Level 4

NEL Diabetes Education Session

Dr Tamara Hibbert & Dr Miriam Samuel

Aims

- What is diabetes?
  - Different types
- Monitoring of diabetes
  - Annual Health Check
  - Targets
- Personalised Care
  - Personal circumstances, working patterns, religion
  - Whole person approach (social prescribing)
- Pathways to remission
- Medications
- Sick Day rules
- Complications
- When to ask for support
  - Local pathways - will vary between areas

Word cloud - Together:

What are the different types of diabetes?

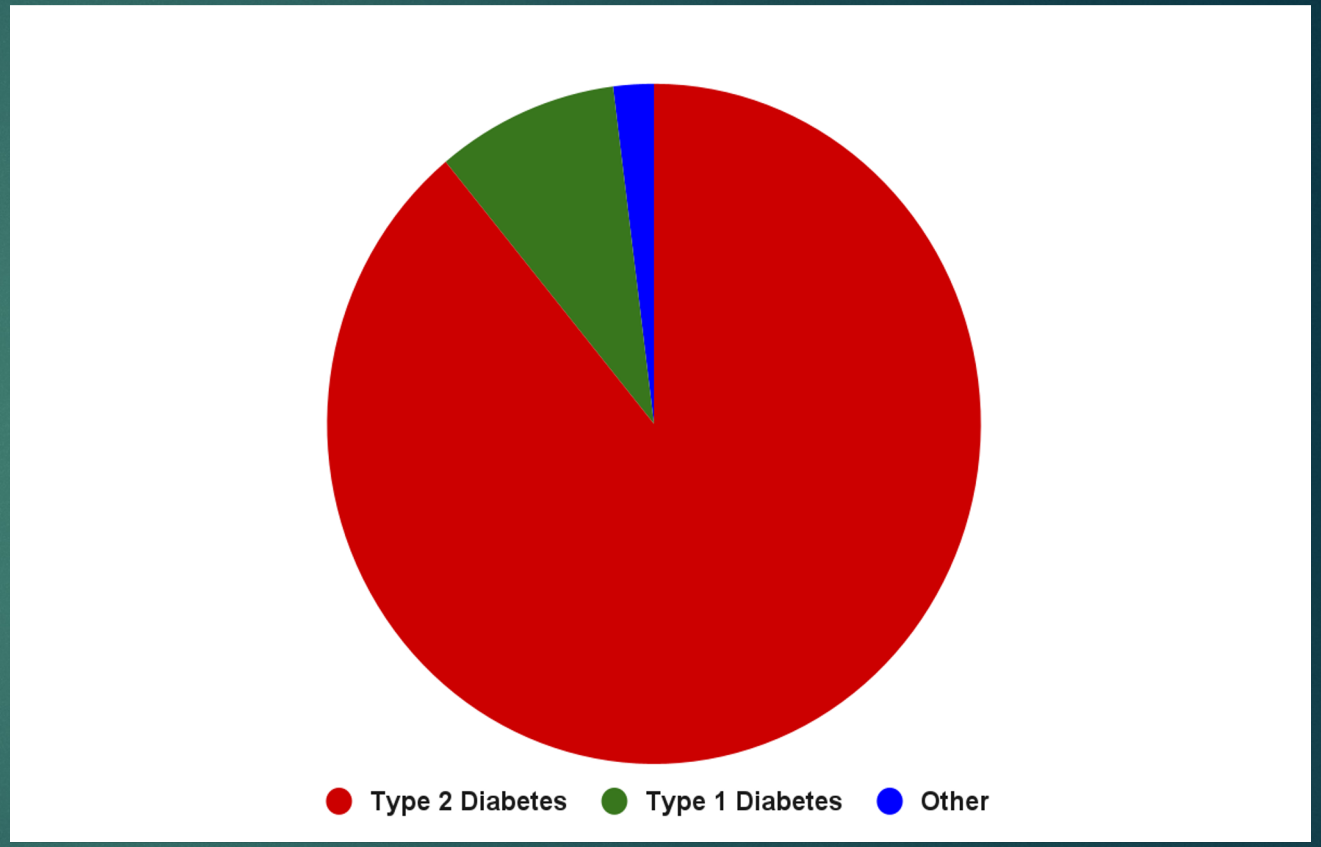
Join at

slido.com

#Level4Diabetes

Types of Diabetes

- Type 2 Diabetes - almost 90%
- Type 1 Diabetes - around 10%



Specific circumstances

- Gestational
- Steroid Induced

Persistent

- MODY (< 25 years old, FHx)
  - 1-2% of diabetes in UK
- Type 3c - damage to the pancreas
- Latent Autoimmune Diabetes in adults

Neonatal presentation

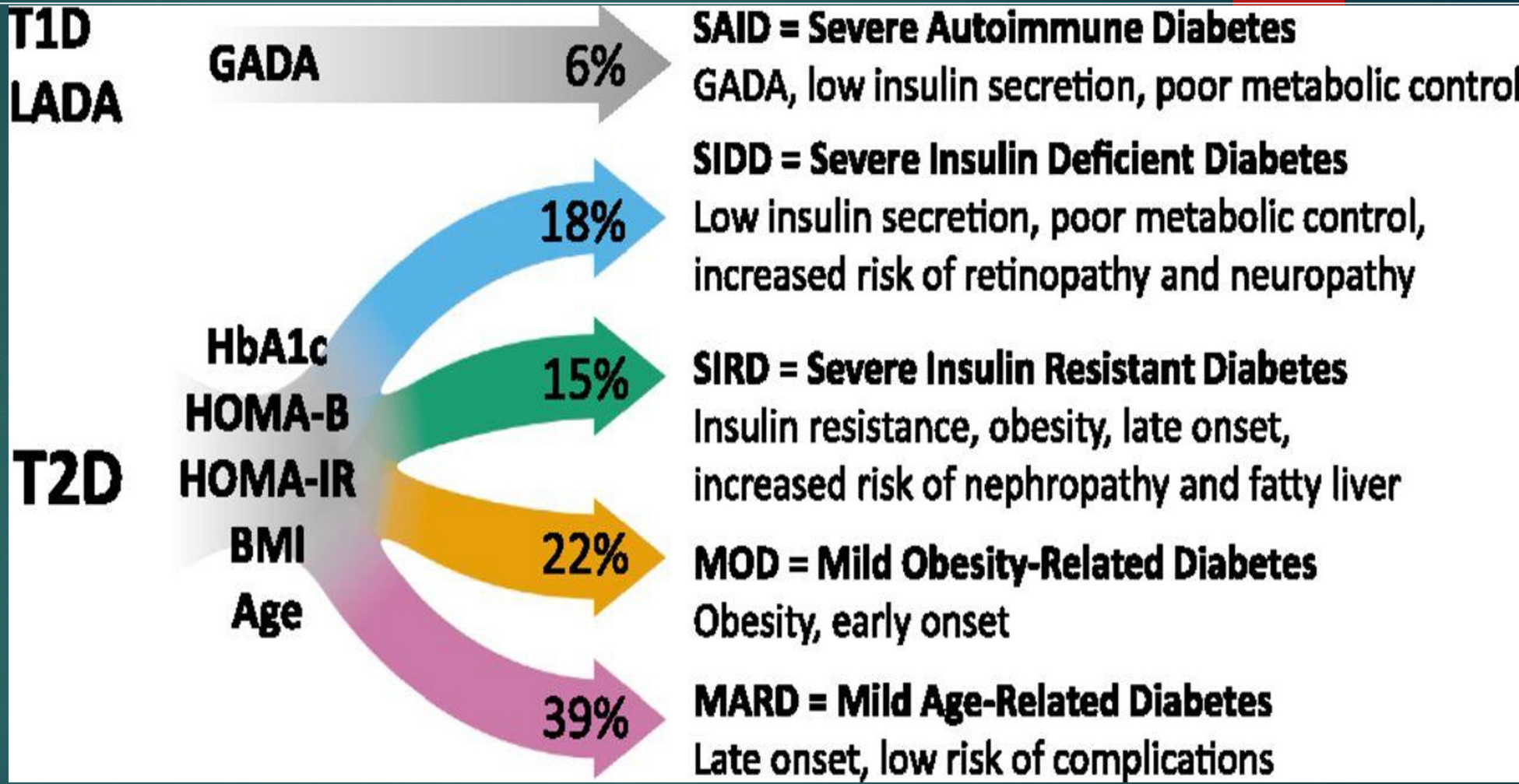
- Wolfram Syndrome, Alstrom Syndrome, Neonatal Diabetes

Type 1:

- Autoimmune, insulin deficiency

Type 2:

