"> <li>• Any foot ulceration</li> <li>• Acute Charcot foot (hot/swollen/painful foot)</li> <li>• Any foot Infection</li> </ul>	<b>Refer urgently (same day) to hospital based Multidisciplinary Diabetic Foot Team (MDfT)* or immediately to ED if the patient has suspected sepsis</b> <ul style="list-style-type: none"> <li>• Triage of referrals within one working day</li> <li>• MDfT review within one additional working day</li> <li>• 'One-stop' case reviews</li> <li>• Coordinate OPAT Care</li> <li>• Refer housebound patients to FPT immediately</li> <li>• Ensure patients provided with written and verbal information and contact numbers</li> </ul> <p><small>*Housebound patients will be managed by the community based, Foot Protection Team under the guidance of the MDfT</small></p>

All referrals should be made using the Referrals Optimisation Protocol: Diabetic Medicine / Referrals/ Podiatry & Foot Referrals

**Service Details:** Foot Protection Team: (landline) 0300 330 5777, (mobile) 07821 809796, (email) [bromh.cccpod4@nhs.net](mailto:bromh.cccpod4@nhs.net)  
Multidisciplinary Diabetic Foot Team: (landline) 01689 865 202, (email) [kch-tr.pruhdiabeticfootclinic@nhs.net](mailto:kch-tr.pruhdiabeticfootclinic@nhs.net)

## 1.13 BMI - Weight Management<sup>17,22,32</sup>

### 1.13.1 Advice on physical activity

Provide general advice on healthy weight and lifestyle to all patients with T2DM.

- For all, recommend increased physical activity, even in absence of weight loss, brings health benefits.
- To prevent obesity, recommend 45-60 minutes moderate intensity exercise a day.
- With a history of obesity, recommend 60-90 minutes moderate intensity exercise a day to avoid regaining weight.

### 1.13.2 Weight management options

Tailor interventions to patient's circumstances and choices.

Consider referral at lower BMI for patients from BAME backgrounds.

- BMI  $\geq 30\text{kg/m}^2$  or ( $27.5\text{kg/m}^2$  & BAME)
  - By default, offer referral to NHS Digital Weight Management Programme (Tier 2) (patient must have access to online technology).
  - Alternatively, recommend self-referral to other Tier 2 service e.g. Weight Watchers, Slimming World (list of services is available on the ROP).
- BMI  $\geq 35\text{kg/m}^2$ 
  - Offer referral to Tier 3 SEL Healthy Weight Programme (12 month intensive course).
- Patients newly diagnosed with diabetes and BMI  $30\text{--}34.9\text{kg/m}^2$ 
  - Discuss referral for bariatric surgery: Upper GI Service for Kings @ Beckenham Beacon – RJZ31 (Tier 4)
- BMI  $\geq 40\text{kg/m}^2$  or (BMI  $\geq 35\text{kg/m}^2$  with complex comorbidities)
  - Discuss referral for bariatric surgery: Upper GI Service for Kings @ Beckenham Beacon – RJZ31 (Tier 4)



#### REFERRALS

**ROP - Dietetic and Weight Management / Weight Management / Referrals**

**Referral options are automatically displayed according to patient eligibility.**

## 1.14 Smoking cessation

### 1.14.1 “Very Brief Advice” for smoking cessation

Patients who smoke should be offered advice on smoking cessation. Online training for providing advice is available free of charge [Very Brief Advice Training Module](#).

### 1.14.2 Practice cessation services

There are currently no commissioned in-person smoking cessation services in Bromley. When the patient is ready to quit, offer referral to the surgery’s smoking cessation service if available.

### 1.14.3 Stop Smoking London

- Self-referral to Stop Smoking London helpline (0300 123 1044) and [online support](#).
  - Provides support through a 4-week quit attempt.
  - Patient buys NRT or vapes over-the-counter or GP can prescribe NRT.
  - For proof of behavioural support, Stop Smoking London can send a confirmatory email to the patient to share with the GP.
- See London Borough of Bromley resource: [Get help to stop smoking - London Borough of Bromley](#).

## 1.15 Diabetic Eye Screening (Retinal Screening)

Retinal screening is carried out by the SEL Diabetic Eye Screening Programme at two sites in Bromley. There is a central administration team which automatically invites patients for screening and results are sent to the GP electronically.

