



# NEI Diabetes Workforce Education Programme

## Diabetes Education – Level 5

### Case Based Discussion

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# Speaker declaration of interest

- Dr Shahzada Khan
  - GP Partner Newham Vicarage Practice
  - NEL Diabetes Educator – NEL Training Hub
- Sheila Garcia-Calahorra
  - Diabetes Specialist Nurse, Hackney Diabetes Centre, Homerton Hospital
- Dr Shaine Mehta
  - Sessional GP City & Hackney
  - NEL Diabetes Educator – NEL Training Hub; Quality Improvement Clinical Lead – City & Hackney GP Confederation; PCN Health Equity lead – Office of PCNs City & Hackney ; Longterm Conditions Lead – City & Hackney – NEL ICB



# Key Points of Discussion

Diabetes in NEL

Type 2, Type 1, or something else

Starting Insulin

Complex medical management

When to refer on

Refusing insulin



# Learning objectives

- Recognise when to consider alternate type of diabetes and what investigations to order
- Understand how to titrate insulin /add medication to patients with poor control and on complex insulin regimes
- Understand when we are reaching the limits of primary care management and need for specialist input
- Know when to refer
- Understand how to personalise targets



# CASE STUDY 1

Mrs Smith: 50 years old, female.

Works full time in retail.

Lives with her husband & teenager son in Hackney.

White British.

She comes to you reporting *'feeling tired'*, *'waking up few times in the night to urinate'*, *'drinking plenty of water but still feeling dry and thirsty'*.

She reports losing a little bit of weight - did not follow a specific diet.



## **Symptoms:**

Last couple of months reports

Polydipsia: drinks around 3-4 litres/day

Polyuria: wakes up 2-3 times in the night

Weight loss: reports losing involuntarily around 4-5 kg over 2 months

## **Past Medical History:**

-Appendicitis at 25 yo

-C section at 35 yo

-vit B12 deficiency



## Investigations (diabetes related):

CBG: 22.4 mmol/l

Urine Ketones: ++

**What would you do next?**

**What standard blood tests would you do?**

**What specific blood tests would you do?**

**What type of diabetes could this be?**

## Blood Tests:

HbA1C: 102 mmol/mol

eGFR > 90

Creatinine: 68

GAD Ab sent

You decide to start patient on insulin /you refer the patient to the Hackney Diabetes Centre for insulin start;

**What insulin would you start her on?**

**At what dose?**

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# History continued...

## Family History:

Granddad (dad side) had diabetes but patient unsure about what type

## Social History:

Lives with her husband and son in a house in Hackney, full time worker, completely independent in the ADL.

Does not smoke and does not take drugs.

Drinks occasionally.

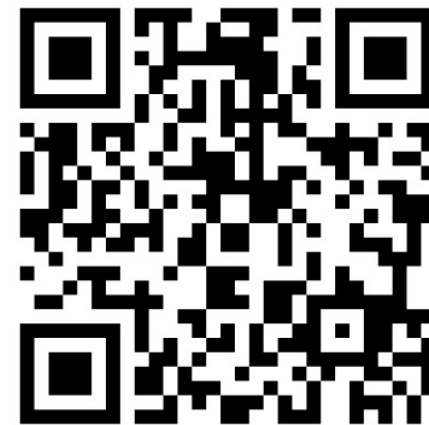
## Medications:

-regular vit B12 injections

-vitamin D during the winter months

**What would you do next?**

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You/We start Mrs Smith on the following insulins:

- Lantus 18 units at night (22:00)
- Novorapid 5 units TDS with meals

**What education does Mrs Smith need before going home?**

- how to monitor CBGS levels (FGM, CGM?)
- CBGS targets
- insulins: how these work, timing, storage
- injection technique
- side effects: hypoglycaemia
- DVLA and driving when on insulin

GAD Ab back as positive (>2000), confirm diagnosis of T1DM  
(LADA)



# Case Study 2

Mark

72 years old male is a retired university professor.

Lives with wife in Hackney

Has had T2DM for 15 years.

He is currently on:

- metformin 500 mg BD
- gliclazide 80 mg BD
- sitagliptin 50 mg AM
- empagliflozin 25 mg AM



He checks his CBGS levels QDS and these are as follow:

Before breakfast: ranging 8.2-10.8

After lunch: ranging 7.3-15.6

Before dinner: ranging 9.2-13

Before bed: 9.9-16.6

eGFR: 52

Creatinine: 110

Hba1C 82 mmol/mol



You decide to start him on insulin.

**What insulin do you go for?**

**Would you do anything else?**

Mark

72 years old male is a retired university professor.

Lives with wife in Hackney

Has had T2DM for 15 years.

He is currently on:

- metformin 500 mg BD
- gliclazide 80 mg BD
- sitagliptin 50 mg AM
- empagliflozin 25 mg AM

He checks his CBGS levels QDS and these are as follow:  
Before breakfast: ranging 8.2-10.8  
After lunch: ranging 7.3-15.6  
Before dinner: ranging 9.2-13  
Before bed: 9.9-16.6

eGFR: 52

Creatinine: 110

Hba1C 82 mmol/mol

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You start on Humulin I 20 units at 22:00.

**What does he need to know before going home?**

6 months after, CGBS levels:

Before breakfast: ranging 5.1-7.3

After lunch: ranging 7.2-11.6

Before dinner: ranging 8.5-12.6

Before bed: 9.5-14.3

**What would you do next?**

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You decide to introduce some Humalog.

**How do you choose the dose?**

**What questions you ask the patient?**

**What time do you advice to inject the Humalog?**

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You start on Humalog 6 units TDS  
15 mins before meals.

