# ‘Sugary and Sleepy’:
## Diabetes Update for Anaesthetists

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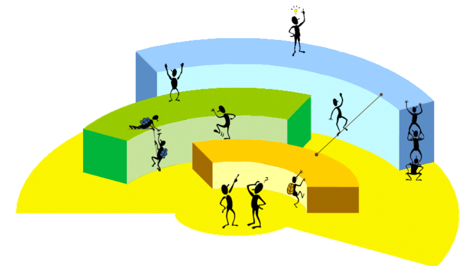
# Aims of talk:

In 30 minutes…!!

- Highlight key points on diabetes that anaesthetists should be aware of

- Links to NCEPOD 2018 report

- Cover aspects of the ‘highs and lows’ in perioperative diabetes care



# What can I do to reduce diabetes risk in my hospital?

# Diabetes: Some numbers…

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- **NHS spends £1.6 million pounds/hr on patients with DM** (10% of annual budget)
- 15-20% of all inpatients have DM, could be 30% in 5yrs
- Patients with diabetes are in for longer & admitted more often (ave 2/7 LoS increase)
- 1 in 5 patients with DM admitted annually with varying problems, which can impact on DM
- >3.5 mill people in UK living with Diabetes
- Increasing numbers of people with diabetes need operations & procedures

# Reducing the diabetes risk in surgery..

- Having diabetes can increase risk (morbidity & mortality)
- NCEPOD 2018
- 13 key Recommendations made: a system wide approach
- How can Anaesthetists reduce diabetes risk in their practice?

# NCEPOD:
# 5 Principle recommendations

- Be familiar with local policies/processes in diabetes (leads etc)
- Pre-Optimise and prioritise in diabetes
- Standardised process for referral
- Ensure close peri-op diabetes monitoring
- Ensure safe patient handover from recovery to ward

- (increase day case rates etc)

# Diabetes: Don’t believe the type?

- Type 1 ~~(‘IDDM’)~~ **INCREASED VIGILANCE NEEDED**
- Type 2 ~~(‘NIDDM’, DM2)~~
- Other

- ‘Needling ‘- Do ask if person uses insulin?

- Patient age for diabetes type is irrelevant

# Not all diabetes is created equal…

# A plea for Type 1 D!

- 2019: Still managed with insulin?!, it's a f/t job!
- Type 1 patients need some insulin at ALL times – usually twice daily rapid/slow fixed mix or basal bolus (rapid with meals & slow) regimens
- 'Carbohydrate counters', considerate prescribing needed (diff doses, diff meals)
- s/c injections or CSII (personal pump)
  'all hands to the pump?'
- Trust the patient – respect the patient voice
- **DKA in hospital is a thing….**
  - **But it should NOT be…**
  - **Vomiting , SOB– could it be DKA?**

# Diabetes: Its not just the numbers…

- 8760….
- Primary care…

Language Matters

Language and diabetes

- Words matter too…
  - ‘Language Matters’
  - See the person, not just the HbA1c…

- Care with language and making assumptions

# Pre-Assessment

- Refer to a local diabetes service if possible (primary care?)
  - Chance to review usual treatment etc
  - Review the diabetes medications… to escalate or de-escalate..!

- JBDS: Aspiration: Aim for HbA1c < 69mmol/mol within 3/12 pre-operatively, but…. Exceptions? Is it too low?? (48-58 not for all), frailty? Hypo unaware?

- HbA1c does not tell the whole story, 'Time in range?'