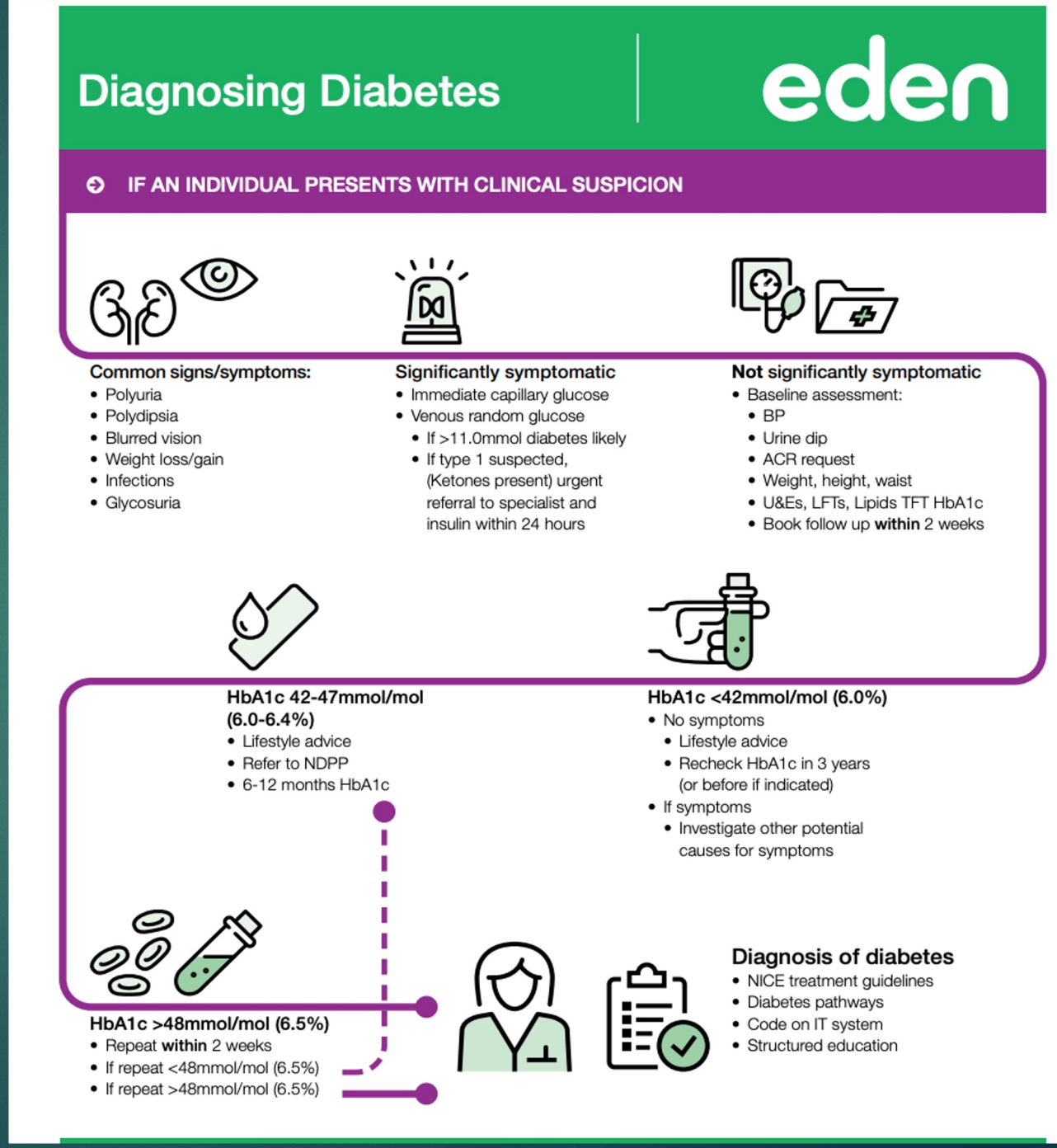
- Insulin deficiency and resistance
- Heterogenous Disease



Novel diabetes subtype characteristics. Overview of distribution and characteristics of subtypes generated by clustering based on clinical parameters in the Swedish ANDIS cohort.
Diabetes. 2020;69(10):2086-2093. doi:10.2337/dbi20-0001

Diagnosing Diabetes

https://static1.squarespace.com/static/5a6439bab7411c94f2ebe216/t/5f3d32521dfbf869d023d00f/1597846099388/Diagnosing_Diabetes_Infographic_V3.pdf



Mr New Diagnosis

- 56 year old man
- Works shifts in a factory
- Recurrent tinea pedis
- Smokes 20 cigarettes a day since 15 years old
- South Asian
- HbA1c 65mmol/mol
- BP 130/76
- BMI 28
- First appointment

Breakout Room Discussion (5 mins):

What would be your top three areas to cover at this initial appointment?

Join at

slido.com

#Level4Diabetes

Mr New Diagnosis

- 56 year old man
- Works shifts in a factory
- Recurrent tinea pedis
- Smoker
- South Asian
- HbA1c 65mmol/mol
- BP 130/76
- BMI 28
- First appointment

Discuss diagnosis

- Asking ND's understanding of a diabetes diagnosis?
- Types of diabetes.
  - testing for diabetes type?
- Symptoms of diabetes
- Confirmatory test if asympptomatic
- Aims of management?
  - Reduce blood sugar
  - Reduce risk of complications

https://www.diabetes.org.uk/diabetes-the-basics

Word cloud - Together:

How would you assess his risk of complications?

Join at

slido.com

#Level4Diabetes

Mr New Diagnosis

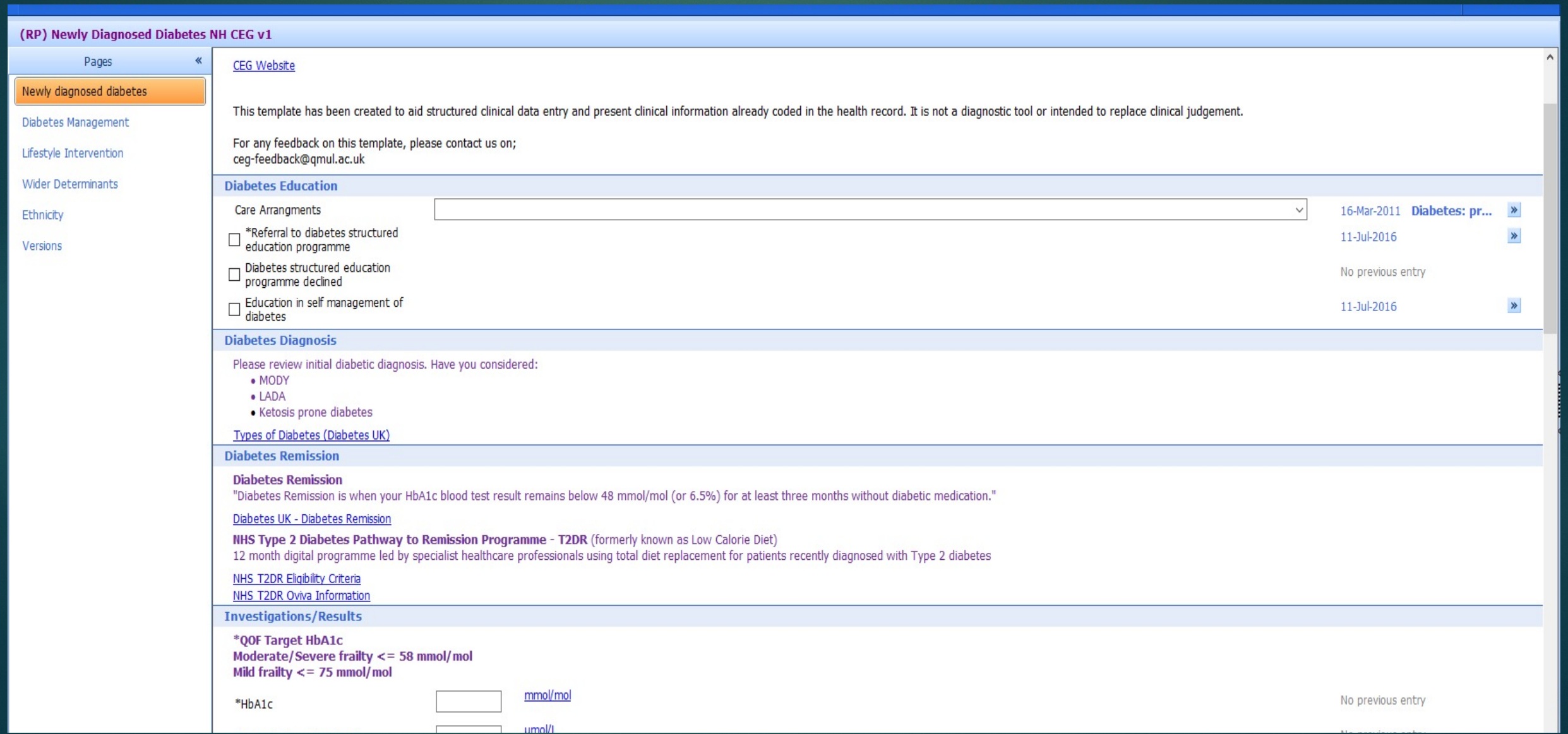
- 56 year old man
- Works shifts in a factory
- Recurrent tinea pedis
- Smoker
- South Asian
- HbA1c 65mmol/mol
- BP 130/76
- BMI 28
- First appointment

Reducing the risk of complications

1) **Addressing Risk Factors**
   a) Smoking
   b) Blood Pressure
   c) Weight (>27.5 in BAME)
   d) What other tests do we need?
   e) QRISK: 15%

1) **Controlling Blood Glucose**
   a) Diabetes structured education
   b) Diet and physical activity
   c) Medication

Newly diagnosed template



Mr New Diagnosis Symptomatic

- 56 year old man
- Works shifts in a factory
- Recurrent tinea pedis
- Smoker
- South Asian
- HbA1c 65mmol/mol
- BP 130/76
- BMI 28

- Presents with:
- Thirst
- Weight loss
- Polyuria

Breakout Room Discussion (5 mins):

What would you do?

