Objectives:
1. To optimize tissue oxygenation and ventilation.
2. To maximize tissue perfusion.
3. To assist in isolating, identifying and eradicating the responsible pathogen.
4. To provide early detection and prompt interventions and prevention of complications such as pneumothorax, bacteremia, empyema or lung abscess.
5. To reduce stress for the patient and significant others through education of disease process and visitation when appropriate.

Process Standards:
1. Identify possible pathogenic mechanisms for pneumonia development.
   a. Aspiration
   b. Inhalation
   c. Inoculation
   d. Direct spread from an infectious site
   e. Hematogenous spread
   f. Colonization in chronic lung disease
2. An initial assessment of respiratory status, including presence or absence of adventitious breath sounds, ventilator settings, and patient tolerance should be made and documented. This assessment should be repeated every 4 hours and as needed.
3. Respiratory therapy should be notified of any ventilator changes made by the physician, or of any new ventilator orders written.
4. Patients requiring Positive End Expiratory Pressure (PEEP) to recruit lung fields will have optimal levels of PEEP. Tidal volumes will also be adjusted to approximately 5ml/kg to prevent barotrauma.
5. Arterial blood gases should be obtained as ordered and results shall be documented on the nursing flow sheet. The physician should be notified of abnormal results as soon as possible.
6. Continuous pulse oximetry will be present. The physician should be notified of abnormal results
7. Daily chest x-rays should be preformed.
8. Administration of ordered antibiotics and other medications will be given in a timely manner.
9. If the patient’s vital signs and oxygenation are stable, turn the patient every 2 hours.
10. Document heart rate and blood pressure hourly or more often if outside acceptable range. Respirations and temperature should be recorded every 4 hours and as needed.

11. Document intake and output hourly. Notify the physician if urine output is < 0.5cc/kg for 2 consecutive hours or if needed.

12. An initial assessment of skin should be done including color, temperature, moisture, or signs of breakdown. This assessment should be repeated every 4 hours. Document skin care given. WOCN consult shall be performed as needed.

13. Neurological checks should be done initially, including pupil size and symmetry, response to light, patient response to verbal or noxious stimuli, and patient spontaneous movement of extremities. This assessment should be repeated every 4 hours.

14. Patients may require the use of continuous rotational therapy. These patients will be placed on a pulmonary specialty bed for continuous rotational therapy per physicians order.

15. Patients may require the use of prone position. These patients will be placed in the prone position upon the physicians order. The position of the patient’s head and bony prominences will be changed every 2 hours or as needed. The patient will remain in the prone position until the physician orders patient to be placed in the supine position.

16. If neuromuscular paralytics and sedation are utilized, continue to assess need for paralysis with oxygen saturation and mixed venous saturation if present. Neuromuscular paralytics are given only as needed and in conjunction with sedation. Sedate patient to a RASS as ordered by physician.

17. As the patient begins to be weaned from ventilator, Daily Awakening Trials (DAT’s) may be ordered. If ordered, DAT’s shall be performed.

18. Obtain and document hemodynamics/minimally invasive hemodynamic values if devices present every 4 hours or more if indicated and notify MD of significant changes. If continuous device present, the nurse shall document continuous hemodynamic data hourly. Oxygenation profiles should also be done as needed to assess oxygen delivery and consumption.

19. Continuous cardiac monitoring should be in place. Documentation of the rhythm should be done initially and repeated every 4 hours. A rhythm strip should be added to the flow sheet every 12 hours and as needed.

20. An infusion pump should maintain all vasoactive drips. Mcg/kg/min should be documented for each vasoactive drip.

21. All lab studies ordered should be obtained in a timely manner with documentation and notification of physician for abnormal results.

22. All medications ordered should be administered in a timely manner and patient effect (and tolerance when appropriate) should be documented.
Outcome Standards:

At the time of discharge from the medical intensive care unit:

1. The patient will have adequate gas exchange and tissue oxygenation as evidenced by warm, dry skin, alertness and appropriate responses to stimuli: urine output is 30 ml/hr (if appropriate); and stable vital signs.
2. The patient will be on room air or require oxygen only by nasal cannula or facemask.
3. All vasoactive drips will be discontinued and the patient will have satisfactory results on p. o. medications.
4. All invasive intravascular lines will be removed with the exception of a multilumen catheter or peripheral IV sites.

References: