

Admission Orders

The transition from the outpatient to the inpatient setting is important. It is critical to initiate care in the inpatient setting as quickly as possible. With predetermined order sets, it is possible for any provider regardless of personal experience or knowledge to generate a disease-specific order set designed by a specialist. Using SETMA's Admission Order sets, it is possible for excellent care to be started without delay.

The Order set can be accessed from:

AAA Home

SOUTHEAST TEXAS MEDICAL ASSOCIATES, L.L.P.

Patient: RichmondPROJ Ztest Sex: M Age: 35 DOB: 05/23/1974
Home Phone: () - Work Phone: () -
Patient's Code Status: []

[SETMA's LESS Initiative](#) | [Preventing Diabetes](#) | [Preventing Hypertension](#) | [Medical Home Coordination](#)
[Charge Posting Tutorial](#) | [ICD-9 Code Tutorial](#) | [E&M Coding Recommendations](#) | **Needs Attention!!**

[Master GP](#) | [Nursing Home](#) | [Ophthalmology](#) | [Pediatrics](#) | [Physical Therapy](#) | [Podiatry](#) | [Rheumatology](#)
[Daily Progress](#) | **Admission Orders** | [Discharge](#) | [Insulin Infusion](#) | [Colorectal Surgery](#) | [Pain Management](#)

[Exercise](#) | [CHF Exercise](#) | [Diabetic Exercise](#) | [Drug Interactions](#) | [Smoking Cessation](#) |
[Hydration](#) | [Nutrition](#) | [Guidelines](#) | [Lab Future](#) | [Lab Results](#)

Disease Management
[Acute Coronary Syn](#) | [Angina](#) | [Asthma](#) | [CHF](#) | [Diabetes](#) | [Headaches](#) | [Hypertension](#) | [Lipids](#) | [Cardiometabolic Risk Syndrome](#) |
[Weight Management](#) | [Renal Failure](#) | [Diabetes Edu](#)

Patient's Pharmacy: []
Phone: () -
Fax: () -
Rx Sheet - Active
Rx Sheet - New
Rx Sheet - Complete
Home Health

Pending Referrals

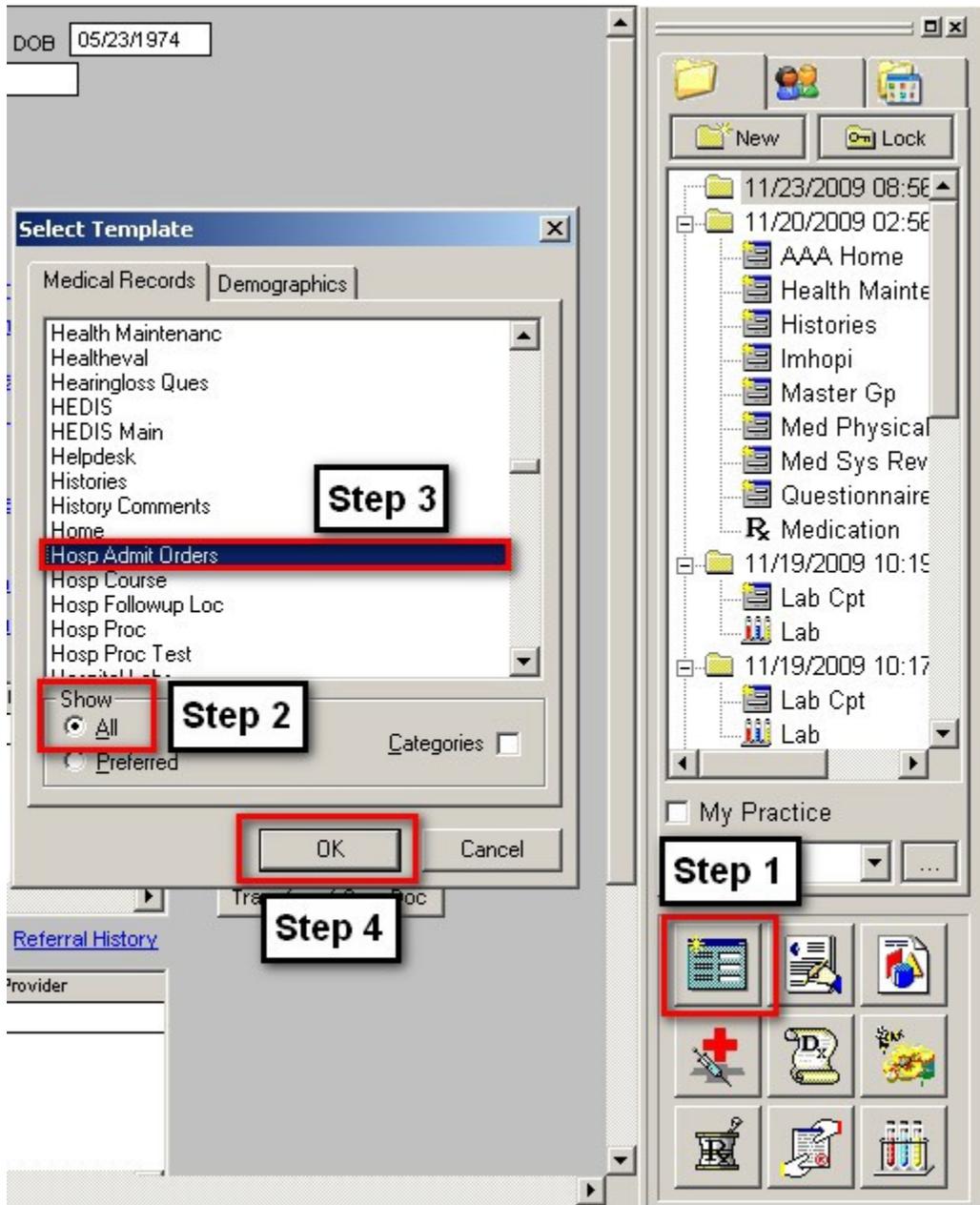
Status	Priority	Referral	Referring Provider
Completed	Routine	Test	Abbas