Join at

slido.com

#Level4Diabetes

Symptomatic Hyperglycaemia

Consider control with Insulin or Sulphonyl urea then review

Sulfonylureas: Gliclazide, Tolbutamide, Glimepiride, Glipizide

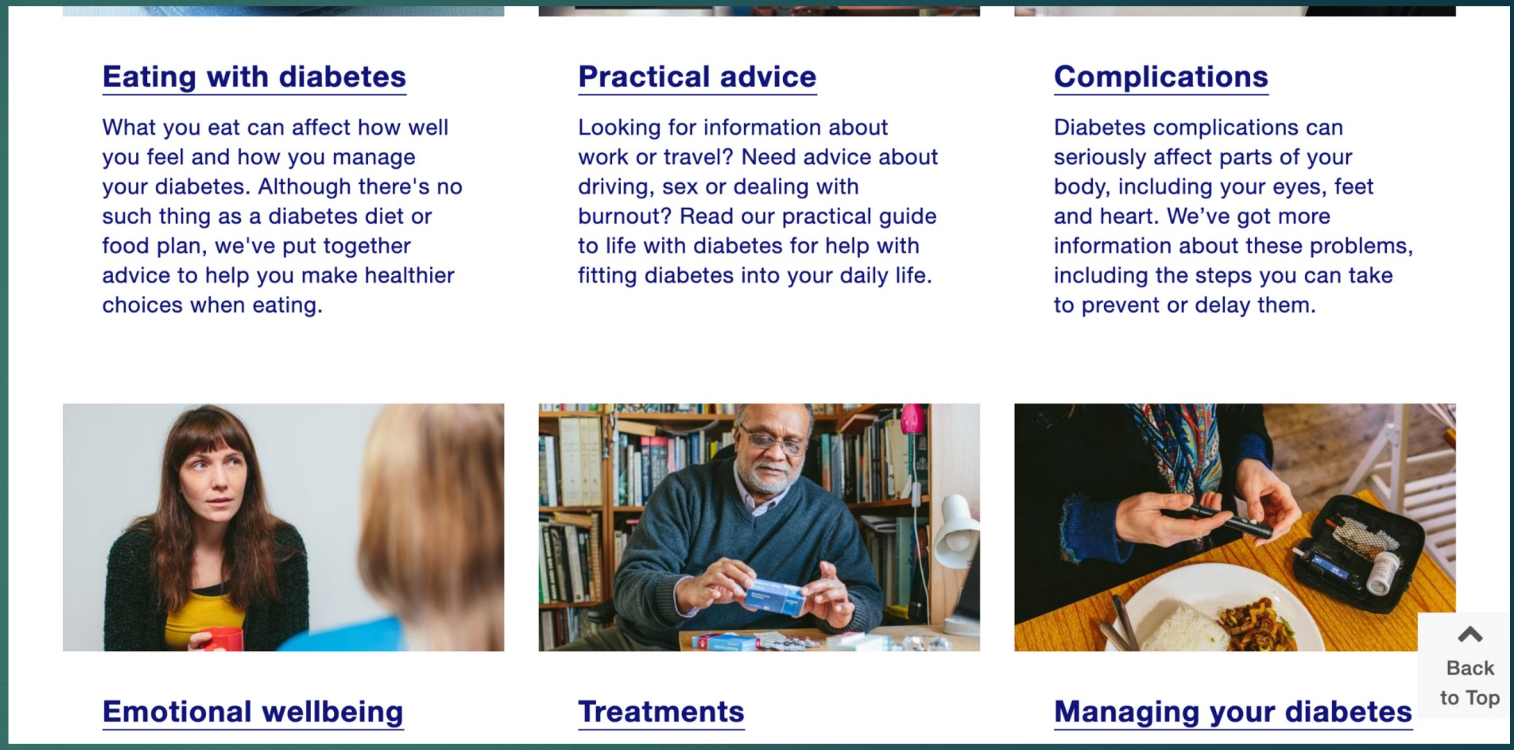
- Weight gain
- Risk of hypoglycaemia (in elderly) - especially long acting
- Dose adjust with renal dysfunction
- Avoid with hepatic impairment

What is diabetes education

- **Level one: Information and one-to-one advice.**

- **Level two: Ongoing learning that may be quite informal, perhaps through a peer group.**
  - **Diabetes UK have online resources**
  - **Local resources**

- **Level three:** Structured education that meets nationally-agreed criteria



https://www.diabetes.org.uk/guide-to-diabetes

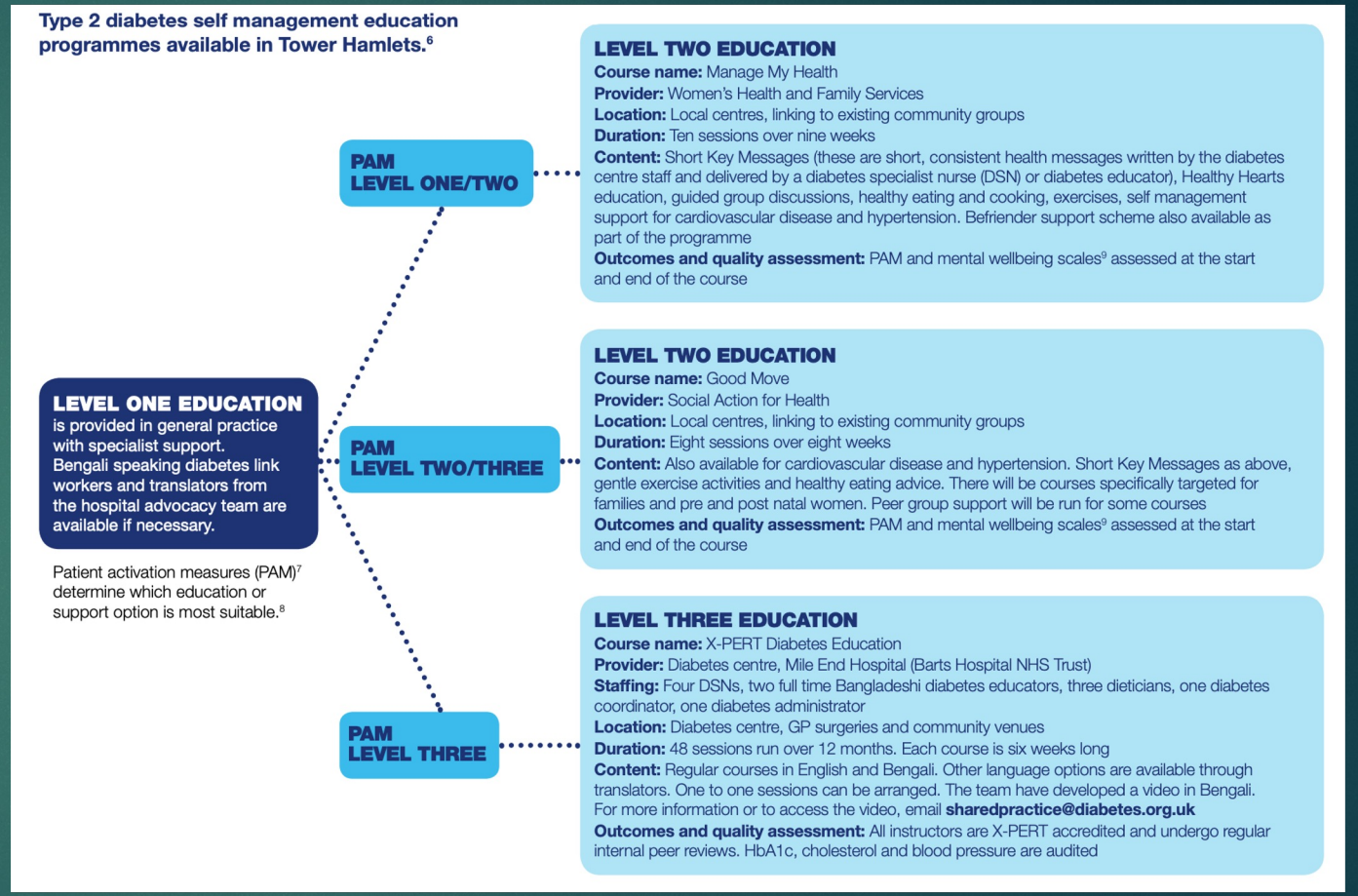
What is diabetes structured education

Level three: Structured education that meets nationally-agreed criteria

- Structured Programme
- Shown to reduce complications
- Excellent local resources
- DESMOND
- X-PERT

NHS Health Living for people with type 2 diabetes

- Patients can self refer
- https://www.healthyliving.nhs.uk/



https://www.diabetes.org.uk/professionals/resources/resources-to-improve-your-clinical-practice/diabetes-self-management-education

Game Changing Remission Pathway

The NHS Type 2 diabetes pathway to remission programme (formally LCD, now T2dR)

Focus on newly diagnosed and those diagnosed within the last SIX years

Shared decision making with patients

An alternative offer to the typical pharmacological management of diabetes

CHOICE for patient at diagnosis

Diabetes into REMISSION– 'T2dR'
FREE – Shakes and supported changes to diet and activity

DESMOND - Structured education
FREE group training to promote self-care and self-management

Typical pharmacological management

Type 2 diabetes remission pathway
(formerly LCD)

