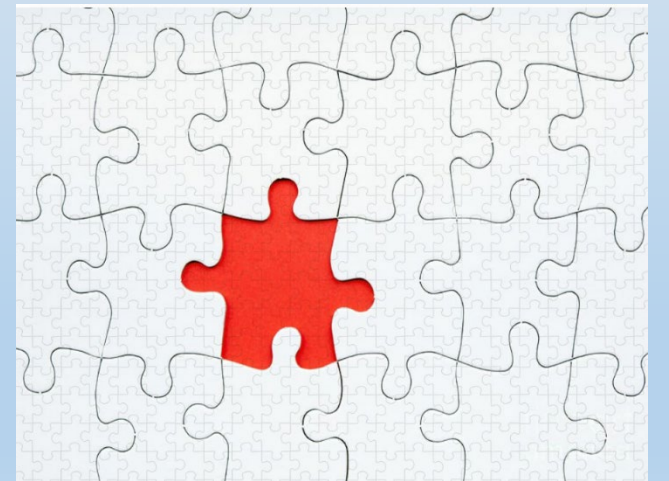


One size doesn't fit all: deprescribing in diabetes

Samina Ali



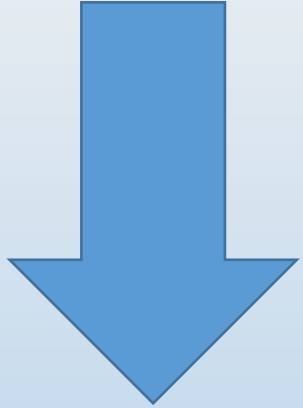
Objectives

- Understanding the need for individualised HbA1c treatment target
- When to consider deprescribing in diabetes
- How to deprescribe in diabetes through practical examples

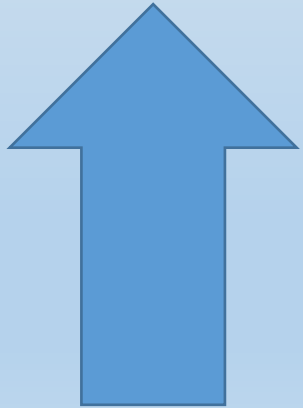
What is Deprescribing in diabetes?

- Stopping or reducing the dose of an glucose lowering drug
- Switching to an alternative glucose lowering class with a more favourable risk–benefit ratio
- Switching to another glucose lowering drug with lower hypoglycaemia risk
- Reduction in self-monitoring of blood glucose
- Cessation/reduction of other drugs such as blood pressure medication or statins
- Reduction in frequency of diabetes-specific assessments (e.g. checking of urinary ACR).

