

BG check options

- POCT glucometer (pre/PACU)
- POCT iSTAT (intraop)
- venous/arterial BG
- venous BG (lab)

Glycemic care pathway patient
and/or
Diabetes noted preoperatively

confirm BG order / write order
holding area

<70mg/dL

71-140mg/dL

TARGET
141-180mg/dL

>180mg/dL

TREAT:
12.5g D50
Monitor BG
Q15 until
corrected

Monitor BG
1-2 hourly based
(stable control?)
(recent insulin?)

Monitor BG
every 2 hrs
in OR/ PACU

TREAT!
and
Monitor BG within
first hour of surgery

no

Anticipated surgical time >4hrs?
Complex surgery?
Critical illness?
Metabolic instability /poor control?

yes

Consider initiating
with IV bolus
0.1U/kg

**Subcutaneous
insulin bolus (lispro)***

BG mg/dL	units
181-230	2
231-280	3
281-330	4
331-380	5
381-430	6
431-480	7
>480	8

*max freq. 2hrly

Monitor BG
every 2 hrs

above
target after 2
doses or poor skin
perfusion

Suggested starting doses only
Adjust to response or known
abnormal insulin resistance or
sensitivity

**Continuous IV insulin
(regular)**

BG mg/dL	units/hr
110-119	0.5
120-149	1
150-179	1.5
180-239	2
240-299	3
300-359	4
>360	6

Monitor BG
every hour

Use "Glycemic Mx Panel in
PACU order set to continue
BG control

Stanford Intraoperative Glycemic Care Guidelines

This pathway is NOT intended for management of DKA, HHS

Target blood glucose range 140-180 mg/dL is permissive and based on recommendations from SAMBA, American Diabetic Association and American Association of Clinical Endocrinologists. Exceptions may apply where providers prefer stricter control (complex cardiac, neuro, transplant Sx)

Blood glucose (BG) measurement intraoperatively:

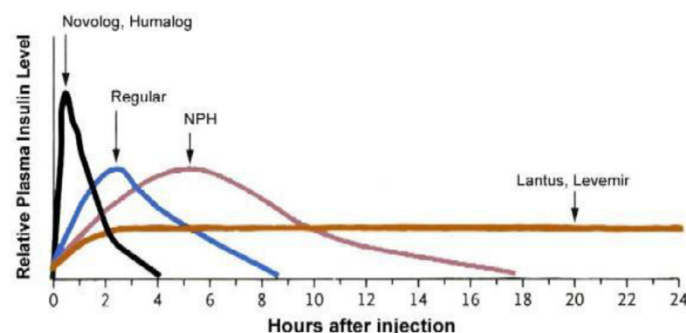
POCT testing glucometers are available in preoperative holding areas and PACU. Nurses in those areas are willing to try come into the OR when asked, but their availability may be limited by workflow in those areas.

CG8 cartridges will soon be available for iSTAT machines which can measure BG intraoperatively.

When POCT is not available, please utilize lab resources to send venous and arterial samples. Turnaround time for these results should be rapid enough to manage BG

Use of subcutaneous insulin analogues (lispro)

Recent reviews have shifted towards a preference for subcutaneous (SC) rapid acting insulin analogues for ambulatory patients and those undergoing shorter, less complex procedures, where skin perfusion will not be compromised. Advantages include rapid onset, ease of administration, low rates of hypoglycemia, and efficacy in correcting hyperglycemia. Repeat dosing at a minimum of 2hr intervals will avoid the chance of a “stacking effect”. Consider switching to a continuous insulin infusion when target range is not achieved after 4hrs.



Uses	Insulin Type	Onset	Peak	Duration	Appearance
Prandial (Nutritional) and/or Correctional	Rapid-acting Humalog (lispro) Novolog (aspart) Apidra (glulisine)	< 15 min	30 -90 min	3-5 hr	Clear, colorless Can be mixed with NPH only (clear before cloudy).
	Short-acting Humulin R (regular) Novolin R (regular)	30-60 min	2-4 hr	5-8 hr	Clear, colorless Can be mixed with NPH only (clear before cloudy).