NHS T2DR Referral Form 20230504

ICBxxx pg1

Section 1: Confirm patient's eligibility - Confirmations must be reviewed and agreed before referring. Eligibility guidance is at section 4/page 4

Confirm you have verified eligibility and that no exclusion criteria apply	Yes ☐
Confirm the patient has a type 2 diabetes diagnosis by adding the date of diagnosis - dd/mm/yyyy	
Confirm you will carry out 6 and 12 month checks (please share the HbA1c result with Oviva)	Yes ☐
Confirm the patient either:	
1. Attended their last retinal screening and it did not detect proliferative retinopathy that is not yet treated	Yes ☐
2. Is a newly diagnosed patient	Yes ☐

Is the patient on the Learning Disability Register?	Yes ☐	No ☐
Is the patient on the Serious Mental Illness Register?	Yes ☐	No ☐

Before completing the referral form please let the patient know they must agree to:

1. Continuing attending diabetes review appointments at their GP practice, regardless of whether remission is achieved
2. Notifying the GP practice of unexpected / concerning symptoms which are considered urgent
3. Notifying the GP practice if they disengage or drop out before the end of the intervention

Section 2: Patient Information - All information must be populated before referring

Patient information	Date of Referral (dd/mm/yyyy):

Medication guidance is at section 5/page 5

Medication changes should be communicated in the most appropriate manner to the patient, ensuring that these have been agreed, understood and retained.
• Please add blood glucose-lowering and blood pressure-lowering medications which are currently being taken - Note that blood pressure-lowering medications include medicines used for indications other than hypertension – i.e. diuretics, alpha blockers for BPH, beta blockers for migraine prophylaxis • Please specify the agreed changes to occur on day 1 of TDR, STOP, NO CHANGE, NEW PRESCRIPTION • **Sulfonylureas, meglitinides and SGLT2 inhibitors must be stopped on day 1 of TDR to safely start TDR**

Confirm any blood glucose-lowering or blood pressure-lowering medications commenced/ceased will be communicated to both the patient and to Oviva	Yes ☐

Blood Glucose Lowering Medications:

Medication class	Current prescription	TDR CHANGES	Agreed changes for patient on day 1 of TDR
Biguanides (e.g. metformin)	Specific medication name: Dose: Frequency:		☐ STOP ☐ NO CHANGE ☐ NEW PRESCRIPTION: Dose: Frequency:
Sulfonylureas (e.g. gliclazide, glimepiride)	Specific medication name: Dose: Frequency:		**MUST BE STOPPED**
Meglitinides (-glinides)	Specific medication name: Dose: Frequency:		**MUST BE STOPPED**
Thiazolidinediones (e.g. pioglitazone)	Specific medication name: Dose: Frequency:		☐ STOP ☐ NO CHANGE ☐ NEW PRESCRIPTION: Dose: Frequency:
DPP4 inhibitor (-gliptins)	Specific medication name: Dose: Frequency:		☐ STOP ☐ NO CHANGE ☐ NEW PRESCRIPTION: Dose: Frequency:
SGLT2 inhibitors (-flozins)	Specific medication name: Dose: Frequency:		**MUST BE STOPPED**
GLP-1 analogues (-tides)	Specific medication name: Dose: Frequency:		☐ STOP ☐ NO CHANGE ☐ NEW PRESCRIPTION: Dose: Frequency:
Tick if patient is NOT currently on blood glucose lowering medication ☐			

Predictions: On Accessibility: Unavailable

Breakout Room Discussion (5 mins):

Mr Newly Diagnosed comes in a for his annual review. What should we cover - list three or more things?

Join at

slido.com

#Level4Diabetes

Annual Checks: Reducing Complications

Care Processes:

Blood tests: HbA1c, U&E, cholesterol

Urine test: ACR and dip for haematuria

Blood pressure (and pulse with rhythm)

Weight and BMI

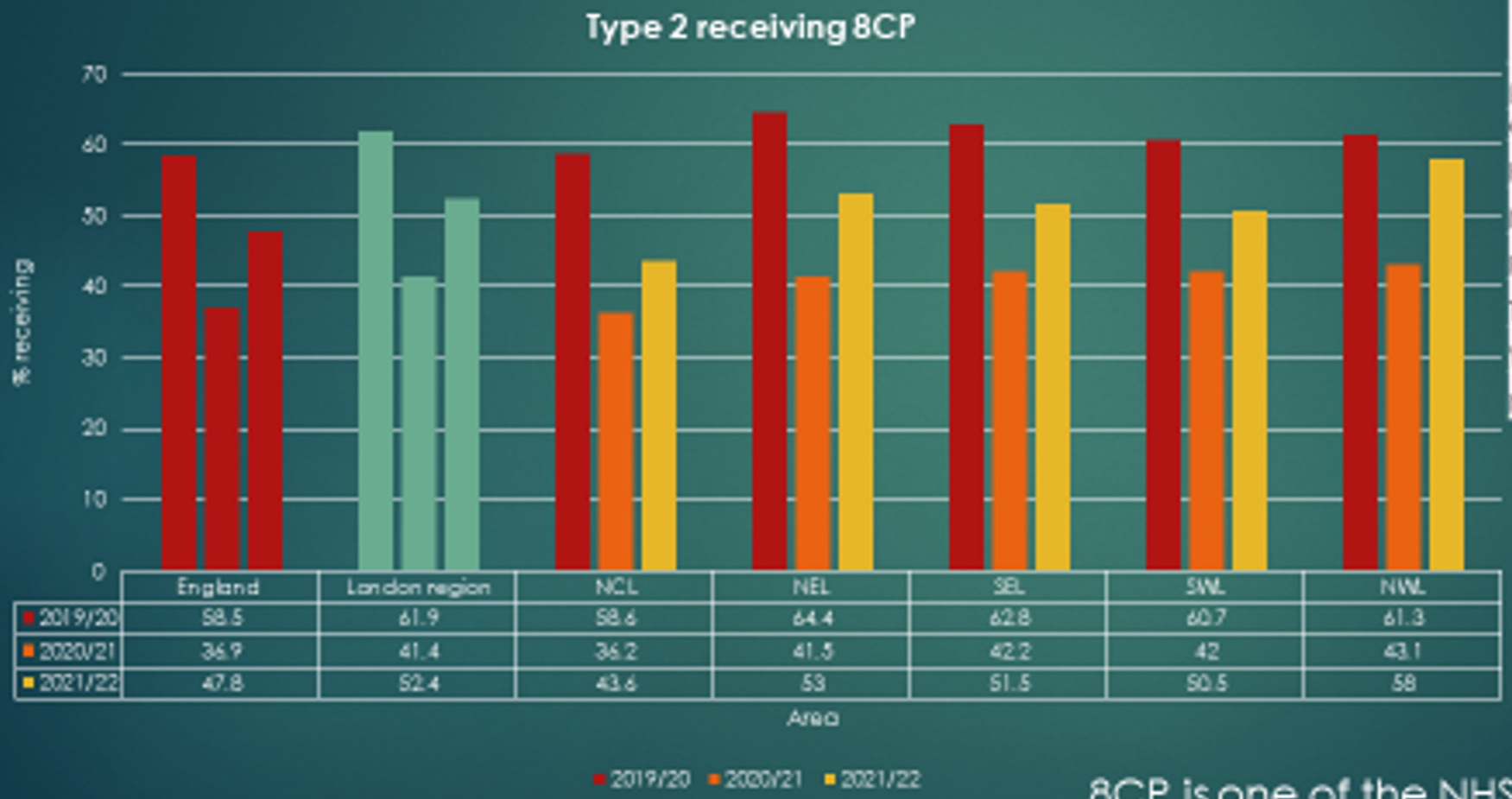
Foot check

Retinal eye screening

Smoking status

Also, pre-pregnancy planning, sexual health, dietary review, emotional wellbeing assessment, review of care plan