### 1.15.1 Referral to retinal screening

Patients correctly coded with diabetes will be identified automatically; the GP does *not* need to make a referral.



Patients whose diabetes is in remission should be coded as “diabetes in remission” not “resolved” as they should continue to receive eye screening

### 1.15.2 Results of screening visit

Grade	Action for GP and Patient	Action for retinal Screening Programme (DESP)
ROM0	No retinopathy. Maintain good control/optimize BP and glucose control.	Rescreen patient in 1 year
R1M0	Background diabetic retinopathy. Optimize BP and glucose control	Rescreen patient in 1 year
R1M1	Background diabetic retinopathy with maculopathy. Changes are reversible in the early stages with good systemic control of Glucose and BP. Encourage attendance at appointments	Closer monitoring in screening programme (3-9 month recall) or referral to hospital eye service
R2M0	Patient has developed pre-proliferative diabetic retinopathy. Encourage improvement of systemic control to slow down progression. Encourage attendance at appointments	Closer monitoring in screening programme (3-9 month recall) or referral to hospital eye service
R2M1	Patient has developed pre-proliferative changes and maculopathy. Patients are at risk of visual loss and need to improve systemic control in a controlled manner. Encourage attendance at appointments	Closer monitoring in screening programme (3-9 month recall) or referral to hospital eye service
R3M0/R3M1	Patient has developed proliferative disease (with or without maculopathy), high risk of visual loss. Patient needs to improve control in a controlled manner. Encourage attendance at appointments	Will arrange referral and urgent appointment with hospital eye service
R3SM0/R3SM1	Patient has developed proliferative disease with maculopathy that is now stable following treatment. Patient needs to improve control in a controlled manner	Stable, treated retinopathy. Will arrange referral if required or closer monitoring in screening programme
U	Patient has non-assessable images using screening camera	Will arrange appointment for slit-lamp bio screening within 13 weeks. May need referral for cataracts

### 1.15.3 Patients who do not attend

The patient's GP is notified of non-attendance for retinal screening and should make efforts to encourage attendance.

#### Patients who are not suitable for screening or who opt out:

Patients may be excluded from screening if they are unable to sit upright and use chin rest, or follow instructions. The programme may contact the GP to confirm if patient is unsuitable. Patients can choose to opt out of screening by completing opt-out form.

Service contact details: 020 718 81979, [gst-tr.seldesp.admin@nhs.net](mailto:gst-tr.seldesp.admin@nhs.net) or [www.gstt.nhs.uk/seldesp](http://www.gstt.nhs.uk/seldesp).

## 1.16 T2DM Review Planning and Tasks

	Tasks/Activity	Who?	Where?	Tools/Support
<b>Review planning</b>	Recall patients at least annually or more frequently if diabetes is unstable/medication changes have been made.	Admin colleague with clinician support: GP/nurse/pharmacist		Eclipse can be used to identify those patients who would most benefit from review.
<b>Pre-patient review</b>	<ul style="list-style-type: none"> <li>Advise patient to attend for bloods: predefined diabetes blood test group in tQuest + submit urine ACR specimen (preferably early morning sample).</li> <li>Where possible, ask the patient to measure their BP and weight.</li> </ul>	HCA/nurse/pharmacist	Remote or F2F	AccuRx and eConsult have facility for pre-review information gathering; text/contact patient to encourage to complete ahead of review.
<b>Patient review</b>	<ul style="list-style-type: none"> <li>Explore patient concerns, expectations.</li> <li>Review trend of BMI and BP.</li> <li>Review investigations: urine ACR, renal function, HbA1c, cholesterol.</li> <li>Re-calculate QRISK2/3 for primary prevention if not on statin.</li> <li>Discuss risk-reduction + lifestyle</li> <li>Medication review                             <ul style="list-style-type: none"> <li>Check patient concerns, side-effects and adherence.</li> <li>Adjust medications if necessary.</li> <li>Signpost to community pharmacy for <a href="#">New Medicines Service</a>.</li> </ul> </li> <li>Include foot check and advice on foot care, share link via accuRx <a href="#">Diabetes UK advice on Footcare</a>.</li> <li>Check patient has attended for eye screening.</li> <li>Ask patient about their mental health.</li> <li>Ask men about erectile dysfunction.</li> <li>Agree goals including self-management.</li> <li>Consider referral to Social Prescriber.</li> <li>Agree next review date.</li> </ul>	GP/nurse/pharmacist	Remote or F2F	<p>Use recommended EMIS/Ardens templates (ensures correct coding, annual review, medication review).</p> <p>Signpost or refer to <a href="#">Diabetes Book and Learn</a> for structured education.</p> <p>Self-management resources - send links via AccuRx. <a href="#">Diabetes UK Information Prescriptions to support personal care</a></p>