**Before he goes home, what does  
he need to be aware of?**

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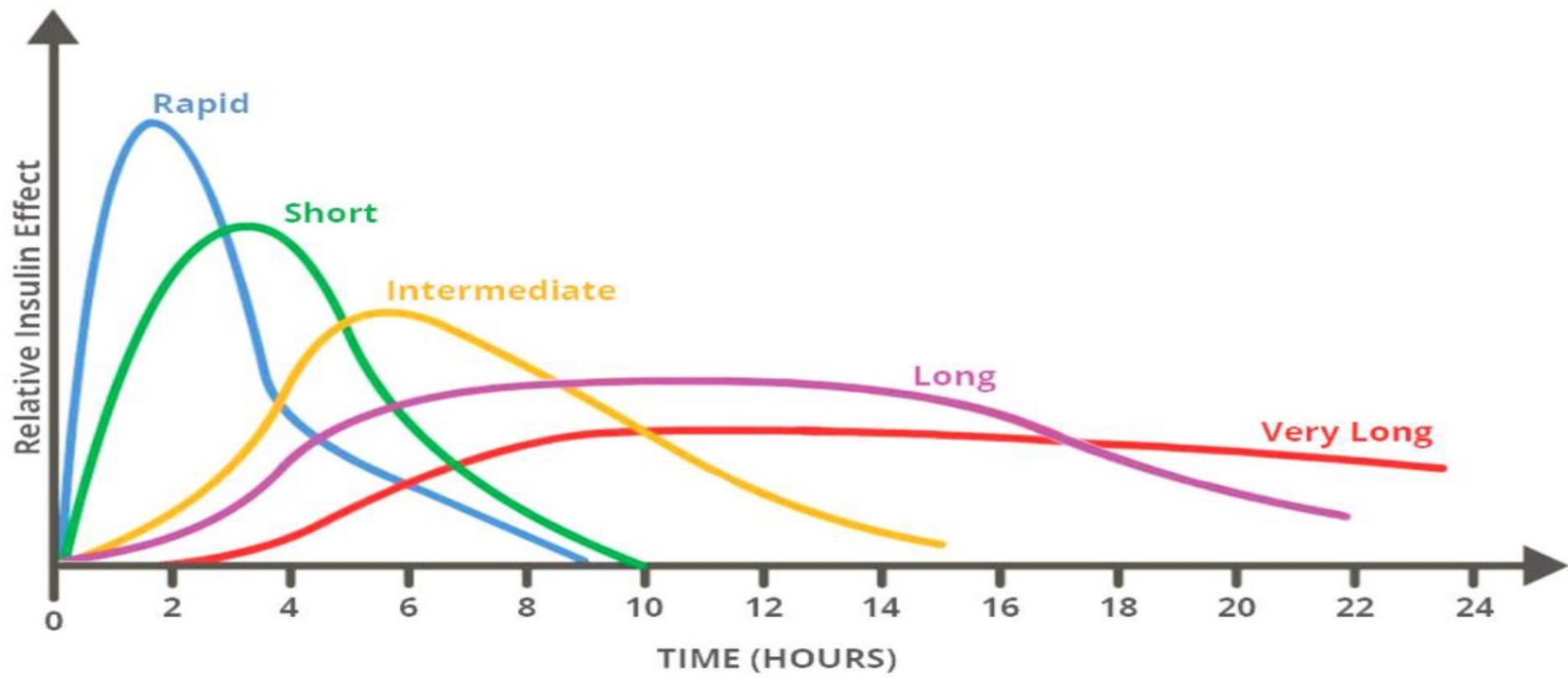
**#NELLevel5Diabetes**







# Insulin





# Insulin Dose Titration – Key points

- Titrate basal insulin dose against fasting BGL
- Set **individualised targets** of BGL targets for fasting and 2hours prandial ( for example fasting 4-7mmol/l and 2hours post meals 5-9mmol/l or 6-12mmol/ for frail patients )
- Starting doses of basal insulin 10units /day or 0.2/kg/day
- Titration clinician led , by 10-20% of Dose every 3 days (or 7 days for ultra long insulin)



**BREAK**

- We will come back at 14:10



- [Insulin | Treatment summaries | BNF | NICE](https://bnf.nice.org.uk/treatment-summaries/insulin)  
([bnf.nice.org.uk/treatment-summaries/insulin](https://bnf.nice.org.uk/treatment-summaries/insulin))
- [Insulin Types and Information](https://diabetes.co.uk/insulin/insulin-types.html)  
([diabetes.co.uk/insulin/insulin-types.html](https://diabetes.co.uk/insulin/insulin-types.html))
- [Insulin Dosage Calculator For T2DM | Toujeo® \(insulin glargine\) injection 300 Units/mL](https://toujeopro.com)  
([toujeopro.com](https://toujeopro.com))
- Louis Kuritzky Timothy S. Reid, and Carol H. Wysham (2019) *Practical Guidance on Effective Basal Insulin Titration for Primary Care Providers* Clinical Diabetes ADA Pubmed  
([ncbi.nlm.nih.gov/pmc/articles/PMC6794223](https://ncbi.nlm.nih.gov/pmc/articles/PMC6794223))
- Roger Gadsby( 2007) *Insulin initiation in primary care* Primary Care Diabetes Society  
([pcdsociety.org/resources/details/insulin-initiation-in-primary-care](https://pcdsociety.org/resources/details/insulin-initiation-in-primary-care))
- <https://bnf.nice.org.uk/treatment-summaries/type-2-diabetes/>
- *Sussex Health and Care Partnership (2022) Type 2 Diabetes Insulin Titration Guidelines For Primary Care* ([int.sussex.ics.nhs.uk/clinical\\_documents/type-2-diabetes-insulin-titration-guidelines](https://int.sussex.ics.nhs.uk/clinical_documents/type-2-diabetes-insulin-titration-guidelines))

