Clinical Notes

Pediatric Pressure Injuries: Different Needs for Smaller Bodies

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The care and prevention of pressure injuries (PI) in adult patients is well researched—with best practices, tools, and resources readily available. But with childhood obesity rates now at 19% and pre-term babies at high-risk for PI, there is an urgent need for more research and more appropriate pediatric-focused treatments and best practices.

They're Not Small Adults

Currently, most prevention and treatment protocols for pediatric patients are extrapolated from adult-patient care best practices.[1] But this is inadequate since these different patient populations have different needs. For example, babies are most likely to develop a PI on the occiput, while the most likely site for adults is the sacrum.

Obese children suffering diabetes or other weight-related comorbidities are at high risk for skin breakdown. Pre-term babies, at-risk for several potential issues including tissue perfusion and oxygenation, suffer hospital-acquires pressure injury rates as high as 23% in NICU and 27% in PICU settings—with most occurring within 2 days of admittance.

Low-air-loss support surfaces designed for adults don't accommodate many smaller children—with feet, elbows, and buttocks often sinking into and in between the mattress cushions. And more than half[1] of all PI incidents among noncritical hospitalized pediatric patients are related to the medical devices being used in their care, such as vent support and CPAP machines.[2]

While many factors have been cited, insufficient evidence exists to determine exactly which are the true risk factors of skin breakdown and which can be modified or reduced. These can include duration and amount of pressure, friction, shear, and moisture, or extrinsic, such as perfusion, malnutrition, infection, anemia, and immobility.[1]

Quick Notes

— Infants and children with critical illness, poor tissue perfusion or oxygenation, and exposure to prolonged pressure from tubes or other equipment are at increased risk for PIs[3]

— The body proportions of children are different from those of adults; in children, the head carries a greater proportion of body weight

Best-Practice Solutions

Until there's more pediatric-focused research, facilities can help prevent PI with pressure redistribution mattresses designed specifically for infants, toddlers, and older children. Most importantly, nurses should use a risk assessment tool, such as the Braden QD scale—adapted from the adult Braden Scale—which includes device-related PI risk.

Despite which risk assessment tool is used, the key is to perform it at least daily along with a head-to-toe assessment. Frequent skin assessments under blood pressure cuffs, trans- cutaneous oxygen pressure probes, tracheostomy plates, nasal prong and mask CPAP, arm boards, plaster casts, and traction boots are also important preventive measures.[1]

References:

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2. Turner J, Demniak C. (2019). "Low Air Loss Support Surface Selection in the Neonatal and Pediatric Population". West Virginia University Medicine Children's, Morgantown, W.Va.
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