- Ensure patient understands medication omission/dose adjustment advice, NOT TO SUSPEND INSULIN in T1D etc…

- If you need to postpone for reasons of glucose, explain why in terms of risk…

- Focussed foot examination needed

# Diabetes: Medications to mention

- Metformin (occ used in T1D)

- SGLT2 inhibitors (‘flozins’) (occ used in T1D)
  - DKA signal (suspend pre-op and until E&D post op)

- GLP-1 injectable therapy (‘atides’- can delay GI transit, suspend until E and D post op)

- DON’T FORGET INSULIN (e.g, continue basal insulin alongside VRIII esp T1D)

# ‘Glucose encounters of the absurd kind…’
# ‘Monitoring is Mandatory..’

# The patient has hyperglycaemia

- Sustained BGL > 14, more than 3-4hrs

# The morning of…

- High glucose..
  - High, Why, Dry? (acute DM decompensation?)
  - Type 1 : CHECK KETONES +/- VBG if BGL >14mmol
  - Type 2: usual control? Pre-op HbA1c?

Do I just give a stat dose of rapid insulin& carry on?

Do I give an oral therapy?

Do I start a VRIII?

Do I need to cancel the case?

Do I need to seek diabetes advice?

# High sugars..causes include..

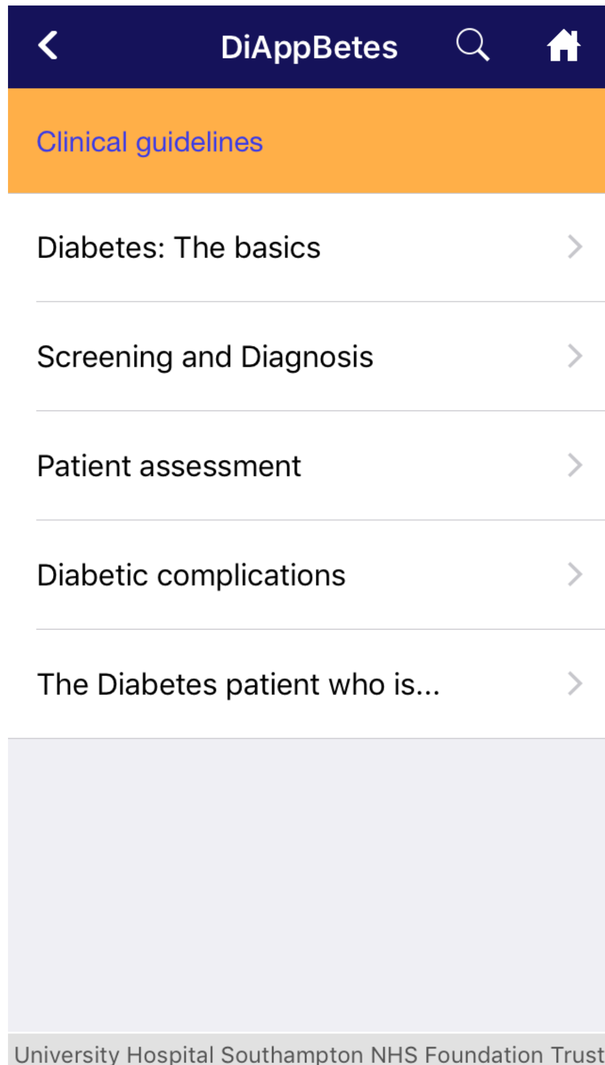
- Sepsis (foot disease?)
- Steroids
- Supplements
- Stasis
- ‘Stress’
- State of mind…