Archived Referrals - Do not use for new referrals [Referral History](#)

Status	Priority	Referral	Referring Provider
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Chart Note
Return Info
Return Doc
Email
Telephone
Records Request
Transfer of Care Doc

Main Tool Bar



- When the Template button is clicked you will be presented with the preference list.
- If the Acute Coronary Syndrome template is listed as one of your preferences, select it.
- If it is not one of your preferences, select the All radio button and scroll down until you find it in the list. Then you may select the template by either double-clicking on the name or single click on the name (so that it is highlighted in blue) and then click the OK button.

NOTE: For more on how to set up your preferences, [Click Here](#)

This template can also be accessed from the Master Nursing Home Template and the Master GP Template.

The Admission Orders consists of two templates:

- **The Master Hospital Template**
- **The Hyperkalemia Template**

The Master Hospital Admission Orders template has the following content:

At the top of the template the patient's name, date of birth, gender and age appear.

The screenshot shows the 'SETMA Admission Orders' form. At the top, the title 'SETMA Admission Orders' is displayed. Below the title, a red box highlights the patient information fields: 'Patient' (Ztest), 'RichmondPROI', 'DOB' (05/23/1974), 'Sex' (M), and 'Age'. The form is divided into several sections. On the left, there are input fields for 'Admitting Physician', 'Facility', 'Bed Type', 'Condition', 'Code Status', and 'Admitting Diagnosis'. In the center, there are 'Consults' fields and a 'Disease Specific' section with buttons for 'Default', 'Routine Orders', 'Diagnostic Orders', 'Nursing Orders', 'qAM Labs', 'Respiratory', 'Medications', 'Critical Care', 'Ventilator', 'Hyperkalemia', and 'Sliding Scale'. On the right, there are buttons for 'Home', 'Print Admit Orders', and a link for 'Report Admission to CBO'. At the bottom, there are checkboxes for 'Old Charts to the Floor' and 'Notify admitting physician of room number at 0630 hours'.

In the left hand column, the following appear:

- **Admitting Physician** – there is a pick list with the names of all of SETMA's providers, which allows the admitting physician's name to be easily added to the template.
- **Facility** – the names of all of the local hospitals are listed on a pick list associated with this function.
- **Bed Type** – 11 wards or bed types are listed on the pick list

- **Condition** – 7 patient conditions are listed on the pick list
- **Code Status** – 4 distinct codes are listed on the pick list
- **Admitting Diagnosis** – the diagnoses from the patient’s current assessment will automatically be placed here.

The screenshot shows the 'SETMA Admission Orders' interface. At the top, patient information is entered: Patient (Ztest, RichmondPRO), DOB (05/23/1974), Sex (M), and Age. Below this, there are several input fields: Admitting Physician, Facility, Bed Type, Condition, Code Status, and Admitting Diagnosis. A red box highlights these fields. To the right, there are 'Consults' fields (two boxes for name, one for 'for') and a 'Disease Specific' section with buttons for Routine Orders, Diagnostic Orders, Nursing Orders, qAM Labs, Respiratory, Medications, Critical Care, Ventilator, Hyperkalemia, and Sliding Scale. At the bottom, there are checkboxes for 'Old Charts to the Floor' and 'Notify admitting physician of room number at 0630 hours'. Navigation buttons like 'Home', 'Print Admit Orders', and 'Report Admission to CBO' are also visible.

Old Charts to Floor – a box is provided for adding this order to the patient’s order set.

In the second column, there are four fields labeled:

- **Consults** – a pick list for all local physicians whom SETMA commonly consults are listed here. If the name of the physician desired is not listed, it can be typed in, Last Name First, First name.
- **For** – the reason for the consult is listed as Assessment 1-8 (these correspond to the eight spaces for Admitting Diagnosis). When Assessment 1 through 8 is chosen, the diagnosis associated with the Admitting Diagnosis box will be placed in the “**For**” box. If the reason for the consult is a reason other than the 8 assessments, there is a list of symptoms on the pick list.

SETMA Admission Orders

Patient DOB Sex Age

Admitting Physician

Facility

Bed Type

Condition

Code Status

Admitting Diagnosis

Consults

<input type="text"/>	<input type="text"/>	for	<input type="text"/>
<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="text"/>	<input type="text"/>		<input type="text"/>
<input type="text"/>	<input type="text"/>		<input type="text"/>

Disease Specific

Routine Orders	Diagnostic Orders
Nursing Orders	qAM Labs
Respiratory	Medications
Critical Care	Ventilator
Hyperkalemia	
Sliding Scale	

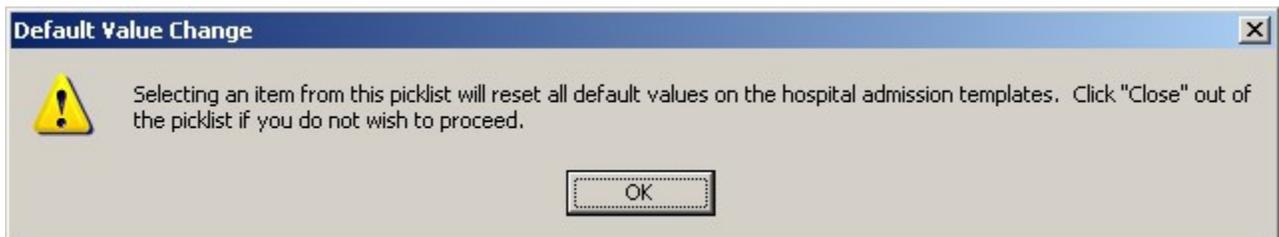
Old Charts to the Floor

Notify admitting physician of room number at

[Report Admission to CBO](#)

Beneath the **Consults** boxes is a function entitled **Disease Specific** with a box beneath it.

