AcDC: Acute **D**iabetes **C**hecklist

The <u>minimum</u> that all ward staff need to know…

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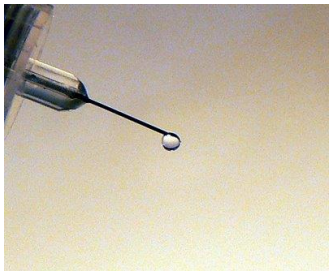
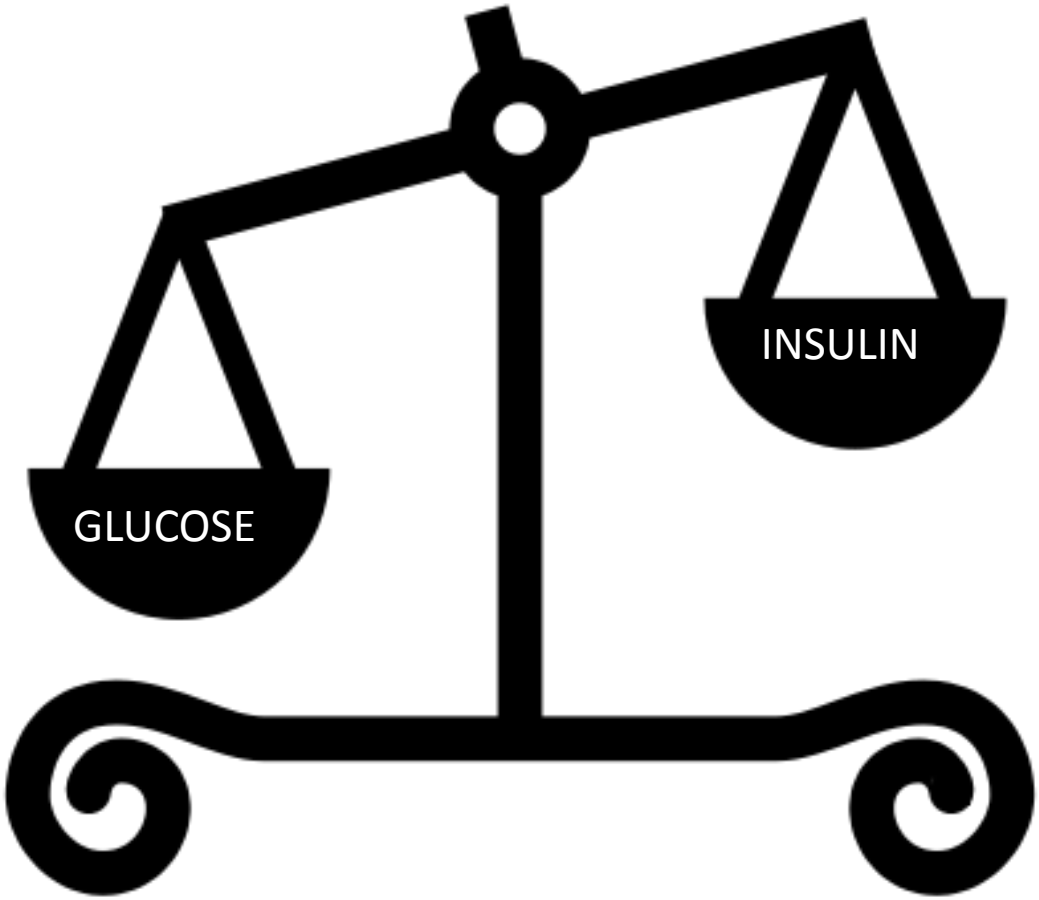


What is diabetes?

Persistent hyperglycaemia due to insulin deficiency, resistance or both



Uncontrolled Diabetes = Persistent Hyperglycaemia

Patient with Diabetes
Vigilance required!!

Advice available via:

- ‘Microguide’ app or at www.diappbetes.co.uk

For any unwell patient…

- ABCDE

- ABC**DEFG**

  – **‘Don’t Ever Forget Glucose’**

Persistent deranged glucose levels can increase clinical risk, delay clinical recovery & increase Length of Stay

See Diabetes?

- The Emergency states not to miss or ignore..

- **See RED: 'Remember Emergencies in Diabetes'**
  - Diabetic KetoAcidosis (DKA)
  - Hyperosmolar Hyperglycaemic State (HHS)
  - Hypoglycaemia
  - Uncontrolled hyperglycaemia
  - Active Diabetic Foot disease

What can I do to reduce diabetes risk on my ward?

