Our Editor's Choice paper, by Collins and colleagues, reports the findings of a pilot study related to managing asthma on college campuses. Specifically, they investigated how student health centers in Texas are managing asthma for college students, and the student health center directors' attitudes and perceptions of the impact of asthma on their college campuses. Survey respondents indicated a lack of understanding of chronic disease management and underuse of the student health center due to a lack of awareness of its existence. Perceived barriers to visiting the student health center included access issues, money, and students self-medicating with short-acting ß agonist inhalers and/or over the counter medications. In her editorial, Levy reminds us that, from a public health standpoint, poor asthma control among college students can have dire consequences for physical, academic, and economic well-being. By implementing national guidelines for transition, mandating established standards of care, and taking a proactive stance, the student health center can play an important role.

Antonio et al sought to determine the impact of fluid balance in the 48 h prior to a spontaneous breathing trial (SBT) on weaning outcomes in a mixed ICU population. Their results suggest that fluid balance should not delay SBT initiation since it did not predict greater probability of SBT failure in the medical-surgical critically ill population. Notwithstanding, avoiding positive fluid balance in COPD patients might improve weaning outcomes. In their editorial, Fernandez and Subria make the important point that, where the effects of any single factor can only be revealed after those of all possible confounding factors are excluded, it seems unrealistic to seek a single predicting factor. Certainly no one would argue the fluid overload is beneficial.

Weakness is associated with delayed liberation from mechanical ventilation. Cottereau et al evaluated the use of handgrip strength as a predictor of ventilator liberation. Handgrip strength predicted difficult weaning but not extubation failure in mechanically ventilated subjects. Time to liberation from mechanical ventilation and ICU length of stay were significantly longer for subjects classified as having muscular weakness according to handgrip strength. No association was shown between handgrip strength and extubation outcome. The authors concluded that muscle weakness, assessed by handgrip strength, is associated with prolonged mechanical ventilation and ICU length of stay, but not with extubation outcome.

As a quality improvement project, Tripathi and colleagues evaluated all planned and unplanned extubations in a multidisciplinary 20 bed pediatric ICU over a 12-month period. As the result of a targeted intervention, the unplanned extubation rate in the PICU decreased from 3.55/100 intubation days to 2.59/100 intubation days. They found that a specific policy for sedation and ventilator weaning could be very helpful in managing intubated patients and preventing unintended harm.

Cuff inflation on the endotracheal tube is currently recommended at 20 to 30 cm H_2O. Rozycki et al compared endotracheal tube designs within a biorealistic tracheal model, to assess cuff and suction performance in this setting. Three endotracheal tube designs were tested for performance by simulant leakage below the cuff and air leakage over a range of cuff pressures (5 to 25 cm H_2O) and PEEP levels (0 to 15 cm H_2O). In this in vitro model, they found that each of the endotracheal tube designs sealed at lower than current recommended cuff pressures.

The goal of the study by Donesky et al was to evaluate the feasibility of using non-research generated clinical data to report long-term outcomes following a pulmonary rehabilitation (PR) program. Using a longitudinal descriptive design, all patients who completed PR at one community-based program in the San Francisco Bay Area were asked to complete 6-month and subsequent yearly questionnaires. This project demonstrated the ability of one program to accurately monitor extended long-term follow up after PR. Implementing this long-term monitoring methodology consistently in PR programs could contribute to comparative effectiveness evaluation of various treatment options.

Wenhua and colleagues conducted a systematic review and meta-analysis of the impact of resistance training in subjects with COPD. The results of this analysis suggest that resistance training can be successfully performed alone or in conjunction with endurance training without increased adverse events during PR of patients with COPD.

Although web-based diaries are well known as a potential self-management tool, reasons that patients use (or do not use) self-management diaries, as well as perceptions and behaviors in using (or not using) diaries, remain largely unknown. Van Kruijssen et al conducted a qualitative study of patient and professional perceptions and behaviors regarding use of online self-management diaries for asthma and COPD. Subjects in this study used self-management diaries to improve their insight into the disease, cope more consciously with their disease, feel in control, and discuss outcomes from the self-management diary with their health care professionals.

Low serum vitamin D level may represent a marker of other factors that may lead to increased asthma prevalence and severity. The aim of the study by Dabbah and colleagues was to assess the correlation between vitamin D level and markers of asthma and allergy in a subgroup of children that may have fewer confounding factors. In the 71 children with asthma in this study, there was no correlation between the level of vitamin D and the degree of airway reactivity, airway inflammation, and allergy. Cause and effect relationship between vitamin D, asthma, and allergy should be further clarified.

Armeniakou et al explore the relationship between oxygen kinetics during constant workload submaximal cardiopulmonary exercise test (CPET) and disease severity in adult subjects with cystic fibrosis (CF). They found that adult subjects with CF have significantly prolonged oxygen kinetics during constant workload submaximal exercise in relation to disease severity. Thus, submaximal exercise should be considered as preferable choice of CPET in adult patients with severe CF.

Xbox Kinect has been proposed as an exercise intervention in CF, but its potential has not yet been compared to standard training modalities. Salonini and colleagues used a crossover-design in which subjects were randomized to undertake 2 interventions, Xbox Kinect and traditional stationary cycle. Maximum heart rates were similar. Heart rate target was achieved more frequently with the stationary cycle. Xbox Kinect caused less dyspnea and fatigue, and was more enjoyable than the traditional stationary cycle. Subjects preferred Xbox Kinect for its interactivity. Xbox Kinect has the potential to be employed as an exercise intervention in young subjects with CF, but investigation over longer periods is needed.

Guan and colleagues evaluated inflammatory responses, spirometry and quality of life in bronchiectasis exacerbations. They found that bronchiectasis exacerbations were characterized by heightened inflammatory responses and poorer quality of life and spirometry, but not increased bacterial density. These results applied to subjects with and without potentially pathogenic microorganisms when clinically stable.