When this box is accessed a pop-up appears which states:



When **OK** is clicked on the above pop-up, a pick list appears with 10 options:

SETMA Admission Orders

Patient DOB Sex Age

Admitting Physician Consults for

Facility

Bed Type

Condition

Code Status

Admitting Diagnosis

Disease Specific

Routine Orders

Diagnostic Orders

Nursing Orders

qAM Labs

Respiratory

Medications

Critical Care

Ventilator

Hyperkalemia

Sliding Scale

Disease specific [X]

- Default
- Asthma Exacerbation
- Chest Pain
- COPD Exacerbation
- Diabetic Ketoacidosis
- Heart Failure
- Pneumonia
- Post Surgical
- Seizures, Alcohol Withdrawal
- Seizures, New Onset

Close

number at

[Report Admission to CBO](#)

When one of the options is chosen, the 8 buttons below will be automatically populated with options which are specific to the disease process which was selected. These options can be changed manually. Also, for the options to be accepted and/or for the information on each pop-up to be placed on the hospital order set, each pop-up must be opened.

The 8 order set options are:

Routine Orders

Hosp Routineord X

Routine Orders

Vital Measurements PT

Diet OT

Activity Wound Care

Accuchecks

Supplemental Oxygen Pulse Ox on Current Oxygen Level

Via L/min

Titrate FiO2 to keep SpO2

IV Therapy

at cc/hr for hours Follow with at cc/hr for hours

Additives

KCl mEq/L

MgSO4 grams/L

Regular human insulin units/L

Sodium Bicarbonate amps/L

Add thiamine 100 mg, folic acid 1 mg, and MVI 1 ampule to first bag of IVF daily.

Other

Comments

Nursing Orders

Hosp Nurseorders [X]

Nursing Orders [Clear All]

- Daily Weights
- Intake and Output Charting
- Wound Care
- Foley Catheter to Gravity
- Nasogastric tube to low intermittent suction
- Enemas Until Clear []
- Check for Fecal Impaction
- Elevate Head of Bed 6 Inches
- Buck's Traction
- Out of Bed to Chair
- Stoma Care
- Notify Physician if:
 - Change in Neurological Status
 - SBP<90 or >160
 - Temp > 104F
 - SpO2<88
 - Urine Output <30 cc/hr or 240/shift
 - Any acute mental status deterioration
(check O2 saturation, ABG, and finger
stick glucose while awaiting callback)

Comments

[]

[OK] [Cancel]

Respiratory

Hosp Resp [X]

Respiratory [Clear All]

Nebulizer Treatment

Xopenex 0.63/3mL []

Xonepex 1.25/3mL [q4 hour]

Atrovent 0.5mg [q4 hour]

Pulmicort Respules 0.5mg q12

Mucomyst 3cc 10% q4 hours for 3 days

CPT []

Incentive Spirometry []

Peak Flows [q24 hour]

Comments

[]

[OK] [Cancel]

Critical Care

Hosp Criticalcare ✕

Clear All

Critical Care

For any acute occurrence of any of the following:

- If SBP < 90 mm Hg then give NS 500cc IV bolus over 15 minutes; if SBP<90 mm Hg after bolus, begin Levophed IV (titrate to 70 <MAP<60) and call MD.
If SBP >180 mm Hg, then give 0.1 mg clonidine PO or 0.625 mg enalaprilat IV x 1 q 4 hours PRN (may repeat x 1 in 1 hour if SBP remains >180 mm Hg). If SBP>180 mm Hg after second dose of PRN antihypertensive, call MD.
- If heart rate<40 and patient is symptomatic (i.e. light headed/presyncopal/loss of consciousness), give 0.5 mg atropine IV STAT (may repeat x 1) and call MD.
If heart rate > 140 beats per minutes for more than 5 minutes, call MD.
- For VF or pulseless VT, defibrilate with 200 J, then 300 J, then 360 J as needed; call CODE BLUE and notify attending MD immediately.
- If RR<8 call MD.
If RR>30 with respiratory distress, call MD.
- If urine output < 60 cc over 2 hours (not resolved by repositioning /flushing Foley catheter) and SBP>110, give Lasix 40mg IVP. If no response in 30 minutes, call MD.