# Case Study

## 3

### The patient

- Mr. MC
  - Age 65
  - Newly arrived from Bangladesh
  - Does not speak English
  - Does not work
- 
- Type 2 diabetes since 2003
  - CABG 2011
  - Angina
  - Gastritis
  - Asthma
  - Chronic liver disease

# Metrics and medication

- Non smoker
- Non drinker
- Height 161cm
- Weight 64.5kg
- BMI 24.9kg/m<sup>2</sup>
- Metformin 500mg bd
- Ranolazine 375mg m/r bd
- Ursodeoxycholic acid 300mg bd
- Ferrous fumarate 210mg od
- Novorapid 40u/40u/40u
- Lantus 50u
- Symbicort 200/6
- Carvidalol 3.125mg tds
- Esomeprazole 40mg bd
- Fexofenadine 120mg od
- Furosemide 20mg bd
- Montelukast 10mg od
- Rifaximin 550mg bd
- Lactulose 15ml bd

# Blood results

- HB 100g/L
  - WBC 3.1
  - PLT 44
  - Hepatitis screen NEG
  - Auto antibody screen NEG
  - ALT 14
  - BIL 16
  - T4 15.2
  - TSH 4.26
- 
- Na 138 K 4.1 Cr 81
  - GFR 83
  - TG 1.59 HDL 1.5 LDL 3.1
  - TC 5.3
  - Alb 41 ALP 169
  - Ca 2.36
  - Serum iron level 13
  - Ferritin 80
  
  - HbA1c 73 (previously 65)

# Things to consider

- Risk level ?
  - Hypos
  - Glucose profile
  - Chronic liver disease
- 
- Renal – ACR 12.9 mg/mmol
  - Diet
  - Compliance with medication



# Glucose profile (discovery sheet)

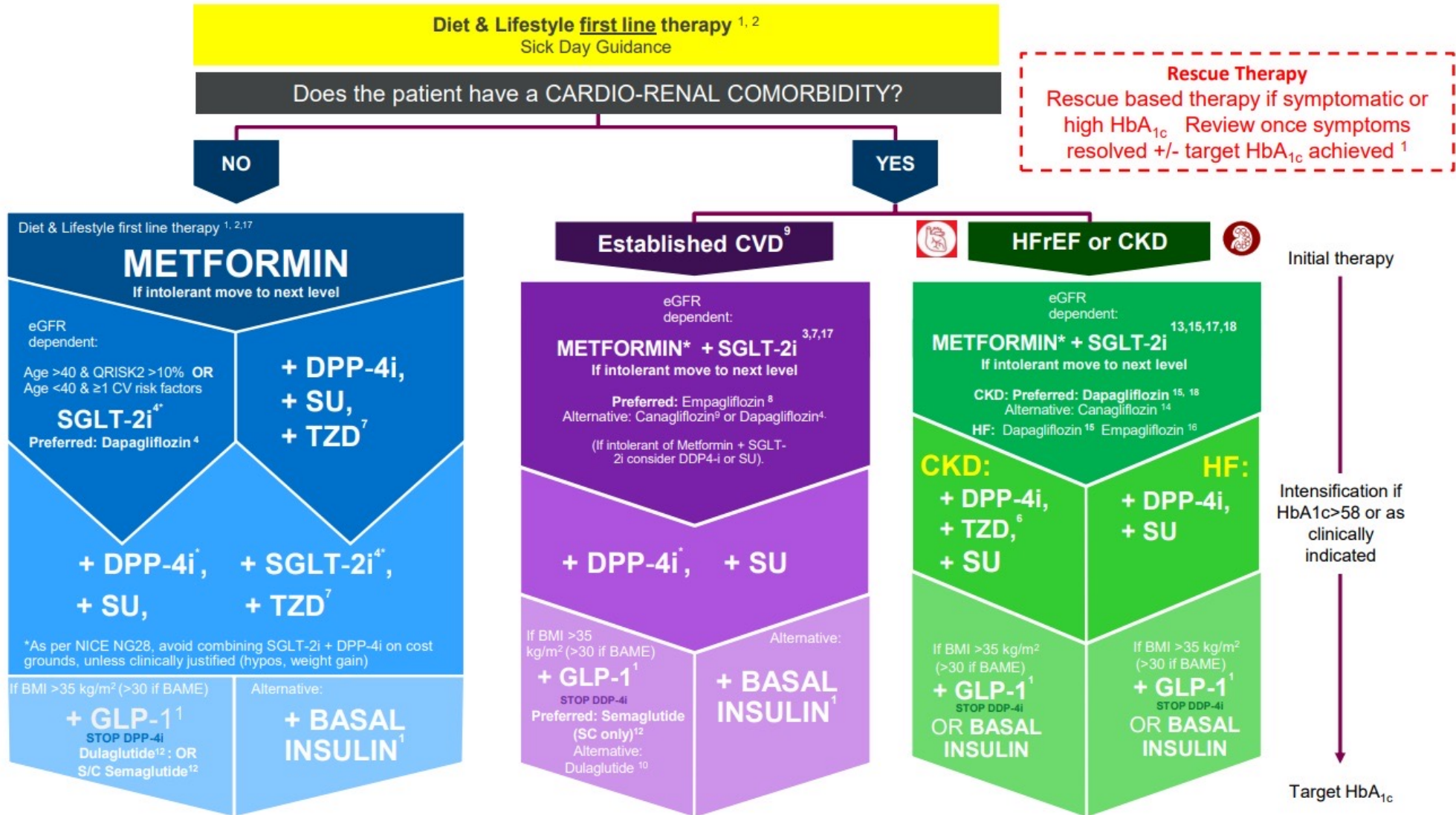
## HOME BLOOD GLUCOSE MONITORING

DATE	Fasting	90-120 minutes after Break fast	Pre Lunch	90-120 minutes after Lunch	Pre Dinner	90-120 minutes after Dinner
13 Sep 23	12.2	12.3	10.1	10.2	12.9	10.3
14 Sep 23	14.7	10.8	13.7	14.2	12.9	9.7
15 Sep 23	9.1	10.9	14.7	13.1	13.8	15.7
16 Sep 23	10.1	12.1	12.2	12.3	7.2	6.1
17 Sep 23	10.8	12.1	13.4	11.1	16.9	13.2
18 Sep 23	14.8	14.1	13.3	17.6	18.5	13.6
19 Sep 23	11.4	10.5	17.1			
20 Sep 23	14.5	10.3	15.4	19.7	16.9	6.5
21 Sep 23	13.0	9.5				