Diabetes status…

- Known Diabetes?
  - Make sure all staff know
  - Make sure appropriate glucose monitoring in place
  - Target glucose range: 5-12mmol/L
  - Make sure actions taken promptly for uncontrolled diabetes

- Not Known Diabetes?
  - Inform doctor if BGL > 7.8mmol > 2hrs after food
  - May need ketones +/- VBG to exclude DKA
  - Should have HbA1c blood test requested & refer to Diabetes team if result >43mmol/mol

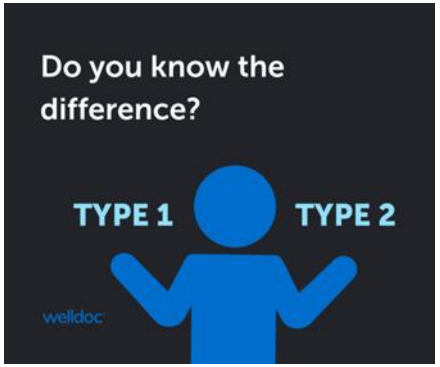
Diabetes: Its not just the numbers…

- Words matter too…
  - ‘Language Matters’
  - See the person, not just the blood results…
- Care with language and making assumptions

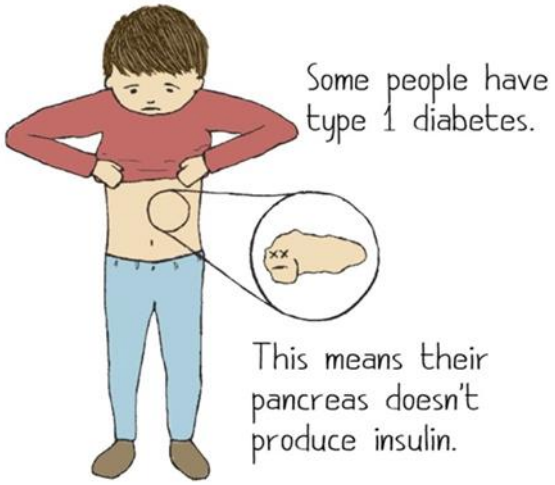
Diabetes: Don't believe the type?

- Type 1 ~~('IDDM')~~ **INCREASED VIGILANCE NEEDED**
- Type 2 ~~('NIDDM', DM2)~~
- Type 3 ('pancreatic' diabetes, usually insulin treated +/- panc enzyme replacement)

- 'Needling '- Ask if patient uses insulin
- Frailty = increased risk?

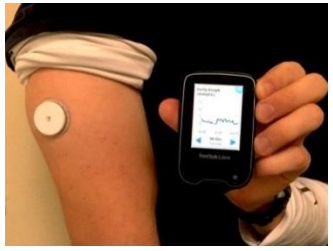


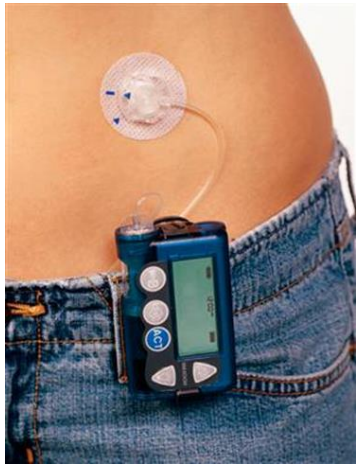
Not all diabetes is created equal…



A plea for Type 1 D!

- People with Type 1 need insulin on board at ALL times
- '**Carbohydrate counters**', considerate rapid-acting insulin prescribing needed (menu available)
- S/c injections: usually twice daily 'Fixed Mix (fast/slow insulin combination injection with breakfast and evening meal) ' or 'Basal Bolus' (1 long acting insulin AND fast insulin with meals) regimens
- CSII (personal pump) – disconnect and use VRIII if patient cannot self manage
- **Respect the patient voice**
- **Vomiting = DKA U.P.O (UK: 1 in 25 risk)**





Acute illness

- Stress of acute operations or health problems (eg sepsis) can destabilise diabetes

- Interventions can upset diabetes control?
  - Eg steroids, feeds, reduced mobility, incorrect prescribing, delayed diabetes medicines administration

- Need to communicate effects of interventions on diabetes to the patient where relevant