Percentage of T2 patients who received 8CP



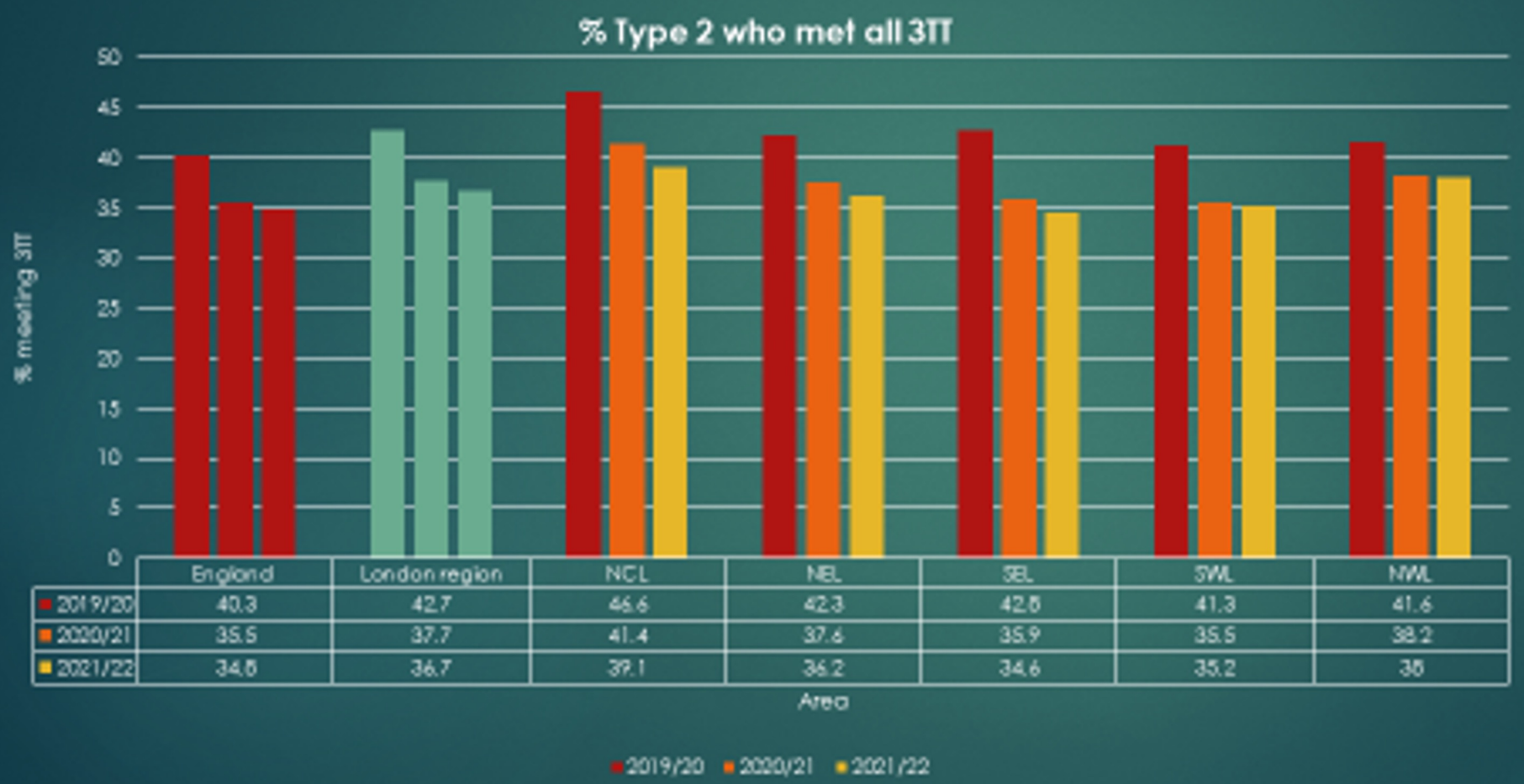
	England	London region	NCL	NEL	SEL	SWL	NWL
2019/20	58.5	61.9	58.6	64.4	62.8	60.7	61.3
2020/21	36.9	41.4	36.2	41.5	42.2	42	43.1
2021/22	47.8	52.4	43.6	53	51.5	50.5	58

Locality	% >12 Yrs & Core Proc recorded: 8 of 8 (15m) HbA1c
Barking and Dagenham	55.4%
City & Hackney	56.5%
Havering	50.9%
Newham	69.5%
Redbridge	54.4%
Tower Hamlets	63.5%
Waltham Forest	41.5%
NEL Total	57.5%

CEG dashboard Sept 2022

8CP is one of the NHS oversight metrics for the ICS

Percentage of T2 patients who met all 3TT



	England	London region	NCL	NEL	SEL	SWL	NWL
2019/20	40.3	42.7	46.6	42.3	42.8	41.3	41.6
2020/21	35.5	37.7	41.4	37.6	35.9	35.5	38.2
2021/22	34.6	36.7	39.1	36.2	34.6	35.2	38

Barking and Dagenham	39.3%
City & Hackney	39.4%
Havering	43.9%
Newham	44.9%
Redbridge	42.9%
Tower Hamlets	39.7%
Waltham Forest	42.9%
NEL Total	42.2%

BREAK

15 minutes

We will come back at 14:25

NICE Guidelines June 2022 update

Overview | Type 2 diabetes in adults: management | Guidance | NICE

NG28 Visual summary on choosing medicines for type 2 diabetes in adults (nice.org.uk)

Diet and lifestyle advice
At each point reinforce advice about diet and lifestyle.

Do we actually ask about food?

British Heart Foundation:

Ultra-processed foods: how bad are they for your health? – BHF

Ultra-processed foods Typically 5+ ingredients containing many additives, preservatives, emulsifiers, sweeteners, artificial flavours and colours are readily **available, cheap and obesogenic**

Word cloud - Together:

What is carbohydrate?

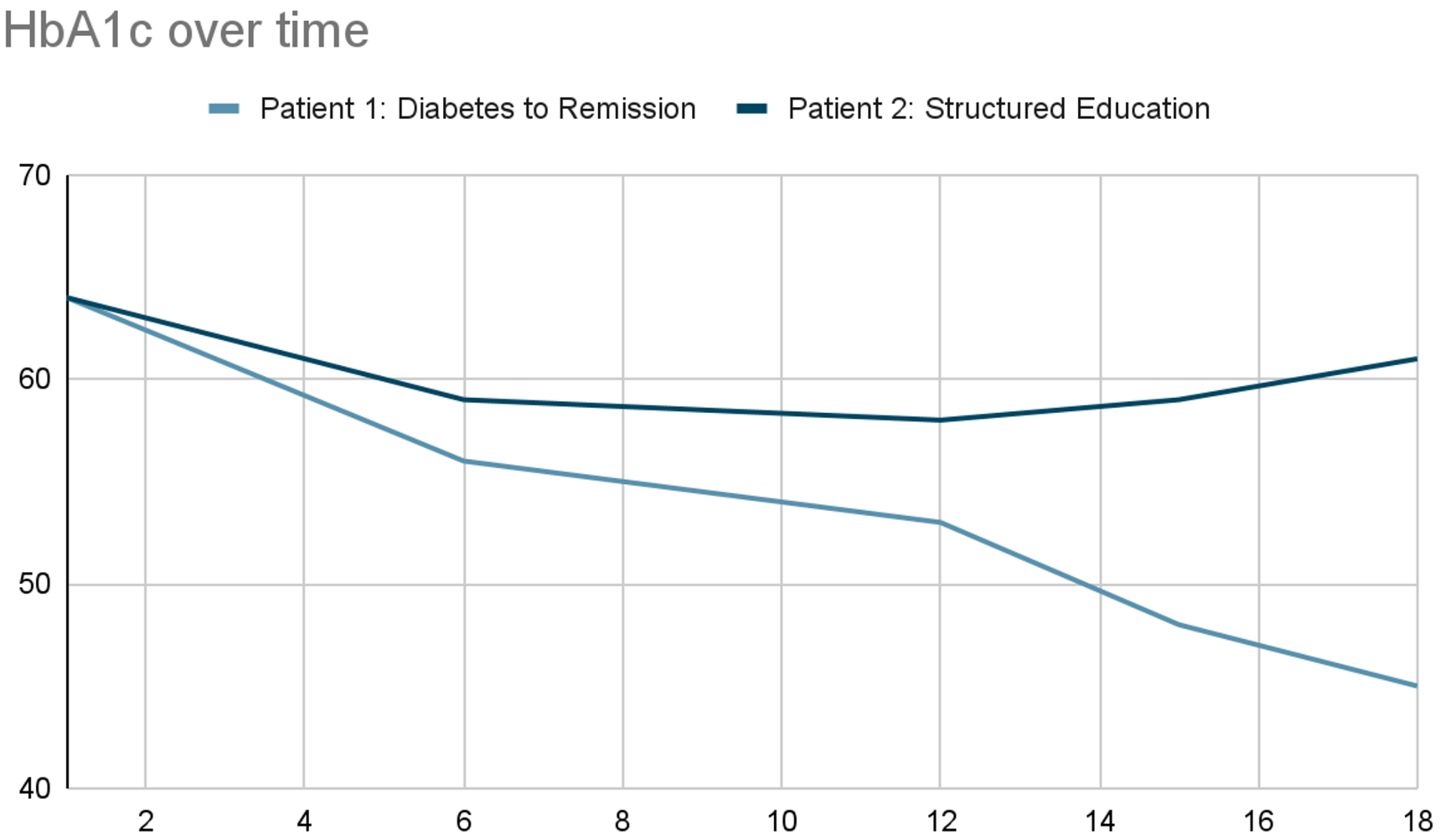
What advice would you give about them?

