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QRG -	QRG – Ordering a HHS protocol					
No.	Action	Responsibility				
1.	From the Requests / Care Plans tab in PowerChart click on +Add and type in "HHS"	Doctors / NMP				
	Search: hhs 🔍 💘 Advanced Options 👻 Type: 👘 Inpatie					
	🔯 🖆 🚖 📲 🖹 Folder: Search within: 🗐 🗸					
	Insulin HHS					
2.	Click on the Powerplan and select Done to open the plan	Doctors / NMP				
3.	Select any orders you want for your patient by ticking the boxes (monitoring, insulin, fluids). Note that the referral to the diabetes nurses has already been pre-ticked and will automatically be requested for any patient on the HHS pathway.	Doctors / NMP				
	All patients presenting with HHS MUST be referred to the					
	Diagnosis	н				
	Blood Glucose as high as > 30 mmol/L Less Ketonemia < 3 mmol/L					
	Monitoring Hourly blood glucose, urine output, GCS. Initial Ketones - use "Glucose (point of care)" order. pH / K+ / Sodium+ hourly for first 2 hours and then 2 hourly thereafter until stable. Osmolality (approximate calculated osmolality = 2Na+ + Glucose + Urea which is measured of the state of the					
	Vital Signs Adult					
	Glucose level, blood      Glucose (Point of Care)					
	Potassium level, blood					
	🗌 🕅 Sodium level, blood					
	POTASSIUM REPLACEMENT     Aim to maintain between 4.0 and 5.0 mmol/L     Over 5.5 mmol/L Nil replacement needed     3.5 - 5.5 mmol/L 40 mmol/L     Below 3.5 mmol/L Senior Review Needed     First bag:					
	Sodium chloride 0.9% (Sodium Chloride 0.9% Infusion)     DOSE: 1,000 mL - ROUT     Second bag (choose either sodium chloride or potassium containing bag):					
	Sodium chloride 0.9% (Sodium Chloride 0.9% Infusion)         DOSE: 1,000 mL - ROUT					
	Image: Characteristic and the second se					
	Sodium chloride 0.9% (Sodium Chloride 0.9% Infusion)         DOSE: 1,000 mL - ROUT					
	Image: Soliton Chloride + Soliton Chloride + DOSE: 1,000 mL - ROUT     (Potassium Chloride 40mmol with Solitum Chlorid      Fourth bag (choose either sodium chloride or potassium containing bag):					
	Image: Sodium chloride 0.9% (Sodium Chloride 0.9% Infusion)         DOSE: 1,000 mL - ROUT					
	Im High Alert Potassium chloride + Sodium chloride     DOSE: 1,000 mL - ROUT     (Potassium Chloride 40mmol with Sodium Chlorid      Fifth bag (choose either sodium chloride or potassium containing bag):					
	Sodium chloride 0.9% (Sodium Chloride 0.9% Infusion) DOSE: 1,000 mL - ROUT					
	Image: Sixth bag (choose either sedium chloride or notassium containing bag)					





4.	Tick the box for Insulin Solut 0.05 kg/unit/hour.	Doctors / NMP			
	<ul> <li>IMPORTANT: Note that the system requires a weight to calculate the infusion rate.</li> <li>If a measured weight has already been entered in the patient's record under assessments / Fluid Balance &gt; Adult Assessments &gt; Measurements, this will automatically populate the insulin infusion order and the rate will be calculated. Continue with step 6.</li> </ul>				
	<ul> <li>If no measured weig order. Please note th Balance screen or an</li> </ul>				
	To manually enter a weight, s then right-click on the Insulin Blood Glucose, Ketnes - use "Gluco Glucose level, blood Glucose (Point of Care) Glucose	select the insuli order to open t Status ose (point of care)" order, Urine Ou sulin (e.g. Levemir / Lan as resolved: e	n order by setting a tick he order details Details tput and GCS is monitored h tus / Tresiba) DOSE 50 mL - ROUTE: int	k next to it and	
5.	Enter the weight manually (in kg)				
	Details	Offset Details	Diagnoses		
	Base Solution	Bag Volume	Rate	Infuse Over	
	Sodium Chloride 0.9% Infusion (con	t.) 50 mL	80		
	Additive	Additive Dose	Normalised Rate	Delivers Occ	ur
		50 unit	S 0.05 unit/kg/hour	Ever	У
	Total Bag Volume	50 mL			
	Weight:				_
	↓ ↓ ↓				
	A rate will calculate using the manually entered weight.				