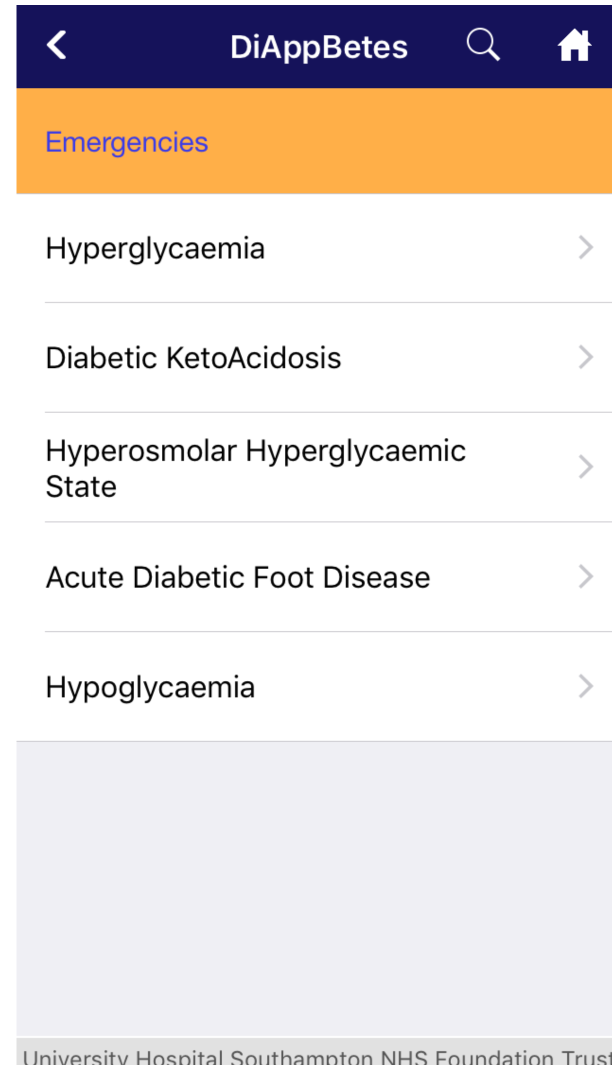
- Not just a ‘stat’ dose of rapid insulin please!

# 2016: MicroGuide DiAppBetes

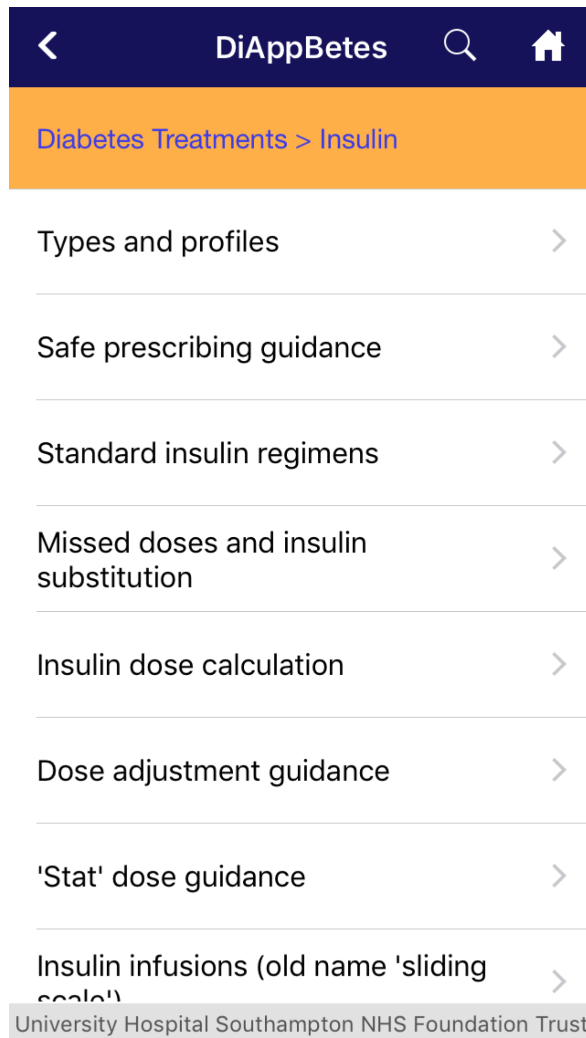
- Advises on things the diabetes team take for granted!
- More of a pocket book of sugar support (static content)
- Free to download (‘Microguide’)
- Option for other Acute trusts to bespoke the content for their own needs