- **Diabetes problems can cause symptoms:**
  - (eg vomiting/SOB = ?DKA, confusion/drowsiness = ?hypoglycaemia, HHS, foot sepsis)
  - **See Diabetes? See RED: 'Remember Emergencies in Diabetes'**

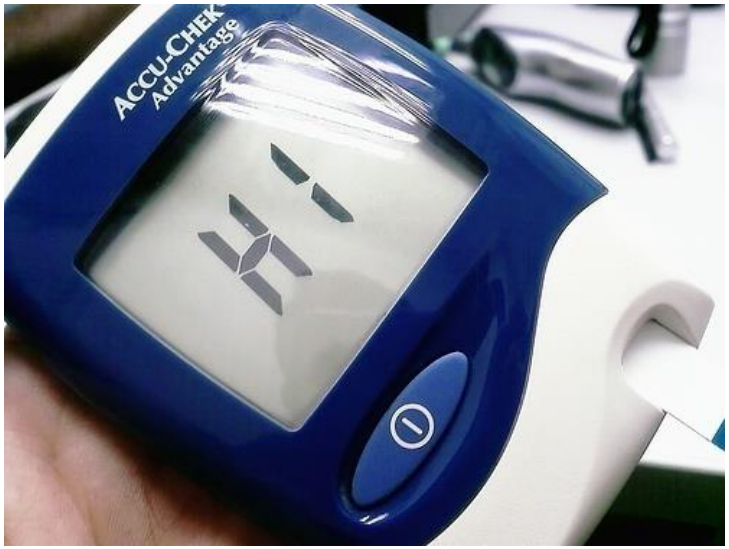
BGM ~~(BM)~~

- **Aim for BGL 5-12mmol/L**
- **BGM** issues: ‘obs stable’?

- NEWS2 –diabetes risk??
- Actions to take?
- ED/Ortho: Trauma can cause DKA!
  - Ensure appropriate BGM and follow on actions in place

