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Title: Adjunct treatment of pneumonia in children 6-18 years old using a hand held sputum induction device

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Body: Pneumonia is consistently a leading cause of mortality and morbidity in the Philippines; treatment is mainly antimicrobial. Lung Flute is a safe, hand held device that helps effective induction of sputum. The objective of this study is to evaluate the effectiveness of Lung Flute in sputum induction for relief of cough in children 6-18 years old admitted for Pediatric Community Acquired Pneumonia (PCAP) PCAP B and PCAP C. Children ages 6-18 years old admitted with a diagnosis of PCAP B or PCAP C were included. Patients diagnosed with PCAP A, PCAP D and hyperreactive airway were excluded. Each subject was enrolled to Lung Flute group or Control group by systematic randomization. Patients in the Lung Flute group used Lung Flute 3x a day in addition to the treatment provided by the physician. Pretested questionnaire on cough was answered by both groups. McNemar test was used. Of the 35 subjects (CI 80%, alpha error .05), there were more males than females with a mean age of 9 years old. Majority admitted were diagnosed with PCAP B in Lung Flute group (73.4%) and Control group (85%). There was significant decrease in the frequency of cough on Day 2 (p value .048954) and significant improvement on the quality of cough on Day 2 (p value .002627) and Day 3 (p value .022961). Significant improvement on the quality of life on Day 1 and Day 2 was seen (p value .0004883, p value .002, p value .0000002384). Effective sputum induction was noted in both groups but earlier improvement was seen in the Lung Flute group. Lung Flute is an effective device in sputum induction and may someday be used as adjunct treatment of pneumonia.