	Details for Insulin solut	ole human fo	or Infusion 50 uni	it [0.05 unit/kg/h	iC
	Details To Continuous Deta	ils 🕒 Offset Details	i Diagnoses		
	Base Solution	Bag Volume	Rate	Infuse Over	
	Sodium Chloride 0.9% Infusion (o	cont.) 50 mL	🚼 4 mL/hour	12.5 hours	
	Additive	Additive Dose	Normalised Rate	Delivers	
	Insulin soluble human for Infusio	n 50 unit	0.05 unit/kg/hour	4 unit/hour	
	Total Bag Volume	50 ml			
		7	D 10 10 10		_
	weight: weight	Туре:	Result dt/tm:		
	80 🔽 🗸 Manua	lly Entered	29/Dec/2017 12:08:45 0	SMT	
	Infusion instructions				
	Minimise the order details to continue with selecting other items of the plan, such as				
	fluids by clicking on the down arrow				



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	•	Select appropriate potassium / fluid replacement.				
<	🎐 POTASSIUM REPLACE	MENT				
	Aim to maintain betwe	een 4.0 and 5.0 mmol/L				
	Over 5.5 mmol/L 3.5 - 5.5 mmol/L	Nil replacement needed 40 mmol/L				
	Below 3.5 mmol/L	Senior Review Needed		_		
	First bag:	(Cardiuma Chlarida 0.0% Infusion)	DOSE 1 000	<u>,</u>		
	Socium chioride 0.9%	(Sodium Chloride 0.9% Infusion)	DUSE: 1,000	,		
	Sodium chloride 0.9%	(Sodium Chloride 0.9% Infusion)	DOSE: 1.000	)		
	High Alert Potassiu (Potassium Chlorid	m chloride + Sodium chloride e 40mmol with Sodium Chlorid	DOSE: 1,000	)		
<	🎐 Third bag (choose eith	er sodium chloride or potassium conta	aining bag):			
	Sodium chloride 0.9%	(Sodium Chloride 0.9% Infusion)	DOSE: 1,000	)		
	High Alert Potassiu (Potassium Chlorid	m chloride + Sodium chloride le 40mmol with Sodium Chlorid	DOSE: 1,000	)		
ś	🎐 Fourth bag (choose eit	her sodium chloride or potassium con	taining bag):			
	Sodium chloride 0.9%	(Sodium Chloride 0.9% Infusion)	DOSE: 1,000	)		
	High Alert Potassiu (Detersions Chlorid)	m chloride + Sodium chloride	DOSE: 1,000	)		
	Fifth had (choose eith)	e sodium chloride er petassium conta	ining hag):			
	Sodium chloride 0.9%	(Sodium Chloride 0.9% Infusion)	DOSE: 1.000	)		
	High Alert Potassiu (Potassium Chlorid)	m chloride + Sodium chloride	DOSE: 1,000	)		
IMPORTANT Please note that needs to be ente	when sequential bag red. If for example ar	er sodium chloride or notassium conta is of fluids are ordered, starting n initial bag of Sodium Chloride	times /offset 0.9% 1000mL			
IMPORTANT Please note that needs to be ente over 1 hour, follo hours is to be orc to start after the 2	when sequential bag red. If for example ar wed by a second bag dered, the 2 <sup>nd</sup> bag wil 1 <sup>st</sup> bag has finished.	er sodium chloride or notassium conta is of fluids are ordered, starting n initial bag of Sodium Chloride g of Sodium Chloride 0.9% 100 I have to have an off-set of 1 ho	times /offset 0.9% 1000mL 0mL over 2 our entered for it			
IMPORTANT Please note that needs to be ente over 1 hour, follo hours is to be oro to start after the 2	when sequential bag red. If for example ar wed by a second bag dered, the 2 <sup>nd</sup> bag wil 1 <sup>st</sup> bag has finished.	er sodium chloride or notassium conta is of fluids are ordered, starting n initial bag of Sodium Chloride g of Sodium Chloride 0.9% 100 I have to have an off-set of 1 ho	times /offset 0.9% 1000mL 0mL over 2 our entered for it	-		