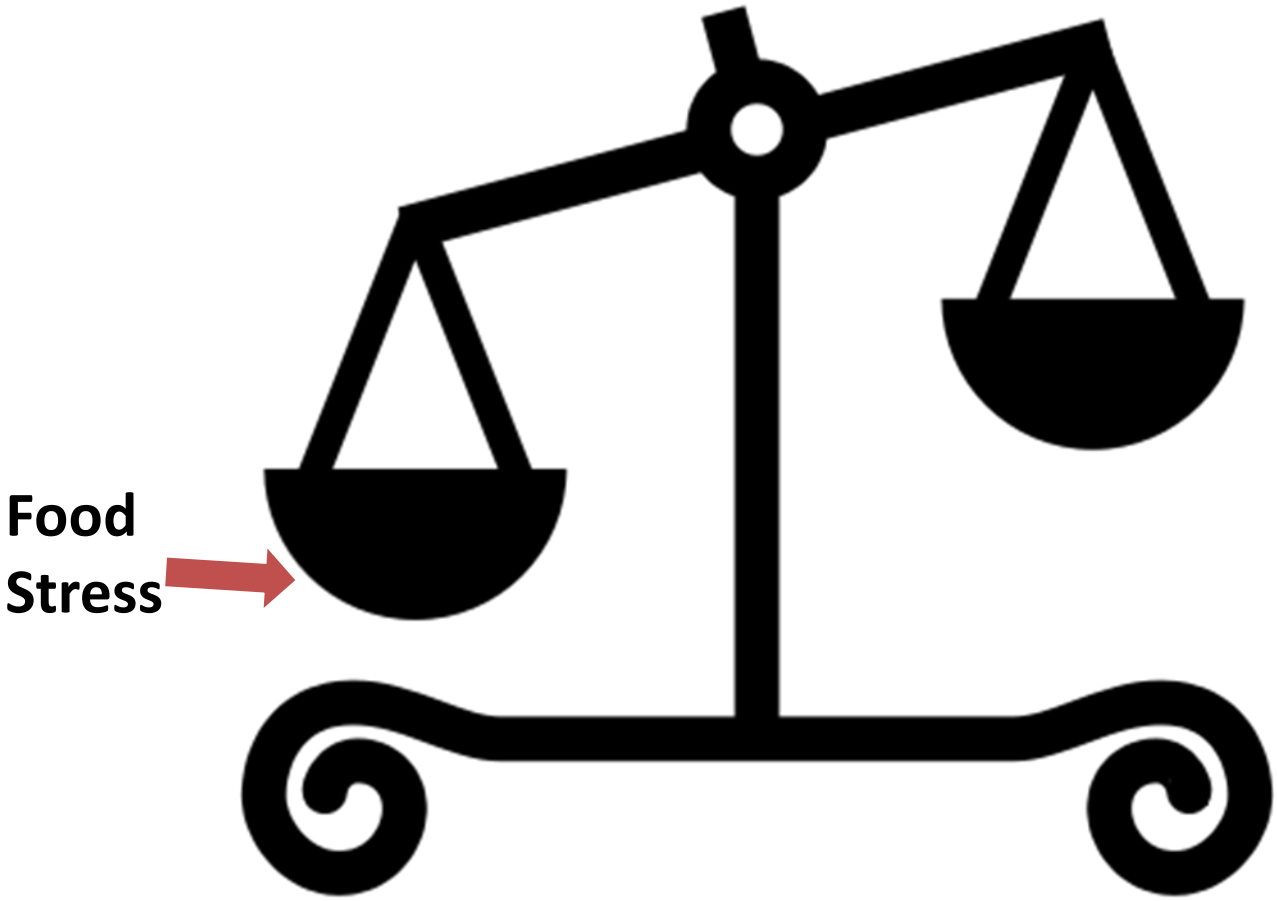
The patient has hyperglycaemia

- Sustained BGL > 14, more than 3-4hrs
- Context? New problem? Usual diabetes control?
- ‘Treat the Trend’ – not ‘one off’ glucose spikes



<u>Type 1 diabetes? check ketones +/- VBG to exclude DKA</u>

With diabetes….



Default in Diabetes = Hyperglycaemia

Glucose High = Why & ?Dry

Cause**S** include:

- Suboptimal prescribing or medication dose adjustment
- States of diabetes emergency (eg **DKA, HHS**)
- Sepsis (**foot disease?**)
- Sedentary
- Suspected new diabetes diagnosis
- Steroids
- Supplements
- State of mind…

Assess patient and take action as needed (eg use Microguide 'Diappbetes'), ensure well hydrated

Not just a 'stat' dose of rapid acting insulin please!