Comments

Diagnostic Orders

Hosp Diagorders X

Diagnostic Orders Clear All

Laboratory <input checked="" type="checkbox"/> CBC <input type="checkbox"/> BMP <input checked="" type="checkbox"/> CMP <input checked="" type="checkbox"/> Mg <input checked="" type="checkbox"/> Phosphorus <input checked="" type="checkbox"/> UA <input type="checkbox"/> BNP <input type="checkbox"/> VDRL <input type="checkbox"/> Toxicology Screen <input type="checkbox"/> CK w/MB Isoenzyme q <input type="text"/> hrs. x <input type="text"/> <input type="checkbox"/> Troponin q <input type="text"/> hrs. x <input type="text"/>	<input type="checkbox"/> ABG <input type="checkbox"/> Hgb A1C <input type="checkbox"/> Amylase <input type="checkbox"/> Lipase <input type="checkbox"/> PT <input type="checkbox"/> PTT <input type="checkbox"/> D-Dimer <input type="checkbox"/> CPK	Cultures <input type="checkbox"/> Blood x2 <input type="checkbox"/> Urine <input type="checkbox"/> Sputum/Tracheal Aspirate <input type="checkbox"/> Wound <input type="button" value="Additional Cultures"/> <input type="checkbox"/> Lumbar Puncture <input type="checkbox"/> EEG	Radiology X-Ray <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> MRI <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> CT Scan <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Ultrasound <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Nuclear Medicine <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> w/IV Contrast <input type="checkbox"/> w/o IV Contrast <input type="checkbox"/> w/Oral Contrast <input type="checkbox"/>
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Other

Comments

qAM Labs

Hosp Qamlabs ✕

Clear All

qAM Laboratory

- CBC
- BMP
- CMP
- Mg
- CXR
- ABG

Other

For days

Comments

Medications

Hosp Meds [X]

Medications Clear All

Antibiotics

If afebrile for 24 hours, switch to PO antibiotics

Other Medications

Lovenox SQ 40mg q24 hours

Pepcid 20mg IVPB q12 hours

PRN Medications

Comments

OK Cancel

Hosp Meds
✕

Medications

Antibiotics

If afebrile for 24 hours, switch to PO antibiotics

Other Medications

Lovenox SQ 40mg q24 hours

Pepcid 20mg IVPB q12 hours

Hosp Prnmeds
✕

PRN Medications

<p><input checked="" type="checkbox"/> Fever</p> <p>Obtain blood cultures x2 if not drawn in past 72 hours CXR portable upright & sputum for gram stain and culture if not done in past 48 hours Urinalysis and culture if not done in past 72 hours Acetaminophen 500mg q4 hours PRN if Temp>101F Cooling blanket if temp>103.5F until temp<103F</p> <p><input checked="" type="checkbox"/> Pain</p> <p>Acetaminophen 500mg q4 hours PRN if Temp>101F</p>	<p><input checked="" type="checkbox"/> Anxiety <input style="width: 100%;" type="text" value="Xanax 0.25mg PO TID PRN"/></p> <p><input checked="" type="checkbox"/> Sedation <input style="width: 100%;" type="text" value="Ambien 5mg PO q HS PRN sleep"/></p> <p><input checked="" type="checkbox"/> Nausea/Vomiting <input style="width: 100%;" type="text" value="Phenergran 12.5mg IVP q 4-6hours PRN"/></p> <p><input checked="" type="checkbox"/> Indigestion <input style="width: 100%;" type="text" value="Maalox 30cc PO q 8 hour PR"/></p> <p><input checked="" type="checkbox"/> Diarrhea <input style="width: 100%;" type="text" value="Imodium 1 PO q 4-6 hours PRN"/></p> <p><input checked="" type="checkbox"/> Constipation <input style="width: 100%;" type="text" value="Milk of Magnesia 30cc po q HS PRN"/></p>
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Ventilator

Hosp Ventilator X

Initial Ventilator Setup

Mode	<input type="text" value="AC"/>	
Rate	<input type="text" value="12"/>	/min
Tidal Volume	<input type="text" value="650"/>	mL
Pressure Support	<input type="text" value="0"/>	cm H2O
FIO2	<input type="text" value="100"/>	%

*If patient ventilated in SIMV mode, respiratory therapist to add pressure support to result in spontaneous tidal volume of at least 6 cc/kg ideal body weight. If SIMV mode chosen and patient has no spontaneous add 10cm H2O pressure support.

PEEP	<input type="text" value="0"/>	cm H2O
Peak Flow	<input type="text" value="70"/>	L/min

Post Intubation Orders

Titrate FIO2 to keep saturation \geq

- CXR portable STAT
- ABGs in 20 minutes
- Continuous pulse oximetry

Sedation

- Morphine sulfate 2-10 mg IV q 1 hour PRN agitation
If morphine allergy or MAP $<$ 60 mm Hg, fentanyl 25-500 mcg IVP q 1 hour PRN agitation
- Diprivan IV 5-10 cc initial bolus and titrate as need for agitation unrelieved by PRN narcotic use

Comments

Beneath these 8 buttons are two additional options:

Hyperkalemia

Hosp Hyperkalemia

Hyperkalemia Diagnostic Orders

24 hour Urine for Creatinine
-or-
 Creatinine Clearance Using the Cockcroft-Gault Equation

Urine Spot K+
 Urine Spot Na
 Urine K+ and Na Concentrations
 Urine Osmolality
 Serum Osmolality
 Serum LDH, CPK, Uric Acid, Phosphate, and ALT
 Serum Cortisol
 Renin
 Aldosterone
 Thyroid Profile