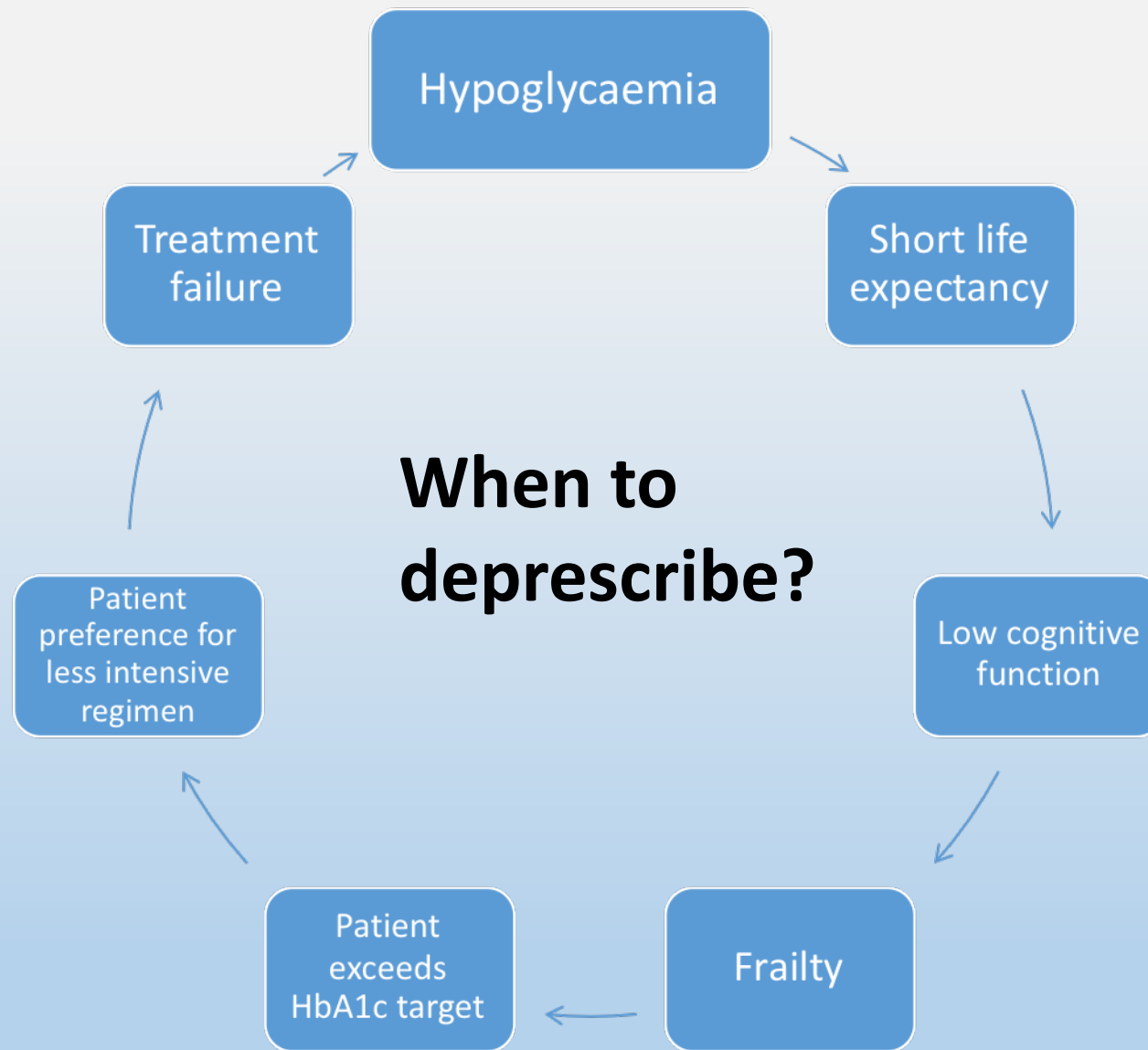
Why deprescribe?