Correctional dosing and insulin sensitivity/resistance

Please note dosing suggested in the guideline assumes an 'average' or 'normal response'. This may be reflected in the home total daily dose (TDD) for patients already taking insulin (sum of basal, prandial and correctional). If **TDD is unknown**, approximate **TDD = 0.4U/kg/day**

Sensitivity/resistance may be seen in:

Sensitive: new diagnosis; age > 70 yrs; BMI < 25kg/m² estimated GFR <45ml/min

Resistant: BMI >35kg/m²; home TDD > 80 units; steroids > 20mg prednisone/day

As an alternative, corrective dosing can be calculated from the following formula:

$$\text{dose of insulin} = \left(\frac{\text{measured BG} - 100}{\text{insulin sensitivity factor}} \right)$$

Insulin sensitivity factor (ISF) is the expected change in BG from 1U of insulin. An average value would be 40.

It can be calculated from the TDD when known from the "1800 rule"

$$ISF = \frac{1800}{TDD}$$

Example: 120kg patient with normal renal function and no prior insulin has BG 290mg/dL
Calculate TDD = 48U, ISF = 37.5, Dose to administer: 5U
Note slight increase from pathway reflective of patient obesity

The sliding scale used in the pathway is derived from the "moderately aggressive" scale within current Stanford protocols.

Continuous intravenous insulin infusions

Indications include complex, longer procedures and in patients less metabolically stable. Type 1 diabetics have reduced or minimal endogenous insulin production and therefore stronger indication for this regime in longer procedures.

The sliding scale listed in the pathway is derived from the starting level of the current Stanford IVI protocol (see appendix) and errs towards a conservative approach. This protocol is designed for inpatient use to achieve stricter targets (110-150mg/dL) – the suggested conservative scale is therefore appropriate but titration may be necessary. The continuous infusion of 5% dextrose usually ordered for NPO inpatients with this regime can be omitted is not necessary because of the surgical stress response, but should be considered if control is very labile.

When faster control is indicated, an initiating dose of 0.1U/kg should be considered.

Patients on continuous subcutaneous home infusions

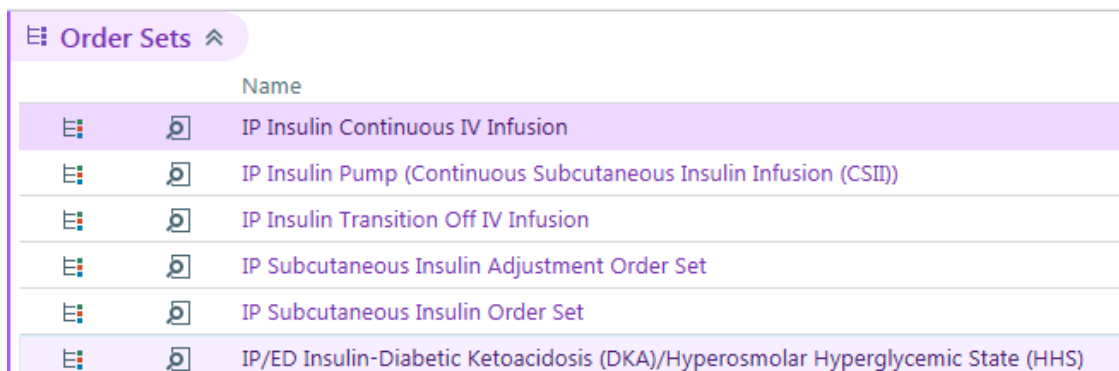
These can remain on the patient until patient is just going to the OR, and restarted in PACU. They cannot be used in the intraoperative phase.

The nurse instructions are included in the appendix. If asked, the order set for “IP Insulin pump Continuous subcutaneous Insulin Infusion (CSII)” can be added to the preoperative order set. This order set defaults to options for oral glucose if BG is low, and should be unchecked (see screenshot in appendix)

Glycemic control in PACU

Current order sets to continue BG management in PACU are complex and hard to navigate within EPIC. For simplicity, a glycemic management panel will be added to the PACU order set which can be selected when appropriate. It will include orders for BG checks, a sliding scale for insulin s.c. bolus and IV regular insulin bolus (if sc route unsuitable). Intended use would be to provide a simple order to bridge until:

1. Discharge home from PACU
2. Starting more complex order sets for patients to be admitted. This would include one from the following screenshot, depending on the planned transition back to their normal regime. This should be discussed with the primary admitting team



The screenshot shows the 'Order Sets' menu in the EPIC system. The menu is titled 'Order Sets' with a small upward arrow icon. Below the title is a table with two columns: 'Name' and a list of order sets. The order sets are listed as follows:

Name
IP Insulin Continuous IV Infusion
IP Insulin Pump (Continuous Subcutaneous Insulin Infusion (CSII))
IP Insulin Transition Off IV Infusion
IP Subcutaneous Insulin Adjustment Order Set
IP Subcutaneous Insulin Order Set
IP/ED Insulin-Diabetic Ketoacidosis (DKA)/Hyperosmolar Hyperglycemic State (HHS)

References:

1. Duggan EW, Carlson K, Umpierrez GE. Perioperative hyperglycemia management: An update. ANESTHESIOLOGY 2017; 126:547–60
2. Handelsman Y., Mechanick J.I., Blonde L., et al: American Association of Clinical Endocrinologists medical guidelines for clinical practice for developing a diabetes mellitus comprehensive care plan. Endocr Pract 2011; 17: pp. 1-53
3. American Diabetes Association. Standards of medical care in diabetes. 2013. Diabetes Care 2013; 36 (Suppl. 1): S11–66
4. Gerlach R¹, Tung A Insulin for Perioperative Glucose Control: Settled Science? Anesthesiology. 2017 Nov;127(5):899-900

Appendix:

STANFORD HEALTH CARE

INSULIN CONTINUOUS IV INFUSION 2956: Summary Guide

Physician Orders Required - Refer to Nursing Orders on Epic

DO NOT USE FOR ACUTE DIABETIC KETOACIDOSIS OR HYPERGLYCEMIC HYPEROSMOLAR STATE (HHS)

1. Discontinue all previous orders for insulin and oral anti-diabetic medications before starting this protocol.

Do Not add insulin to TPN during IV insulin infusion.

2. Nutrition
Patients should be on IV dextrose infusion or enteral nutrition while on insulin drip.
Do not use for patients who are on an oral diet. D/C oral diet or bolus enteral feedings.
Patients must be made **NPO** prior to initiating continuous IV infusion.
If patient can tolerate fluids by mouth, may have **non-caloric** beverages.
Patients must be on ONE continuous carbohydrate source.
 - ☐ Continuous TPN/PPN or continuous enteral feeds
 - ☐ D10/W @ 50 ml/hr - Required for medical-surgical units or IICU
 - ☐ D5/W, D10/W or D5/NS
3. **INITIATE PROTOCOL FOR BG GREATER THAN 150 MG/DL
TARGET BLOOD GLUCOSE (BG) LEVEL 110-150 MG/DL**
4. Monitoring
Check BG immediately prior to starting insulin infusion.
CHECK BG HOURLY. Adjust infusion rate hourly as ordered .
When BG in target range for 4 consecutive hours with stable IV insulin rate (+/- 1 unit), may check BG every 2 hours.
If carbohydrate source is interrupted for greater than 30 minutes, check BG and notify MD.
If patient is off unit for a procedure, RN to accompany patient with meter and D50.
5. Infusion
100 units regular insulin in 100 ml NS. Flush tubing with 20 ml from the bag before starting infusion. Repeat this flush procedure with every tubing change (insulin adheres to tubing). Refer to Continuous IV Insulin Infusion Procedure for instruction on IV dextrose, enteral nutrition and TPN set-up.
6. Initiation
Give Regular insulin IV bolus as ordered by physician. The recommended dose is 0.1 units/kg with a maximum dose of 10 units. If the serum Cr is 2.5 mg/dl or greater or if the patient requires dialysis, the recommended dosing is 0.075 units/kg with a maximum dose of 10 units.
Initiate insulin infusion
Level 1 – Start here for most patients with BG 151-400. If weight is < 55 kg or serum Cr is 2.5 mg/dl or greater, or on dialysis, start on level 1
Level 2 - Start here if BG >400 mg/dl, s/p cardiovascular surgery, s/p solid organ transplant or receiving glucocorticoids.
Exceptions to Level 2- If weight < 55 kg or serum Cr \geq 2.5 mg/dl or on dialysis, start Level 1.
NO PATIENTS START AT LEVEL 3 OR 4