CBC
 CMP
 EKG

Treatment

Select Severity of Hyperkalemia

Mild 5.3 - 6.0 mEq/L
 Moderate 6.0 - 6.5 mEq/L
 Severe >6.5 mEq/L

Administer intravenous calcium gluconate 10% (4.65 mEq/10 mL) slow IVP over 10 minutes to ameliorate cardiac toxicity, if present.
 Regular Insulin 10 U IV and 50 mL D50W bolus
 NaHCO₃ 50 mEq slow IVP (If patient has metabolic acidosis and/or EKG changes)
 Nebulized Albuterol 10 mg
 Kayexalate retention enema 50 G (in sorbitol). Irrigate with tap water after enema to prevent necrosis
 Kayexalate 60 mg (in sorbitol) PO
 Discontinue oral and parenteral potassium supplements
 Remove potassium-containing salt substitutes
 Change the diet to a low-potassium tube feed or a 2-g potassium ad-lib diet if patient on PO diet
 Stat consult to SETMA Nephrology for Emergency Dialysis

Follow-Up Lab

Serum Potassium in 2 hours

Sliding Scale

Hosp Slide Scale

SETMA Sliding Scale Insulin Protocol

Use SETMA Sliding Scale Insulin Protocol

Patient Sensitivity

The **Hyperkalemia** Button launches the following template entitled **Hyperkalemia Diagnostic Orders**:

At the top of the template, there are 15 laboratory orders listed

The screenshot shows a software window titled "Hosp Hyperkalemia" with a sub-header "Hyperkalemia Diagnostic Orders" and a "Help" button. A red box highlights a list of 15 diagnostic orders, each with a checkbox and a "Help" button. The orders are: 24 hour Urine for Creatinine, -or- Creatinine Clearance Using the Cockcroft-Gault Equation, Urine Spot K+, Urine Spot Na, Urine K+ and Na Concentrations, Urine Osmolality, Serum Osmolality, Serum LDH, CPK, Uric Acid, Phosphate, and ALT, Serum Cortisol, Renin, Aldosterone, and Thyroid Profile. To the right of this list are three more checkboxes: CBC, CMP, and EKG. Below the diagnostic orders is a "Treatment" section with a "Select Severity of Hyperkalemia" section containing three radio buttons: Mild (5.3 - 6.0 mEq/L), Moderate (6.0 - 6.5 mEq/L), and Severe (>6.5 mEq/L). Below this are 11 treatment checkboxes: Administer intravenous calcium gluconate 10% (4.65 mEq/10 mL) slow IVP over 10 minutes to ameliorate cardiac toxicity, if present; Regular Insulin 10 U IV and 50 mL D50W bolus; NaHCO3 50 mEq slow IVP (If patient has metabolic acidosis and/or EKG changes); Nebulized Albuterol 10 mg; Kayexalate retention enema 50 G (in sorbitol). Irrigate with tap water after enema to prevent necrosis; Kayexalate 60 mg (in sorbitol) PO; Discontinue oral and parenteral potassium supplements; Remove potassium-containing salt substitutes; Change the diet to a low-potassium tube feed or a 2-g potassium ad-lib diet if patient on PO diet; and Stat consult to SETMA Nephrology for Emergency Dialysis. At the bottom left is a "Follow-Up Lab" section with one checkbox: Serum Potassium in 2 hours. At the bottom center are "OK" and "Cancel" buttons.

There are nine help buttons on this template; they are:

Hyperkalemia Diagnostic Orders

Info Hyperkalemia

Hyperkalemia

Severe hyperkalemia is a medical emergency

- * Neuromuscular signs (weakness, ascending paralysis, respiratory failure)
- * Progressive ECG changes (peaked T waves, flattened P waves, prolonged PR interval, idioventricular rhythm and widened QRS complex, "sine wave" pattern, V fib)

Pseudohyperkalemia

- * Hemolysis
- * Thrombocytosis >1,000,000
- * WBC > 200,000
- * Redistribution
- * Acidosis
- * Digitalis overdose
- * AD hyperkalemic periodic paralysis

Impaired Potassium Secretion

- * Aldosterone deficiency
- * Adrenal failure
- * Syndrome of hyporeninemic hypoaldosteronism (SHH)
- * Tubular unresponsiveness
- * Renal failure
- * GFR < 10 -20% of normal

Treatment (1)

- * Stop potassium!
- * Get and ECG
- * Hyperkalemia with ECG changes is a medical emergency

Treatment (2)

- * First phase is emergency treatment to counteract the effects of hyperkalemia
- * IV Calcium
- * Temporizing treatment to drive the potassium into the cells
- * Glucose plus insulin
- * Beta2 agonist
- * NaHCO₃

Treatment (3)

- * Therapy directed at actual removal of potassium from the body
- * Sodium polystyrene sulfonate (Kayexalate)
- * Dialysis

Determine and correct the underlying cause!

OK Cancel

Creatine Clearance Using the Cockcroft-Gault Equation

Creat Clearance

Estimated Creatinine Clearance

Complete the following four fields and click Calculate.

Weight lbs

Sex (must be uppercase)

Age

Serum Creatinine

Calculate >>> mL/min

OK Cancel

Urine Spot K +

Info UrineK ✕

Urine Potassium

This test is usually performed to detect or confirm the presence of conditions that affect body fluids (for example, dehydration, vomiting, diarrhea) or disorders of the kidneys or adrenal glands, which are the source of the aldosterone.

The serum (blood) and urine potassium depend on many factors.

- * Aldosterone is a steroid hormone that plays a major role in regulating potassium levels within the body.
- * Aldosterone increases the loss of potassium in the kidneys.
- * Potassium is also affected by acid/base balance because potassium exchanges with hydrogen, to some extent, across cell membranes.

Normal Values

- * Spot Urine normal values 40-60 mEq.
- * The usual range for a person on a regular diet is 25 to 120 mEq/L/day.
- * However, lower or higher urinary levels may occur depending on dietary potassium intake and the relative amount of potassium in the body.