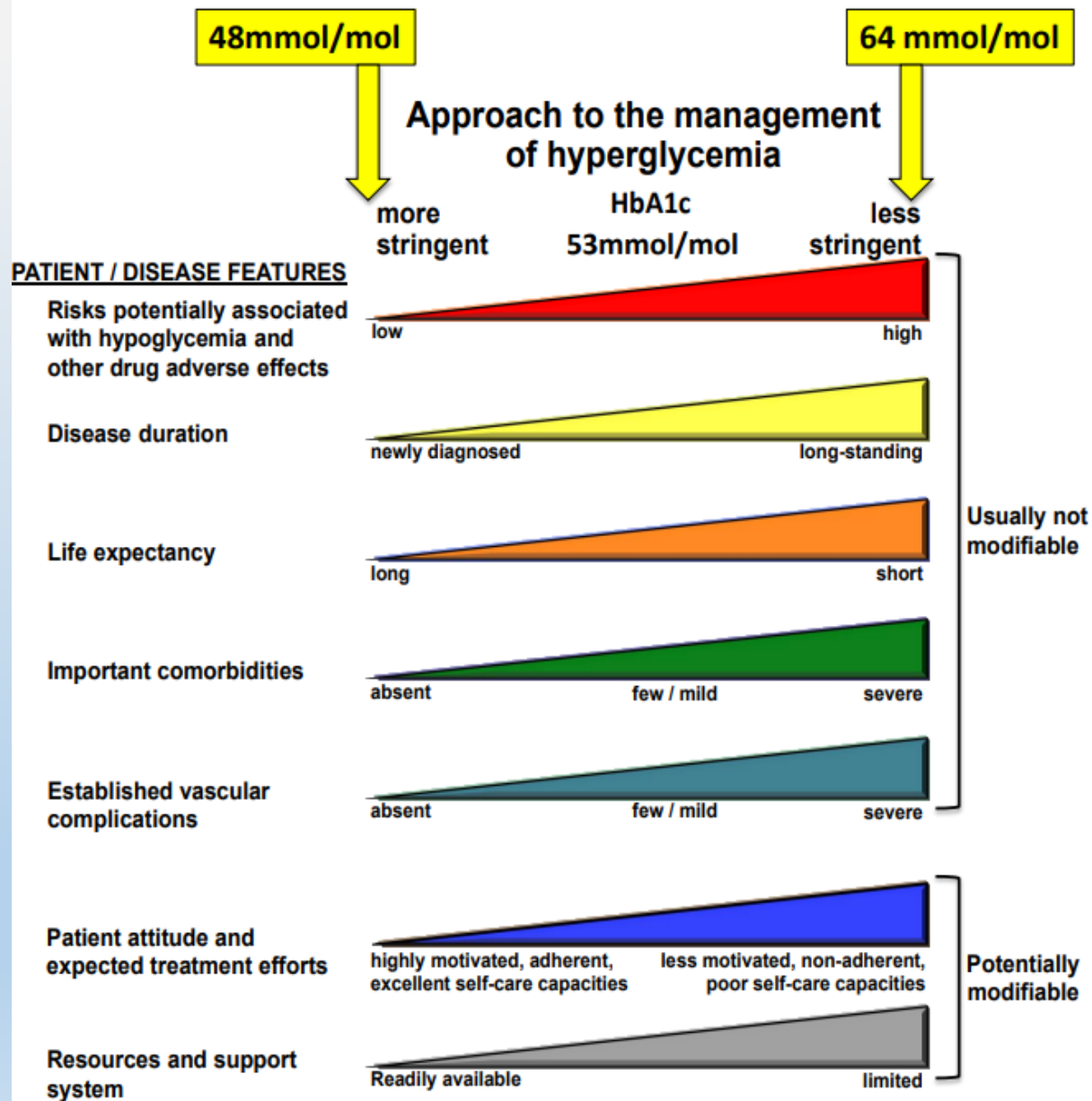
Medication burden
Patient harm
Cost



Quality of life
Adherence
Outcomes



Modulation of the intensiveness of glucose lowering therapy in T2DM



Patient prefers less intensive regimen

Patient A

62 year old Caucasian male. Type 2 diabetes was diagnosed in 2017 following an admission with a perianal abscess
Current occupation: Taxi driver

HbA1c- 86mmol/mol
BMI-27kg/m²
BP- 128/66
All other blood parameters normal
No microalbuminuria

Current medication:
Metformin 500mg daily
Abasaglar- 8 units
Novorapid 4 units

Patient concerns:

Worried about hypos whilst driving so takes insulin once at midnight after shift and purposely keep blood sugars running high during the day. Tries to check blood sugars every 2 hours whilst driving.

Outcomes:

- Chased autoantibody results to verify diabetes type
- Stopped insulin gradually
- Increased dose of Metformin to 1gram twice daily
- Added in an SGLT2
- After 3 months follow up: HbA1c 60mmol/mol and BMI 26.5kg/m²
- No longer needs to check blood sugars every two hours whilst driving

Patient B

54 year old Caucasian female with Type 2 diabetes. Her friend had just been initiated on a once weekly injection

HbA1c- 60mmol/mol
BMI-32kg/m²
BP- 130/68
All other blood parameters normal
No microalbuminuria

Current medication:
Metformin 1G twice daily
Dapagliflozin 10mg daily
Byetta 10mcg twice daily

Patient concerns: felt byetta regimen was not working out since changing jobs.

Outcomes:

- Switched to once weekly Semaglutide 1mg
- Checked HbA1c in 3 months- 52mmol/mol and weight loss of 5kg

Tips

- Adopt an emotional intelligence approach
- Always listen to the patient's needs and desires as they are the ones taking the medication
- Understand their want for a less intensive regimen
- Meet patient half way if the patient's demands are too high
- Review patient every 3- 6 months to review HbA1c and check patient adherence/side effects
- 20 minute appointments

Patient achieves HbA1c target

Patient C

84 year old South Asian male. Type 2 diabetes. Carer for his wife who has dementia.

