Pulmonary Vest Therapy to Prevent Pneumonias in Quadriplegic Cerebral Palsy. Audrius V. Plioplys, MD, FRCPC, FAAP, CMD (Mercy Hospital, Chicago, IL); Jone Ebel, RN; Irene Kasnicka, RN.

Disclosures: None declared.

Objectives: To extend our previous observations (J Am Med Directors Assn 2002;3:318-21) on the effectiveness of high-frequency chest wall oscillation vest therapy, with the Advanced Respiratory vest, for preventing pneumonias. **Design:** Quantitative research using before-during treatment data. **Setting:** 2 pediatric skilled nursing facilities for children with severe cerebral palsy (CP). **Participants:** 11 subjects (6 men, 5 women), with severely quadriplegic CP and frequent pulmonary infections, were identified (age range, 1-28y; median, 17y). All were fed by gastrostomy tube; 9 had a tracheostomy; and 6 had epilepsy. **Interventions:** Not applicable. **Main Outcome Measures:** Data were collected for the 12 months prior to initiation of vest therapy and for the 12 months of vest therapy. **Results:** The number of pneumonias decreased from 52 to 27 per year ($P<.05$). The number of hospitalizations due to pneumonia decreased from 13 to 3 ($P<.05$). The frequency of effective suctioning of pulmonary secretions was significantly increased ($P<.001$) and the frequency of seizures decreased ($P<.05$). **Conclusion:** Vest therapy resulted in a statistically significant reduction in the incidences of pneumonias, number of hospitalizations for pneumonia, and seizure frequency. Vest therapy was tolerated well, without side effects. **Key Words:** Cerebral palsy; Rehabilitation.

Cost Savings of Pulmonary Vest Therapy. Audrius V. Plioplys, MD, FRCPC, FAAP, CMD (Mercy Hospital, Chicago, IL); Jone Ebel, RN; Irene Kasnicka, RN.

Disclosures: None declared.

Objectives: To determine cost savings from using pulmonary vest therapy to prevent hospitalizations related to pneumonia. **Design:** Quantitative research using before-during treatment data. **Setting:** 2 pediatric skilled nursing facilities for children with severe cerebral palsy (CP). **Interventions:** Not applicable. **Main Outcome Measures:** The average hospitalization for pneumonia was 5 days, 4 of which were in the intensive care unit (ICU). The daily hospitalization rates were obtained from the business offices of 3 regional hospitals with pediatric ICU units that serve our patients. **Results:** During our 1-year study, the number of hospitalizations was decreased by 10. The average hospitalization charge was $8225. Thus, the cost savings for 10 hospitalizations was $82,550. The cost of a vest therapy unit was $15,000 and a total of 3 units were used. The vest therapy units continue to be in use for the third year, without mechanical failure or maintenance requirements. **Conclusion:** In the first year alone, there was a very significant cost savings. It should be noted that these sums do not include hospital laboratory testing, pharmacy costs, or physician costs, and so significantly underestimate the actual savings. **Key Words:** Cerebral palsy; Rehabilitation.

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