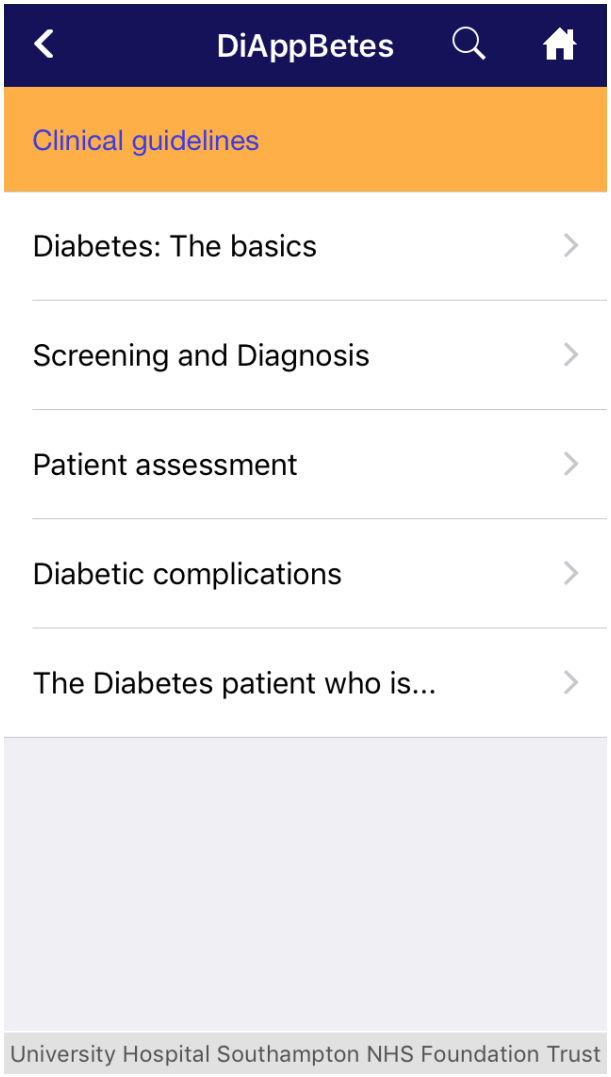
MicroGuide DiAppBetes

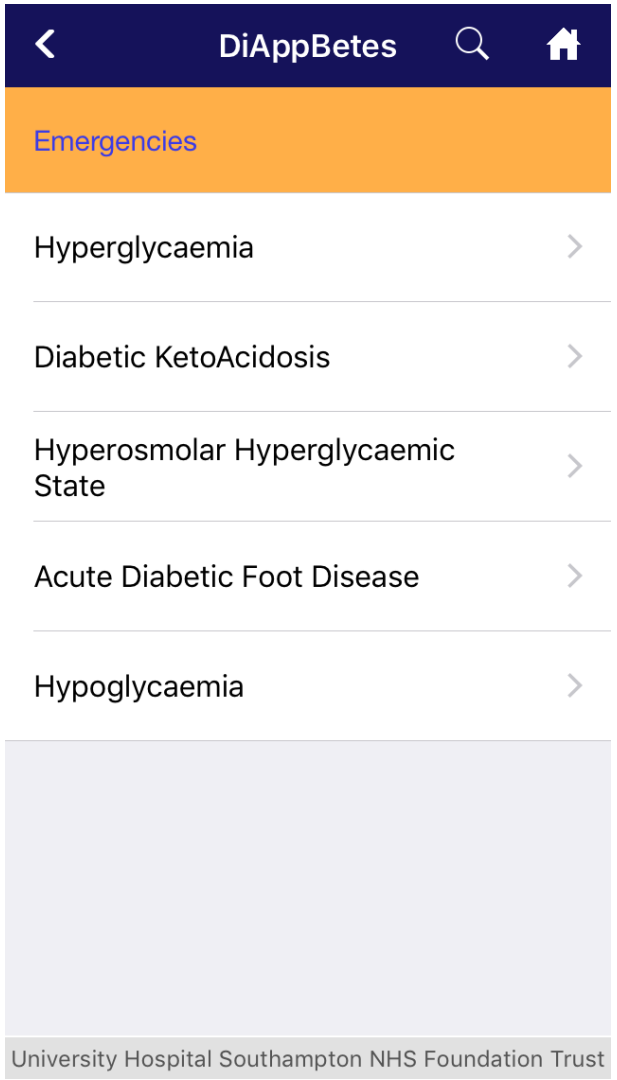
- Pocket book of sugar support

- Free to download (‘microguide’)