HbA1c- 54mmol/mol
BMI-27kg/m²
All other blood parameters normal
No microalbuminuria

Patient concern: busy caring for wife
HCP concern: elderly and on SU- increased risk of hypos

Current medication:
Metformin 1 gram twice daily
Gliclazide 80mg twice daily
Alogliptin 25mg daily
Atorvastatin 80mg daily
Clopidogrel 75mg daily
Mirtazapine 30mg night
Tildiem 300mg m/r daily
Lansoprazole 15mg daily

Plan:

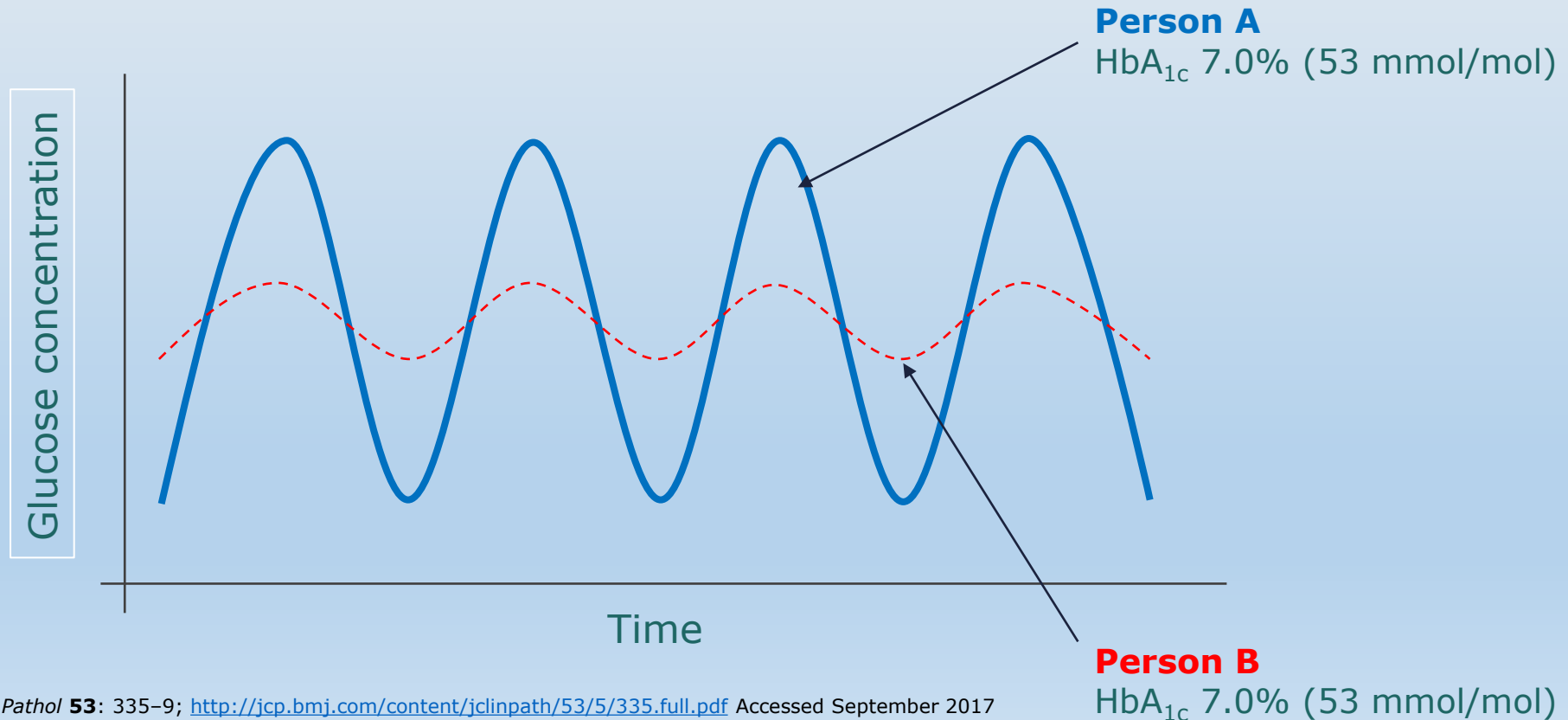
- Step wise reduction of Gliclazide until BMs were around 9-10mmol/l
- He stayed on Gliclazide 40mg in the morning
- Advised to eat regularly and discussed hypo symptoms

