Medication Deprescribing Guidance

This guidance has been developed by **the Greater Manchester and Easter Cheshire Strategic Clinical Network** to support the deprescribing of medications ahead of referral to the NHS Low Calorie Diet Programme (LCD) 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 the person (SMS / email / printed) and to Xyla on the referral form.

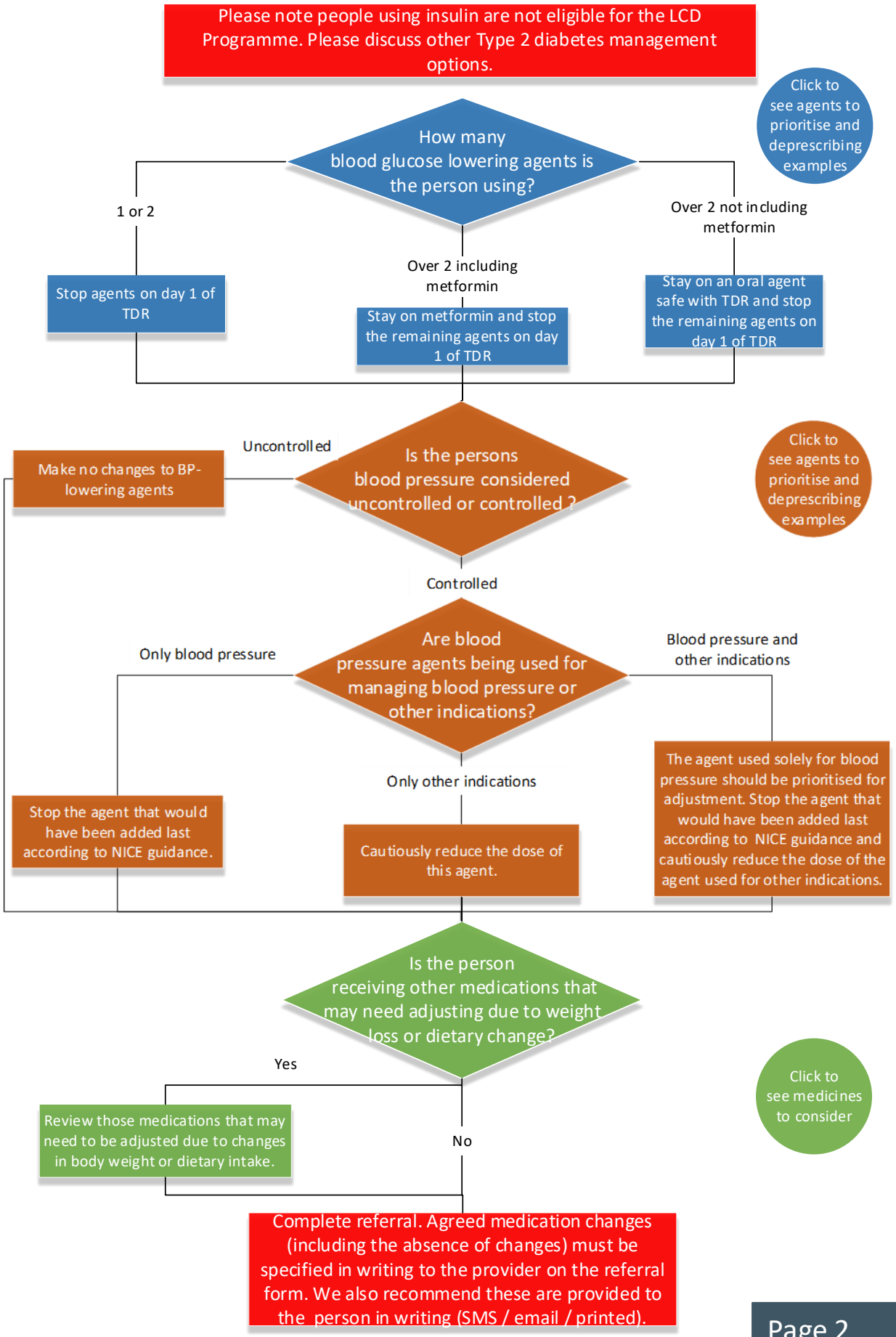
Please note this guide provides an overview of the recommendations for medication deprescribing, for more detailed information please consult the 'NHS Low Calorie Diet Pilot Programme Guidance for GP practices and referrers' here.

If you have any queries regarding medication changes or the referral please contact the Xyla support team at GM-LCD@xylahealth.com.

Blood Glucose Lowering Agents

Blood Pressure Lowering Agents

Other Medications



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 LCD 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 LCD programme.		
GLP-1 analogues (-tides)	Exenatide, Dulaglitide, Liraglutide, Lixisenatide, Semaglutide	No – risk of compounding weight loss
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 LCD 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 - 1 agent.
    - stop the agent (metformin) on the first day of TDR. This will be the case for any instances of monotherapy for glycaemia.

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

- person is on metformin and SGLT2 inhibitor at time of referral - 2 agents.
    - stop both these agents (metformin and SGLT2 inhibitor) on the first day of TDR. This will be the case for any instances of dual therapy for glycaemia (Also note that the SGLT2 inhibitor is unsafe with TDR).
- person is on metformin and sulfonylurea at time of referral - 2 agents.
    - stop both these agents (metformin and sulfonylurea) on the first day of TDR. This will be the case for any instances of dual therapy for glycaemia.

Examples – ≥ 3 glucose-lowering agents

≥ 3 glucose-lowering agents at time of referral – stay on metformin (or, if metformin contraindicated / not tolerated, another oral agent which is safe with TDR, e.g. DPP4-i or pioglitazone) and stop the remaining agents on first day of TDR.

- person is on metformin, sulfonylurea and DPP4 inhibitor at time of referral – 3 agents
    - stop the sulfonylurea and DPP4 inhibitor on the first day of TDR but stay on metformin.
- person is on sulfonylurea, SGLT2 inhibitor and GLP-1 analogue (metformin not tolerated) at time of referral – 3 agents
    - stop all three of these agents on the first day of TDR
- person is on sulfonylurea, SGLT2 inhibitor, and DPP4 inhibitor (metformin not tolerated) at time of referral – 3 agents
    - stop the sulfonylurea and SGLT2 inhibitor on the first day on TDR but stay on DPP4 inhibitor
- person is on DPP4 inhibitor, pioglitazone and SGLT2 inhibitor (metformin not tolerated) at time of referral – 3 agents
    - stop the SGLT2 inhibitor and one of the other glucose-lowering agents (DPP4 inhibitor and pioglitazone) on the first day of TDR –i.e. only stay on either DPP4 inhibitor or pioglitazone (not both)
- person is on metformin, pioglitazone, SGLT2 inhibitor and GLP-1 analogue at time of referral – 4 agents
    - stop pioglitazone, SGLT2 inhibitor and GLP1-analogue on the first day of TDR but stay on metformin

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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 – (both systolic < 140mmHg and diastolic < 90mmHg)

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

Examples – no agents used solely for BP

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

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

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