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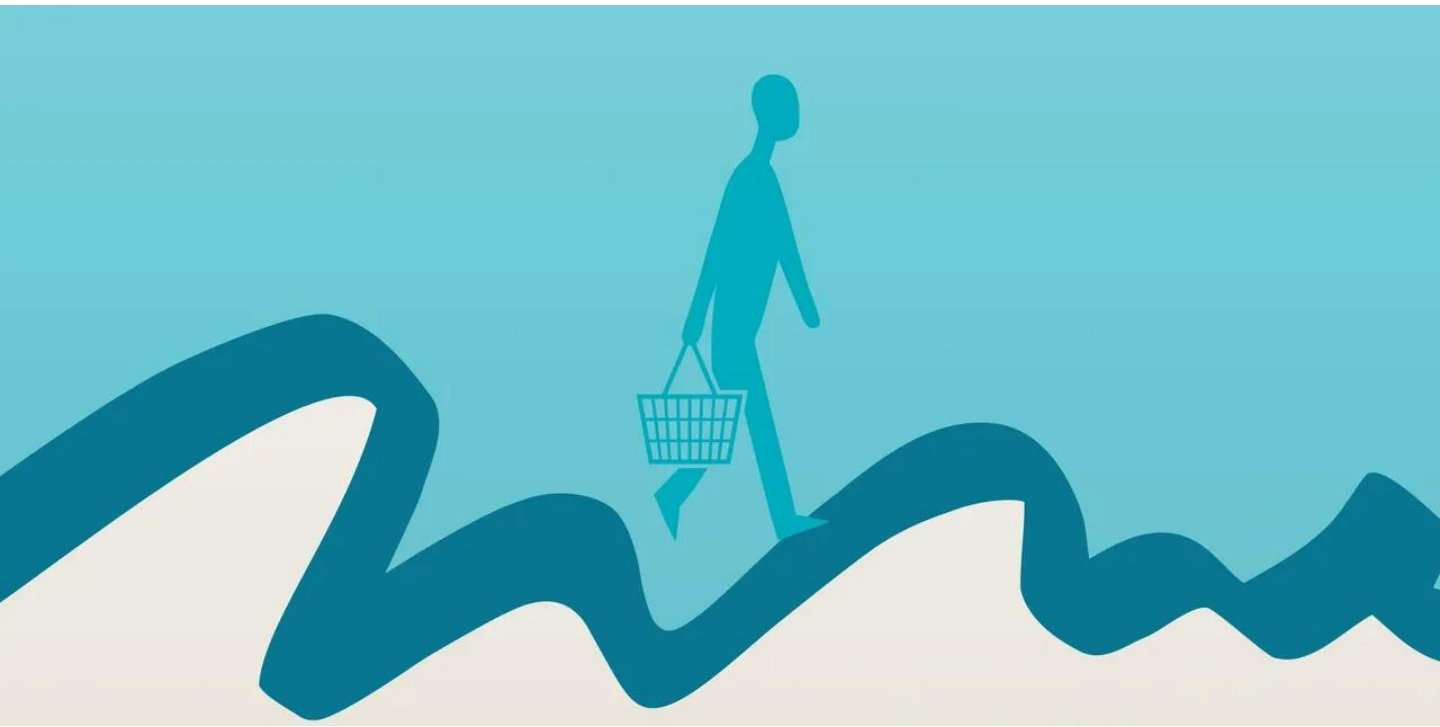
NHS Greater Manchester Integrated Care



NHS Type 2 Diabetes Path to Remission Programme Medication Deprescribing Guidance

This guidance has been developed by **the Greater Manchester and Eastern Cheshire Strategic Clinical Network** to support the deprescribing of medications ahead of referral to the NHS Type 2 Diabetes Path to Remission (NHS T2DR) Programme and the person beginning total diet replacement (TDR).

It is important to ask the person if they are receiving medication or treatment from other services as those prescribed may not appear on the person's record.