How to de-titrate Gliclazide

- Gliclazide taken with breakfast will potentially lower blood glucose levels up to the evening meal
- Gliclazide taken with evening meal potentially will lower blood glucose levels before breakfast
- Reduce by 40mg each time
- Ask patient to monitor BMs (fasting and pre-evening meal)
- Amend Gliclazide dose according to the blood glucose levels
- Target BMs before meals:
 - younger patients- 5-7mmol/l
 - older patients- 9-10mmol/l

Practical Pointer: Remember that HbA_{1c} does not provide information on stability of glycaemic control

In theory, a person with wildly fluctuating glucose concentrations could have the same HbA_{1c} value as one whose glucose varies little throughout the day⁽⁶⁾



Patient D

57 year old South Asian male. Type 2 diabetes since 2011. Fatty liver disease and BDR in 2018. Recently started a regimen of eating healthy and walking regularly.

HbA1c- 37mmol/mol (previously 57mmol/mol)
BMI-21kg/m² (was 23kg/m²)
All other blood parameters normal
No microalbuminuria

Current medication:
Metformin 1 gram twice daily
Gliclazide 40mg daily
Atorvastatin 20mg

Patient concern: Nil
HCP concern: Hypos – although patient denies having any

Outcomes:

Plan:

- Stopped Gliclazide- told to get in touch if blood glucose levels rise
- Encouraged to continue healthy eating and daily walk
- Reviewed HbA1c in 3 months- 42mmol/mol. Reduced metformin to 500mg twice daily
- Reviewed HbA1c in after 3 months- HbA1c at 42mmol/mol
- Metformin stopped- will review HbA1c again in 3 months

Patient E

60 year old female. Type 2 diabetes since 2012. CKD since 2019

HbA1c- 48mmol/mol
BMI-26kg/m²
eGFR 45- All other blood parameters normal
Microalbuminuria
BP- 125/70

Current medication:
Metformin 500mg twice daily
Alogliptin 12.5mg daily
Dapagliflozin 10mg daily
Atorvastatin 20mg daily
Ramipril 10mg daily

Patient concern: Nil

Plan:

- Patient has CKD- continued SGLT2i
- Stopped gliptin as only taking half of usual dose
- HbA1c checked 3 months later was still at 48mmol/mol

SGLT2i use in other indications in patients with type 2 diabetes

SGLT2i	CKD	Heart Failure
Canagliflozin	Green	Red
Dapagliflozin	Green	Green
Empagliflozin	Red	Green
Ertugliflozin	Red	Red

Patient F

58 year old Caucasian male. Type 2 diabetes since 2018.

HbA1c- 47mmol/mol
BMI-23.5kg/m²
eGFR >60ml/min
All other blood parameters normal
No Microalbuminuria
BP- 120/70

Current medication:
Metformin 1 gram twice daily
Empagliflozin 10mg daily
Semaglutide 1mg weekly
Simvastatin 40mg daily

Patient concern: Has lost a whopping 15kg and doesn't want to lose more

- Plan:
- SGLT2i stopped as patient's BMI <25kg/m²
 - Semaglutide reduced to 0.5mg once weekly
 - Patient advised to continue following a healthy balanced diet and maintain his daily walking regimen to keep weight gain at bay
 - HbA1c after 3 months was 52mmol/mol and minimal further weight loss

Tips

- Stop/reduce glucose lowering medicines that are hypo risk first
- Review HbA1c every 3-6 months- ensure your practice has a good recall system in place
- Can ask patient to check their BMs and flag if above or below target
- Check patient's co-morbidities-CKD, HF
- When in doubt, ask patient which glucose lowering medicine they would like to stop

Hypoglycaemia

- Adjust dose of any glucose lowering medication that can cause hypos
- Is there a pattern to the hypos?
- Are they missing meals? Or not eating enough starchy foods?
- Unplanned exercise?
- Taken too many tablets by accident?
- Drinking too much alcohol or drinking alcohol without food
- Ask patient to monitor BMs if not already doing so

Treatment failure

SIGN diabetes Guidelines (2017):

“Continue medication at each stage if EITHER individualised target achieved OR HbA1c falls more than 0.5% (5.5 mmol/mol) in 3–6 months. Discontinue if evidence that ineffective.”