Greater-than-normal urine potassium levels may indicate

- * Acute tubular necrosis
- * Cushing's syndrome (rare)
- * Diabetic acidosis and other forms of metabolic acidosis
- * Hyperaldosteronism (very rare)
- * Eating disorders (anorexia, bulimia) and vomiting
- * Low magnesium levels

Additional conditions under which the test may be performed

- * Medullary cystic disease

Urine Spot Na⁺

Info UrineNa ✕

Urine Sodium

The test is often used to determine hydration status and the kidney's ability to conserve or excrete sodium. This test may also be performed to indirectly indicate the function of the adrenal cortex, or to detect or monitor conditions that result in abnormal urine sodium levels.

Aldosterone, a hormone produced by the adrenal gland, plays a major role in regulating sodium levels within the body and urine. Specifically, aldosterone increases the reabsorption of sodium in the kidneys at the expense of potassium and hydrogen loss.

Urine Sodium

Reabsorption of sodium in turn enhances retention of water in body tissues and the blood stream. It is by this means that aldosterone helps maintain plasma volume and blood pressure. Dehydration and conditions that decrease kidney blood flow stimulate aldosterone production.

Normal values are generally

- * 15 to 250 mEq/L/day, depending on hydration status and daily intake of dietary sodium.
- * Spot urine sodium of less than 20 generally means dehydration, hypotension or other conditions which have stimulated aldosterone production.

Greater-than-normal urine sodium levels may indicate

- * Adrenocortical insufficiency
- * Steroid use
- * Excessive salt intake

Lower-than-normal urine sodium levels may indicate

- * Aldosteronism
- * Congestive heart failure
- * Diarrhea and dehydration states
- * Renal failure

Additional conditions under which the test may be performed

- * Acute tubular necrosis
- * Hepatorenal syndrome
- * Medullary cystic disease
- * Glomerulonephritis
- * Prerenal azotemia

Urine Osmolality

Info Urineosmolal ✕

Urine Osmolality

Osmolality measures the concentration of particles in a solution (in this case, urine). Osmolality (particles/kg water) and osmolarity (particles/liter of solution) are sometimes confused -- but for dilute fluids (such as urine), they are essentially synonymous.

Osmolality is a more exact measurement of urine concentration than specific gravity because specific gravity depends on the precise nature of the molecules present in the urine. Specific gravity also requires correction for the presence of glucose or protein.

Normal values are as follows

- * Random specimen: 50 to 1400 mOsm/kg
- * 12 to 14 hour fluid restriction: greater than 850 mOsm/kg (mOsm/kg = milliosmoles per kilogram)

Greater-than-normal measurements may indicate

- * Addison's disease (rare)
- * Congestive heart failure
- * Shock
- * Syndrome of inappropriate ADH secretion

Lower-than-normal measurements may indicate

- * Aldosteronism (very rare)
- * Diabetes insipidus (rare)
- * Excess fluid intake
- * Renal tubular necrosis
- * Severe pyelonephritis

Additional conditions under which the test may be performed

- * Complicated UTI (pyelonephritis)
- * Dilutional hyponatremia (SIADH)

Serum Osmolarity

Info Serumosmolar ✕

Serum Osmolarity

Osmolality measures the concentration of particles in solution. Osmolality increases with dehydration and decreases with overhydration.

In normal people, increased osmolality in the blood will stimulate secretion of ADH (antidiuretic hormone). This will result in increased water reabsorption, more concentrated urine, and less concentrated plasma.

A low serum osmolality will suppress the release of ADH, resulting in decreased water reabsorption and more concentrated plasma.

Normal values range from 280 to 303 mOsm/kg. (milliosmoles per kilogram)

Greater than normal levels may indicate

- * Dehydration
- * Diabetes insipidus
- * Head trauma resulting in deficient ADH secretion
- * Hyperglycemia
- * Hyponatremia
- * Consumption of alcohol
- * Consumption of methanol
- * Consumption of ethylene glycol
- * Renal tubular necrosis
- * Severe pyelonephritis
- * Shock
- * Stroke resulting in deficient ADH secretion
- * Uremia

Lower than normal levels may indicate

- * Excess fluid intake
- * Hyponatremia
- * Overhydration
- * Paraneoplastic syndromes associated with lung cancer
- * Syndrome of inappropriate ADH secretion

Additional conditions under which the test may be performed

- * Complicated UTI (pyelonephritis)
- * Diabetic hyperglycemic hyperosmolar coma
- * Hepatorenal syndrome
- * Interstitial nephritis

Renin

Info Renin X

Renin

Plasma renin activity (PRA) is measured as part of the diagnosis and treatment of hypertension.

- * Patients with primary hyperaldosteronism will have an increased aldosterone production associated with a decreased PRA.
- * Patients with secondary hyperaldosteronism (that is, caused by renal disease or renal vascular disease) will have increased plasma levels of renin and aldosterone.

Essential Hypertension and Salt Sensitivity

- * Patients may also have renin and aldosterone levels checked in essential hypertension to evaluate if patients are salt sensitive.
- * This will cause a low renin with normal aldosterone levels, and this helps to guide the physician in choosing the correct medication for these patients.
- * Patients with low renin hypertension, who are salt sensitive, respond well to diuretic medications.