Principles of remote monitoring: See [CES LTC during COVID-19 guide](#)

## 1.17 Diabetes Review: Advice for Patients

### 1.17.1 Dietary advice

[I have type 2 diabetes – what can I eat? | Diabetes UK](#)

Advise on healthy eating:

- Eat
  - plenty of vegetables.
  - sufficient fibre
  - fish, especially oily fish (mackerel, salmon, sardines) regularly.
- Avoid
  - sugary food and drinks.
  - energy dense foods such as crisps, cakes, biscuits and pastries.
  - alcohol.
  - salty, processed foods.

Consider signposting the patient to the [NHS Diet Advice for Diabetes](#) (diabetes.co.uk).

Professional resource: [CDEP](#) Nutrition learning module to increase your knowledge of diet and T2DM.

### 1.17.2 Goal setting

[Watch this short patient video](#) on achieving goals.

Support your patients to make **SMART** goals e.g.

Specific:	Measurable:	Achievable:	Realistic:	Timed:
'I want to lose weight'	'I'll aim to lose 2kg'	'I'll attend a Book and Learn course to help me'	'I'll ask my family to help too'	'I'll do this over the next 6 months'

### 1.17.3 Personalised Care

"A one-size-fits-all health and care system simply cannot meet the increasing complexity of people's needs and expectations. Personalised care is based on 'what matters' to people and their individual strengths and needs." [NHS England](#). Consider learning through the [Personalised Care Institute](#).

### 1.17.4 Hypoglycaemia

See [TREND Guidance](#) 'Hypoglycaemia in adults in the community: recognition, management and prevention'

## 1.18 Diabetes Review: Advice for Patients - Sick Day Rules

If available, increase glucose monitoring to at least 4 times a day when unwell.

Maintain fluid and carbohydrate intake. Sugary fluids if glucose low and sugar-free fluids if glucose high.

NEVER stop insulin: adjust dose of insulin and gliclazide according to glucose readings.

If adjusting medication doses, remember to change them back once in recovery.

SADMANS rules			
Classes of drugs that should be temporarily stopped during dehydrating illness			
<b>S</b>	Sulfonylureas	<b>M</b>	Metformin
<b>A</b>	ACE inhibitors	<b>A</b>	ARBs
<b>D</b>	Diuretics	<b>N</b>	NSAIDs
		<b>S</b>	SGLT2 inhibitors

Patients should seek medical advice if they:

- have no access to glucose monitoring and experience symptoms of high glucose – e.g. thirst, polyuria, fatigue.
- are unable to maintain hydration or take carbohydrates due to vomiting.
- have persistently high or low glucose despite adjusting medication doses.
- have any other concerns when they feel unwell.

### 1.18.1 Patient Resources

[Patient Information Leaflet: Type 2 Diabetes: What to do when you are ill \(TREND\)](#) <sup>33</sup>

[London Clinical Network Guidance](#) Sick day rules: how to manage Type 2 diabetes if you become unwell with coronavirus and what to do with your medication

[NHS Video library guide to using glucometer](#)

## 1.19 Diabetes, Preconception & Pregnancy

### 1.19.1 Preconception planning and care for patients with diabetes

Preconception planning for diabetic patients is extremely important to reduce the risk of adverse maternal and fetal outcomes.

If a woman living with diabetes wishes to conceive:

- Refer immediately to Bromley Healthcare Diabetes Clinic and specify 'Preconception, Type 2 (or 1) diabetes'. The patient will be reviewed every 4-6 weeks.
- Start folic acid 5mg once a day, at least 3 months before trying to conceive.
- Check HbA1c (aim for <6.5%), thyroid function and renal function.
- Start regular home glucose monitoring (will be arranged in preconception clinic if not already established). Measure blood glucose on waking and before and after meals (aim for blood glucose 4-7 before meals, 5-8 after meals).
- Review medication for contraindications in pregnancy and stop where possible e.g. ACEI, ARB and statin. Seek specialist advice if necessary.
- See Section 1.8.1 for the management of hypertension in pre-conception and pregnancy.



