The Handle of the Broom

Alison Glover was one of the first to document significant practice variation in clinical care in a study on the incidence of tonsillectomy in school-age children in the United Kingdom in 1938.[1] Since that time, there have been a number of studies linking clinical care practice variation with higher costs of care,[2,3] and in many cases, these studies show that greater health-care expenditures do not necessarily lead to better outcomes or patient satisfaction.[4,5] More recently, a number of studies have documented significant practice variation in clinical care in the pediatric ICU (PICU) setting.[6-10] Reducing practice variation through standard care protocols and clinical pathways has been shown to reduce the costs associated with care, shorten the duration of mechanical ventilation, and reduce the stay in the PICU in a number of studies reported in this journal.[11,12]

In this issue of RESPIRATORY CARE, Lowe et al[13] report the findings of a retrospective analysis of a quality improvement intervention in their PICU whose primary aim was to standardize the use of β-agonists and airway clearance for critically ill children with acute respiratory failure.[13] Physician-directed orders (pre-intervention group) were replaced by a standardized, respiratory therapist-driven protocol (post-intervention group). There were no significant differences in any of the demographics or severity of illness between the pre-intervention (n = 152 subjects) and post-intervention (n = 171 subjects) groups. Even after controlling for age, sex, and severity of illness, there was a significant reduction in the number of β-agonist treatments, number of airway clearance interventions, duration of mechanical ventilation, and length of stay in the respiratory therapist-driven protocol group. Although the study did not assess the impact of the intervention on costs of care, it is certainly realistic to believe that reducing the number of β-agonist treatments by 37%, the number of airway clearance interventions by 21.8%, and the duration of mechanical ventilation by 25.2% would lower costs. Moreover, in a concomitant survey, the PICU staff felt that implementation of the therapist-driven protocol provided greater consistency of care as well as more effective and more efficient care. Finally, as has previously been shown,[14] the PICU staff felt that implementation of the protocol elevated the status of the respiratory therapy staff and increased their perceived value as members of the PICU team.

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Despite the evidence that supports minimizing practice variation, practitioners seem resistant to doing so; a common refrain is that standardization of care leads to "cookbook medicine" or that standardization of care impedes the ability to innovate.[15] However, there is a way for PICU teams to be creative, innovative, and cutting-edge while being disciplined, regimented, and systematic at the same time. Rather than an "either/or" discussion ("you are either innovative or you are not"), standardization of care practices is very much a "both/and" discussion. Lillrank and Liukko[16] classify processes into standards, routines, and non-routines. Standards are the processes where there is clearly a preferred way to do something, a best practice supported by solid evidence. These processes are usually repetitive in nature and are directly linked to specific outcomes. Deviation from the standard will result in worse outcomes. Non-routine processes are usually uncommon, highly variable, and specific to the clinical scenario. These kinds of processes lend themselves to a trial-and-error approach that encourages "out of the box" thinking. With these kinds of processes, there is room for flexibility and creative thinking. Between standards and non-routines are the routine processes in which there are usually one or 2 common approaches that will work. Lillrank and Liukko[16] use a broom metaphor to describe these processes and how they should be managed. The rigid broomstick handle represents the standard processes, whereas the flexible bristles of the broom represent the non-routine processes. The routine processes lie somewhere in the middle. Using the broom metaphor, and based upon the results of the study by Lowe and colleagues,[13] β-agonist and airway clearance treatments are clearly standards (ie, the handle of the broom).

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