Frailty in diabetes

Frailty in diabetes

- Improve frailty in diabetes by:
 - simplifying, switching or stopping regimen to avoid hypos

And reducing:

- Falls
- Hyperglycaemia
- Weight loss
- Sarcopenia

Managing diabetes in Frailty

	De-escalation threshold		Treatment target	
	Threshold	Suggested interventions	Targets	Interventions
The fit older adult with diabetes	53 mmol/mol (7.0%)	Evaluate long-acting sulfonylurea and insulin therapy that may cause hypoglycaemia. Consider appropriate dosage in setting of renal function	58 mmol/mol (7.5%)	Avoid initiating new agents that may cause hypoglycaemia or exaggerate weight loss.
Moderate Severe frailty	58 mmol/mol (7.5%)	Discontinue any sulfonylurea if HbA _{1c} below threshold. Avoid TZDs because of risk of heart failure. Cautious use of insulin and metformin mindful of renal function.	64 mmol/mol (8.0%)	DPP-4 inhibitors and longer-acting insulins have demonstrated safety. TZDs may increase risk of heart failure. SGLT2 inhibitors may provide additional benefit in people with heart failure but also exacerbates symptoms of diabetes
Very Severe frailty	64 mmol/mol (8.0%)	Withdraw sulfonylureas and short-acting insulins because of risk of hypoglycaemia. Review timings and suitability of NPH insulin with regard to risk of hypoglycaemia. Therapies that promote weight loss may exacerbate sarcopenia.	70 mmol/mol (8.5%)	DPP-4 inhibitors renally at appropriate dose for those close to target. Consider once-daily morning NPH insulin or analogue alternatives if symptomatic nocturnal hyperglycaemia. Educate carers and relatives regarding risk of hypoglycaemia

DPP-4, dipeptidyl peptidase-4; SGLT2, sodium-glucose co-transporter-2; TZD, thiazolidinediones.

Patient G

77 year old Caucasian male with dementia. Lives alone.
Also has Type 2 diabetes, hypothyroidism and BDR. Has moderate frailty.

HbA1c- 90mmol/mol
BMI-24kg/m²
BP- 136/72
All other blood parameters normal
No microalbuminuria

Current medication:
Alogliptin 25mg daily
Gliclazide 40mg twice daily
Can't tolerate Metformin
Galantamine 4mg daily
Atorvastatin 20mg daily
Levothyroxine 100mcg daily

Family concerns:

Worried about diabetes control. Forgets if he has eaten so family have to ration food and keep limited supply in patient's house. Has had a few falls recently at home.

Outcomes:

- Gliclazide stopped as not appropriate due to falls and irregular eating pattern
- Started on 10 units of Lantus with District Nurse input
- Due HbA1c next month

Tips

- Priority to improve quality of life
- Avoid glucose lowering drugs which cause hypoglycaemia where possible
- Medication choices should be made based on comorbidities in the first instance
- Frailty is not a unidirectional process- assess after every intervention
- Regular review following deprescribing to ensure the intervention is not detrimental

How to deprescribe?

Determine the patient's individualised HbA1c target- is there a need to deprescribe?

Identify which therapy can be deprescribed

Discuss deprescribing with the patient

Implement deprescribing

Monitor the patient regularly

Summary

- Guidelines focus on intensifying treatment
- Overtreatment increases the risk of hypoglycaemia and/or ADRs
- Deintensification of treatment is not common practice
- Always involve the patient/carers in the decision making process
- Follow up patient regularly following change

Thank you for listening!!



Any Questions??