Join at

slido.com

#Level4Diabetes

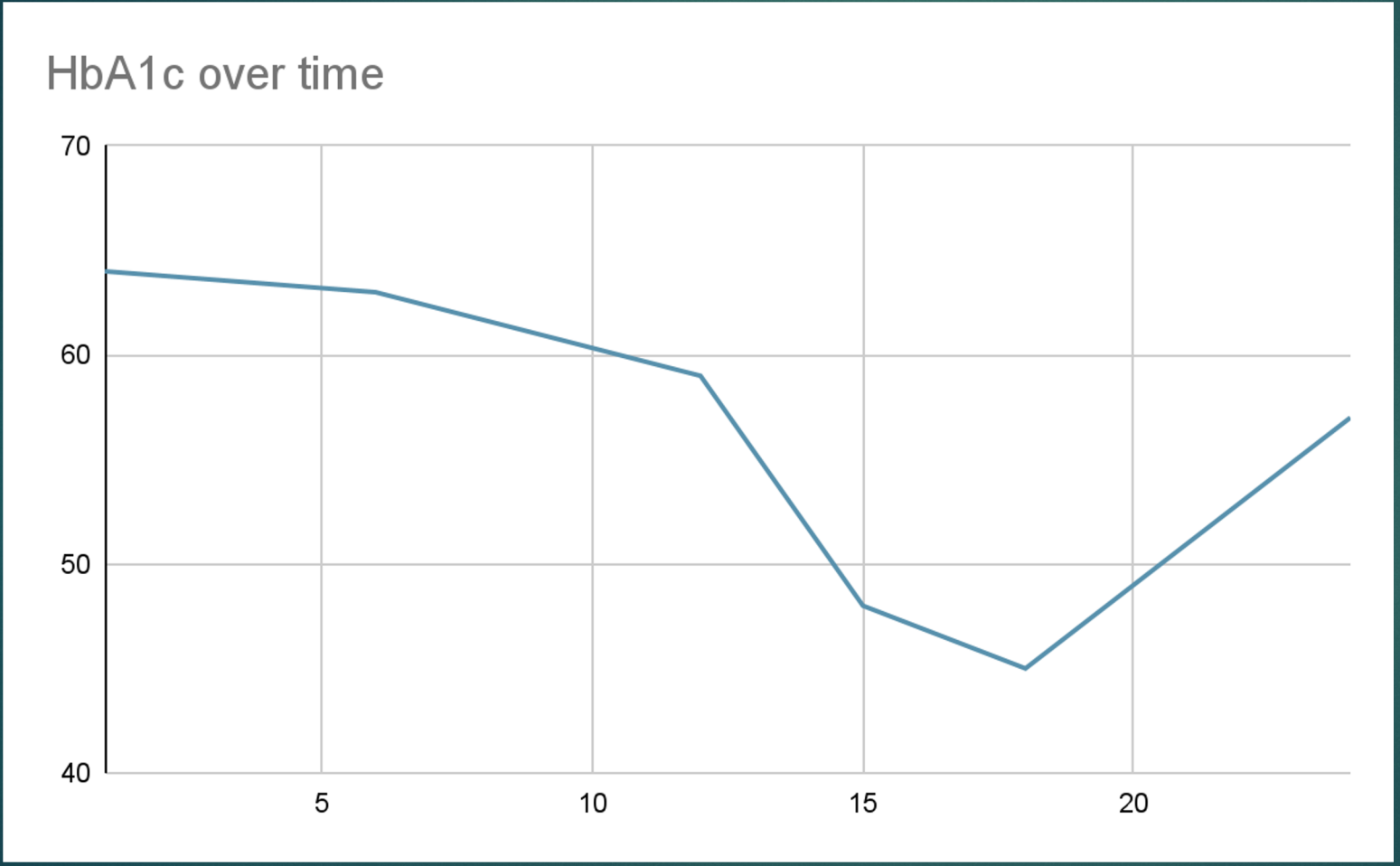
Differing pathways



Patient 1:
Highly Motivated
Flexible Home Working

Patient 2:
Unstable Housing
Casual Work
Hard to attend education

HbA1c Result



Lost job and flat
Living on friend's floor

Breakout Room Discussion (5 mins):

What do you want to know before discussing medication options?

Join at

slido.com

#Level4Diabetes

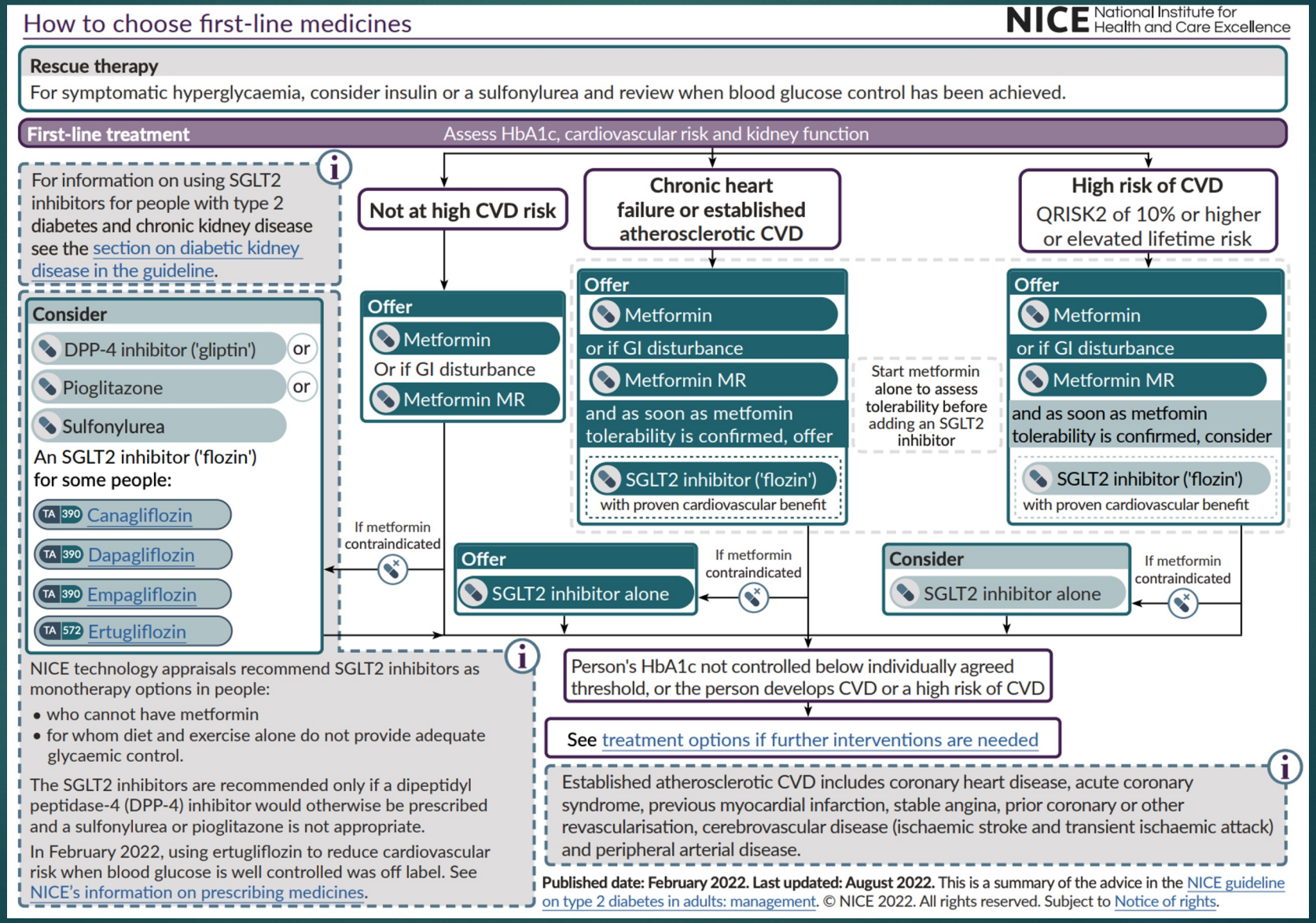
Optimising treatment and asking about compliance

Choosing treatments

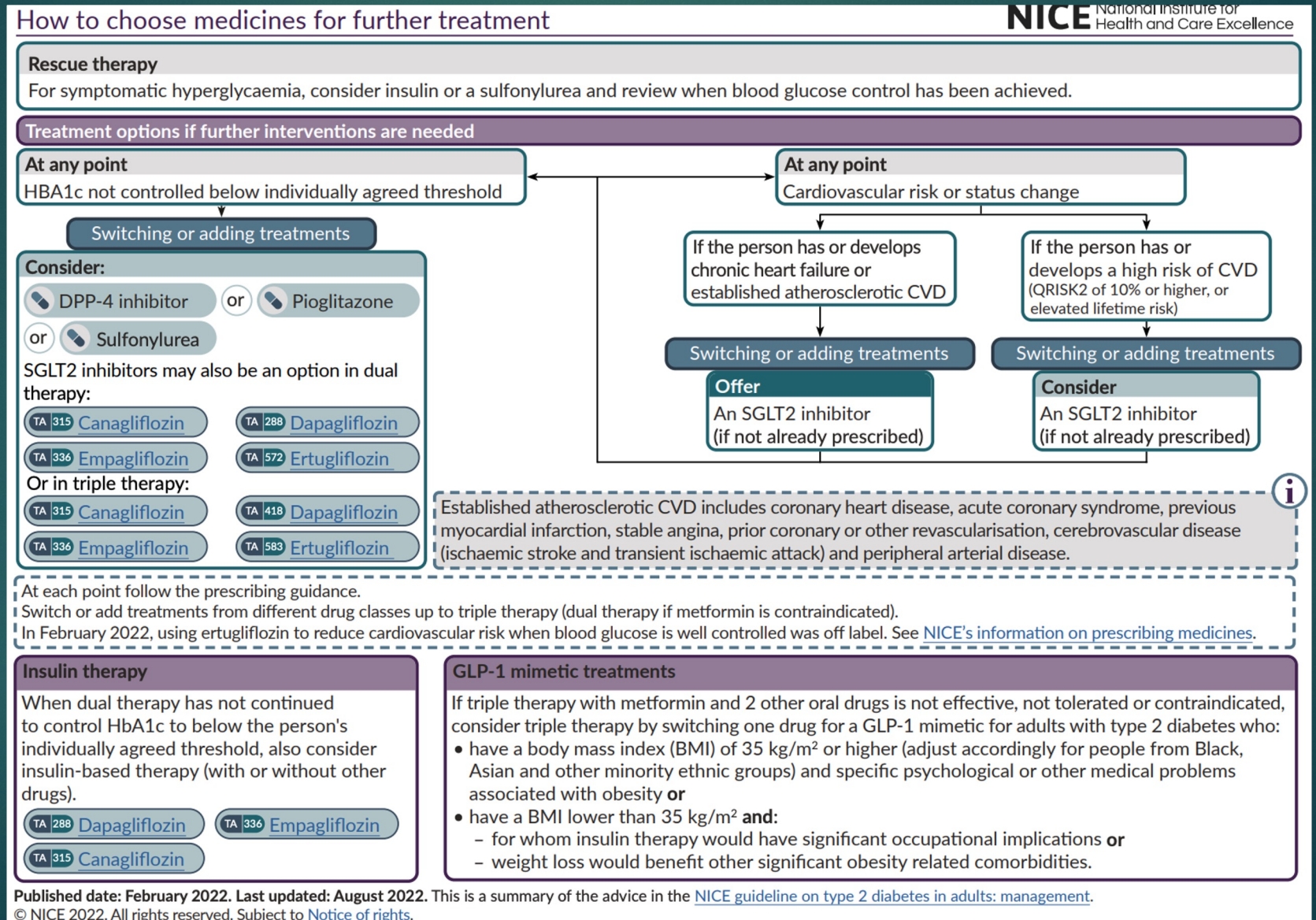
Base the choice of medicine on:

- the person's individual clinical circumstances, for example comorbidities, contraindications, weight, and risks from polypharmacy
- the person's individual preferences and needs
- the effectiveness of the drug treatments in terms of metabolic response and cardiovascular and renal protection
- safety (see MHRA guidance, the BNF and individual SPCs) and tolerability of the drug treatment
- monitoring requirements
- the licensed indications or combinations available
- cost (if 2 drugs in the same class are appropriate, choose the option with the lowest acquisition cost)

Oral Medication



Further Intensification



How to choose medicines for further treatment

NICE National Institute for Health and Care Excellence

Rescue therapy

For symptomatic hyperglycaemia, consider insulin or a sulfonylurea and review when blood glucose control has been achieved.

Treatment options if further interventions are needed

At any point

HBA1c not controlled below individually agreed threshold

Switching or adding treatments

Consider:

- DPP-4 inhibitor or Pioglitazone
- or Sulfonylurea

SGLT2 inhibitors may also be an option in dual therapy:

- TA 315 Canagliflozin
- TA 288 Dapagliflozin
- TA 336 Empagliflozin
- TA 572 Ertugliflozin

Or in triple therapy:

- TA 315 Canagliflozin
- TA 418 Dapagliflozin
- TA 336 Empagliflozin
- TA 583 Ertugliflozin

At any point

Cardiovascular risk or status change

If the person has or develops chronic heart failure or established atherosclerotic CVD

Switching or adding treatments

Offer

An SGLT2 inhibitor (if not already prescribed)

If the person has or develops a high risk of CVD (QRISK2 of 10% or higher, or elevated lifetime risk)

Switching or adding treatments

Consider

An SGLT2 inhibitor (if not already prescribed)

Established atherosclerotic CVD includes coronary heart disease, acute coronary syndrome, previous myocardial infarction, stable angina, prior coronary or other revascularisation, cerebrovascular disease (ischaemic stroke and transient ischaemic attack) and peripheral arterial disease.

At each point follow the prescribing guidance.
Switch or add treatments from different drug classes up to triple therapy (dual therapy if metformin is contraindicated).
In February 2022, using ertugliflozin to reduce cardiovascular risk when blood glucose is well controlled was off label. See NICE's information on prescribing medicines.

Insulin therapy

When dual therapy has not continued to control HbA1c to below the person's individually agreed threshold, also consider insulin-based therapy (with or without other drugs).

- TA 288 Dapagliflozin
- TA 336 Empagliflozin
- TA 315 Canagliflozin

GLP-1 mimetic treatments

If triple therapy with metformin and 2 other oral drugs is not effective, not tolerated or contraindicated, consider triple therapy by switching one drug for a GLP-1 mimetic for adults with type 2 diabetes who:

- have a body mass index (BMI) of 35 kg/m² or higher (adjust accordingly for people from Black, Asian and other minority ethnic groups) and specific psychological or other medical problems associated with obesity **or**
- have a BMI lower than 35 kg/m² **and:**
  - for whom insulin therapy would have significant occupational implications **or**
  - weight loss would benefit other significant obesity related comorbidities.

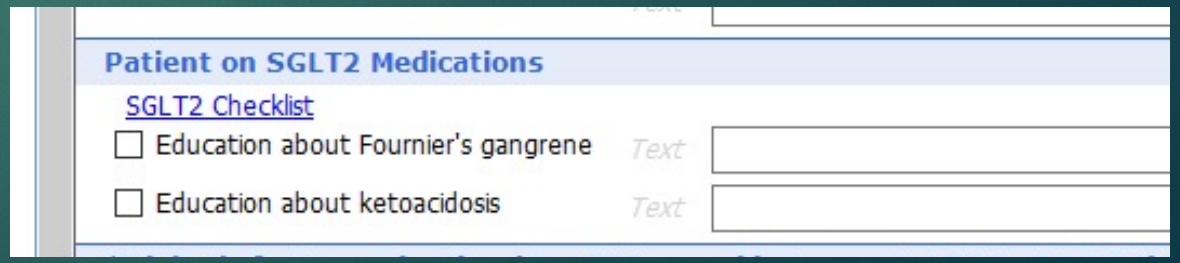
Published date: February 2022. Last updated: August 2022. This is a summary of the advice in the NICE guideline on type 2 diabetes in adults: management.

Metformin

- First Line in Type 2 Diabetes
  - MR if GI intolerance
- No effect on weight
- Does not cause Hypos
- SICK DAY RULES

SGLT2-inhibitors: 'flozins'

- Sugar renally excreted
  - Glycosuria a normal side effect
  - Can lead to thrush
- Weight loss
- Should be added if
  - CKD
  - Heart Failure
  - Raised risk of cardiovascular disease
    - Established cardiovascular disease
    - QRISK RAISED
    - Elevated lifetime risk (1 or more cardiovascular risk factors if <40 years)
- RISKS
  - Normoglycaemic Ketoacidosis
  - Stay well hydrated
  - Sick day rules
  - Fournier's gangrene



Case Mr 2 years post Remission Pathway…the blue pill

- 56 year old man
- Ex-smoker, gave up 15 years ago
- Completed remission programme after being referred at diagnosis
- Essential hypertension
- HbA1c 56mmol/mol
- BP 112/77
- BMI 25.6
- Current medication: Metformin 1g BD, Dapagliflozin 10mg OD, Atorvastatin 40mg OD, Ramipril 2.5mg OD

Word Cloud - Together:

What advice would you give?

Join at

slido.com

#Level4Diabetes

Mr ND, a few years on... the red pill

- 56 year old man
- Ex-smoker, gave up 5 years ago
- MI 2 years ago
- Left foot ulcer
- HbA1c 97mmol/mol
- BP 112/77
- BMI 30
- eGFR 54ml/min/1.73m2
- Urine ACR 33mg/mmol
- Current medication: Metformin 1g BD, Ramipril 10mg OD, Bisoprolol 5mg OD, Atorvastatin 80mg OD, Novomix 30 12units BD

Breakout Room Discussion (5 mins):

What would you like to know to develop a care plan?

Join at

slido.com

#Level4Diabetes

Considering Chronic Kidney Disease

Initial investigations | Diagnosis | Chronic kidney disease | CKS | NICE

Progression of CKD by GFR and Albuminuria Categories				Albuminuria categories Description and range		
				A1	A2	A3
				Normal to mildly increased	Moderately increased	Severely increased
				<30 mg/g <3 mg/mmol	30-299 mg/g 3-29 mg/mol	≥300 mg/g ≥30 mg/mmol
GFR categories (ml/min/1.73m²) Description and range	G1	Normal to high	≥90			
	G2	Mildly decreased	60-90			
	G3a	Mildly to moderately decreased	45-59			
	G3b	Moderately to severely decreased	30-44			
	G4	Severely decreased	15-29			
	G5	Kidney failure	15			

Breakout Room Discussion (5 mins):

What local resources may help you support people experiencing social challenges that prevent optimal diabetes management?

