

In our Editor's Choice paper, Mah et al determined the effectiveness of a multidisciplinary tracheostomy service alone and following implementation of a post-tracheostomy care bundle on rates of decannulation and tolerance of oral diet. The addition of a tracheostomy care bundle significantly improved rates of decannulation and tolerance of an oral diet. An important member of the multidisciplinary service was the respiratory therapist. As stated by Divo, bundling multiple facets of tracheostomy care not only makes sense, but it is a crucial step to improve the outcomes of patients with a tracheostomy.

Ramírez and colleagues evaluated the ability of healthcare professionals to identify patient-ventilator asynchrony using waveform analysis. They found that healthcare professionals who had specific training in mechanical ventilation increased their ability to identify asynchrony using waveform analysis. Neither experience nor profession proved to be relevant factors to identify asynchrony correctly using waveform analysis. As Mireles-Cabodevila and Dugar point out in their editorial, this study not only highlights the poor recognition of significant patient-ventilator interactions among health care providers, but also highlights the need for a standard vocabulary to guide research around this subject.

The study by Binks and colleagues assessed the accuracy of caregiver estimates of dyspnea. Caregiver estimates of breathing discomfort were significantly lower than those reported by subjects, and the discrepancy was seen in all professions (physicians, respiratory therapists, and nurses). Lareau and Makic offer a thoughtful editorial accompanying this paper. They make the important point that we should ask patients about their level of dyspnea, because clinicians tend to underestimate the level of dyspnea and discomfort when relying on objective information such as breathing frequency, heart rate, and use of accessory muscles. It is also important to establish whether the dyspnea arises from respiratory effort, which would inform an evaluation of ventilator settings and airway patency, or from a fear of having breathing controlled by the ventilator, which would inform an approach of reassuring and the patient and potentially intervening with medication.

The purpose of the study by Miller was to describe the training methods, skills maintenance methods, and barriers that prevent respiratory therapists (RTs) from intubating in some hospitals. A survey instrument was developed by the author, and was posted on the AARConnect social media website's management section. Endotracheal intubation training for RTs varied among those surveyed. Simulation training and supervised intubations were the most common training methods. Recertification methods were wide-ranging, with most RTs being recertified after completing a minimum number of intubations.

Mulhall et al evaluated whether a tablet-based multimedia education tool improved provider and subject knowledge of inhaler use techniques. The tablet-based inhaler education tool improved inhaler technique for both providers and subjects. While this intervention did show durable efficacy for improving inhaler use by subjects, it did not reduce their respiratory symptoms.

Alsalmi and colleagues evaluated the effectiveness of learning inhaler technique from written instructions and the

impact of health literacy for subjects diagnosed with COPD who used a dry powder inhaler (DPI). The educational handouts for DPIs helped subjects already using a DPI to improve their inhaler technique. Stable subjects with COPD were able to generate appropriate inspiratory flows to properly use DPIs. Neither vision nor health literacy were associated with the inability to learn inhaler technique from patient education inhaler device handouts.

Patterson et al evaluated smoking cessation using a mixed-methods analysis of treatment seeking participation and preferences. Smoking cessation program attendance in this sample of mostly African-American smokers was poor. Increased knowledge about cessation benefits and access to full-course pharmacotherapy, particularly in those without a COPD diagnosis and who do not have a maternal history of cancer, may be high-priority targets to promote use of a cessation program in this population.

In a bench study, Chikata and colleagues investigated the influence of high-flow nasal cannula (HFNC) gas flow and other respiratory parameters on  $F_{IO_2}$ . When HFNC gas flow was 60 L/min, measured  $F_{IO_2}$  was similar to set  $F_{IO_2}$  at 0.3 and 0.5, while at  $F_{IO_2}$  0.7, as tidal volume increased, measured  $F_{IO_2}$  decreased slightly. At 20 or 40 L/min, changes in tidal volume resulted in deviation from set  $F_{IO_2}$ .

The study by Jácome and Marques investigated the short- and mid-term effects of pulmonary rehabilitation on computerized respiratory sounds in subjects with COPD. Computerized respiratory sounds were sensitive to short- and mid-term effects of pulmonary rehabilitation.

The aim of the study by Torres-Sánchez and colleagues was to analyze physical and functional impairment in subjects hospitalized with COPD exacerbation, and to assess the physical and functional impact of hospitalization at one-month follow-up in subjects with severe COPD. They found that hospitalization due to COPD exacerbation led to physical and functional impairment at one-month follow-up.

Maloni et al evaluated the stability and agreement of a microtransducer and an air-filled balloon esophageal catheter in the monitoring of esophageal pressure. They found that the catheter with microtransducer had a small baseline pressure drift, similar to the air-filled balloon catheter. The poor agreement between the catheters does not allow the microtransducer catheter to be used as a surrogate of the traditional air-filled balloon catheter.

The aim of the study by Sayas Catalan and colleagues was to determine the usefulness of videolaryngoscopy with NIV for identifying mechanisms and sites of obstruction, and for providing a guide for their resolution, in subjects where CPAP is difficult to titrate. The use of videolaryngoscopy with NIV in difficult-to-titrate subjects may help to identify the sites and mechanisms of obstruction, and in some cases may improve quality of ventilation.

The aim of the study by Gochicoa-Rangel and colleagues was to analyze the long-term stability of a portable single-breath  $D_{LCO}$  instrument (nDD EasyOne Pro).  $D_{LCO}$  measurements were stable over the 3-y period without any need for manual recalibration of the instrument. The biological control was as good as the  $D_{LCO}$  simulator to evaluate this kind of device in a long-term laboratory quality control program.