**REFER to Bromley Healthcare Diabetes Clinic (Preconception)**  
**ROP - Diabetic Medicine / Referrals/ BHC Diabetes Service Referral Form**  
**Community Diabetes Referral Form - Specify 'Preconception and Diabetes Type (1 or 2)'**

### 1.19.2 Pregnant and diabetic



**REFER URGENTLY to Antenatal Clinic (Pregnant)**

**Self-referral (preferred route)**

Self-referral form, under 'Referrals': [Maternity | Princess Royal University Hospital \(PRUH\) \(kch.nhs.uk\)](#)

Patient sends form to PRUH Antenatal Clinic [kch-tr.br-maternitypruh@nhs.net](mailto:kch-tr.br-maternitypruh@nhs.net)

**GP referral**

ROP/ Obstetrics/ Antenatal Referral Form

If pregnant and not already under the Preconception Diabetes Clinic, urgent assessment in the Diabetes Antenatal Clinic is needed.

If there are specific, acute concerns, bleep the diabetes nurse for maternity at the PRUH (bleep 477).

The Diabetes Antenatal clinic runs every Tuesday and Thursday morning (01689 863 560).

### 1.19.3 Gestational diabetes

Gestational diabetes is defined as diabetes that develops during pregnancy and usually resolves after delivery of the baby. It is associated with adverse maternal and fetal outcomes.

Screening for gestational diabetes occurs for at-risk patients at the antenatal booking appointment and patients are managed in the Antenatal Diabetes Clinic.

Patients who have a history of gestational diabetes are at increased risk of developing type 2 diabetes later in life and they should be offered:

- HbA1c check in primary care at 13 weeks postnatal and when the patient wishes to conceive again.
- Screen for diabetes annually.

## 1.20 T2DM: Preferred Medication (biguanide, sulfonylurea, ACEI, ARB) <sup>17,19,20</sup>

Class	Drug	Starting Dose	Daily Range	Notes (these are not extensive, please refer to the latest BNF for further information especially titration increments/cautions/contra-indications)
Biguanide	Metformin	500mg OD	Metformin standard release Start 500mg daily with/after food and increase by 500mg every 2 weeks until on 1g BD or maximum-tolerated dose	<ul style="list-style-type: none"> <li>Ensure eGFR &gt;45ml/min, or review dose. Contraindicated if corrected eGFR &lt;30ml/min. Routine renal function at least annually, 6 monthly for those at risk of renal impairment.</li> <li>Consider slow-release preparation if standard preparation causes gastrointestinal side effects.</li> <li>Take with meals to reduce gastrointestinal side effects</li> <li>Remember sick day rules (see Section 1.18 <i>Sick Day Rules</i>)</li> <li>Manufacturer advises patients and carers should be informed to seek urgent medical advice if symptoms of lactic acidosis e.g. dyspnoea, cramps, abdominal pain</li> </ul>
	<p>Latest NICE CKD guidance (August 2021) does not recommend adjusting the estimation of glomerular filtration rate (GFR) in people of African-Caribbean or African family background</p>			
Sulfonylurea	Gliclazide	40-80mg daily	160mg-320 mg daily, doses over 160mg divided. Titrate every 2 weeks according to pre-meal blood glucose – 4-6mmol/L or individualised target or against 3 monthly HbA1c.	<ul style="list-style-type: none"> <li>Inform patients of risk of adverse events/hypoglycaemia, particularly if renal impairment</li> <li>Advise patients on how to manage hypoglycaemia</li> <li>Use with care in those with mild to moderate renal impairment (eGFR 30-60ml/min), only prescribe under specialist advice in severe impairment (eGFR &lt;30ml/min)</li> <li>Self-monitor according to DVLA guidance and consider alternative if Group 2 driver (large lorries and buses)</li> <li>Consider alternative if BMI &gt;35</li> <li>Care with frail elderly, housebound and certain occupations e.g., working heavy machinery</li> </ul>
ACEI	1st line Ramipril	2.5mg OD (1.25mg OD in frail/elderly patients)	2.5mg-10mg OD	<ul style="list-style-type: none"> <li>For people of Black African or African-Caribbean family origin, use ARB instead of ACEI (as increased risk of angioedema with ACEI)</li> <li>Check base line U&amp;Es and renal profile (Na/K/Cr/eGFR). Hyperkalaemia may occur, therefore close monitoring of serum potassium is required</li> <li>Re-check renal profile within 2 weeks of initiation or dose increase and then at least annually.</li> <li><b>Titrate ACEI/ARB up at 2-4 weekly intervals to achieve optimal BP control</b></li> </ul>
	2nd line Lisinopril	10mg OD	10-80mg OD (maintenance dose 20mg for hypertension)	
ARB	Losartan	50mg OD (25mg OD if >75yrs old)	50mg-100mg OD	<ul style="list-style-type: none"> <li>Initiation/dose titration: if Cr increases by &gt;20% (or eGFR falls by &gt;15%) stop ACEI and seek specialist advice. ACEI dose should only be increased if serum creatinine increases by &lt;20% (or eGFR falls by &lt;15%) after each dose titration and potassium &lt;5.5mmol</li> <li><b>ACEI/ARB dose should be optimised before the addition of a second agent</b></li> <li>Side effects: symptomatic hypotension can occur on first dosing – suggest take at night. Dry cough with ACEI, consider switch to ARB</li> <li><b>Caution:</b> Do not combine ACEI and ARB to treat hypertension</li> <li>For diabetic nephropathy ARB of choice: losartan and irbesartan</li> </ul>
	Candesartan	8mg OD	8mg-32mg OD	

