Therapeutic strategies performed by physiotherapists in three intensive care units (ICUS) in Santiago, Chile: pilot study.

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Abstract

Background: To date, there are four systematic reviews suggesting positive effects of rehabilitation and chest physiotherapy during ICU stay. However, in Chile there is no information about the therapeutic strategies used by physiotherapists (PTs) working in this environment. A better understanding of the interventions they perform would shed light on possible areas of improvement.

Purpose: To describe the duration and therapeutic strategies used by PTs working at three Level 3 ICUs in Santiago, Chile.

Methods: A cross sectional study carried out in three level 3 ICUs in Santiago: a private hospital, a public hospital and a national reference centre for cardiothoracic disorders. PTs were observed in each unit for 24 hours over the course of 8 days, using a structured observation template. Data were collected on time spent on different activities (reading of charts and test results, assessment of patient, intervention, reassessment, writing on patients' charts, change-of-shift report and administrative work) and therapeutic strategies performed with patients. Frequency of use is presented for the most common activities and the median (P_{25}-P_{75}) of their duration. Chi-squared was used to compare frequencies according to ward. P-value <0.05 were considered statistically significant.

Results: 32 PTs were observed for 960 hours during 1131 visits. 121 patients received care from PTs during this period with a median (P_{25}-P_{75}) APACHE II of 13 (9–19). 41 patients (33.9%) were on invasive or non-invasive mechanical ventilation. 88% of the PTs' working time was spent on activities related to patients' care and 12% in administrative tasks or clinical meetings with members of staff. The median (P_{25}-P_{75}) duration of a visit was 20 (12–28) min including 3 (1–4) different therapeutic strategies. The most commonly used were: mucus clearance techniques (49%), ribcage compression-decompression (48%), active-assisted range of motion (ROM) (21%), sitting on edge of bed (SEB) (19%), mechanical ventilator parameters adjustment (16%) and assisted walking (16%). Neuromuscular electric stimulation or training with cycloergometer, steps or treadmill were not used. Passive ROM was more frequent in the ICUs than High Dependency Units (HDUs) (20% vs 12%, $p < 0.0001$), while SEB (14% vs 23%, $p < 0.0006$), assisted standing (11% vs 17%, $p < 0.044$) and assisted walking (10% vs 20%, $p < 0.0001$) were more common in HDUs than ICUs.

Conclusion(s): Chest physiotherapy techniques are the most commonly used techniques despite conflicting evidence on their benefit. It is noteworthy that some forms of early mobilisation are also frequently performed, although they were more common in HDUs than ICUs. Beliefs about safety of exercise, lack of skills, knowledge or human resources, might be preventing the use of more active ways of rehabilitation. This should be explored in the future in order to increase the quality of care provided.

Implications: This pilot study will help to develop a self-report questionnaire. With it, we aim to survey PTs across Chile in order to establish the current therapeutic strategies used and human resources in the ICU. This information would help to develop policies in relation to the minimum number of PTs and standard of care in the ICU.