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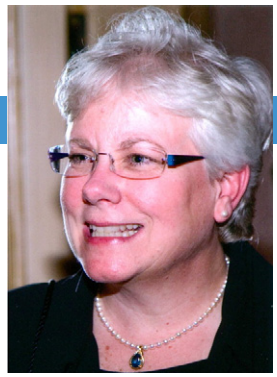

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RESEARCH COMMENTARY DEPARTMENT

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Translational Research—Changing the Landscape of Pediatric Nursing

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THE LANDSCAPE OF pediatric nursing is being transformed through translational research and evidence-based practice (EBP). Pediatric nursing continues to focus on the health and care of children and their families, and, with innovative intervention strategies being tested through clinical nursing research and translated into practice, the quality of care is enhanced. Indeed, new evidence generated from clinical nursing research improves nursing practice (Polit & Beck, 2012). Moreover, EBP improves the quality of health outcomes (Melnyk & Fineout-Overholt, 2011) and enhances care for children and families (Hockenberry & Wilson, 2011). Thus, new interventions developed and tested through research and quality improvement projects generate new evidence that is then translated into practice (Christian, 2013a). As a result, new evidence and innovative intervention strategies not only improve the care of children and their families but also change the landscape of pediatric nursing practice (Christian, 2013b).

In this issue, twelve articles illustrate the changing landscape of pediatric nursing practice and the advent of new evidence designed to improve care and the quality of practice by (a) evaluating the practice of maintaining peripherally inserted central catheter (PICC) line patency in pediatric patients with heart failure receiving continuous inotropic support with continuous low dose heparin (CLDH); (b) evaluating the effectiveness of a commercially available, peripheral IV (PIV) stabilization device and the rate of complications compared to standard sterile transparent dressing in hospitalized children; (c) determining the effectiveness of a clinical practice guideline quality improvement (QI) project to decrease the incidence of skin breakdown in children hospitalized in the pediatric cardiac intensive care unit (PCICU); (d) exploring experienced pediatric nurses' use of nonpharmacological approaches for pain relief in hospitalized children in Norway; (e) describing parent-reported sleep disturbances and behavior problems in school-age children with juvenile idiopathic arthritis (JIA), as compared with typically developing, healthy children; (f) identifying levels of fatigue in children, adolescents, and young adults receiving care in acute care and ambulatory care outpatient settings at a university-affiliated, tertiary care children's hospital; (g) describing and evaluating the use of a memory book intervention for grief and loss recovery in orphaned children living at two children's homes in South Africa; (h) exploring the relationships among health literacy, social support, self-efficacy, and interpersonal interactions with health care providers (HCPs) in low-income Latina mothers; (i) exploring the experiences of parents of premature infants with transportation from the neonatal intensive care unit (NICU) at a university hospital to NICUs at two local hospitals in Norway; (j) examining pediatric nurses' grief experiences and the relationships among children's deaths, burnout, and job satisfaction; (k) reviewing an experimental

Changing the landscape of pediatric nursing practice is exemplified by the development of new evidence that is translated into practice, transforming the quality of care and health outcomes for children and their families worldwide.

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fecal microbiota transplantation (FMT) investigational biologic drug therapy in pediatric patients diagnosed with *Clostridium difficile* infection (CDI) and ulcerative colitis (UC); and (l) identifying research priorities for children's nursing in an acute care setting in Ireland using a three-round Delphi survey.

- A retrospective, 2:1 case control design study was conducted to evaluate the current practice of maintaining PICC line patency in pediatric patients (<1 year to 21 years) with heart failure ($N = 33$) receiving continuous inotropic support with CLDH, compared to those who did not receive heparin (Giangregorio, Mott, Tong, Handa, Gauvreau, & Connor, 2014). Children in the cohort who received CLDH ($n = 22$) were compared to children who did not receive heparin ($n = 11$) before practice change implementation. Although no statistically significant differences were found between groups for duration of patency (number of days) and need for thrombolytic agents, clinically significant differences were noted. Median duration of patency for the children in the heparin cohort was 24 days, compared to 16 days for the children who did not receive heparin support. Further, use of thrombolytic agents was less for those who received heparin (28%) compared with children who did not (50%).

Interestingly, significant differences between groups were found for emergent admissions, accounting for 64% admissions of the heparin group and 36% of the control group ($p = 01$), reflecting a change in practice to encourage pediatric patients to stay at home until admission was absolutely emergent. Findings from this study demonstrated clinically significant differences between children with heart failure with PICC who received CLDH compared to those who did not.

- The effectiveness of a commercially available PIV (*StatLock*) stabilization device and the rate of complications was evaluated in comparison with standard sterile transparent dressing in hospitalized children (2 to 17 years, $N = 80$) using a two-group, quasi-experimental design (Laudenbach, Braun, Klaverkamp, & Hedman-Dennis, 2014). No statistically significant differences were found between comparison groups [stabilization device group ($n = 36$); taping group ($n = 44$)] in relation to PIV complication rates, although 22.5% ($n = 18$) of the children experienced PIV complications [stabilization device group ($n = 8$); taping group ($n = 10$)]. Further, there were no statistically significant differences between the stabilization device and standard taping groups for age, PIV placement site, and administration of medications.

Interestingly, the mean duration time of PIV placement for children was relatively brief (1.5 days) and may indicate that the use of a stabilization device is unwarranted for short-term PIVs in children.

- A QI project was evaluated through chart review to determine the effectiveness of a clinical practice guideline to decrease the incidence of skin breakdown in children ($N = 200$) hospitalized in the PCICU (Kiss & Heiler, 2014). The QI project was designed to determine the effectiveness of a pediatric skin integrity clinical practice guideline by comparing pre-implementation ($n = 100$) and 6-month post-implementation ($n = 100$) through random chart review of children who were patients in the PCICU. No significant differences were found for identified risk factors. A significant decrease in skin breakdown was found for children post-implementation of the practice guideline ($p < .0422$), with those admitted prior to guideline implementation 1.35 times more likely to have skin breakdown. Logistic regression analysis indicated significant differences after implementation of the protocol ($p < .0389$) and length of intubation ($p < .0156$), with a decreased incidence of skin breakdown from 41% to 18%.
- Qualitative focus groups were used to explore and describe experienced pediatric nurses' ($N = 14$) use of non-pharmacological approaches for pain relief in hospitalized children in Norway (Svendsen & Bjørk, 2014). Findings revealed that experienced pediatric nurses focused on establishing a relationship and building cooperation with the child, especially during painful invasive procedures. Establishing cooperation with the child was identified as essential for nurses during painful invasive procedures. Three non-pharmacological approaches for pain relief were identified as the most frequent methods: (a) encouraging, connecting and maintaining a positive attitude (most comprehensive approach); (b) giving the child control over the situation; (c) moving focus away from the situation. Moreover, these experienced pediatric nurses stressed that cooperation represented the opposite of restraint during painful invasive procedures, and the use of distraction could be unsafe because it threatened future cooperation by the child.

Thus, it is important to allow adequate time in clinical practice to establish cooperation with the child for maximum benefit of non-pharmacological approaches for pain relief.

- Sleep disturbances and behavior problems in school-age children (6 to 11 years) with JIA ($n = 70$) as identified by parent-report were compared with typically developing, healthy children ($n = 46$), using a descriptive, correlational design (Ward, Sonney, Ringold, Stockfish, Wallace, & Landis, 2014). Significant associations were found for overall mean sleep disturbances with externalizing behavior problems ($r = .32$, $p < .001$) and internalizing behavior problems ($r = .22$, $p < .02$). A linear regression model was significant in predicting parent-reported externalizing