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|---|--|
| <b>AIM</b>  |  |
| Achieve 90% adherence to lung protective ventilation by December 1, 2014  |  |
| <b>PROBLEM</b>  |  |
| Despite proven benefit in mortality, adherence to Lung Protective Ventilation for patients with ARDS is poor. Currently only 32% of patients with ARDS receive lung protective ventilation by 24 hours after initiation of mechanical ventilation.  |  |
| <b>IMPORTANCE</b>   |  |
| Acute respiratory distress syndrome (ARDS) is a severe complication of critical illness that contributes to increased morbidity, mortality, costs, and healthcare utilization. Despite decades of research, the only intervention that has decreased mortality in patients who develop ARDS is the use of lung protective ventilation (LPV), defined as tidal volumes of <6.5 ml/kg Ideal Body Weight. Additional research suggests that the benefits of LPV may extend to patients merely at risk for ARDS. In those patients, every 1 ml/kg IBW over 6 ml/kg IBW doubles the odds of developing ARDS. |  |
| <b>EXPECTED OUTCOMES</b>  |  |
| Flowsheet variables in Epic to document current vent settings in ml/kg. Education of units to ensure adherence going forward. Create a reliable process to adapt continuous quality improvement.  |  |
| <b>MEASURES</b>   |  |
| Big Y: 90% patients receiving $\leq 6.5$ ml/kg ideal body weight within 24 hours  |  |
| Structure: % of patients seen by clinical specialist daily  |  |
| Process: % effort of clinical specialist, details of clinical specialist report   |  |
| Outcome: Average tidal volume in ml/kg ideal body weight, duration of mechanical ventilation, ICU length of stay, ICU mortality   |  |
| <b>RISKS/BARRIERS</b>   |  |
| The biggest barrier I anticipate will stem from lack of comfort with the required ventilator settings to achieve the goal. This will require education by the project team, especially the RT Clinical Specialists. Additional limiting factors will be the ability of Epic core team to build the necessary fields in the flowsheet.   |  |
| <b>STAKEHOLDERS</b>   |  |
| Key stakeholders include the physician providers, nursing, and respiratory therapy. Our improvement team includes members of each of these groups in order to build a multidisciplinary approach to the goal. Please see the Project Team list below for additional details with regard to names and roles of the stakeholders.   |  |
| <b>SCOPE</b>  |  |
| In Scope:   | Out of Scope:  |
| Unit: Medical ICU, Surgical ICU, Neuroscience ICU   | Unit(s): Other UNC ICUs                                      |
| Patient population: Adult patients on mandatory mechanical ventilation  | Patient population: Patients on ECMO, non-conventional modes |
| <b>Start:</b> Intubation or admission from outside hospital   | <b>End:</b> Liberation from mechanical ventilation           |
| <b>SCHEDULE</b>   |  |
| Kickoff Meeting – June 17   |  |
| Purple Belt Training – 7/25, 8/21, 8/22   |  |
| Unit Education – 9/1-9/15   |  |
| Implementation of protocol – 9/16   |  |
| Measurement, analysis, and refinement – 9/16-11/30  |  |
| Sustainment – 12/1 ongoing  |  |

# Lung Protective Ventilation Project Charter

rev. 07/15/2014

| PROJECT TEAM            |   |
|-------------------------|---|
| Team Member             | Project Role  |
| Shannon Carson, MD      | Project Sponsor, Process Owner (Blue Belt)                            |
| Thomas Bice, MD         | Project Sponsor, Project Lead, Process Owner (Blue Belt, Purple Belt) |
| Kathy Short, RRT        | Project Sponsor, Process Owner (Blue Belt)                            |
| Maureen Heck, RN        | Project Sponsor (Blue Belt)   |
| Mike Garrett, RRT       | Team Leader (Purple Belt)   |
| Chris Biancianello, RRT | Team Leader (Purple Belt)   |
| Joyce Lanier, RRT       | Team Leader (Purple Belt)   |
| Lydia Chang, MD         | Team Member (Yellow Belt)   |
| Sean Montgomery, MD     | Team Member (Yellow Belt)   |
| Dedrick Jordan, MD      | Team Member (Yellow Belt)   |
| Tom Caffey              | Project Coach (Black Belt)  |