Diabetic ketoacidosis care pathway 2
4 hours to discharge

Time bundle started:_____ NAME: *Affix label*
Location: _____
Date: _____

Whenever possible, all patients should be notified to the diabetes team within 12 hours of admission

Aim: To improve management of diabetic ketoacidosis in adults aged 16 years and over more than 4 hours after presentation

Definition: Severe uncontrolled diabetes with: a) ketonaemia/ketonuria; b) metabolic acidosis: c) usually with hyperglycaemia

Subsequent Management ✔

Review Blood Glucose results and U&Es	
Prescribe usual long acting insulin SC if relevant along with IV insulin (Detemir, Glargine, Insulatard, Humulin I etc) at patient's usual times	
Continue Sodium chloride 0.9% + KCl at 250 mls/hr until BG <14 mmol/L	

When Blood Glucose falls <14 mmol/L (If not fallen in first 4 hours)

• Commence Glucose 10% with 20 mmol KCl 100ml/hour • Reduce Sodium chloride 0.9% to 150mls/hour + KCL (according to K+ table below) • Reduce insulin to 3 units/hour • Maintain Blood Glucose >9 mmol/L and ≤14 mmol/L adjusting insulin rate as necessary	
Review U&Es	
Review K+ result and replace KCl in 500 ml Sodium Chloride 0.9% bag as: • None if anuric or > 5 mmol/L • 10 mmol if level 3.5-5 mmol/L • 20 mmol if level <3.5 mmol/L	

Measure and record Lab glucose, U&Es and HCO3 4 hourly for 24 hours (Measure lab BG 2 hourly if BG>20mmol/l)

8 ☐ 12 ☐ 16 ☐ 20 ☐ 24 ☐

Convert back at next convenient meal time to usual sc insulin regimen when: • HCO3 within normal reference range • Patient eating normally Stop iv fluids and iv insulin 30 mins after usual injection of pre-meal sc insulin	
Phone/refer for specialist diabetes review before discharge. If not available, ensure specialist team receives a copy of the discharge summary	
Do not discharge until HCO3 normal, established on usual sc regimen and eating normally	

If Blood Glucose rises >14 mmol/L after glucose commenced ✔

• Continue Glucose 10% with 20mmol KCL at 100ml/hour • Continue Sodium chloride 0.9% at 150mls/hour + KCL • Increase insulin to maintain Blood Glucose > 9 mmol/L and ≤14 mmol/L • When Blood Glucose ≤ 14mmol/L adjust insulin rate as necessary to maintain Blood Glucose > 9 and ≤ 14 mmol/L	

Good Clinical Practice

Record SEWS/MEWS/SIRS and GCS score. Finger prick Blood Glucose hourly

Review other investigations

If not improving at start of this bundle:
- Check that equipment is working
- Confirm venous access is secure
- Check non-return valve on pump
- Replace 50ml syringe with fresh saline & insulin
- Call consultant/senior physician if all the above is working and patient still deteriorating

Supplementary Notes

1. Continuation of Insulin It is reasonable to use a point-of-care blood glucose meter to monitor blood glucose level if the previous laboratory blood glucose value is less than 20 mmol/L.

2. Consider Precipitating Factors
Common causes include:
- Omissions of insulin
- Infection
- Newly diagnosed
- Myocardial infarction
- Combination of the above.

Some or all of the following may have contributed to the DKA episode:
- Errors in insulin administration
- Faulty equipment
- Practical problems.

3. Refer for Specialist Diabetes review as soon as possible
For local diabetes Service:
- Insert No here_____

Ensure insulin is prescribed before patient leaves hospital.

Fluid (potassium) prescription sheet

	DATE	FLUID POTASSIUM	RATE Dose (mmol)	Signature	Serial No Batch No	Time begun	Given by
A		Sodium Chloride 0.9%	250ml / hour				
B		Sodium Chloride 0.9%	250ml / hour				
C		Sodium Chloride 0.9%	150ml / hour				
D		Sodium Chloride 0.9%	150ml / hour				
E		Sodium Chloride 0.9%	150ml / hour				
F		Sodium Chloride 0.9%	150ml / hour				
G							
H							

Once Blood Glucose <14mmol start Glucose 10% in addition to Sodium Chloride 0.9%

I		Glucose 10%	100ml/hour				
		KCL 20 mmol					
J		Glucose 10%	100ml/hour				
		KCL 20 mmol					
K							

Intravenous Insulin Prescription

DATE TIME	INSULIN RATE (units/hr)	TYPE OF INSULIN	SIGNATURE	GIVEN BY
	6units/hr			
	3units/hr			