# Possible next steps

- Oral medications
  - Injectable medications
  - Insulin titration
- 
- Discussion

# TYPE 2 DIABETES – MANAGEMENT ALGORITHM



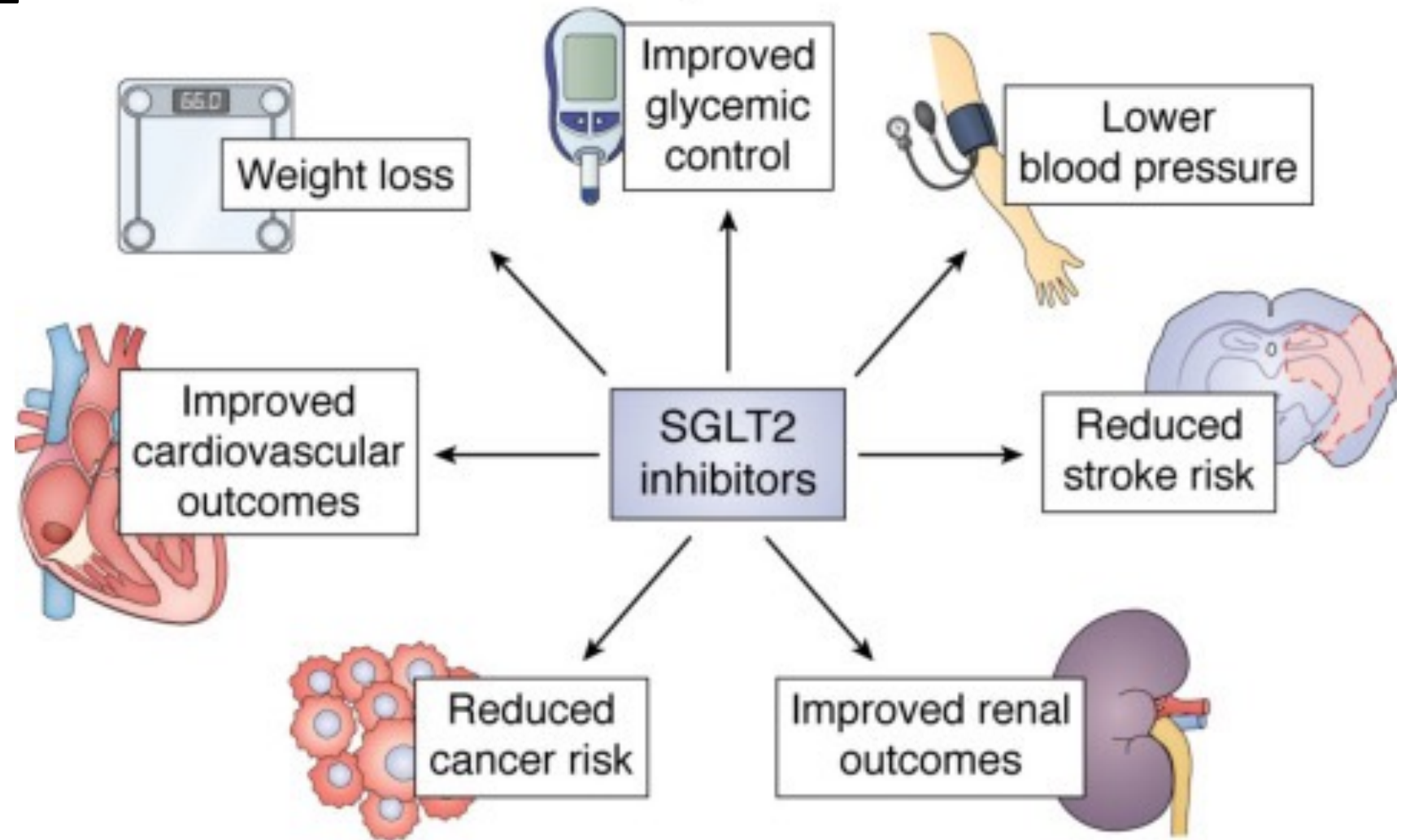
<b>* When initiating metformin</b>	Consider 2 weeks of monotherapy before initiating another agent to assess for gastrointestinal side-effects
<b>When initiating a SGLT-2i</b>	Consider a 25% dose reduction in any concomitant SU or Basal insulin & monitor for evidence of hypoglycaemia
<b>GLP-1</b>	Consider discontinuing in those who do not achieve a beneficial metabolic response after 6 months (see additional guidance)
<b>Definitions</b>	DDP-4i (Dipeptidyl Peptidase-4 Inhibitor), SGLT-2i (Sodium Glucose Co-Transporter 2 Inhibitor), SU (Sulfonylurea), TZD (Thiazolidinedione) GLP-1 (Glucagon-like-peptide 1 analogues)

# NEL guidelines:

- [NEL TYPE 2 Diabetes Draft Submission Post iMOC Comments 22082022 \(gp-website-cdn-prod.s3.amazonaws.com\)](#)

# SGLT2i Benefits- beyond HbA1c

Beneficial effects of SGLT2 inhibitors  
in clinical and preclinical studies



# CHECKLIST FOR INITIATING SGLT-2i (cannagliflozin, empagliflozin, dapagliflozin & ertugliflozin)

## Contraindications

- Type 1 diabetes
- Patients <18 years  $\geq$ 85years
- Pregnancy and breastfeeding (counsel patients of childbearing potential on the risks of taking a SGLT-2i during pregnancy)
- Previous DKA whilst taking a SGLT-2i

## Cautions

- Risk of volume depletion, especially in elderly or frail patients- review diuretics
- Consider reduction of dose of sulfonylurea/repaglanide/insulin or speak to specialist for advice
- Tablets contain lactose, patients with rare hereditary problems of galactose intolerance, total lactase deficiency or glucose-galactose malabsorption should not take this medicine.

