

# EMERGENCY DEPARTMENT OBSERVATION UNIT

## CHF ADMISSION/DISCHARGE CRITERIA

### ADMISSION CRITERIA

1. History of CHF
2. Normal or unchanged ECG
3. Initial cardiac enzymes within normal range
4. Stable Vital Signs
6. Elevated Serum Cr  $\geq 1.8$
7.  $< 500$ cc of urine output within 2 hrs of IV diuretic
8. BNP assay  $> 500$  pg/ml

### EXCLUSION CRITERIA

1. ECG evidence of MI
2. High suspicion of MI
3. Unstable Vital Signs
4. Clear diagnosis of ACS by history
5. Mental status changes
6. Private attending chooses IP admission
7. Systolic BP less than 90 mmHg
8. Cardiogenic Shock
9. Evidence of low cardiac output syndrome

### EMERGENCY DEPARTMENT INTERVENTIONS

1. IV, oxygen, ECG, CXR
2. Cardiac monitoring
3. Aspirin 325 mg po if not contraindicated
4. Initial cardiac enzymes obtained in Emergency Department
5. Nitrates as needed for pain
6. Emergency Department attending speaks with PMD or Cardiologist (on call)

### OBSERVATION UNIT INTERVENTIONS

1. IV, oxygen, ST-segment monitoring
2. Obtain stat 12 lead ECG for worsening pain
3. Contact ED attending for rhythm abnormalities or ST-segment changes
4. Natreacor infusion for 15 hours, with repeat BNP
5. Time 0 and 4 hours CK, troponin, ECG
6. If cardiac enzymes abnormal, admit to hospital
7. If cardiac enzymes negative, order appropriate stress test.

### DISPOSITION

1. HOME
  - a. Stable VS
  - b. Normal cardiac enzymes
  - c. Unremarkable stress test
  - d. No significant ECG changes
2. HOSPITAL
  - a. Unstable VS
  - b. Positive cardiac enzymes
  - d. ECG changes
  - f. ED/PMD/CARD clinical discretion

**NOT A PART OF THE MEDICAL RECORD**

**EMERGENCY DEPARTMENT  
OBSERVATION UNIT  
CHF**

**Admission Orders**

Addressograph

1. Admit to Emergency Department Observation Unit
2. Initial Emergency Department Physician: \_\_\_\_\_
3. Private Physician: \_\_\_\_\_ Time Contacted: \_\_\_\_\_
4. Consult: \_\_\_\_\_
5. Condition:    \_\_\_ Stable                   \_\_\_ Serious
6. Copies of Emergency Department H&P on chart
7. Allergies: \_\_\_\_\_
8. Routine Vital Signs
9. ST segment - continuous monitoring until cardiac enzymes completed
10. Activity:       \_\_\_ up ad lib   \_\_\_ Other: \_\_\_\_\_
11. Diet:           \_\_\_ Cardiac           \_\_\_ 1800 cal ADA       \_\_\_ 1500 cc Fluid Restrict   \_\_\_ Other:
12. IV Fluids:     \_\_\_ Saline Lock       \_\_\_ Other: \_\_\_\_\_
13. Oxygen:       \_\_\_ Nasal cannula @ \_\_\_ L/minute   \_\_\_ Other: \_\_\_\_\_
14. Medications:  
    \_\_\_ EC ASA 325 mg every am  
    \_\_\_ Tylenol 1 gram po every 6 hours prn pain or fever > 101°  
    \_\_\_ Motrin 800 mg po every 6 hours prn pain  
    \_\_\_ Ultram 50 mg po every 6 hours prn pain  
    \_\_\_ SL NTG 0.4 mg prn chest pain every 5 minutes x 3  
    \_\_\_ Maalox 30 cc po every 4 hours prn indigestion  
    \_\_\_ Ambien 10 mg po every hs prn sleep  
    \_\_\_ Lovenox 40 mg SQ every day
15. Cardiac Medications:  
    *Loop Diuretics*  
    \_\_\_ Furosemide (Lasix) \_\_\_ mg IV every 6 hours  
    \_\_\_ Torsemide (Demadix) \_\_\_ mg IV every 12 hours  
  
    *ACE inhibitors*  
    \_\_\_ Altace 2.5 mg po once daily  
    \_\_\_ Vasotec 2.5 mg po BID  
  
    *Angiotensin Receptor Blockers (ARB's)*  
    \_\_\_ Cozaar 50 mg po BID  
    \_\_\_ Diovan 80 mg po BID  
  
    *Beta Blockers (continue only if chronic therapy over 2 weeks)*  
    \_\_\_ Coreg 3.125 mg po BID  
    \_\_\_ Toprol XL 25 mg po daily

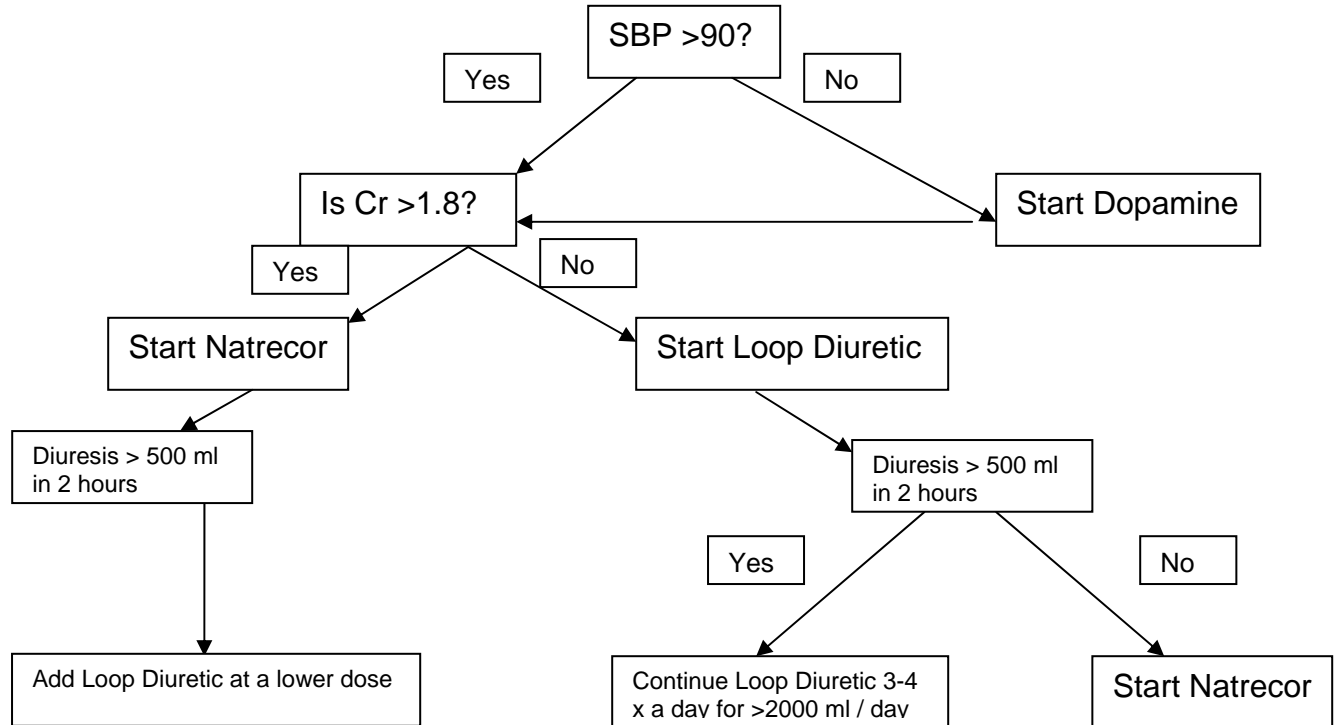
\_\_\_\_\_  
Emergency Department Physician Signature

\_\_\_\_\_  
Date/Time

16. Testing Orders:
- \_\_\_ CK and troponin at 0 and 4 hours from Emergency department arrival, results on flow sheet
  - \_\_\_ 12 Lead ECG at 0 and 4 hours from Emergency department arrival
  - \_\_\_ STAT 12 Lead ECG for monitor alert, chest pain
  - \_\_\_ BNP at 18 hours
  - \_\_\_ PT/INR, CMP, CBC in am
  - \_\_\_ 2D Echo with Doppler, % EF
17. Contact Emergency Department Physician for positive tests results, abnormal rhythm or ST segment changes.
18. Re-evaluate for discharge every 3 hours.
19. Smoking cessation instructions.

\_\_\_\_\_  
Emergency Department Physician Signature

\_\_\_\_\_  
Date/Time



## Nesiritide (Natrecor®) Standing Orders

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Patient Weight: \_\_\_\_\_ lbs \_\_\_\_\_ kg

