Long-term acute care units (LTACs) are designed to meet the needs of patients who have ventilator-dependent respiratory failure, chronic pulmonary problems, and severe wounds. One hundred and nine with different comorbidities as shown in (figure 1). Patient age groups are dependent respiratory failure, chronic pulmonary problems, complex and severe wounds, infections requiring long term antibiotic therapy, and conditions requiring continued life support, nutritional therapies, or pain control. Patients requiring mechanical ventilation for more than 15 days are an example. The weaning protocol is initiated if criteria are met (described in the next sections). Following the criteria, patients meet a days and/or CIVs were released with the pulmonologist and the radiologist. Decisions regarding the plan of care are then made according to findings. This model has been in place for the last three years. Constant communication between all members of the multidisciplinary team facilitates weaning and the ultimate objective of discharge as applicable.

**Weaning Protocol:** The weaning protocol used in our setting is derived from that used by Sheinhorn and colleagues. The studies quoted in this paper where performed prior to the 2005. The proposal to re-define a successful wean as being ventilator-free for 7 days in the PMV setting, certainly makes more sense and should be used in future studies. 2. The PMV population has been a rising area of research and study since the 1990s, when emerging economic pressures to maximize resource utilization have resulted in specialized centers for post intensive care unit (ICU) care. A retrospective review (n=123) of such patients at a regional weaning center from 1998 to 1999 revealed no improvement in weaning outcomes through time. The numbers were as follows: 55.9% weaned, 15.6% failed to wean, and median time to wean was 29 days. Although overall mortality rates have remained unchanged, survival of ventilated patients 1-year after discharge has improved from 45% (1988-1992) to 59% (1992-1996).7 A later analysis of a smaller population (n=123), reflected a 50% (p=0.004) mortality rate and 38% (p=0.01) wean rate. Significant predictors of poor outcomes were: age > 64 and not functionally independent before admission. Such subgroup of patients reflected a 95% (9P 94%-96)% mortality rate. Multicenter outcome studies of PMV patients admitted to long term hospitals were later elucidated from a pool of 1,419 patients in 23 hospitals. Outcomes of all patients upon discharge were as follows: 54% 1-year weaned, 20.9% ventilator dependent, and 25% deceased. Median time to wean (n=795) was 15 days (range 7-30). Characteristically, most patients admitted were elderly, with acute on chronic illness, and continued to require prolonged and aggressive ICU intervention. Apart from the epidemiologic characteristics of such patients, much research has focused on which weaning strategy provides optimal outcomes. In the non-LTAC setting, a comparison of spontaneous breathing trials versus decreasing levels of pressure support ventilation failed to demonstrate equal effectiveness in COPD patients requiring mechanical ventilation for more than 15 days. In the LTAC setting, studies have failed to standardize weaning protocols for PMV. In 2001, Scheinhorn et al. used a therapist-implemented patient-specific (TIPS) protocol for PMV. The protocol is based on stepwise reductions in SIMV and PSV, followed by Spontaneous Breathing Tidal (SBT). Wean outcomes of patients subject to the TIPS protocol were compared with patients treated under the same physician prior to protocol institution (n=26). The demonstrated TIPS patients had shorter time to weaning (17 days) compared to historical controls (29 days). However, the subgroup analysis of the 51 patients with wean rate (34.7% vs 56.5%) and ventilator-dependence rate (17.5% vs 10.9%) is not statistically significant (23.7% vs 30.7% p=0.3). A follow-up study (n=191) of the TIPS protocol was thereafter designed to determine the optimal PSV used to determine early entry into the SBT phase of weaning. Such PSV was maintained until no data on wean success was changed to >100. Average time to weaning was 13.5 days.7 PMV patients have clearly different needs and resource consumption compared to patients in acute ICUs. Specialized venues, staff training, and reimbursement schemes are rapidly evolving. One challenging aspect of studying the PMV population is varying definitions of “weaning success”. In the ICU setting (and in this LTAC), weaning success is based on the patient’s ability to tolerate weaning without the need for the reintroduction of ventilatory support (invasive or non-invasive) or severe weakness as outlined above, these observational results are hypothesis generating, but worthy of further study. Controlled, cohort studies should be undertaken to study this evolving segment of hospital care, to elucidate whether the use of a multidisciplinary weaning team or the use of this modified-TIPS protocol indeed provides a successful wean as being ventilator-free for 7 days in the PMV setting, certainly makes more sense and should be used in future studies.

**Conclusion:** The weaning success rate of ventilated patients admitted to our LTAC is 46%. With median time to weaning of 17 days, and mortality of 28.2%, this reflects a wean success rate of 44%. Mortality rate was 28.2%. As of this preliminary report, data on patient demographics and time to wean was 14.8 days, and rate of ICU transfer was 15.6%. These are being collected manually and will be incorporated into the final study results. Several factors influence weaning success rates. Clearly, the patient’s age and functional status (Barthel index) is unique in whether one approach to chronic weaning will be beneficial or not. Sheinhorn (1997) demonstrated that the TIPS protocol reduced the length of time to weaning. However, a statistically significant difference in mortality and overall wean rate was not demonstrated. The chronic weaning strategy used in this research is derived from, and is similar in many respects to the TIPS protocol. One difference is the inclusion of a nurse practitioner working within the context of a multidisciplinary team of pulmonologists, primary care physicians, respiratory therapists and nursing staff. Another difference was the inclusion of low tidal volumes for all ventilator settings. Our wean success rate of 46% is numerically better than most established data (see Introduction). However, the degree of compliance to the multidisciplinary protocol were not measured, (1) the difference in outcomes could not be ascribed to any single aspect of our chronic weaning protocol, and (2) definitions of successful weaning may not exactly be the same from study to study. Although, from the conclusion of the 2005, a patient that was ventilator-free for 3 days was what was generally accepted as a successful wean in the LTAC setting. The studies quoted in this paper where performed prior to the 2005. The proposed definition of a successful wean as being ventilator-free for 7 days in the PMV setting, certainly makes more sense and should be used in future studies.

**References:**


**Abstract:** Long-term acute care units (LTACs) are designed to meet the needs of patients who have ventilator-dependent respiratory failure, chronic pulmonary problems, and severe wounds. The weaning protocol is initiated if criteria are met (described in the next sections). Following the criteria, patients meet a days and/or CIVs were released with the pulmonologist and the radiologist. Decisions regarding the plan of care are then made according to findings. This model has been in place for the last three years. Constant communication between all members of the multidisciplinary team facilitates weaning and the ultimate objective of discharge as applicable. The weaning protocol used in our setting is derived from that used by Sheinhorn and colleagues. The studies quoted in this paper were performed prior to the 2005. The proposal to re-define a successful wean as being ventilator-free for 7 days in the PMV setting, certainly makes more sense and should be used in future studies.

**Methodology and materials:** Inclusion criteria of this study was, all patients admitted tokindred on a ventilator. And there was no exclusion criteria. The multidisciplinary team consists of the Pulmonologist, Attending Physicians, Nurse Practitioners (NP), Respiratory Therapists (RT), and Nursing Staff (NS). The Nurse Practitioner facilitates weaning in the LTAC through coordination of care. It is noteworthy that the patients each have an internal care as a primary care physician and a primary team in consultation. The day begins as the NPs assure that no acute problems necessitate immediate action are present. RTs report an account of overnight events, current ventilator settings, weaning parameters, as well as the patient’s respiratory status and the NPs conduct daily rounds with the Pulmonologist. The laboratory values and progress notes are reviewed and analyzed. The evaluation of a new patient includes a history and physical, drawing of arterial blood gases, chest x-ray, and sputum culture. If the assessment warrants any immediate changes, they are made at this time. The NPs discuss any medical issues that may interfere with the weaning process with the attending physicians. Such conditions may include fluid and electrolyte imbalance, complications of chronic wounding processes, or exacerbation of chronic obstructive pulmonary disease. The laboratory values and progress notes are reviewed and analyzed. The evaluation of a new patient includes a history and physical, drawing of arterial blood gases, chest x-ray, and sputum culture. If the assessment warrants any immediate changes, they are made at this time. The NPs discuss any medical issues that may interfere with the weaning process with the attending physicians. Such conditions may include fluid and electrolyte imbalance, complications of chronic wounding processes, or exacerbation of chronic obstructive pulmonary disease. The laboratory values and progress notes are reviewed and analyzed.