

MULTIPLE VRIII CHARTS		CHART	OF
Name:	Hospital:	CRITICAL CARE VRIII <small>ONLY FOR USE IN CRITICAL CARE</small> Stress hyperglycaemia CBG >10mmol/L on two or more occasions with the oversight of clinical judgement Diabetic patient normally on insulin, unable to take oral food/fluid or undergoing frequent feeding interruptions and for whom adjustment of their own regimen is not possible	
HOSP N.O:	Ward:		
D.O.B:	Cons.:		
Date: / / 20			

TREATING HYPOGLYCAEMIA (ON VRIII) = CBG < 4 mmol/l

- NURSE LED TREATMENT** Call for **HELP** + Stop IV Insulin + Check A-B-C
- Is patient asymptomatic or suitable for oral glucose - 4 glucose tablets or 2 glucose gels
- Is patient symptomatic or NBM:**
- IV access secured**
 - Give 20% Glucose 100 mls IV Stat
 - Check CBG every 15 mins
 - If CBG < 4 mmol/L, repeat 20% Glucose IV up to 3 times (4 Boluses in total)
 - OR... If NO time to secure IV ACCESS**
 - 1 mg Glucagon IM once + Secure IV access
 - Give 20% Glucose 100 mls IV Stat + Check CBG every 15 mins
 - If CBG < 4 mmol/L, repeat 20% Glucose IV up to 3 times (4 Boluses in total)
- Restart VRIII once CBG>4, run VRIII at 0.2 ml/hr for 1 hour, after 1 hour follow a reduced VRIII protocol (i.e. IN to ST)**

- CONTINUED TREATMENT**
- If persistent Hypoglycaemia after 3 boluses of 20% Glucose:
 - URGENT** Medical or Diabetes Team review
 - If Hypoglycaemia occurs with **Reduced** VRIII protocol use increased dose of Dextrose/Glucose

20% GLUCOSE BOLUS			Date	Time	Sign	Date	Time	Sign	GLUCAGON			Date	Time	Sign
100 ml	IV	BOLUS							1 mg	IM	Once in 24 hrs			
As per treating HYPOGLYCAEMIA						As per treating HYPOGLYCAEMIA						Once in 24 hrs		
Sign			Date			Sign			Date					

TREATING HYPERGLYCAEMIA (ON VRIII) = CBG > 12 mmol/L

- INITIAL TREATMENT** Check Urinary or Blood ketones
- If Urinary ketones ≥ +++ or Blood ketones ≥ 3mmol/L
 - Follow DKA management guidelines
 - Urgent Medical or Diabetes Team review
 - If Urinary ketones ≤ ++ or Blood ketones < 3mmol/L
 - If patient unwell - Medical Team review
 - Hourly Blood ketones and continue hourly CBG

- CONTINUED TREATMENT**
- If patient has CBG > 12 mmol/L despite VRIII for three hours
 - Consider changing to an increased VRIII protocol (i.e. ST to IN)
 - If persistent Hyperglycaemia
 - Medical Team or Diabetes Team review

RESTARTING USUAL DIABETES MEDICATION

- Patient must be able to eat and drink normally
- Usual diabetes medication and a meal must be taken **one hour before** VRIII is stopped
- If LONG ACTING INSULIN was omitted, then continue VRIII till next LONG ACTING INSULIN dose given or contact Diabetes Team
- Once VRIII stopped please refer to standard CBG monitoring
- If patient is new to insulin as part of an emergency procedure consult Diabetes or Medical Team before stopping VRIII
- If patient's CBG is outside the range of 4-14 mmol/L then consult Diabetes or Medical Team prior to discharge

USUAL DIABETES MEDICATION AND A MEAL MUST BE GIVEN ONE HOUR BEFORE VRIII IS STOPPED

INSTRUCTIONS	PRESCRIBERS	NURSES
	<ol style="list-style-type: none"> Write ALL usual diabetes medications in Drug Chart and Insulin Chart If the patient is on LONG ACTING INSULIN prescribe 0.8 x normal dose, if clinically safe to do so Omit all other diabetes medication Prescribe Fluid on FLUID PRESCRIPTION (below) Prescribe VRIII on VRIII PRESCRIPTION (page 3) Consider daily de-escalation especially with stress hyperglycaemia 	<ol style="list-style-type: none"> Sign for each fluid on FLUID RECORD (below) Sign for each syringe of insulin on INSULIN RECORD (page 3) VRIII must always be given alongside a substrate of nutrition (enteral or parenteral) or IV glucose/dextrose IV dextrose should be given on feed breaks in primarily NG fed patients with diabetes to ensure nutritional substrate In unfed non-diabetics omission of IV glucose/dextrose can be considered with oversight of clinical judgement (rare) VRIII can continue beyond 24 hrs, do not stop for doctor review