<b>Inclusion Criteria: (Check all that apply)</b>																																					
<input type="checkbox"/> Elevated Serum Cr $\geq$ 1.8																																					
<input type="checkbox"/> < 500cc of urine output within 2 hrs IV diuretic																																					
<input type="checkbox"/> BNP assay > 400 pg/ml																																					
<input type="checkbox"/> <b>Severe volume overload- risk of intubation</b>			1. Hold Nitroglycerin (if active) immediately																																		
			prior to Nesiritide (Natrecor®)																																		
<b>Exclusion Criteria: (Check all that apply)</b>																																					
<input type="checkbox"/> Systolic BP less than 90 mmHg			2. Give Loop Diuretic IV Bolus																																		
<input type="checkbox"/> Cardiogenic Shock			(2x oral dose recommended)																																		
<input type="checkbox"/> Evidence of low cardiac output syndrome			<input type="checkbox"/> Furosemide (Lasix®) _____mg IV push																																		
<input type="checkbox"/> Cold, clammy skin			<input type="checkbox"/> Bumetanide(Bumex®) _____mg IV push																																		
<input type="checkbox"/> Mental status changes			<input type="checkbox"/> Torsemide(Demedex®) _____mg IV push																																		
<b>Bolus Volume and Infusion Flow Rate</b> 1.5 mg in 250 mL = 6 mcg/ml concentration																																					
<b>Bolus Volume (mL)</b> For 1 mcg/kg: bolus = patient weight (kg) $\div$ 6 For 2 mcg/kg: bolus = patient weight (kg) $\div$ 3																																					
<b>Infusion flow rate (mL/hr)</b> For 0.01 mcg/kg/min (mL/hr) = patient weight (kg) $\div$ 10																																					
<table border="1"> <thead> <tr> <th rowspan="2">Patient Weight (kg)</th> <th colspan="2">Volume of Bolus (mL)</th> <th rowspan="2">Infusion Rate (mL/hr)</th> </tr> <tr> <th>1 mcg/kg</th> <th>2mcg/kg</th> </tr> </thead> <tbody> <tr> <td>60</td> <td>10</td> <td>20</td> <td>6</td> </tr> <tr> <td>70</td> <td>11.5</td> <td>23</td> <td>7</td> </tr> <tr> <td>80</td> <td>13.5</td> <td>27</td> <td>8</td> </tr> <tr> <td>90</td> <td>15</td> <td>30</td> <td>9</td> </tr> <tr> <td>100</td> <td>16.5</td> <td>33</td> <td>10</td> </tr> <tr> <td>110</td> <td>18.5</td> <td>37</td> <td>11</td> </tr> <tr> <td>120</td> <td>20</td> <td>40</td> <td>12</td> </tr> </tbody> </table>			Patient Weight (kg)	Volume of Bolus (mL)		Infusion Rate (mL/hr)	1 mcg/kg	2mcg/kg	60	10	20	6	70	11.5	23	7	80	13.5	27	8	90	15	30	9	100	16.5	33	10	110	18.5	37	11	120	20	40	12	
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<b>Note:</b> The bolus should be drawn from the diluted 250 mL bag and NEVER from the reconstituted vial.																																					
			3. Begin Nesiritide (Natrecor®) bolus of																																		
			<input type="checkbox"/> 1 mcg/kg over _____ 1 min. _____ 15 min.																																		
			<input type="checkbox"/> 2 mcg/kg over _____ 1 min. _____ 15 min.																																		
			<input type="checkbox"/> No bolus																																		
			<b>NOTE:</b> Bolus should be drawn from diluted 250 mL bag, <b>NEVER</b> from the reconstituted vial																																		
			4. Begin Nesiritide infusion at 0.01 mcg/kg/min																																		
			5. Check BP Q15 minutes x 1 hr following bolus, then																																		
			6. Check BP Q30 minutes x 1 hr, then																																		
			7. Check BP Q 1 hour x 2 hrs, then																																		
			8. Check BP Q 4 hours for duration of infusion																																		
			9. 1-2 hours prior to next infusion bag assess to determine need for continued therapy																																		
			10. For BP less than _____mmHg, call Doctor and decrease infusion by ½ (0.005 mcg/kg/min)																																		
			11. For BP less than _____mmHg, call Doctor and D/C Nesiritide																																		
			12. Stop Nesiritide at 18 hours of infusion or Stop at _____ hours/days of infusion																																		
			<b>Signature:</b>																																		

# EMERGENCY DEPARTMENT OBSERVATION UNIT

## CHF PROGRESS NOTE

Addressograph

Please date and sign each entry.

<b>DATE:</b>		<b>TIME:</b>	
<b>PROTOCOL: CHF</b>			
<b>RELEVANT HISTORY/PHYSICAL FINDINGS:</b>			
<b>OBSERVATION INTERVENTIONS:</b>			
	0 <sub>2</sub> % Saturation Monitor		Natreacor infusion
	Cardiac Monitor		
	Cardiac Enzymes		
<b>GOALS OF OBSERVATION PERIOD:</b>			
<b>HOW OFTEN WILL PATIENT BE EVALUATED BY PHYSICIAN:</b>			
<b>MORNING PLAN</b>			
<b>PRIMARY PHYSICIAN CONTACTED:</b>			
	<b>YES NAME:</b>		
	<b>NO</b>		

\_\_\_\_\_  
**ATTENDING SIGNATURE / DATE**

**EMERGENCY DEPARTMENT  
OBSERVATION UNIT**

**CHF  
DISCHARGE NOTE**

Addressograph

**DATE:**

**TIME:**

**PRESENTING COMPLAINT:**

**OBSERVATION COURSE:**

<input type="checkbox"/> ECG 1	<input type="checkbox"/> ECG 2
<input type="checkbox"/> 0 hour CK	<input type="checkbox"/> 4 hour CK
<input type="checkbox"/> 0 hour Troponin	<input type="checkbox"/> 4 hour Troponin
<input type="checkbox"/> BNP 1	<input type="checkbox"/> BNP 2
<input type="checkbox"/> ECHO	
<input type="checkbox"/> Natrecor	

**PHYSICAL EXAM:**

**DIAGNOSIS:**

**DISPOSITION:**  Home  Admission

**DISCHARGE INSTRUCTION GIVEN:**  Yes  No

**PRIMARY PHYSICIAN CONTACTED:**  Yes  No

**NAME:** \_\_\_\_\_

**FOLLOW UP:**

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**ATTENDING SIGNATURE / DATE**