Join at

slido.com

#Level4Diabetes

Case YW

- 38 year old woman
- Gestational diabetes in her first pregnancy 4 years ago
- Within 2 years developed T2d
- Non-smoker
- Primary school teacher
- Black British
- HbA1c 64mmol/mol
- BP 144/88
- BM1 32
- Current medication: Metformin 1g BD, Ramipril 2.5mg OD, Atorvastatin 20mg OD

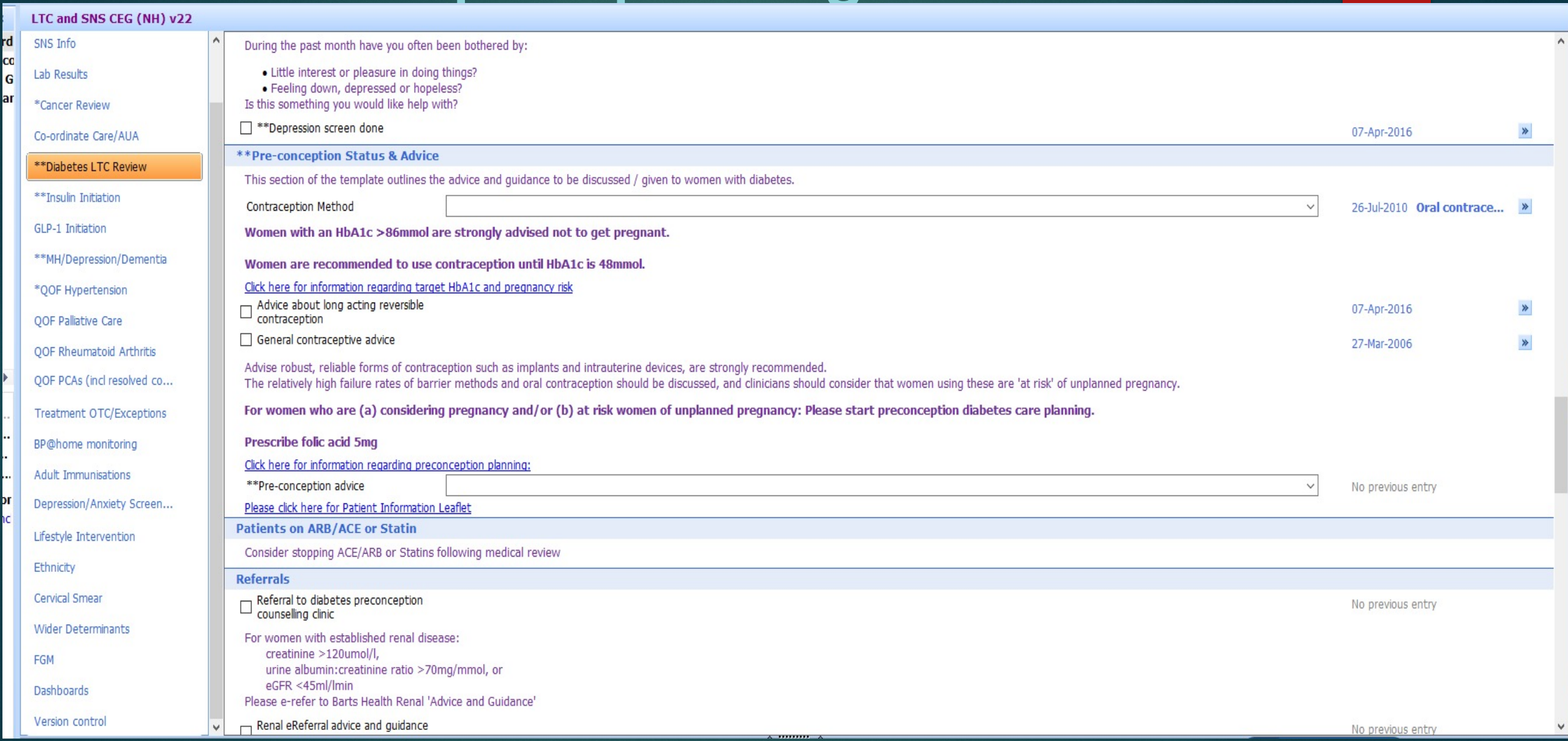
Breakout Room Discussion (5 mins):
How would you optimise?

Join at
slido.com
#Level4Diabetes

Risk of pregnancy

- Folic acid 5mg daily
- Contraception advice
- Preconception planning/referral to clinic
- Target HbA1c 48mmol/mol
- Robust advice not to become pregnant if HbA1c off target
- Medication review – teratogenicity
- Blood sugar testing QDS

Pre-conception planning



Duty Doctor

Call from Mr ND - 18:30

- High fever
- Body Aches
- Breathing OK
- COVID test negative
- Wondering if he needs antibiotics?

Telephone assessment

- Stable
- Talking in full sentences
- Booked for face to face review the next day
- What else would you advise the patient

Sick Day Rules

- Stay hydrated by drinking plenty of unsweetened fluids
- Check blood sugars
- Continue to take most diabetes medication including insulin (dose may need adjustment)
- SGLT2i, ACEi, metformin should be paused until full recovery
- Speak to HCP if any concerns
- Type 1/ketone prone diabetes – check for ketones and contact diabetes team if positive

Case ND, further in the future…

- 86 year old man
- Dementia
- HbA1c 50mmol/mol
- BP 122/70
- BMI 25
- Current medication: Metformin 1g BD, Ramipril 10mg OD, Bisoprolol 5mg OD, Atorvastatin 80mg OD, Novomix 30 44units BD
- Frequent falls

Word Cloud - Together:

What factors do we need to consider?

Join at

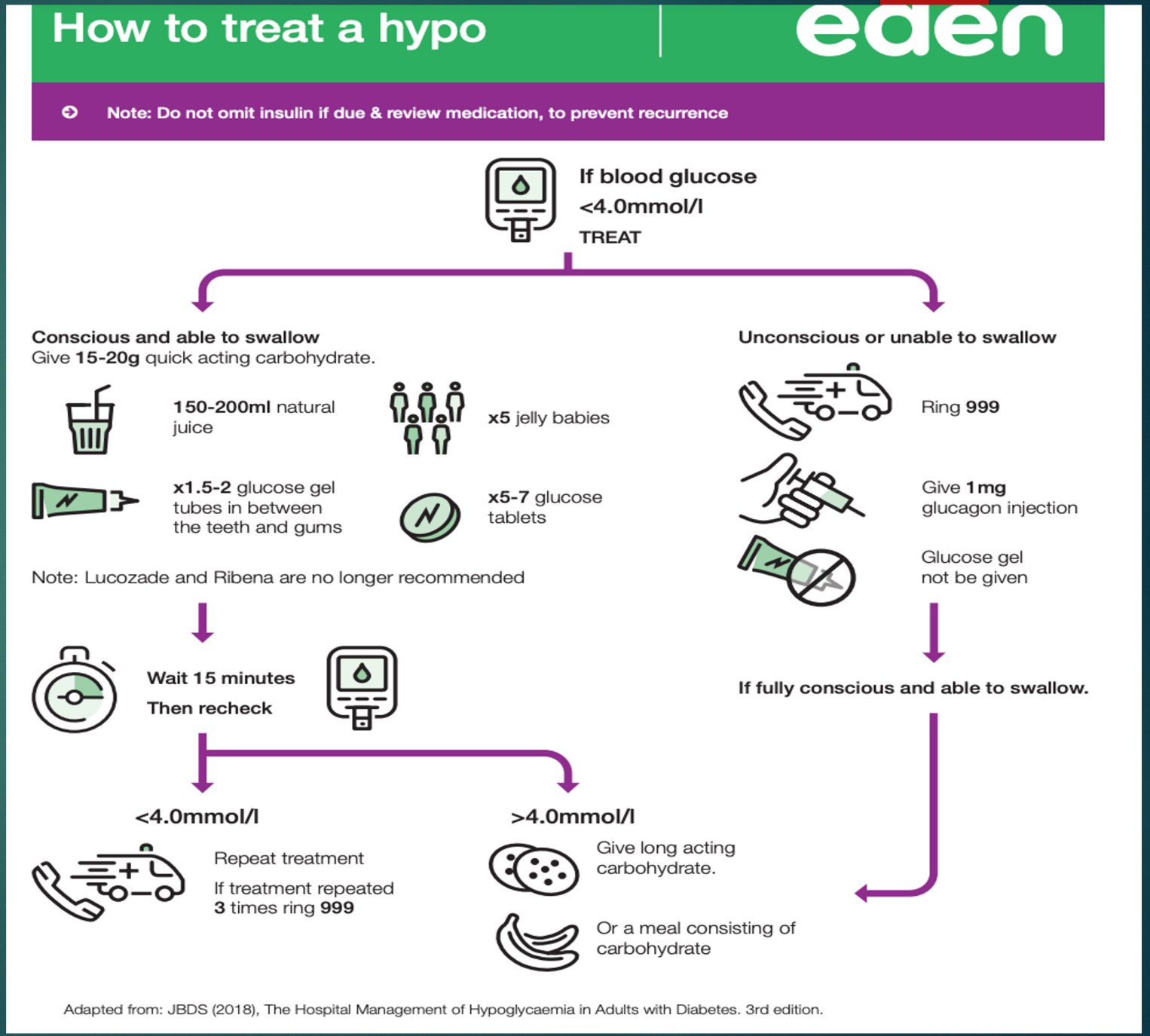
slido.com

#Level4Diabetes

How to treat a hypo

What Causes Hypoglycaemia?

What are the symptoms?



Ramadan

- Open dialogue
- Risk assessment
- Medication adjustment
- Trial run if possible
- Dietary advice
- Fluid advice
- Exercise advice
- Plan to support breaking fast
- Signposting to trusted resources
- It's never too early to start planning for next time

The MDT approach

Traditional

Doctors – GPs and diabetologists

Nurses

DSNs

Podiatrists

Dietitians

HCAs

Administrators

Retinal screeners

Newer

Clinical Pharmacists

Physician's Associates

Psychologists/Psychiatrists

Care co-ordinators

Social prescribers

Health and well-being coaches

Voluntary sector/Charities

e.g. Diabetes UK

Thank you

Any questions?

Please participate to our very short **post-training survey**.

It is important for us to capture your learning and get your ideas on how to improve our sessions:

https://www.surveymonkey.com/r/level4diabetes