Agreed medication changes (including the absence of changes) must be specified in writing to Momenta on the referral form. We also recommend these are provided to the person in writing (SMS / email / printed).

Please note this guide provides an overview of the recommendations for medication deprescribing, for more detailed information please consult the 'NHS T2DR Programme - Guidance for GP practices and referrers' here.

More information can be found on the Momenta website at https://momentanewcastle.com/hcp-t2dr-gm. If you have any queries regarding medication changes or completing the referral form please contact the Momenta support team at momenta.t2dr-gm@nhs.net.

Blood Glucose Lowering Agents

Blood Pressure Lowering Agents

Other Medications

Please note people using insulin are not eligible for the NHS T2DR Programme. Please discuss other Type 2 diabetes management options.

Click to see agents to prioritise and deprescribing examples

How many blood glucose lowering agents is the person using?

1 or 2

Stop agents on day 1 of TDR

Over 2 including metformin

Stay on metformin and stop the remaining agents on day 1 of TDR

Over 2 not including metformin

Stay on an oral agent safe with TDR and stop the remaining agents on day 1 of TDR

Is the persons blood pressure ≥ 140/90?

Yes

Make no changes to BP-lowering agents

Click to see agents to prioritise and deprescribing examples

No

Are blood pressure agents being used for managing blood pressure or other indications?

Only blood pressure

Stop the agent that would have been added last according to NICE guidance (i.e. Stop spironolactone, then alpha-blocker, then B-blocker, then thiazides, then calcium channel blockers, then ACE or AT2 inhibitors)

Only other indications

Cautiously reduce the dose of this agent.

Blood pressure and other indications

The agent used solely for blood pressure should be prioritised for adjustment. Stop the agent that would have been added last according to NICE guidance (i.e. Stop spironolactone, then alpha-blocker, then B-blocker, then thiazides, then calcium channel blockers, then ACE or AT2 inhibitors) and cautiously reduce the dose of the agent used for other indications.

Is the person receiving other medications that may need adjusting due to weight loss or dietary change?

Yes

Review those medications that may need to be adjusted due to changes in body weight or dietary intake. If medications cannot be safely adjusted, the individual is not suitable for the NHS T2DR programme

Click to see medicines to consider

No

Complete referral. Agreed medication changes (including the absence of changes) must be specified in writing to Momenta on the referral form. We also recommend these are provided to the person in writing (SMS / email / printed).

Deprescribing of blood glucose lowering agents

Selecting the glucose-lowering agent for adjustment

- People on 1-2 glucose-lowering agents should stop these agents on day one of TDR (it is likely that most persons will be in this group).
- People on ≥ 3 agents should stay on metformin only (or, if not taking metformin stay on an oral agent which is safe with TDR) and stop the remaining glucose-lowering agents on the first day of TDR.
- Counsel the person about the osmotic symptoms of diabetes and when and how to seek appropriate support.

Which glucose-lowering agents are safe with TDR?

Insulin is not included here as people treated with insulin are not eligible for the NHS T2DR Programme

Class of medication	Examples of drugs	Is this safe with TDR?
Biguanides	Metformin	Yes –safe
Sulfonylureas	Gliclazide, Glibenclamide, Glimepiride	No –risk of hypoglycaemia
Meglitinides	Repaglinide, Nateglinide	No –risk of hypoglycaemia
Thiazolidinediones	Piogliazone	Yes -safe
DPP4 inhibitors (-gliptins)	Linagliptin, Alogliptin, Sitagliptin, Saxagliptin, Vildagliptin	Yes -safe
SGLT2 inhibitors (-flozins)	Dapagliflozin, Canagliflozin, Empagliflozin, Ertugliflozin	No –risk of ketoacidosis
Please note if SGLT-2 inhibitors are being used for indications other than diabetes e.g. for cardio and/or renal benefit and it would be inappropriate to stop these, the individual is unsuitable for the NHS T2DR programme.		
GLP-1 analogues (-tides)	Exenatide, Dulaglitide, Liraglutide, Lixisenatide, Semaglutide	Yes - safe
Alpha-glucosidase inhibitors	Acarbose	Yes –safe