## 1.21 T2DM: Preferred Medication (CCB, thiazide, spironolactone, alpha and beta blockers, statin) <sup>17,19,20</sup>

Class	Drug	Starting Dose	Daily Range	Notes (these are not extensive, please refer to the latest BNF for further information especially titration increments/cautions/contra-indications)
CCB	Amlodipine	5mg OD	5-10mg OD	<ul style="list-style-type: none"> <li>Increase after 2-4 weeks to maximum dose of 10mg OD.</li> <li>Caution: Interacts with simvastatin – consider switching to atorvastatin.</li> <li>If amlodipine causes ankle oedema consider using a thiazide-like diuretic instead</li> <li>CI: unstable angina, aortic stenosis, severe hypotension</li> <li>Side effects include flushing and headaches at initiation; swollen ankles especially at higher doses</li> </ul>
Thiazide-like diuretic	Indapamide (IR)	2.5mg OD	2.5mg OD	<ul style="list-style-type: none"> <li>Check baseline renal profile, then after 2 weeks, then at least annually. If K &lt; 3.5mmol/L or eGFR &lt;25ml/min, stop indapamide and seek specialist advice.</li> </ul>
Aldosterone receptor antagonist (K-sparing diuretic)	Spironolactone	25mg OD	25mg OD	<ul style="list-style-type: none"> <li>Step 4: Spironolactone is the preferred diuretic at step 4 (NICE), but is an unlicensed indication in resistant hypertension (BNF)</li> <li>Consider only if potassium ≤4.5mmol/L (caution in reduced eGFR &lt;30ml/min, as increased risk of hyperkalaemia). Monitor Na/K/renal function within 1 month and repeat 6 monthly thereafter</li> <li>If K&gt;4.5mmol/L should be stopped.</li> </ul>
Alpha blocker	Doxazosin (IR)	1mg OD	2-16mg OD (or BD dosing when >8mg/day)	<ul style="list-style-type: none"> <li>Consider at Step 4 if potassium ≥ 4.5mmol/L. Initial dose of 1mg usually increased after 1-2 weeks to 2mg OD</li> <li>At doses above 8mg/day, consider split dosing from OD to BD to reduce BP variation</li> <li><b>Caution:</b> Initial dose as may cause postural hypotension so avoid in elderly as orthostatic hypotension risk</li> </ul>
Beta blocker	Atenolol	25mg OD	25-50mg OD	<ul style="list-style-type: none"> <li>Consider at Step 4 if potassium ≥ 4.5mmol/L.</li> <li><b>Particular caution in T2DM – symptoms of hypoglycaemia may be masked.</b></li> <li>Beta blockers may be considered in younger people and in those with an intolerance/CI to ACEI/ARBs, women of childbearing potential, co-existent anxiety/tachycardia/heart failure.</li> <li><b>CI:</b> asthma, 2nd/3rd degree AV block, severe PAD</li> <li><b>Caution:</b> beta blockers can cause bradycardia if combined with certain CCBs e.g. Verapamil/Diltiazem</li> </ul>
	Bisoprolol	5-10mg OD	5-20mg OD	
Statin	Atorvastatin (alternative is rosuvastatin)	20mg OD	20-80mg OD	<ul style="list-style-type: none"> <li>Seek specialist advice if eGFR &lt;30ml/min, liver disease, untreated hypothyroidism, heavy drinker</li> <li><b>CI</b> in pregnancy, breast feeding, avoid or address contraceptive needs women of childbearing age. Advise to stop 3 months before conception.</li> <li>Multiple drug interactions, check BNF for advice, avoid grapefruit juice</li> <li>Advise patient to visit GP if they experience unexplained muscle pains</li> <li>Refer to SEL IMOC Guidelines on Lipid Management (<a href="https://selondonccg.nhs.uk/download/12704/">https://selondonccg.nhs.uk/download/12704/</a>)</li> </ul>