## DKA risk factors

- Low beta cell function (e.g. low C-peptide levels, latent autoimmune diabetes in adults [LADA], a history of pancreatitis)
- Restricted food intake or severe dehydration.
- Sudden reduction in insulin
- Surgery
- Alcohol dependence

**Seek specialist advice or consider alternative options if patient is at risk of DKA**

## Monitoring Requirements

- Check HbA1c, weight and BP before initiating
- Assess liver function
- Assess renal function before treatment , unlike ACEi/ARB there is no need to check renal function after initiation.
- In the elderly there is a risk of hypotension, assess frailty with an approved frailty score and review antihypertensive if necessary.

*Initial increases in creatinine and initial decrease in eGFR are generally transient during initiation or reversible after discontinuation.*

## Patient Advice

- SGLT-2i reduce blood glucose by preventing the kidneys from reabsorbing glucose back into the blood so excess glucose is passed out in the urine.
- Risk of DKA and symptoms (vomiting, nausea, abdominal pain, a sweet smell to the breath, confusion etc) and seek urgent medical help.
- Sick day rules- stop temporarily during acute illness, vomiting or diarrhoea.
- Common adverse reactions such as polyuria, genital infection and UTI; advise to use clotrimazole 1% cream (can be bought OTC) if symptoms of genital candida develop. Advise on good genital hygiene.
- Individuals taking diuretics should be counselled on the symptoms of hypovolaemia and when to seek medical advice.
- Importance of foot care.
- If Fournier's gangrene is suspected, stop the SGLT-2i and seek urgent medical advice. (NOTE this extremely unlikely i.e. less than 1 in 10,000 chance and only applies to patients with T2DM)

# CQC:

- MHRA/CAS/[drug safety update](#) alerts – to ensure the provider has taken appropriate action in response to the alerts
- SGLT-2 inhibitors – Fournier’s gangrene risk
- “advise patients to seek urgent medical attention if they experience severe pain, tenderness, erythema, or swelling in the genital or perineal area, accompanied by fever or malaise”
- EMIS: code: Education for risk of Fournier Gangrene

### Patient Advice:

- Risk of Euglycaemic Ketoacidosis (EKA) and symptoms (vomiting, nausea, abdominal pain, a sweet smell to the breath, confusion etc) and seek urgent medical help- A&E,999.
- Sick day rules-stop temporarily during acute illness, reduced intake food/fluids, vomiting or diarrhoea.
- Common adverse reactions such as polyuria, genital infection UTI, and Balanitis;
- It is important to counsel patients with diabetes on routine preventative foot care.
- Fournier's gangrene: Patients should be advised to seek medical attention if they experience a combination of symptoms of pain, tenderness, erythema, or swelling in the genital or perineal area, with fever or malaise. Be aware that either uro-genital infection or perineal abscess may precede necrotising fasciitis.

### Checklist:

- Prior amputation, severe peripheral neuropathy, severe peripheral vascular disease, or active diabetic foot ulcers
- History of organ transplantation
- History of recurrent mycotic genital tract infection
- At risk of significant volume depletion and hypotension: may add to the diuretic effect of thiazide and loop diuretics increased risk of dehydration and hypotension (SBP < 95 mmHg)
- history of pancreatitis, Type 3c DM\*, LADA
- History of alcohol abuse
- Severe dehydration, sudden reduction in insulin, acute illness, surgery, previous episode of DKA,
- Very low carbohydrate/ketogenic diet

**CONTRAINDICATIONS:** polycystic kidney disease or on immunological therapy for renal disease, Type 1 diabetes mellitus, Previous DKA, Pregnancy or breast feeding. SGLT2i should not be used in patients with ESRD or in patients on dialysis, Disclaimer: information correct at time of publishing. This is not a comprehensive list of contra-indication or adverse reactions: please refer to individual SPC for more information.



# INDIVIDUALISATION OF PATIENT HbA1c TARGETS

Agree an individualised HbA1c target based on: the person's needs and circumstances including preferences, comorbidities, risks from polypharmacy and tight blood glucose control, and ability to achieve longer-term risk-reduction benefits. Support the person to aim for the agreed HbA1c target, measure HbA1c levels at:

- 3-6 monthly intervals (tailored to individual needs), until the HbA1c is stable on unchanging therapy
- 6 monthly intervals once the HbA1c level and blood glucose lowering therapy are stable