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IMPORTANT Please note that needs to be ente over 1 hour, follo hours is to be orc to start after the +1 hr	<ul> <li>Sixth bag (choose either when sequential bag red. If for example ar wed by a second bag dered, the 2<sup>nd</sup> bag will 1<sup>st</sup> bag has finished.</li> <li>First bag: Sodium chloride 0.9% (Second bag (choose either Sodium Chloride 0.9% (Sodium Chloride 0.9% (Third bag (choose either Sodium chloride 0.9% (Sodium chloride</li></ul>	s of fluids are ordered, starting n initial bag of Sodium Chloride g of Sodium Chloride 0.9% 100 l have to have an off-set of 1 he Sodium Chloride 0.9% Infusion) her with or without potassium): Sodium Chloride 0.9% Infusion) % (40mmol in 1,000mL) + nfusion 1,000 mL r with or without potassium): Sodium Chloride 0.9% Infusion)	times /offset 0.9% 1000mL 0mL over 2 our entered for it DOSE: 1,000 mL - F DOSE: 1,000 mL - F DOSE: 1,000 mL - F			
IMPORTANT Please note that needs to be ente over 1 hour, follo hours is to be or to start after the 2 	<ul> <li>Sixth bag (choose either when sequential bag red. If for example ar wed by a second bag dered, the 2<sup>nd</sup> bag will 1<sup>st</sup> bag has finished.</li> <li>First bag:</li> <li>Sodium chloride 0.9% (Second bag (choose either Sodium chloride 0.9%) (Potassium Chloride 0.9%)</li> <li>Potassium Chloride 0.9% (Second bag (choose either Sodium Chloride 0.9%)</li> </ul>	s of fluids are ordered, starting n initial bag of Sodium Chloride g of Sodium Chloride 0.9% 100 l have to have an off-set of 1 he Sodium Chloride 0.9% Infusion) her with or without potassium): Sodium Chloride 0.9% Infusion) % (40mmol in 1,000mL) + nfusion 1,000 mL	ining ban): times /offset 0.9% 1000mL 0mL over 2 our entered for it DOSE: 1,000 mL - F DOSE: 1,000 mL - F			
IMPORTANT Please note that needs to be ente over 1 hour, follo hours is to be ord to start after the ✓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	<ul> <li>Sixth han (choose either when sequential bag red. If for example ar wed by a second bag dered, the 2<sup>nd</sup> bag will 1<sup>st</sup> bag has finished.</li> <li>First bag:</li> <li>Sodium chloride 0.9% (Second bag (choose either Sodium Chloride 0.9%)</li> <li>Potassium Chloride 0.9% (Potassium chloride 0.9%)</li> <li>Third bag (choose either Sodium chloride 0.9%)</li> <li>Third bag (choose either Sodium chloride 0.9%)</li> <li>Sodium chloride 0.9% (Chloride 0.3%)</li> <li>Sodium chloride 1.5%</li> <li>Chloride 0.3% (40mmon chloride 0.3%)</li> </ul>	s of fluids are ordered, starting initial bag of Sodium Chloride g of Sodium Chloride 0.9% 100 I have to have an off-set of 1 he Sodium Chloride 0.9% Infusion) her with or without potassium): Sodium Chloride 0.9% Infusion) % (40mmol in 1,000mL) + nfusion 1,000 mL r with or without potassium): Sodium Chloride 0.9% Infusion) % (40mmol in 1,000mL) + nfusion 1,000 mL r with or without potassium): Sodium Chloride 0.9% Infusion) odium chloride (Potassium Lin 1,000mL) + Sodium Chlori 0,3% (40mmol in 1,000m	times /offset 0.9% 1000mL 0mL over 2 our entered for it DOSE: 1,000 mL - F DOSE: 1,000 mL - F DOSE: 1,000 mL - F DOSE: 1,000 mL - F DOSE: 1,000 mL - F			