## 2 Educational Resources

### 2.1 Professional resources

[Cambridge Diabetes Education Programme](#) comprehensive, competence-based learning. Free for all Bromley clinicians [www.cdep.org.uk](http://www.cdep.org.uk) – contact BETH at [broccg.beth@nhs.net](mailto:broccg.beth@nhs.net) for the registration code.

[Diabetes in Healthcare](#) Diabetes UK free online learning for health professionals

[RCGP Diabetes Hub](#)

[RCGP Quality Improvement Toolkit for Diabetes Care](#)

[Personalised Care Institute](#)

[Primary Care Diabetes Society](#)

### 2.2 Patient resources

[Diabetes Book and Learn](#) NHS South London Diabetes Education Booking Service

[The Diabetes UK Bromley Group](#) Support and information for everyone with diabetes and their carers.

[Diabetes UK Website](#)

[Health and Care videos on Diabetes](#)

[Diabetes and Looking After Your Feet](#) Diabetes UK patient leaflet

## 3 Bromley Clinical Support

### 3.1 Community Diabetes Centre

Telephone Advice:

- Office Hours: Community Diabetes Centre 01689 865911
- Out of Hours: Consultant Connect: (your practice has a specific phone number for Consultant Connect or contact via the Consultant Connect app)



REFER

ROP - Diabetic Medicine / Referrals/ Community Diabetes Referral Form

## 4 T2DM and COVID-19

### 4.1 COVID-19

[Managing T2DM during COVID pandemic](#) Clinical Effectiveness guide (Southwark)

[https://selondonccg.nhs.uk/covid\\_19/diabetes/](https://selondonccg.nhs.uk/covid_19/diabetes/) SEL COVID-19 clinical support

## 5 Advanced Primary Care Practice

### 5.1 Advanced Primary Care Practices (APCPs) in Bromley

#### 5.1.1 What is an Advanced Primary Care Practice (APCP)?

An APCP is a Bromley practice that works with Bromley Healthcare (BHC) Diabetes Service and signs up to either:

- initiate and manage injectable antidiabetic therapies
- or
- manage injectables which have been started by the BHC Bromley Diabetes Service (referred by the GP to the Diabetes Service and discharged once stable, usually within 6-8 weeks)

#### 5.1.2 What courses are needed for APCP healthcare professionals?

An APCP needs two or more healthcare professionals from their practice (including a GP) who have attended an advanced diabetes course which includes initiation and management of insulin:

- university-accredited: Warwick, Kings, Leicester
- or
- RCGP/RCN courses: MERIT, TOPICAL.

The professionals must maintain their continuing professional development and show annual evidence of Diabetes CPD.

#### 5.1.3 Key Performance Indicators (KPIs)

An APCP agrees to meet a set of KPIs and share their data with BHC. This is added to a dashboard which can be monitored for achievement by BHC and the allocated diabetes specialist nurse, allowing assessment of what areas of support may be required and thus enabling a bespoke training/support package to be offered.

KPI payments to practices are based on the number of patients on the practice register who had a Diabetes Care Plan documented for that year, pro-rata.