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Please note if SGLT-2 inhibitors are being used for indications other than diabetes e.g. for cardio and/or renal benefit and it would be unsafe to stop these, the individual is unsafe for the NHS T2DR programme

Examples –1 or 2 glucose-lowering agents

1 glucose lowering agent at time of referral - stop the agent on first day of TDR

- person is on metformin only at time of referral
    - stop the medication (metformin) on the first day of TDR. This will be the case for any instances of glucose lowering monotherapy

2 glucose-lowering medications at time of referral –stop both medications on first day of TDR

- patient is on metformin and SGLT2 inhibitor at time of referral
    - stop both these medications (metformin and SGLT2 inhibitor) on the first day of TDR. This will be the case for any instances of glucose-lowering dual therapy
- patient is on metformin and sulfonylurea at time of referral
    - stop both these medications (metformin and sulfonylurea) on the first day of TDR. This will be the case for any instances of glucose-lowering dual therapy

Examples – ≥ 3 glucose-lowering agents

≥ 3 glucose lowering medications at time of referral remain on metformin (or, if not clinically suitable, another medication which is safe with TDR, e.g. DPP4 inhibitor or pioglitazone) and stop the other glucose lowering medications on first day of TDR

- patient is on metformin, SGLT2 inhibitor and DPP4 inhibitor at time of referral
    - remain on metformin and stop the SGLT2 inhibitor and DPP4 inhibitor on the first day of TDR
- patient is on sulfonylurea, SGLT2 inhibitor, and DPP4 inhibitor at time of referral
    - remain on DPP4 inhibitor and stop the sulfonylurea and SGLT2 inhibitor on the first day on TDR
- patient is on SGLT2 inhibitor, DPP4 inhibitor and pioglitazone at time of referral
    - remain on either DPP4 inhibitor or pioglitazone (not both), stopping the other glucose lowering medications on the first day of TDR
- patient is on sulfonylurea, SGLT2 inhibitor and GLP1 analogue at time of referral
    - stop all three of these glucose lowering medications on the first day of TDR (although it would be acceptable to remain on the GLP 1 analogue if clinically indicated)
- patient is on metformin, sulfonylurea, SGLT2 inhibitor and GLP1 analogue at time of referral
    - remain on metformin and stop sulfonylurea, SGLT2 inhibitor and GLP1 analogue on the first day of TDR

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Deprescribing of blood pressure lowering agents

Selecting the BP-lowering agent for adjustment

If blood pressure is considered uncontrolled

- If blood pressure is considered uncontrolled at time of referral (systolic ≥ 140mmHg or diastolic ≥ 90mmHg), make no changes to BP-lowering agents.

If blood pressure is considered controlled

- If blood pressure is considered controlled at time of referral (both systolic < 140mmHg and diastolic < 90mmHg), one BP-lowering agent should be adjusted on the first day of TDR .

It is recognised an agent may be used in one person solely for managing blood pressure while, in another person, it may also be used for another indication, e.g. ACE-inhibitors in heart failure with reduced ejection fraction (HFREF).

Agents being used specifically and solely for managing blood pressure (i.e. not also being used for nephropathy, angina, heart failure, BPH, migraines etc), in a particular person, are the priority for adjustment – stop the agent that would have been added last according to current NICE guidance.

- If not being used for other indications, this would be (in order of stopping first):
    - Spironolactone or alpha-blocker or beta-blocker
    - Thiazide diuretic (or calcium-channel blocker)
    - Calcium-channel blocker (or thiazide diuretic)
    - ACE-inhibitor or Angiotensin receptor blocker

If the person is taking agents which affect blood pressure but are being used for other indications (none are being used solely to manage blood pressure) - cautiously reduce the dose of this agent rather than stopping it.