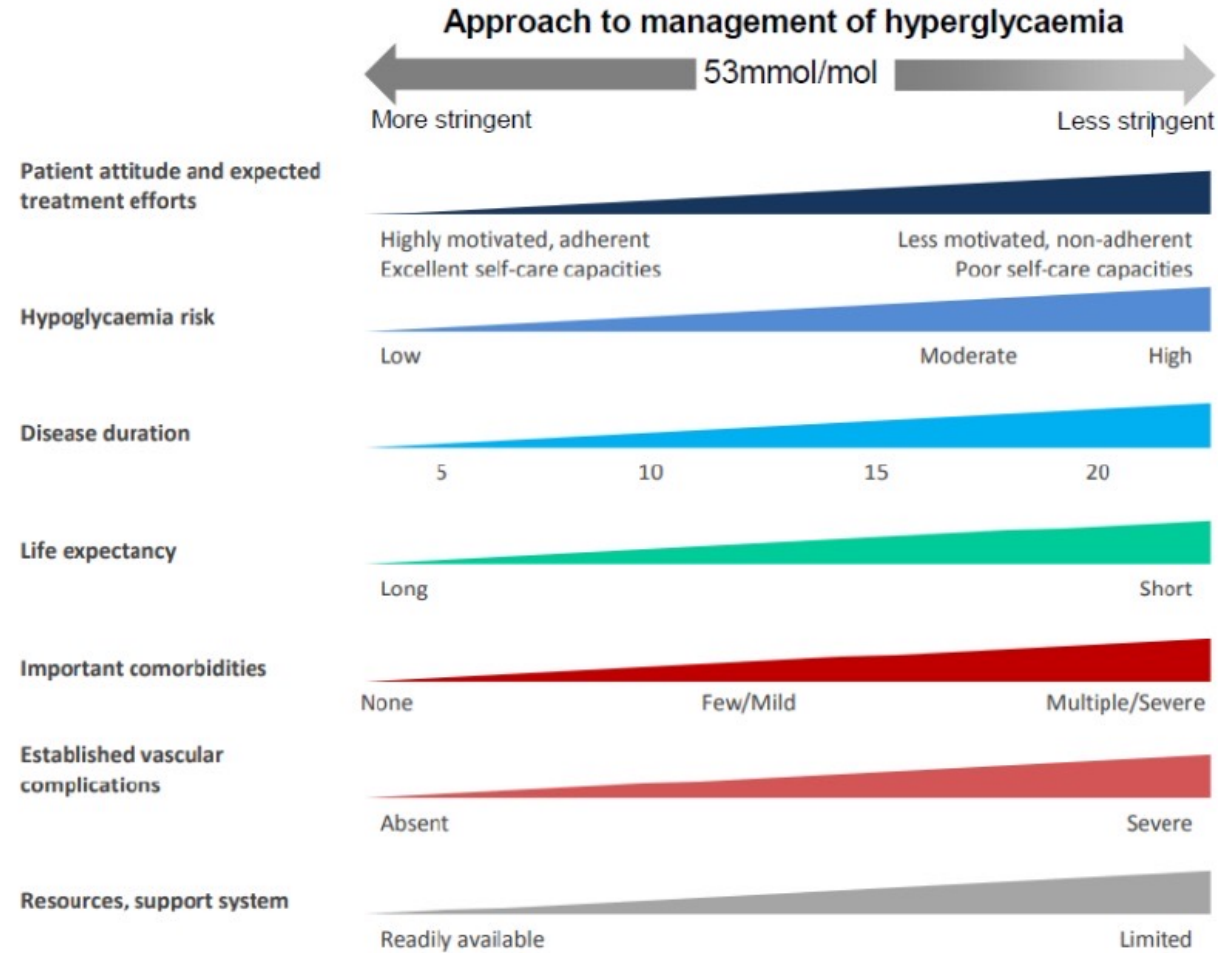
Patients Group	Target HbA1c presumption (this must be individualised)
Patients managed by lifestyle and diet	<48% mmol/L (6.5%)
<p>If <b>all</b> the following apply:</p> <ul style="list-style-type: none"> <li>• Younger patients &lt;60years within 10 years of diagnosis</li> <li>• Without established macrovascular disease (IHD, CVA, PVD)</li> <li>• Taking a single oral agent not associated with the hypoglycaemia (metformin, DPP-4i, SGLT-2i, pioglitazone)</li> </ul>	48 mmol/L (6.5%)
<p>If <b>all</b> the following apply:</p> <ul style="list-style-type: none"> <li>• Younger patients &lt;60 years within 10 years of diagnosis</li> <li>• Without established macrovascular disease (IHD, CVA, PVD)</li> <li>• Without CKD</li> <li>• Low risk for serious consequence of hypoglycaemia</li> <li>• Taking SU/repaglinide/insulin/GLP-1 OR more than one oral agent</li> <li>• Without significant comorbidity</li> </ul>	53mmol/L (7.0%)
<p>If life-expectancy &gt; 10 years and <b>any</b> of the following apply:</p> <ul style="list-style-type: none"> <li>• Age &gt;60 years or duration diabetes &gt;10 years</li> <li>• Established macorvascular disease (IHD, CVA, PVD)</li> <li>• CKD on dialysis</li> <li>• Tight control poses a high risk of the consequences of hypoglycaemia (e.g. risk of falling, impaired awareness of hypoglycaemia, people who drive or operate machinery as part of their job)</li> <li>• Experiences recurrent hypoglycaemia on SU/insulin</li> <li>• Significant comorbidities.</li> </ul>	58mmol/L (7.5%)
Patients who have moderate or severe frailty (the 'Rockwood Frailty Score' or the 'electronic Frailty Index' (eFI), which is integrated into EMIS, can be used to guide the clinicians judgement) and/or elderly (>80 years), and/or life-expectancy <10 years	<75mmol/L (<9%)

**Note:** Fructosamine may be more appropriate for monitoring diabetes if the following apply: Sickle cell anaemia, other anaemia, homozygous haemoglobin variant disease or increased cell turnover. In these situations fructosamine provides an alternate means of assessing glucose control. It gives an estimate of glucose control in the proceeding 2 to 3 weeks. A level below of 340µmol/L indicates very good diabetes control and a level below 380µmol/L indicates good control. Seek advice from diabetes team.

# INDIVIDUALISATION OF PATIENT HbA1c TARGETS

Involve adults with type diabetes in the decisions about their individual HbA1c. Encourage them to achieve the target and maintain it unless any resulting adverse effects (including hypoglycaemia), or their efforts to achieve their target, impair their quality of life. [NICE patient decision Aid](#)

Offer lifestyle and dietary advice ([NICE NG28, section 1.3](#)) and drug treatment to support adults with type 2 diabetes to achieve and maintain their HbA1c target.