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IMPORTANT Please note that needs to be ente over 1 hour, follo hours is to be ord to start after the 2 ↓1 hr ↓1 hr ↓1 hr ↓2 Details for Pota Details ↑1 ↓2 Con Insulin DKA (Initiated Start offset: 1	<ul> <li>Sixth has (choose either when sequential bag red. If for example ar wed by a second bag dered, the 2<sup>nd</sup> bag will 1<sup>st</sup> bag has finished.</li> <li>First bag:</li> <li>Sodium chloride 0.9% (</li> <li>Second bag (choose either of the second bag (choose either of the second</li></ul>	s of fluids are ordered, starting in initial bag of Sodium Chloride g of Sodium Chloride 0.9% 100 I have to have an off-set of 1 he Sodium Chloride 0.9% Infusion) her with or without potassium): Sodium Chloride 0.9% Infusion) % (40mmol in 1,000mL) + nfusion 1,000 mL r with or without potassium): Sodium Chloride 0.9% Infusion) odium chloride 0.9% Infusion) Dodium chloride 0.9% Infusion) odium chloride 0.9% Infusion)	ining ban): times /offset 0.9% 1000mL 0mL over 2 our entered for it DOSE: 1,000 mL - F DOSE: 1,000 mL - F DOSE: 1,000 mL - F DOSE: 1,000 mL - F DOSE: 1,000 mL - F			



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7.	Alternatively, a defined start time can be entered for the bag of fluid. To enter a start time, select the order, right-click modify and in the order select the tab "Details". In this tab a specific Start Date / Time can be entered. DOSE 1000ml = ROUTE introVENOUS - influion = RATE230 mJ/hour = INFUSE OVER: 4 hour - STARE29 The bag (choose after with or without potasium) The Column Choirde 03% (d/Ommol in 1,000mL) = Sodium Choirde 0.9% Influsion 1,000 mL DOSE 100 mL = ROUTE- introVENOUS - influion = INFUSE OVER: 4 hour - STARE29 The bag (choose after with or without potasium) Column Choirde 0.3% (d/Ommol in 1,000mL) = Sodium Choirde 0.9% Influsion 1,000 mL Details Continuous Details () Offset Details () Dagnoses () Adherence Column () Details () Offset Details () Dagnoses () Adherence Column () Dagnose () Adherence () Dagnose () Dagnose () Adherence () Dagnose () Da	Doctor / NMP
8.	Select appropriate Glucose replacement         Glucose Replacement: Concurrent use of glucose: - WHEN Capilla         Glucose 5% + KCl 20 mmol/L (Potassium Chloride 20mmol with Glucose 5% intravenous infusion)         Glucose 5% + KCl 20 mmol/L (Potassium Chloride 20mmol with Glucose 5% intravenous infusion)         Her Signal Glucose 5% + KCl 20 mmol/L (Potassium Chloride 20mmol with Glucose 5% intravenous infusion)         WHEN Capillary blood glucose < 7 MMOLS START         Glucose 10% + KCl 20 mmol/L (Potassium Chloride 10mmol with Glucose 10% intravenous infusion)         Glucose 10% + KCl 20 mmol/L (Potassium Chloride 10mmol with Glucose 10% intravenous infusion)         Her Signal Glucose 10% + KCl 20 mmol/L (Potassium Chloride 10mmol with Glucose 10% intravenous infusion)         Please order both bags of Glucose (either 5% or 10%) at the same time as the second bags already have the correct Offset time (i.e. starting time) entered.	Doctor / NMP