- use clinical judgement and shared decision making and take into account the blood pressure reading.
- consider arranging early review to monitor clinical response, in relation to the specific indication for the agent.
- in some circumstances, it may be reasonable not to adjust these agents initially but to carefully monitor and respond accordingly.

Counsel the person about symptoms of postural hypotension and advise them of when and how to seek appropriate support.

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Examples – at least one agent used solely for BP

Blood pressure is considered controlled at time of referral – (e.g. systolic < 140mmHg and diastolic < 90mmHg)

- patient is taking ramipril 10mg (for BP solely –no other indications) at time of referral
    - stop the ramipril 10mg on the first day of TDR
- patient is taking ramipril 10mg (for BP solely) and amlodipine 10mg (for BP solely) at time of referral
    - stop the amlodipine 10mg on the first day of TDR
    - the amlodipine would be added last according to NICE guidance for hypertension and is therefore stopped first
- patient is taking ramipril 10mg (previous MI), amlodipine 10mg (for BP solely), indapamide mr 1.5mg (for BP solely) and bisoprolol 10mg (previous MI) at time of referral
    - stop indapamide mr 1.5 mg (or, alternatively, the amlodipine 10mg)
    - although bisoprolol would be added last according to NICE guidance for hypertension, it is used here for another indication and should therefore not be adjusted at this time
    - excluding bisoprolol, the indapamide (or amlodipine) would have been added last according to current NICE guidance for hypertension and is therefore stopped first

Examples – no agents used solely for BP

Blood pressure is considered controlled at time of referral –(e.g. both systolic < 140mmHg and diastolic < 90mmHg)

- patient is taking ramipril 10mg (for nephropathy) at time of referral
    - reduce ramipril dose to 5mg rather than stopping
- patient is taking propranolol 40mg bd (for migraine prophylaxis) and doxazosin 2mg (for BPH) at time of referral
    - discuss options, balancing potential impact on migraine frequency / LUTs against risks of hypotension with TDR on these medications
    - given the low doses in this example, it may be reasonable not to make any changes to these medications initially –if so, careful monitoring required
    - if medication adjusted, advisable to arrange review of migraines / LUTs at clinically appropriate interval
- patient is taking ramipril 10mg (HFREF), bisoprolol 10mg (HFREF) and furosemide 60mg (HFREF) at time of referral
    - needs caution – inadvisable to suddenly stop an medication in this example unless strong clinical rationale
    - carefully reduce dose of one medication – use clinical judgement and shared decision making
    - early review, including assessment of fluid status (particularly if adjusting furosemide), should be arranged

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Deprescribing of medications affected by weight / dietary changes

Medications needing adjustment –weight / dietary changes

- It is important to consider other medications that may affect someone if they lost weight or had a major dietary change and whether the dose of this medicine will need to be adjusted.

Selecting medications – weight / dietary changes

- It is not possible to provide an exhaustive list of all medications which may need adjustment due to weight / dietary changes. If in doubt, please discuss with a pharmacist colleague.
- Commonly used oral medicines which may require adjustment include:
    - Warfarin
    - Non-vitamin K antagonist oral anticoagulants (NOACs)
    - Digoxin
    - Phenytoin
    - Ciclosporin
    - Antifungals –voriconazole
    - Long-term antibiotic therapy (e.g. isoniazid)
    - Carvedilol
    - Prasugrel
- Many medicines administered parentally may require dose adjustment by weight. These include:
    - Low molecular weight heparin
    - Infliximab (and other biologics)
    - Long-term antibiotic therapy (e.g. macrolides, aminoglycosides, fluoroquinolones, beta-lactams)

It is the responsibility of the referrer to make sure that processes are in place for any applicable medications to be adjusted and to only refer the person if safe and robust processes are in place to manage the adjustment of these medicines in line with dietary or weight changes.

If involving other services, such as specialist clinics, prior discussion with such services must take place to establish feasibility, responsibility and agreement for appropriately frequent person review and dose adjustment.

If this cannot be done safely then the person should not be referred to the NHS T2DR programme.

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