Re	eorder code: WMT261G	MULTIPLE VRIII C	HARTS	CHART	OF								
lam	٥.	Hospital:			VRIII	eason							
		Ward:		Variable Ra	ate Intravenous Insulin Infusion	Please tick n							
	OSP N.O: ADDRESOGRAPI O.B:	Cons.:		Medical reaso	n (see intranet guidance)	□							
0.0.1	В:	Date: / / 20	0	_	ssessment Clinic (PAC) plan - VRIII nce Guide' used								
	PRESCRIB	ERS			NURSES								
RUCTIONS	<ol> <li>Write ALL usual diabetes mediand Insulin Chart</li> <li>Record VRIII as a supplementa</li> <li>If the patient is on LONG ACTIONS x normal dose (round dow</li> <li>Omit all other diabetes medical</li> </ol>	ry chart on Drug Chart NG INSULIN prescribe n to nearest unit)	2. Sign f 3. Sign f 4. Fluids 5. VRIII	Ensure every section of chart is appropriately completed 2. Sign for each fluid on FLUID RECORD (below) 3. Sign for each syringe of insulin on INSULIN RECORD (page 3) 4. Fluids must be administered through an IV pump									

## WHICH FLUID TO USE FOR A FOR A VRIII

before VRIII is stopped

6. VRIII and Fluids must not be disconnected (eg peri-operatively)

7. VRIII can continue beyond 24 hrs, do not stop for doctor review

8. Usual diabetes medication and a meal must be given one hour

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

5. Prescribe Fluid on FLUID PRESCRIPTION (below)

6. Prescribe VRIII on VRIII PRESCRIPTION (page 3)

7. Daily U+E's, change fluid as appropriate

8. Discuss how and when VRIII to be stopped

STANDARD FLUID	To be p		TERNATIVE FLUIDS perienced clinician and rev	riewed regularly
1 <sup>st</sup> choice in most patients	K > 6 mmol/L	K < 4 mmol/L	If repeatedly hypoglycaemic despite VRIII Reduced Protocol	Customised Fluid To be used by diabetes team
0.45% NaCl + 5% Dextrose + 0.15% KCL or <b>'STANDARD'</b>	0.45% NaCl + 5% Dextrose	0.45% NaCl + 5% Dextrose + 0.3% KCL	10% Glucose + 0.15% KCL	Prescribe on: FLUID PRESCRIPTION
100 ml/hr	100 ml/hr	100 ml/hr	100 ml/hr	

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

### FLUID PRESCRIPTION AND RECORD

Check electrolytes daily and change fluid as appropriate

PRESCRIPTION				REC	CORD	
FLUID	ml/hr	Sign	Date	Time	Nurse Prep.	Nurse Chk.
Prescribed fluids a	re continuou	ıs at 100 ml/h	ı <mark>r</mark> (unless sı	pecified)		
	FLUID	FLUID ml/hr	FLUID ml/hr Sign	FLUID ml/hr Sign Date		FLUID ml/hr Sign Date Time Nurse Prep.

## 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

- 1. Give 20% Glucose 100 mls IV Stat
- 2. Check CBG every 15 mins
- 3. 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. 1 mg Glucagon IM once + Secure IV access
- 2. Give 20% Glucose 100 mls IV Stat + Check CBG every 15 mins
- 3. 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**

- 1. If persistent Hypoglycaemia after 3 boluses of 20% Glucose:
  - URGENT Medical or Diabetes Team review
- 2. If Hypoglycaemia occurs with Reduced VRIII protocol use 10% Glucose + 0.15% KCL (page 1)

20% GLUCOSE BOLUS		BOLUS	Date	Time	Sign	Date	Time	Si	gn	(	LUCA	GON	Date	Time	Sign		
100 ml	IV	BOLUS								1 mg	IM	Once in 24 hrs					
	oer trea	•									per tro	eating CAEMIA	0	Once in 24 hr			
Sign		Date								Sign		Date					

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

INITIAL TREATMENT

**Check Urinary or Blood ketones** 

- 1. If Urinary ketones ≥ +++ or Blood ketones ≥ 3mmol/L
  - a. Follow DKA management guidelines
  - b. Urgent Medical or Diabetes Team review, if applicable Contact Anaesthetist on list
- 2. If Urinary ketones ≤ ++ or Blood ketones < 3mmol/L
  - a. If patient unwell Medical Team review
  - b. Hourly Blood ketones and continue hourly CBG