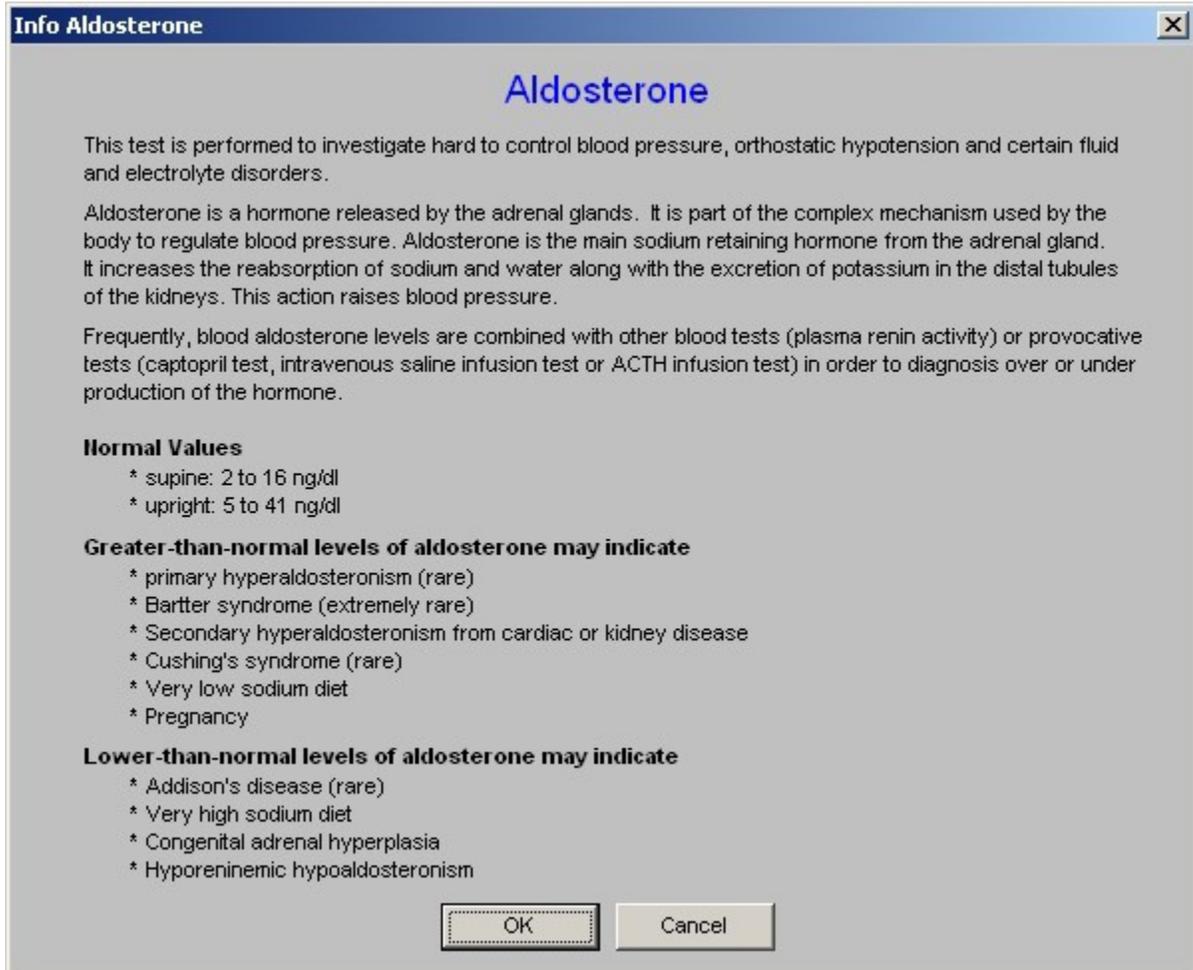
Renin

- * Is an enzyme released by specialized cells of the kidney into the blood. It is in response to sodium depletion and/or low blood volume.
- * Renin converts angiotensinogen (a protein released into the blood by the liver) to angiotensin I.
- * Angiotensin I is converted to angiotensin II by an enzyme in the veins of the lungs. Angiotensin II acts on the adrenal cortex to stimulate the release of aldosterone. Aldosterone acts on the distal tubules of the kidneys to decrease the loss of sodium ions and secondary fluids.
- * This has the effect of increasing blood pressure.
- * In addition, angiotensin causes constriction of small blood vessels, which also increases blood pressure.

Normal values range from 1.9 to 3.7 ng/ml/hour.

Greater-than-normal levels may indicate	Lower-than-normal levels may indicate
<ul style="list-style-type: none">* Addison's disease* Cirrhosis* Essential hypertension* Hemorrhage (bleeding)* Hypokalemia* Malignant hypertension* Renin-producing renal tumors* Renovascular hypertension	<ul style="list-style-type: none">* Salt-retaining steroid therapy* ADH therapy* Salt sensitive essential hypertension
	Additional conditions under which the test may be performed
	<ul style="list-style-type: none">* Primary hyperaldosteronism

Aldosterone



At the bottom of the template, there are:

Options for selecting the severity of hyperkalemia; the options are

Mild	5.3—6.0 meq/L
Moderate	6.1 – 6.5 meq/L
Severity	>6.5 meq/L

When the radial button is checked next to one of these options, the 11 options below are automatically populated according to a treatment algorithm built into the system.