STANFORD HEALTH CARE

INSULIN CONTINUOUS IV INFUSION 2956: Summary Guide

Physician Orders Required - Refer to Nursing Orders on Epic

TARGET BLOOD GLUCOSE (BG) LEVEL 110-150 MG/DL

LEVEL 1			LEVEL 2		LEVEL 3		LEVEL 4	
Glucose		Units/hr	Glucose	Units/hr	Glucose	Units/hr	Glucose	Units/hr
< 70 = HYPOGLYCEMIA (See #8 for treatment)								
STEPS	70-109	0	70-109	0	70-109	0	70-109	0
	110-119	0.5	110-119	1	110-119	2	110-119	3
	120-149	1	120-149	1.5	120-149	3	120-149	5
	150-179	1.5	150-179	2	150-179	4	150-179	7
	180-209	2	180-209	3	180-209	5	180-209	9
	210-239	2	210-239	4	210-239	6	210-239	12
	240-269	3	240-269	5	240-269	8	240-269	16
	270-299	3	270-299	6	270-299	10	270-299	20
	300-329	4	300-329	7	300-329	12	300-329	24
	330-359	4	330-359	8	330-359	14	330-359	28
>360	6	>360	12	>360	16	>360	32	

LEVEL 5		LEVEL 6		LEVEL 7		LEVEL 8		
Glucose		Units/hr	Glucose	Units/hr	Glucose	Units/hr	Glucose	Units/hr
< 70 = HYPOGLYCEMIA (See #8 for treatment)								
STEPS	70-109	0	70-109	0	70-109	0	70-109	0
	110-119	5	110-119	7	110-119	9	110-119	11
	120-149	7	120-149	9	120-149	11	120-149	13
	150-179	9	150-179	11	150-179	13	150-179	15
	180-209	11	180-209	13	180-209	15	180-209	17
	210-239	14	210-239	16	210-239	18	210-239	20
	240-269	18	240-269	20	240-269	22	240-269	24
	270-299	22	270-299	24	270-299	26	270-299	28
	300-329	26	300-329	28	300-329	30	300-329	32
	330-359	30	330-359	32	330-359	34	330-359	36
>360	34	>360	36	>360	38	>360	40	

7. **Adjusting Insulin Level**

If BG target range (110-150 mg/dl) not met after two hours, advance to next level (ie. Level 1 to Level 2)

If hourly BG falls 3 steps or more within a level – Decrease by one level (Level 2 to Level 1). If on Level 1, decrease rate by half one time only. Turn off infusion when rate is less than 0.1 units/hr.

If hourly BG increases 3 steps or more within a level – Increase by one level.

If on Level 8 and unable to achieve target BG range of 110-150 mg/dl after four hours, contact the physician, do not stop infusion, continue at the rate indicated until new orders are obtained.

For BG <110 mg/dl: Stop infusion. If BG <80mg/dL,, check BG every 30 minutes until BG is above 80 mg/dl then, every hour until BG is 110 mg/dl or greater. Re-start infusion one level lower. If on Level 1, decrease insulin rate by half. Turn off infusion when rate is less than 0.1 units/hr.

8. **Hypoglycemic Treatment for IV Insulin Infusion: (BG < 70 mg/dl)**

STOP insulin infusion.

For BG below 50 mg/dl, give 50 ml (25 g) of D50 IV push

STANFORD HEALTH CARE

INSULIN CONTINUOUS IV INFUSION 2956: Summary Guide

Physician Orders Required - Refer to Nursing Orders on Epic

For BG 50-69 mg/dl, give 25 ml (12.5 g) of D50 IV push

Check BG every 30 minutes until BG is above 80 mg/dL, then every hour until BG is 110 mg/dL or greater

Restart insulin infusion when BG is 110 mg/dL or greater. Re-start infusion one level lower. If on Level 1, decrease insulin rate by half. Turn off infusion when rate is less than 0.1 units/hr.

9. After BGs within the target range for four hours with stable IV insulin rate (+/- 1 unit) if on levels 1-3 or (+/-2) if on levels 4-8, consider transition to SQ insulin. Contact MD regarding on-going SQ insulin plan and diet orders. Refer to Transition to SQ insulin Order Set.
Give SQ insulin per MD orders prior to discontinuing infusion. After infusion discontinued, check BG q 1 hour X 2 then, q 2 hour X 1. No corrective insulin is associated with these BG checks. Contact physician if glucose > 250 or < 80 during transition.
Patient may eat after discontinuing the insulin drip if a prandial dose of insulin is ordered with the food.
10. Document BG, insulin rate and level hourly or as ordered.
11. If IICU patient not in target within 8 hours and IV dosing accurate, contact MD and consider transfer to ICU.