9.	When all orders have been selected (ticked), click	Doctor / NMP
10.	If at this point something was missing from one of the orders (for example a weight), then this would be denoted with next to the orderable. Orders can only be signed, once all required fields have been completed. To do so, click on the medication with the symbol and complete details.	Doctor / NMP
11.	Sign	Doctor / NMP
12.	Navigate to the drug chart to check that all meds have been ordered correctly.	Doctor / NMP



13.	In order to <b>view</b> sections of the plan that have not been ordered, and to <b>order items</b> <b>later on from the same plan</b> , navigate to the Request / Care Plans tab in PowerChart. As a default, only items ordered off the plan will display. Click on the light-bulb to expand the view to the whole plan (including items not ordered and general information).	Doctor / NMP
	Orders Decument in Day	
14.	Obstetrics View Urgers Document in Plan	Doctor / NMP
	Newborn Summary	6:
	Results Review Offset 🕅 Component	
	Requests/Care Plans + Add Plans Insulin DKA (Initiated)	
	Drug Chart - Document in Plan - A Continuous - A Continuous	
	Task List Insuin DKA (initiated) General	
	Assessments/Fluid Balance ED TTO packs (Completed) Monitoring	
	Ward 1 TTO packs (Completed)	
	Clinical Notes	
	Alleroits + Add Solution Categorised Solution 500 mL	
	Problems and Diagnoses	
	Form Browser	
	r omin biousei la Continuous la Contractions la Carlo de la Contraction solo mL	
	4 🗄 🥎 🚫 🕂 Add to Phase - 🛄 Comments Start: 19/Mar/2018 16:18 GMT Stop: None 📖	_
	Image: Status         Offset         Image: Status         Details	
	Insulin DKA (Initiated) 19/Mar/2018 16:18 GMT	
	Last updated on: 19/Mar/2018 16:18 GMT by: Test, ClinPrac01	
	⊿ Continuous	
	Diagnosis de la companya de la compa	
	Blood Ketones > 31 mmo/L	
	Acidosis: pH < 7.3 or / and Venous Bicarbonate < 15 mmol/L	
	If you are unsure of diagnosis please refer to Diabetes , intravenous insulin pathway selection plan	
	General General	
	🏈 Severity Criteria - Consider HDU/ITU admission if:	
	Ketones > 6 mmol/l	
	Bicarbonte < 5 mmol/L	
	pH < 71	
	GCS < 12	
	Systolic BP < 90 mmHg	
ł	Heart Rate > 100 or < 60 bpm Oxyme 540vation < 92%	
	All patients presenting with DKA MUST be referred to the Diabetes Team	
	Grand Content of the second se	
	Monitoring	
	Price of the second secon	:0
	(Awaiting Co	-
	Image: Construction of the second s	
	Slood Silucose, Ketones - use "Glucose (point of care)" order, Unine Output and GCS is monitored hourly	
	Gesselwsis, blood	
	🗆 🔂 Vital Signs Adult	
	Prescribing /8	
	Un not stop Long Acting Insulin (e.g. Levemir / Lantus / Iresiba)	
	Stopping fixed rate installin infusion once DKA has resolved:	_
		_
15	If required select items that need to be ordered from the plan by putting a tick in the	Doctor / NIMD
15.	in required, select items that need to be ordered from the plan by putting a tick in the	
	respective box (see step 3). If additional details need to be completed, see step 9.	
	Click Urgers For Signature and then click Sign	