

# Clinician's Commentary

Cardiopulmonary physiotherapy (CPT) encompasses a wide variety of treatment techniques that address the physiologic and functional impairments to effective ventilation, oxygen transport, and oxygen utilization. These treatment techniques may include breathing exercises, manual secretion-clearance techniques, positioning, mobility, and activity. Physiotherapists ensure that the use of rehabilitation resources has purpose and is goal oriented. Most importantly, the discontinuation of physiotherapy services should be based on the achievement of treatment goals and the assurance that the patient is not likely to deteriorate when the cessation of physiotherapy services. The Paediatric Cardiopulmonary Physiotherapy Discharge Tool described in this issue of *Physiotherapy Canada* addresses the goal of facilitating the optimal timing of discharge from hospital for paediatric CPT patients.<sup>1</sup>

Although the principles by which physiotherapists develop clinical impressions are based on a uniform foundation of knowledge, practice settings and resource availability can be diverse drivers of physiotherapy services. In one hospital, physiotherapy resources may be limited, while in another they are abundant. In addition, the complexity of cardiac, thoracic, and upper-abdominal surgeries may also affect the length of stay, thus causing wait lists to grow. As a result, the strains on a variety of hospital resources may affect the discharge of a post-surgical patient from an acute-care hospital. The Delphi panel approach used by Ellerton et al. to determine the content of the discharge tool takes into consideration the perspectives of multiple experts with diverse experiences. This process enables the development of a consensus identifying the factors that may guide the decision to discharge from postoperative CPT in a wide variety of paediatric clinical settings.

Ellerton et al. demonstrate that the criterion items included in their paediatric discharge tool are similar to those included in the adult-focused Postoperative Physiotherapy Discharge Scoring Tool, or POP-DST<sup>2</sup> (mobility, breath sounds, secretion clearance, SpO<sub>2</sub>, respiratory rate). However, clear distinctions in the paediatric population are identified in their study. The inclusion of discharge planning and the evaluation of respiratory distress instead of respiratory rate alone were found to be important assessment criteria for paediatric physiotherapists practising CPT.

Discharge planning illustrates one of the unique differences between adult and paediatric care: children's inherent dependence on a support system, whether it be family or community-based care. The discharge-planning

criteria identified by the Delphi panel highlight this area of attention, ensuring that the physiotherapist assesses whether a paediatric patient has

1. no requirement for CPT support after discharge from hospital,
2. requirement for CPT support after discharge from family independently, or
3. requirement for further CPT resources and support after discharge beyond what can be managed by family.

Furthermore, by including an assessment of discharge-planning requirements, the physiotherapist can ensure that discontinuation of CPT in a paediatric acute-care setting is safe and that the patient will continue to receive necessary care. Assessment of these requirements will also ensure that length of stay and use of acute-care resources are minimized, thereby minimizing health care costs.

The inclusion of signs of respiratory distress is another distinction in the management of paediatric as opposed to adult patients. Assessment of respiratory rate alone is not sufficient to indicate whether or not a child is in distress; there is physiological variability in respiratory rate between children of different age groups, as well as variability within the same age group due to factors such as anxiety. Paediatric physiotherapists use a wide variety of signs of respiratory distress to understand a patient's work of breathing; in particular, smaller children will demonstrate intercostal indrawing, nasal flaring, or tracheal tugging as a sign of respiratory distress. Therefore, this discharge tool effectively cues the PT to assess the presence of respiratory distress from a wide range of manifestations.<sup>1</sup>

Ellerton et al. have effectively compiled a group of fundamental factors to be used when assessing a paediatric patient's readiness for discharge from CPT. The development of a scoring system and an assessment of the psychometric properties of the Paediatric Cardiopulmonary Physiotherapy Discharge Tool will ultimately provide a valuable resource to guide clinical decisions. For the novice physiotherapist, in particular, this tool could help to ensure a high standard of care that optimizes resource utilization.

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**REFERENCES**

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