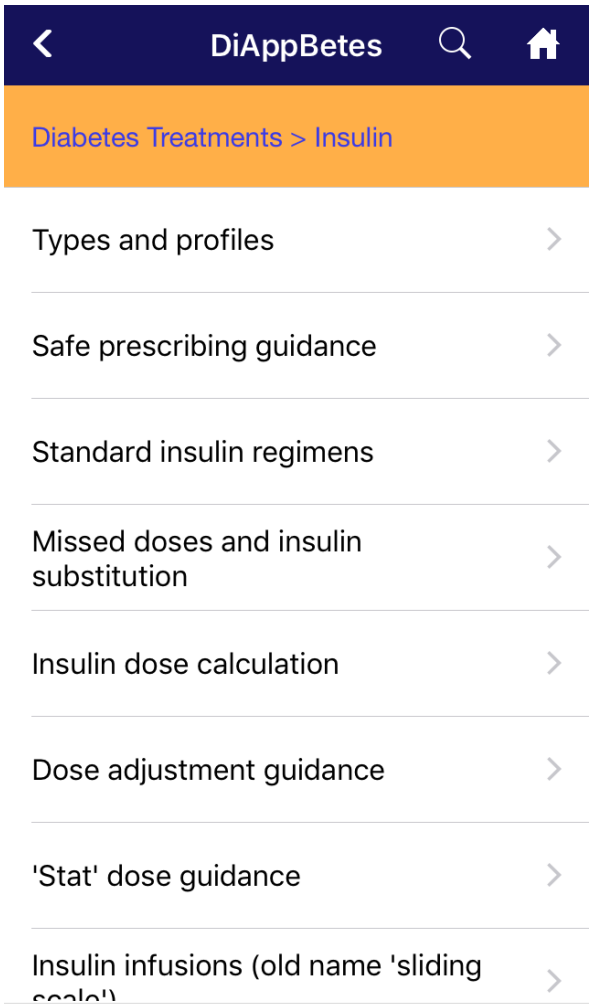
  Or www.diappbetes.co.uk

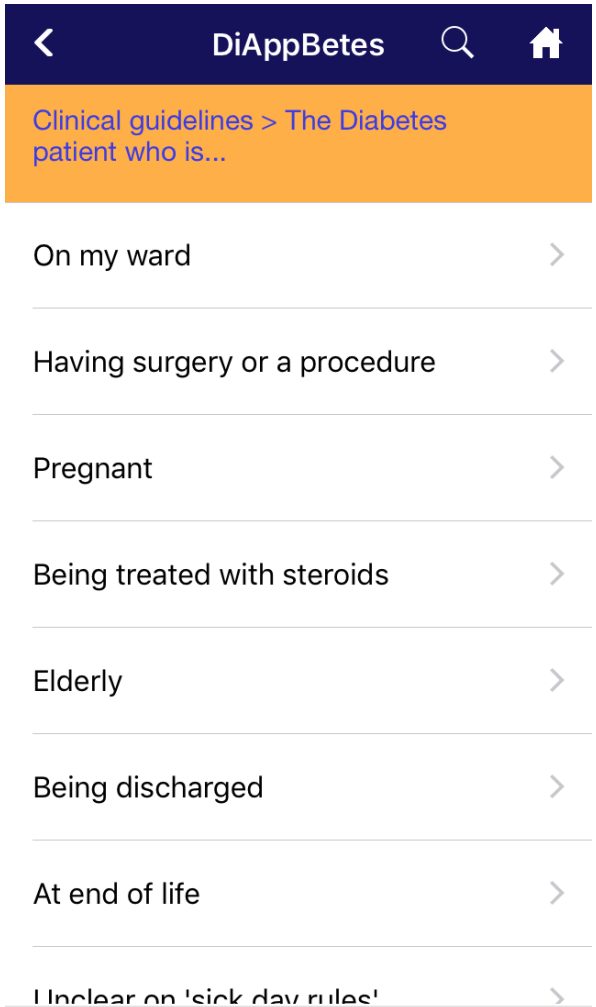
App Screenshots (1)



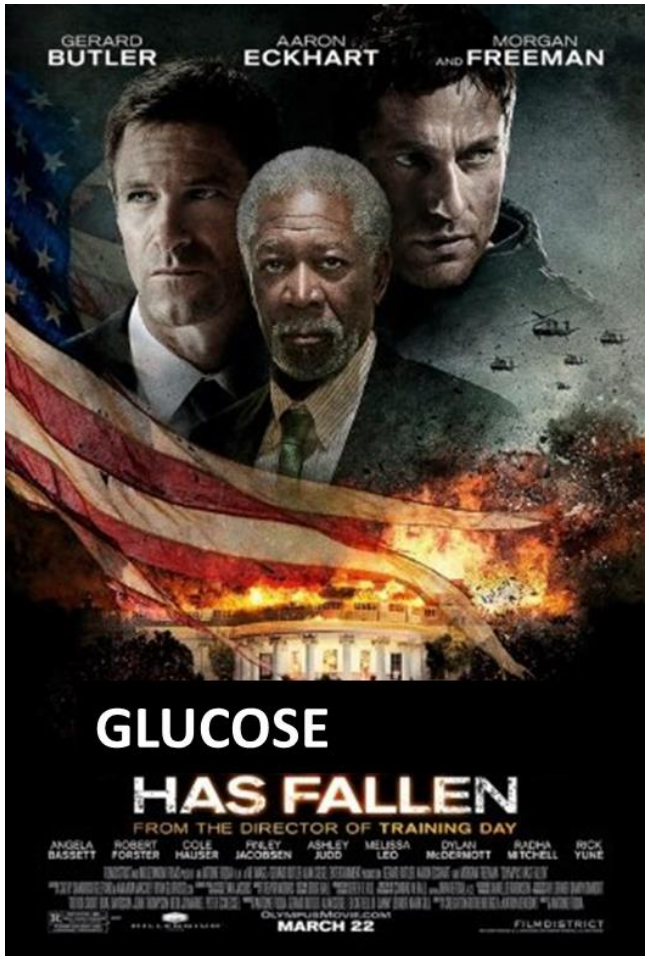


App Screenshots (2)





What about hypoglycaemia? (BGL<4mmol/L)



9Rs of hypoglycaemia

- Recognise
- Respond (hypo kit? NOT 50% glucose OR IV Insulin Infusion)
- Reflect (cause?)
- Record & handover
- Reassess
- Renal
- Reduce risk (therapies? Leaflets, driving)
- Refer?