#### CONTINUED TREATMENT

- 1. If patient has CBG > 12 mmol/L despite VRIII for three hours
  - Consider changing to an increased VRIII protocol
- 2. 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

# VARIABLE RATE INTRAVENOUS INSULIN INFUSION PROTOCOLS (mls/hr)

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

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

### VRIII PRESCRIPTION AND INSULIN RECORD

If in doubt continue VRIII till prescriber review

	<b>, ,</b>																
CBG mmol/L	STandard Protocol				PRES	CRIPTIC	NC	RECORD									
Target range 6-12	1st choice in most patients Patient on 24-100 units/day	Protocol Patient on < 24 units/day	Protocol Patient on > 100 units/day	USE CODE	ST, RE,	IN, CU	49.5ml of 0.9% Saline with 50 units Actrapid® in a 50 ml syringe										
< 4.0	FOLLO	W TREATING HYPOGL	YCAEMIA GUIDELINES (	VRIII CODE	Date	Sign	Date	Time	Prep.	Chk.	VRIII SET UP						
4.1 - 6.0	** RATE =	: 0.1 ml/hr if CBG 4.1-6 a	nd LONG ACTING INSULIN	ontinued													
	0.5 **	0.2 **	0.5 **									<ul> <li>Use a line with anti-reflux and anti- syphon valve</li> </ul>					
6.1 - 8.0	1	0.5	2									Prime line with 5ml before attaching to					
8.1 - 12.0	2	1	4									patient					
12.1 - 16.0	4	2	6									Starting syringe volume should be 45ml					
16.1 - 20.0	5	3	7									when first attached to patient  Each new syringe must:					
20.1 - 24.0	6	4	8					Date Time	Start at 45mls								
>24.1	8	6	10									Be signed for on record opposite					
×24.1	FOLLO	W TREATING HYPERG	LYCAEMIA GUIDELINES								Start before previous finished						
	PATIE	NTS WITH DIAB	ETES ON INSULIN	MUST ALWAYS H	AVE A SOU	RCE OF	INSULIN	AND GL	UCOSE o	r DEXTR	OSE	RT					

ate	,	/20	T .	ime hh:mm																								
ite	/	/20	'	iiie nn:mm													IF VRIII	> 12 HOL	JRS ENSU	RE A PLA	N IS IN P	ACE FOR	WHEN A	ND HOW	VRIII IS	TO BE ST	OPPED	
				>24.1																								
Capillary Blood Glucose Level mmol/L				22 - 24																								
			19 - 21.9																									
			17 - 18.9																									
	S		16 - 16.9																									
	ᇜ		15 - 15.9			F CAP	ILLAR	Y BLO	OD G	LUCO	SE > 1	2 MN	IOL/L	FOR T	HREE	HOU	RS FO	LLOW	HYPE	RGLY	CAEN	IIA GL	JIDELI	NES				
	3		14 - 14.9																									
	ÍΨ	_	13 - 13.9																									
	$\leq$	. <u>-</u>		<b>12 - 12.9</b> 11 - 11.9																								
	0	Ö	E	10.1 - 10.9																								
	Ξ	CBG	HOURLY	9 - 10																								
	$\equiv$		¥	8 - 8.9			<del>                                     </del>			_				V -		CL		<b>A</b> /	CD			<b>/</b> [						
	_	Š	_	7 - 7.9			1								V	31		VV		J								
		ш		6 - 6.9																								
	F		5 - 5.9																									
	O		4.1 - 4.9				IF SYN	<b>ІРТОІ</b>	MATIC	OFF	IYPOG	iLYCA	EMIA	AND	NBM	CONS	IDER :	50 ML	S OF	20% G	iLUCC	SE ST	AT					
			3 – 4.0																									
				2 – 2.9				IF CA	PILLA	RY BL	OOD	GLUC	OSE <	4.0 N	MOL,	L FOI	LOW	THE F	IYPOG	LYCA	<b>EMIA</b>	GUID	ELINE	S				
				1-1.9																								
				0-0.9																								
				od mmol/L)		ļ	<u> </u>																					
			(ST,				<u> </u>																					
				mls/hr		<u> </u>	<u> </u>																					
			used	ml																								
Vol	ume	infused		ml																								
d inf	fusior	n rate		mls/hr			ļ																					
Vol	ume	to be inf	used	ml																								
Vol	ume	infused		ml																								
rse's	Signa	ature														1	/RIII >	12 H	<b>OURS</b> :	CHE	CK U+	E, CH	ANGE	FLUID	AS A	<b>PPRO</b>	<b>PRIA</b>	ГЕ