#### 5.1.4 Practice and Patient Benefits

##### Practice benefits:

- In-house specialist support for practice staff.
- Enhanced skills in diabetes.
- Ability to give quicker access to treatment for patients.
- Supported by a named DSN who has direct access to a consultant.
- Virtual facilitation clinics - enabling review of multiple patients in a short period of time.
- Improved clinical outcomes.
- Access to performance reports.
- Bespoke template and reporting tools built into EMIS.
- Increased QOF and NDA compliance.
- Easier access to specialist services for complex patients – pumps, preconception, Young Adult Clinics, renal clinics, etc.

##### Patient benefits:

- Seen by a primary care professional, who is more likely to know their medical history as well as social/psychological issues.
- Quicker access to diagnosis and treatment.
- Seen close to home - does not have to travel to a hospital site: easier access.
- Relationship with the HCP is already in place.
- Complex patients can be seen at BHC diabetes service rather than travelling to Kings at Denmark Hill.

## 6 Abbreviations

### 6.1 Abbreviations

2WW – Two week wait referral	DASH – Dietary approaches to stop hypertension	MDft – Multidisciplinary foot team
α-B – Alpha blocker	DESMOND – Diabetes Education and Self-Management for Ongoing and Diagnosed	NDA – National Diabetes Audit
A&E – Accident and Emergency	DPP – Diabetes Prevention Programme	NSAID – Non steroidal anti-inflammatory
ABPM – Ambulatory blood pressure monitoring	DVLA – Driver and Vehicle Licensing Agency	OD – Once daily (dosing)
ACEI– Angiotensin converting enzyme inhibitor	DXS – Point-of-care tool for EMIS Web	PAD – Peripheral Arterial Disease
ACR – Albumin-creatinine ratio	ECG – Electrocardiogram	PCOS – Polycystic Ovarian Syndrome
ALT – Alanine aminotransferase	eGFR – Estimated glomerular filtration rate	PHM – Population health management (contract)
APCP – Advanced Primary Care Practice	ERS – Electronic Referral System	PLT – Protected Learning Time
APL – Active Patient Link tools	F2F – Face to face	PMS – Primary medical services (contract)
ARB – Angiotensin receptor blocker	FBC – Full blood count	PRUH – Princess Royal University Hospital
AST – Aspartate aminotransferase	GSTT – Guy’s and St. Thomas’ Hospital	QOF – Quality and outcomes framework (contract)
BAME – Black, Asian and Minority Ethnic	IMOC – Integrated Medicines Committee	QRISK2 – a prediction algorithm for CVD. EMIS currently using QRISK2 (although QRISK3 released in 2017)
β-B – Beta blocker	IR – Immediate release	RCGP – Royal College of General Practitioners
BD – Twice daily (dosing)	K – Potassium	Renal profile – this includes serum sodium/potassium/creatinine/eGFR
BHC – Bromley Healthcare	KCH – King’s College Hospital	ROP – Referrals Optimisation Protocol
BMI – Body mass index	HbA1c – Haemoglobin A1c %	SEL – South East London
BP – Blood Pressure	HBPM– Home blood pressure monitoring	SPC – summary of product characteristics
CES – Clinical Effectiveness Southwark	IGR – Impaired glucose regulation	SPLW – Social Prescribing Link Worker
CCB – Calcium channel blocker	IHD – Ischaemic Heart Disease	T2DM – Type 2 Diabetes Mellitus
CK – Creatinine Kinase	LFT – Liver function tests	TIA – Transient ischaemic attack
CKD – Chronic Kidney Disease	LGT – Lewisham and Greenwich NHS Trust	TFT – Thyroid function blood tests
Cr – Creatinine	LADA – Latent autoimmune diabetes in adults	
CVD – Cardiovascular disease		

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Guide developed by Clinical Effectiveness South East London: Bromley Leads

Contact CESEL with any feedback at [selccg.clinicaleffectiveness@nhs.net](mailto:selccg.clinicaleffectiveness@nhs.net)

Access this guide online at: [Clinical Effectiveness South East London \(CESEL\) - South East London CCG \(selondonccg.nhs.uk\)](https://www.clinicaleffectiveness.org.uk/ce-south-east-london-ccg) or via the Referrals Optimisation Tool (Diabetic Medicine/Professional Resources).

**Making the right thing to do the easy thing to do.**