# Case 4: Patient not keen on insulin

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67years old

Female

Type 2 Diabetes 24 years

# PMH

- Comorbidities
- Ischaemic heart disease
- Hypertension
- Hysterectomy
- Osteoarthritis
- Angioplasty, 3 vessel in 2022
- Diabetes complications
- Background diabetes retinopathy

# Medication

- Ramipril 10mg OD
- Bisoprolol 5mg OD
- Asprin 75mg OD
- Atorvastatin 40mg at night  
(reduced from 80mg due to pain)
- Lansoprazole 30mg OD
- GTN Spray

## Diabetes:

- Empagliflozin 5mg / Metformin  
1g tablets BD

# Results

- Cholesterol – TC 2.4, HDL 1.2, LDL 0.9, TG 0.72

- GFR > 90

- LFT – normal

- Urine ACR – 1.8mg/mmol

- BMI – 22.7 Kg/m<sup>2</sup>

- **Weight :**

Current- 56.0Kg

February 59.1Kg

January 2022- 59.8Kg

- **HbA1c:**

October 2023- 73mmol/mol

February 2023 – 68

July 2022- 75

September 2021 – 59

December 2020 – 59

- BP – 124/64 mmHg (October 2023)

# Other Facts

- Patient is very compliant with medication.
- Aims to follow a healthy diet.
- Wants to be as healthy as possible
- Does not want to lose anymore weight.
- Has a supportive family
- Has no diabetes symptoms
- **How do we improve her blood sugar levels?**

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# Discovery Sheet

16/08/56

	Blood Glucose before breakfast	Breakfast foods eaten	Blood Glucose 1-2 hrs after breakfast	Blood Glucose before lunch	Lunch foods eaten	Blood Glucose 1-2 hrs after lunch	Blood Glucose before evening meal	Evening meal foods eaten	Blood Glucose 1-2 hrs after evening meal	Blood Glucose before bedtime	Snacks	Exercise and general comments
Example	8.5	Scrambled eggs on 2 slices of toast	-	8.7	Chicken, salad and 3 small new potatoes. 1 orange	7.9	6.1	Prawn curry with rice	16.5	9.1	2 chocolate digestives	15-minute walk in the evening
Day 1	(10:55) 7.7	Cereal & grilled brucheten with a cup of tea Small glass of juice (11:30)	(13:30) 12:1	/	cup of tea with yumyum & Samosa (16:00)	/	(20:00) 14.1	Biryani with mayo salad (20:15)	(10:30) 13.1	/	Apple (14:30) Roasted cheffers (15:00) Red onion (21:40) 1/2 cup tea (21:45)	N/A
Day 2	(10:40) 7.9	2 grilled toast with jam & cup of tea (11:00)	(12:15) 15.2	/	Keema naan cup of tea (15:50)	/	(21:00) 10.1	Chapatti with lentil curry (21:15)	(11:00) 11.3	/	Pumpkin Seeds Half apple	went shopping walked 1 hour + (12:30pm - 3pm)
Day 3	(10:15) 8.6	1 boiled egg with a crossaint & cup of tea	(13:12) 11.2	/		/	(19:51) 12.7	Chapatti with Spinach + chicken Curry with red onion (20:15)	(22:30) 11.7	/		N/A



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Example	8.5	Scrambled eggs on 2 slices of toast	-	8.7	Chicken, salad and 3 small new potatoes, 1 orange	7.9	6.1	Prawn curry with rice	16.5	9.1	2 chocolate digestives	15-minute walk in the evening
Day 4	(9:23) 7.7	Cup of tea with 2 biscuits	(12:12) 8.4	/	/	/	(20:34) 11.9	Chapati with chicken tikka curry (21:00)	(23:18) 11.8	/	/	N/A
Day 5	(11:00) 7.8	grilled toast with jam & cup of tea (11:20)	/	(18:00) 9.3	Pizza (3 slices) & cup of tea (18:59)	(21:00) 12.9	/	/	/	/	Apple (17:00) few slices of Persimmon fruit	lunch was late so had it as an early dinner.
Day 6	(11:00) 7.8	Quaker oat Porridge & cup of tea + cake rusk (11:10)	(13:30) 9.8	/	/	/	(19:15) 10.7	naan with lentil curry & kebabs burger with salad (20:30)	(23:00) 11:6	/	/	/
Day 7	(11:30) 7.9	2 Toaster toast with onion & cup of tea	(14:18) 10.6	/	/	/	(19:28) 9.8	Chapati with liver curry (20:00)	(23:00) 11.3	/	Nuts Snacks (15:00)	

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Day 4	(11:32am) 8.3	1 Parantha with lamb Curry	(2:15pm) 16.4	/	/	/	(8:17pm) 7.8	Lamb kebab roll with salad & sauces.	(11:10pm) 14.3	/	Handful of peanuts & 1 Popadom	walk in whilst out shopping & also brisk walking indoors after dinner.
Day 5	(11:05am) 7.9	1 boiled egg with a Sealed brioche Bun & cup of tea.	(13:46pm) 13.7	/	/	/	(7:39pm) 12.4	naan with spinach curry & Roast, veg + potato bake	(22:15) 11.6	/	1 nitz cracker + 1 scoper biscuit (21:45)	N/A
Day 6	(11:15) 8.4	1 grilled toast with Jam & 1 grilled toast with beans & tea	(14:20) 10.0	(15:25) 8.1	Fish finger sandwich (saves) & cup of tea with slice of cake (15:50)	(18:15) 10.7	/	Chapathi with lentil curry + 1 roast potato (20:50)	/	/	Apple / Pear few (14:50) Sausage sticks (17:00)	N/A
Day 7	(10:15am) 8.2	2 x Toast with fried egg & 1 spoon beans. cup of tea.	(12:30) 12.3	(14:30) 7.7	1.5 At + one and half Atta bread with veg Curry.	(16:30) 11.3	(19:51) 12.7	Chapati with Spinach + chicken Curry with red onion (20:15)	(10:30) 11.7	/		N/A