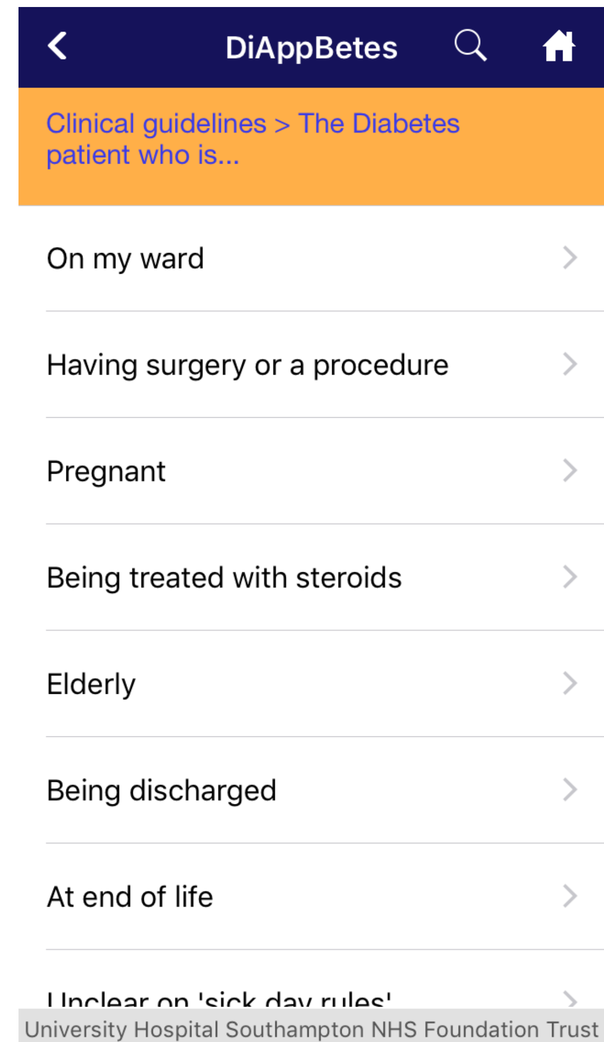
# App Screenshots (1)



# App Screenshots (2)



# What about hypoglycaemia?

# 8Rs of hypoglycaemia

- Recognise)
- Respond (hypo kit? 50% glucose?
- Reflect
- Record <u>& handover</u>
- Reassess
- Renal
- Reduce risk
- Refer?

# Safety..

- Safe prescribing ESPECIALLY insulin
- Safe use of IV insulin (with BGM)
- SGLT2 inhibitors (DKA risk)
- Suspend other meds if indicated
- Focussed Foot exam

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

# Putting it all together…

# D

- **D**iabetes ?

# D.1

- **D**iabetes ?
- Type **1** diabetes? (DKA risk etc)

# 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
- **E**ating & drinking – use of VRIII, withholding meds etc

# ‘D.1.A.B.E.T

- **D**iabetes ?
- Type **1** diabetes?
- **A**cute issues
- **B**lood glucose monitoring
- **E**ating & drinking
- **T**reatment (DM meds to suspend, impact of steroids, care with insulin)

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

- **D**iabetes ?
- Type **1** diabetes?
- **A**cute issues
- **B**lood glucose monitoring
- **E**ating & drinking
- **T**reatment
- **E**ducation (for your teams and your patients)

# ‘D.1.A.B.E.T.E.S.’

- **D**iabetes ?
- Type **1** diabetes?
- **A**cute issues
- **B**lood glucose monitoring
- **E**ating & drinking
- **T**reatment
- **E**ducation
- **S**afety – how can I reduce diabetes risk in my department?

# ‘D.1.A.B.E.T.E.S.’

- **D**iabetes ?
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- **E**ducation
- **S**afety

# In conclusion:

- Diabetes is one of the glues that binds an acute trust
- We need diabetes champions in anaesthesia
- Reduce ‘insulin resistance’
- Could ‘**D1ABETES**’ be a framework for you to use to champion good practice?

# Thanks for listening