WHICH FLUID TO USE FOR A FOR A VRIII

All fluids must contain glucose or dextrose and be run through an IV pump

STANDARD FLUID	ALTERNATIVE FLUIDS <i>To be prescribed by an experienced clinician and reviewed regularly</i>		
1 st choice in most patients (reduced volume)	No concern of fluid overload	Low volume / High Glucose option	Customised Fluid <i>To be used by diabetes team</i>
10% Dextrose	5% Glucose	20% Dextrose	Prescribe on: FLUID PRESCRIPTION
0.5ml/Kg/hr Ideal Body Weight (Average 42 ml/hr)	1 ml/Kg/hr Ideal Body Weight (Average 83 ml/hr)	As per physician instruction	Specify rate: ml/hr

Prescribed fluids are continuous (eg: as many bags required until VRIII stopped or prescription changed)

FLUID PRESCRIPTION AND RECORD

Only required if no enteral or parenteral nutritional substrate

PRESCRIPTION				RECORD			
Date	Fluid	Rate ml/hr	Sign	Date	Time	Nurse Prep.	Nurse Chk.
Ensure background substrate of nutrition or IV glucose/dextrose for those on VRIII							
	10% Dextrose						
Nutritional substrate for duration of NG feed break only (suggested Dextrose 10% 42ml/hr)							
	10% Dextrose						

Middle page

VARIABLE RATE INTRAVENOUS INSULIN INFUSION PROTOCOLS (mls/hr)

Select: Protocol according to units/day. **ST**andard protocol (CODE = **ST**) 24 to 100 units/day

USE CODE (in red) to prescribe VRIII opposite on **VRIII PRESCRIPTION AND INSULIN RECORD**

CBG mmol/L	ST andard Protocol 1 st choice in most patients Patient on 24-100 units/day	RE duced Protocol Patient on < 24 units/day and stress hyperglycaemia	IN creased Protocol Patient on > 100 units/day	CU stomised Protocol To be used by diabetes team
Target range 6-12				
< 4.0	FOLLOW TREATING HYPOGLYCAEMIA GUIDELINES (page 4)			
4.1 - 6.0	** RATE = 0.1 ml/hr if CBG 4.1-6 and LONG ACTING INSULIN continued			
	0.5 **	0.2 **	0.5 **	
6.1 - 8.0	1	0.5	2	
8.1 - 10.0	2	1	4	
10.1 - 14.0	4	2	6	
14.1 - 19.0	5	3	7	
19.1 - 24.0	6	4	8	
>24.1	8	6	10	
	FOLLOW TREATING HYPERGLYCAEMIA GUIDELINES (page4)			

VRIII PRESCRIPTION AND INSULIN RECORD

If in doubt continue VRIII till prescriber review

PRESCRIPTION				RECORD				
USE CODE: ST, RE, IN, CU				49.5ml of 0.9% Saline with 50 units Actrapid® in a 50 ml syringe				
VRIII CODE	Date	Time	Sign	Date	Time	Prep.	Chk.	VRIII SET UP
								<ul style="list-style-type: none"> Use a line with anti-reflux and anti-syphon valve Prime line with 5ml before attaching to patient Starting syringe volume should be 45ml when first attached to patient Each new syringe must: <ul style="list-style-type: none"> Start at 45mls Be signed for on record opposite Start before previous finished

IV DEXTROSE SHOULD BE GIVEN DURING FEED BREAKS ON PRIMARILY NG FED PATIENTS WITH DIABETES

Date	/	/20	Time hh:mm	IF VRIII > 12 HOURS ENSURE A PLAN IS IN PLACE FOR WHEN AND HOW VRIII IS TO BE STOPPED																	
Capillary Blood Glucose Level mmol/L CHECK CBG HOURLY 2 hourly if no change in VRIII rate for 4 hours (BITCH face (Excluding NG feed breaks)	>24.1	IF CAPILLARY BLOOD GLUCOSE > 12 MMOL/L FOR THREE HOURS FOLLOW HYPERGLYCAEMIA GUIDELINES																			
	22 - 24																				
	19 - 21.9																				
	17 - 18.9																				
	16 - 16.9																				
	15 - 15.9																				
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	13 - 13.9																				
	12 - 12.9																				
	11 - 11.9																				
	10.1 - 10.9																				
	9 - 10																				
	8 - 8.9																				
	7 - 7.9																				
6 - 6.9																					
5 - 5.9																					
4.1 - 4.9																					
3 - 4.0																					
2 - 2.9																					
1 - 1.9																					
0 - 0.9																					
VRIII Protocol in use (ST, RE, IN, CU)																					
Insulin infusion rate	mls/hr																				
Volume to be infused	ml																				
Volume infused	ml																				
Fluid infusion rate	mls/hr																				
Volume to be infused	ml																				
Volume infused	ml																				
Indicate Nutrition (PO, NG, PN, IV)																					
Nurse's Signature																					

PRIOR TO TRANSFER TO WARD, PLEASE ENSURE PATIENT IS ON WARD DOCUMENTATION

VRIII > 12 HOURS CHECK U+E, CHANGE FLUID AS APPROPRIATE

IF VRIII CONTINUED BEYOND 24 HRS, DOCTOR REVIEW; CONTINUE VRIII WITH CLEAR RECORD OF TRANSFER TO NEW CHART