# Discovery Sheet

16/08/56

	Blood Glucose before breakfast	Breakfast foods eaten	Blood Glucose 1-2 hrs after breakfast	Blood Glucose before lunch	Lunch foods eaten	Blood Glucose 1-2 hrs after lunch	Blood Glucose before evening meal	Evening meal foods eaten	Blood Glucose 1-2 hrs after evening meal	Blood Glucose before bedtime	Snacks	Exercise and general comments
Example	8.5	Scrambled eggs on 2 slices of toast	-	8.7	Chicken, salad and 3 small new potatoes, 1 orange	7.9	6.1	Prawn curry with rice	16.5	9.1	2 chocolate digestives	15-minute walk in the evening
Day 1	(10:17) 9.8	Boiled egg in buttered-toasted bun with salad & cup of tea (10:50)	(13:20) 10.2	(15:30) 9.1	Tea & biscuits nuts snack 2 small potatoes from curry (15:40)	(17:35) 8.7	(19:15) 9.3	Spinach curry & Chappatti Handful portion of pasta (19:20)	(21:30) 13.8	/	Rice Pudding few spoons (10:50)	N/A
Day 2	(11:18) 9.4	2 grilled toast (multigrain bread) & cup of tea (11:40)	(13:50) 11.1	/	Cup of tea (16:30) Jacket potato & veg (17:50)	/	(20:40) 9.6	Mutton Pilaw rice with mutton curry & handful of sweet rice (20:45)	(10:45) 13.7	/	Apple (14:20)	10 min walking after dinner
Day 3	(10:30) 8.8	Omelette with 2 slice of toast & cup of tea	(13:49) 7.6	/	(16:00pm) 3x Grilled fish fingers, Handful of Grilled chies & cup of tea.	/	(19:18) 11.7	Veg Currys with 1 chappati	(10:30am) 12.3	/		N/A

# Discussion



DIETARY  
CHANGES?



CHANGES TO  
MEDICATION?



INSULIN?



**North East Local  
Health & Care  
Partnership**

## Supporting Insulin Starts

**EMOTION Study**  
**Polanski WH et al.**  
**J Diabetes Complications.**  
**2019; 33(4):307-314**  
**A global study**

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# Refusing insulin...

- Significant numbers of patients that need insulin refuse to accept it as part of the treatment. Of those that start, many discontinue the insulin.
- Often, these patients then live with hyperglycaemia until complications eventually develop by which time it is too late.





## Reasons for refusal

- ‘So that means things are really serious now’
- ‘Once you start, there’s no going back’
- ‘I don’t want injections’
- ‘I’ll gain weight’
- ‘Hypos’
- ‘I’ll try harder, I promise’
- ‘I feel ok, things can’t be that bad’
- ‘Another tablet’
- ‘I’ve not been looking after myself, but I will from now on’

# The EMOTION study

- Looked at strategies found to be helpful by initially reluctant patients started on basal insulin.
- Starting insulin is a major decision for the patient.
- It needs TIME, RESPECT and SKILL. If done badly, the patient pays the price







# STEP 1

## EXPLAIN THE BENEFITS

More than 70% said this helped convince them, especially that the HCP told them they would

1. LIVE LONGER AND HEALTHIER
2. FEEL BETTER
3. WOULD IMPROVE THEIR BLOOD GLUCOSE
4. WAS A NATURAL SUBSTANCE THAT THEIR BODY NEEDED

# STEP 2

## CLINICIAN POSITIVITY AND ENTHUSIASM

(NOT DOOM AND GLOOM)

1. INSULIN MORE NATURAL THAN PILLS
2. HELP TO MINIMISE WEIGHT GAIN
3. CAN DISCONTINUE OTHER MEDS
4. WON'T BE TREATED DIFFERENTLY BY OTHERS
5. MAY NOT BE FOREVER



# STEP 3



## **DON'T JUST TALK – SHOW THEM INSULIN DEMONSTRATION**

1. CLINICIAN WENT THROUGH THE PROCESS
2. SHOWED HOW SIMPLE
3. SHOWED INSULIN PEN
4. DEMO INJECTION / FIRST INJECTION TOGETHER
5. LESS PAINFUL THAN EXPECTED

# STEP 4

## RESPECT, SPACE, TIME AND FOLLOW UP

1. TOOK TIME TO EXPLORE WHY DID NOT WANT INSULIN
2. ANSWERED ALL QUESTIONS
3. 'TRY IT AND SEE' APPROACH
4. LEFT FINAL DECISION TO PATIENT
5. MADE THEMSELVES AVAILABLE FOR FOLLOW UP





# NOT AS SUCCESSFUL...BUT STILL DONE

HCP WAS 'AUTHORITARIAN'

1. 'I WILL NOT BE RESPONSIBLE IF YOU REFUSE'
2. WOULD NOT TREAT THEM FURTHER
3. BADGERED THEM AT EVERY APPOINTMENT

# FINAL SUGGESTIONS



- PERSUADE NOT BULLY
- DO NOT THREATEN WITH INSULIN
- EXPLAIN WHY NEEDED (AND TABLETS NOT WORKING)
- NATURAL SUBSTANCE
- PROVIDED FREE (VS REST OF THE WORLD)
- FEEL BETTER
  
- ALLOW TIME
  
- THE HEALING COMES FROM YOU



**Thank you**  
**Panel Q&A**

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/level5diabetes>**