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Insulin Corrective Scales

MILD Corrective Insulin Scale: Use if Total Daily Dose of insulin (TDD) including scheduled and corrective scale doses is 0-19 units.

☼ Prandial (Premeal) Insulin Scale		☾ Night Time Insulin Scale	
Less than 70	Follow Hypoglycemia Protocol and notify provider	Less than 110	Treat for hypoglycemia notify Provider
70-80	Subtract 1 unit from scheduled prandial	180-230	1 unit
81-150	0 unit	231-260	1 unit
151-230	1 unit	261-290	1 unit
231-310	2 units	291-320	2 units
311-390	3 units	321-350	2 units
391-470	4 units	351-380	2 units
471-550	5 units and call provider	> 380	3 units

MODERATE Corrective Insulin Scale: Use if TDD including scheduled and corrective scale doses is 20-39 units.

☼ Prandial (Premeal) Insulin Scale		☾ Night Time Insulin Scale	
Less than 70	Follow Hypoglycemia Protocol and notify provider	Less than 110	Treat for hypoglycemia notify provider
70-80	Subtract 1 unit from scheduled prandial	180-230	1 unit
81-130	0 unit	231-260	2 units
131-180	1 unit	261-290	2 units
181-230	2 units	291-320	3 units
231-280	3 units	321-350	3 units
281-330	4 units	351-380	4 units
331-380	5 units	> 380	5 units
381-430	6 units		
431-480	7 units		
> 480	8 units and call provider		

AGGRESSIVE Corrective Insulin Scale: Use if TDD including scheduled and corrective scale doses is 40-59 units.

☼ Prandial (Premeal) Insulin Scale		☾ Night Time Insulin Scale	
Less than 70	Follow Hypoglycemia Protocol and notify provider	Less than 110	Treat for hypoglycemia notify provider
70-80	Subtract 2 units from scheduled prandial	180-230	1 unit
81-110	0 unit	231-260	2 units
111-130	0 unit	261-290	3 units
131-160	1 unit	291-320	4 units
161-190	2 units	321-350	5 units
191-220	3 units	351-380	6 units
221-250	4 units	> 380	7 units
251-280	5 units		
281-310	6 units		
311-340	7 units		
341-370	8 units		
371-400	9 units		
401-430	10 units		
431-460	11 units		
> 460	12 units and call provider		

VERY AGGRESSIVE Corrective Insulin Scale: Use if TDD including scheduled and corrective scale doses is > 60 units.

☼ Prandial (Premeal) Insulin Scale		☾ Night time Insulin Scale	
Less than 70	Follow Hypoglycemia Protocol and notify provider	Less than 110	Treat for hypoglycemia notify provider
70-80	Subtract 2 units from scheduled prandial	180-230	2 units
81-100	0 units	231-260	3 units
101-120	0 unit	261-290	4 units
121-140	1 units	291-320	5 units
141-160	2 units	321-350	6 units
161-180	3 units	351-380	8 units
181-200	4 units	> 380	10 units
201-220	5 units		
221-240	6 units		
241-260	7 units		
261-280	8 units		
281-300	9 units		
301-320	10 units		
321-340	11 units		
341-360	12 units		
361-380	13 units		
381-400	14 units		
401-420	15 units		
421-440	16 units		
441-460	17 units		
> 460	18 units and call provider		

MOR PACU Insulin Pump Tip Sheet

Diabetic Educator pager #16668 or (650) 725-2609, M-F 8-5pm, Weekends 9-5pm
Endocrine Fellow On-Call page 23636

Pre-Op RN Responsibilities:

- Page Diabetes Educator (DE) for support if needed.
- Confirm pump settings with patient.
- DE provides support to providers and RNs in entering insulin pump orders and assessing and documenting pump activities. (**Note: DEs do not place orders. They are nurses.**)
- **Ensure you have medication orders for PRE-OP and POST-OP.**
- **Need Nurse Communication orders to “stop pump directly before the procedure” AND “to restart pump when patient has recovered from sedation and meets criteria to use insulin pump.”**
- Review the “Continuous Subcutaneous Insulin Infusion (CSII) Patient Agreement” form with pt and have them sign it.
- Provide pt with “Bedside Insulin Pump Flow Sheet” as a tool to communicate with RN rate changes and boluses. Found at front desk under “Forms” and on the Intranet.
- Document basal rate (and bolus dose if applicable) on MAR.
- **Document under “CSII (Patient Insulin Pump)” tab under Flowsheets.** Wrench in if not in view. Verify that pt has extra supplies.
- Assess infusion site and tubing for no infection, kinks, or leaks.
- **Suspend pump DIRECTLY before pt goes intra-op.** Before removing pump, check blood glucose. **ONLY USE HOSPITAL GLUCOMETER.** If BG >200, pt may need bolus before pump is suspended. Inform DE/Primary Team if procedure is going to be longer than 4 hours.
- **If patient has a sensor, remove the transmitter. Omni Pods are disposable, but they need extra supplies for a new one in Recovery.**
- Insulin pump, supplies, and transmitter are kept with family until pt is ready to reconnect the pump. **Tell family that they must stay in waiting area and be accessible.** If no family, have it stored in OR pharmacy. Chart on MAR and CSII Flowsheet when pump is stopped.

PACU Responsibilities:

- **If not already in EPIC, prioritize getting orders for basal and bolus insulin pump medication in the MAR. Prioritize getting a Nurse Communication order to “restart pump when patient is awake and meets criteria to use insulin pump.”** Consult DE or Endocrine Team if Primary Team needs assistance in placing orders.
- **Check blood sugar Q2H while pt is off pump.** Inform Primary Team if BG >300.
- Pt must meet criteria to reattach pump. (Refer to CSII Protocol). Pt must be A & O x3, able to articulate rate, manipulate screen, & demonstrate how to stop pump in emergency. If still on narcotics, assess for capability to self-administer pump.
- All pts must have their own pump supplies.
- If pt has a wireless Omni Pump, they will need a new pod to put on in Recovery.
- **Document under “CSII (Patient Insulin Pump)” tab under Flowsheets.** Wrench in if not in view. Document restarting pump in MAR also. Assess infusion site and tubing for no infection, kinks, or leaks. Document site and neuro assessment Q8H per policy. **ONLY USE HOSPITAL GLUCOMETER.**
- Document on **MAR** basal rate (and bolus rate if applicable). **RN MUST witness bolus and chart it.** Document basal rate Q4H on MAR.
- Pt and nurse will use “Bedside Insulin Pump Flow Sheet” to communicate with each other rate changes and boluses.

How to Guide Providers to Enter EPIC 24-Hour Insulin Pump Orders:

- Under “Order Sets” Type “IP Insulin Pump (Continuous Subcutaneous Insulin Infusion (CSII))”
- Click “Open Order Sets.” Then select the type of insulin in patient’s pump under “Insulin Pump” (Aspart or Lispro)

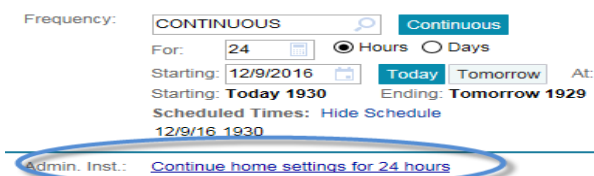


- Select the first 2 orders, BOLUS (PRN) and CONTINUOUS

Select ALL

- ☒ insulin aspart (NovoLOG) subcutaneous pump bolus 0.1-20 Units
0.1-20 Units, Subcutaneous, PRN, hyperglycemia, Starting Today at 1856, Until Tomorrow at 1855
- ☒ insulin aspart (NovoLOG) subcutaneous pump
0-2 Units/hr (0-0.02 mL/hr), Subcutaneous, CONTINUOUS, Starting Today at 1900, Until Tomorrow at 1859
- ☐ insulin aspart (NOVOLOG) subcutaneous pump basal
0-2 Units/hr, Subcutaneous, CONTINUOUS

- Option is to CONTINUE HOME SETTINGS FOR 24 HRS, have provider enter in patient’s pump range



- **EVERY RN to chart both basal (& PRN/bolus if applicable) when assuming care of patient! Rate check pump.**

☒ **Consult to Endocrinology**
P: Reason for Consult: Patient on subcutaneous insulin pump

☐ **Give 4 oz. of juice.**
If blood glucose < 70, give 4 oz.(1/2 cup) of juice. Recheck BG in 15 minutes. Repeat treatment until BG is 80 or greater during day, or 110 or greater at HS, CONTINUOUS