- Responsibility??

E&D?

- NBM, vomiting etc
- ?needs IV insulin infusion (~~'sliding scale'~~) & appropriate BGM & glucose based fluids
  - N.b. may need to half usual hourly insulin infusion rate with AKI, frailty, low BMI (increased insulin sensitivity states)

- End of life care?
  - Priorities : symptom control, foot ulcer /bedsore prevention, simpler diabetes management

Treatments

- **T**reatment
  - 'Stop the **DAMN** dru**GS**'*?
  - Review diabetes meds –suspend/reduce? Usually being taken?
  - Suspend Sulphonylureas (eg Gliclazide) if reduced intake/AKI to reduce hypo risk
  - How may our interventions upset DM?
  - **Frailty**: need to de-escalate for overtreatment?

(eg low Hba1c ≤ 48mmol/mol = increased hypo risk)

*If indicated, suspend **D**iuretics, **A**ntihypertensives, **M**etformin,**N**SAIDs, **G**LP-1s, **S**GLT-2 inhibitors

Diabetes: Medications to mention

- **Metformin**
- **Sulphonylureas** (eg Gliclazide): hypos, reduced intake)
- **SGLT2 inhibitors** ('-flozins': DKA signal (suspend if unwell))
- **GLP-1 injectables** ('-atides')
  - can delay GI transit, suspend until E and D
- **DON'T FORGET INSULIN**

(e.g, continue usual basal (long acting) insulin alongside VRIII esp T1D)

Education

- **E**ducation
  - For patients
  - For clinical staff (app, UHS VLE etc)
  - Early referral to diabetes team AFTER initial management steps undertaken please

Safety..

-Safe prescribing ESPECIALLY insulin

– Safe use of IV insulin (with BGM)

– Type 1 diabetes care

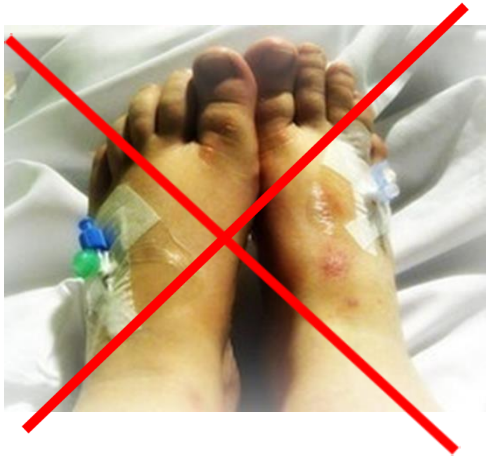
– SGLT2 inhibitors (DKA risk)

– Suspend other meds if indicated

– Focussed Foot exam

– Frailty

– Discharge planning



- **S**ymptoms & **S**igns – e.g. SOB, drowsy?

See Diabetes? See R.E.D :'Remember Emergencies in Diabetes

Putting it all together…

AcDC: The **Ac**ute **D**iabetes **C**hecklist…

D

- **D**iabetes ?

D.1

- **D**iabetes ?
- Type **1** diabetes?

D.1.A.

- **D**iabetes ?
- Type **1** diabetes?
- **A**cute issues affecting BGLs?

D.1.A.B

- **D**iabetes ?
- Type **1** diabetes?
- **A**cute issues
- **B**lood glucose monitoring with corrective action taken

D.1.A.B.E

- **D**iabetes ?
- Type **1** diabetes?
- **A**cute issues
- **B**lood glucose monitoring with corrective action taken
- **E**ating & drinking, End of Life

D.1.A.B.E.T

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- Type **1** diabetes?
- **A**cute issues
- **B**lood glucose monitoring with corrective action taken
- **E**ating & drinking, End of Life
- **T**reatment

D.1.A.B.E.T.E

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- **B**lood glucose monitoring with corrective action taken
- **E**ating & drinking, End of Life
- **T**reatment
- **E**ducation

‘D.1.A.B.E.T.E.S.’

- **D**iabetes ?
- Type **1** diabetes?
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- **B**lood glucose monitoring with corrective action taken
- **E**ating & drinking, End of Life
- **T**reatment
- **E**ducation
- **S**afety

- Could this work in your area to help focus the mind on diabetes?

Thanks