Hosp Hyperkalemia X

Hyperkalemia Diagnostic Orders Help

24 hour Urine for Creatinine
 -or-
 Creatinine Clearance Using the Cockcroft-Gault Equation Help

Urine Spot K+ Help
 Urine Spot Na Help
 Urine K+ and Na Concentrations
 Urine Osmolality Help
 Serum Osmolality Help
 Serum LDH, CPK, Uric Acid, Phosphate, and ALT
 Serum Cortisol
 Renin Help
 Aldosterone Help
 Thyroid Profile

CBC
 CMP
 EKG

Treatment

Select Severity of Hyperkalemia

Mild 5.3 - 6.0 mEq/L
 Moderate 6.0 - 6.5 mEq/L
 Severe >6.5 mEq/L

Administer intravenous calcium gluconate 10% (4.65 mEq/10 mL) slow IVP over 10 minutes to ameliorate cardiac toxicity, if present.
 Regular Insulin 10 U IV and 50 mL D50W bolus
 NaHCO₃ 50 mEq slow IVP (If patient has metabolic acidosis and/or EKG changes)
 Nebulized Albuterol 10 mg
 Kayexalate retention enema 50 G (in sorbitol). Irrigate with tap water after enema to prevent necrosis
 Kayexalate 60 mg (in sorbitol) PO
 Discontinue oral and parenteral potassium supplements
 Remove potassium-containing salt substitutes
 Change the diet to a low-potassium tube feed or a 2-g potassium ad-lib diet if patient on PO diet
 Stat consult to SETMA Nephrology for Emergency Dialysis

Follow-Up Lab

Serum Potassium in 2 hours

These treatment orders, along with the diagnostic orders will print on the hospital order set.

Beneath the Hyperkalemia button is a button entitled Sliding Scale.

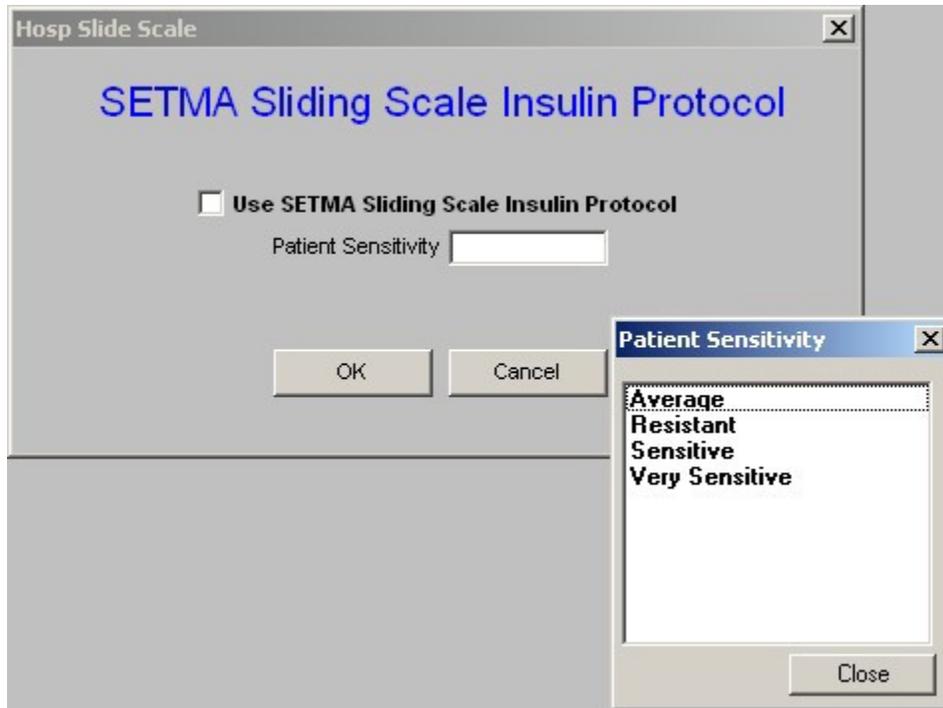
When depressed this button launches a pop-up entitled SETMA Sliding Scale Insulin Protocol.

Hosp Slide Scale X

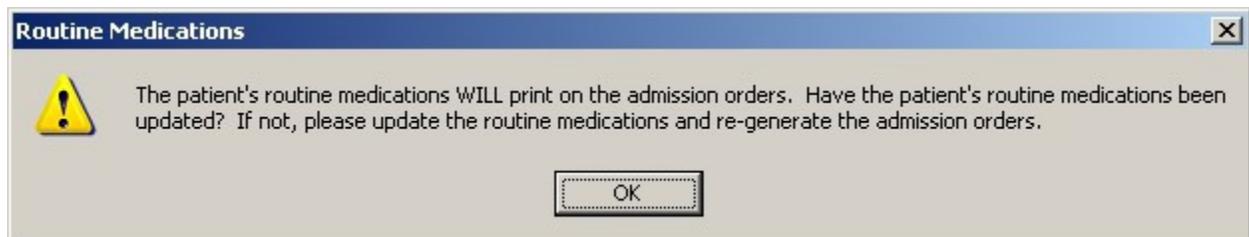
SETMA Sliding Scale Insulin Protocol

Use SETMA Sliding Scale Insulin Protocol
 Patient Sensitivity

The window on this pop-up allows the provider to select the degree of sensitivity to insulin which is unique to this patient. The options are Average, Resistance, Sensitive, Very Sensitive. Depending upon which option is chosen a unique insulin sliding scale will be placed on the order set. The default position is “average.”



Once all the information has been completed, the button Print Admit Orders should be depressed. At that point a pop-up appears which states:



All of the medications on the patient’s current visit will be printed on the hospital order set. If any of them should not be continued or if any of them are incorrect, they should be inactivated or corrected before the hospital order set is printed.

Once the order set is printed, each page must be signed or initialed and the last page signed by the physician.