☐ **glucose (GLUTOSE) chewable tablet**
16 g. Oral, EVERY 15 MIN PRN, Blood glucose LESS THAN 70

☒ **DSOW IV syringe 12.5 g**
12.5 g. Intravenous, PRN, Blood glucose LESS THAN 70, Starting Today at 1333, Until Discontinued

☒ **Insulin Documentation**
Routine, CONTINUOUS starting Today at 1345 Until Specified, 1.Document all insulin in MAR: Basal, Prandial and Corrective. 2.Complete Insulin Pump Documentation flowsheet each shift.

☒ **Patient on Insulin Pump (continuous subcutaneous) Protocol**
Protocol: Insulin Pump (continuous subcutaneous) protocol
CONTINUOUS starting Today at 1345 Until Specified

☒ **Patient Can Regulate Own Insulin**
Routine, CONTINUOUS starting Today at 1345 Until Specified, Patient can regulate insulin pump with medical and nursing supervision.

☒ **Give patient "Bedside Insulin Pump Flow Sheet" to document insulin delivery, BG and carbohydrates**
Give patient "Bedside Insulin Pump Flow Sheet" to document insulin delivery, BG and carbohydrates, CONTINUOUS starting Today at 1345 Until Specified

☒ **Glucose by Meter: Additional glucose monitoring checks**
Routine, PRN starting Today at 1333 Until Specified
Nursing Instructions: when patient requests, for symptoms of hypoglycemia or hyperglycemia, change in mental status or poor glucose control

☒ **Suspend pump or disconnect tubing from site for BG45 mg/dl or less. Follow hypoglycemia protocol.**
Suspend pump or disconnect tubing from site for BG45 mg/dl or less. Follow hypoglycemia treatment orders, PRN starting Today at 1333 Until Specified

☒ **Secure Insulin Pump Not in Use**
Routine, ONCE First occurrence Today at 1345, If an insulin pump is removed, request a family member to hold the pump until pump therapy resumed. If no family is available, secure pump in Central Pharmacy. Refer to "Patient's Own Medications" in Pharmacy policies.

☒ **Notify MD: if BG45mg/dl or less or patient requires assistance for treatment of hypoglycemia**
Routine, PRN starting Today at 1333 Until Specified, Notify physician and Diabetes CNS if BG45mg/dl or less or patient requires assistance for treatment of hypoglycemia.

☒ **Nurse to assess if patient meets criteria for self-management of insulin pump**
On admission and every 8 hours Inclusion criteria: 1. Patient is physically and cognitively capable of self-managing insulin pump 2. Patient is willing to follow the terms of CSII Patient Agreement 3. There is no surgery or procedure requiring anesthesia or sedation at this time 4. No tests or procedures that would expose the pump to ionizing radiation or magnetic fields. See CSII protocol, "Special Considerations" section "D". 5. The patient's judgment is not impaired 6. The patient requests to self-manage their insulin pump 7. Glucose control is acceptable: 80 - 200 mg/dl 8. Adequate insulin pump supplies 9. An operating insulin pump. CONTINUOUS starting Today at 1345 Until Specified

☒ **Notify MD: if patient is not appropriate for CSII and request alternative insulin plan**
Routine, PRN starting Today at 1333 Until Specified, Exclusion criteria for patient self-management of CSII: -Patient not physically or cognitively capable to self manage insulin pump. -Non-adherence to CSII Patient Agreement or usual pump therapy guidelines. -Planned surgery or procedure requiring anesthesia or sedation. -Patient receiving narcotics for pain control or sedation with impaired judgement. -Patient requests withdrawal from CSII. -On-going poor glucose control 1) BG greater than 300mg/dl which does not correct after two boluses and cannot be explained; 2) recurrent hypoglycemia or severe hypoglycemia (45 mg/dl or less) -Inadequate pump supplies: infusion sets, tubing, insulin reservoirs, batteries and skin prep products -Inoperative or malfunctioning pump -Tests or procedures that expose the pump to ionizing radiation or magnetic fields. See CSII protocol, "Special Considerations" section "D".

☒ **Nurse to review CSII Patient Agreement form with patient and have patient sign**
Nurse to review CSII Patient Agreement form with patient and have patient sign, ONCE First occurrence Today at 1345