



Evidence to Practice: Blended Methods for Bedside Evidence Integration

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Background

Noninvasive Positive Pressure Ventilation (NIPPV) has gained prevalence as an effective way to manage respiratory compromise in infants and children, however device related pressure injury is a potential adverse effect of NIPPV. Nursing specific processes combined with collaborative interdisciplinary assessments directly impact patient outcomes related to prevention of hospital acquired device related pressure injury.

Purpose

To determine the effect of specific improvement strategies aimed at decreasing incidence of hospital acquired device related pressure injury for children receiving NIPPV.

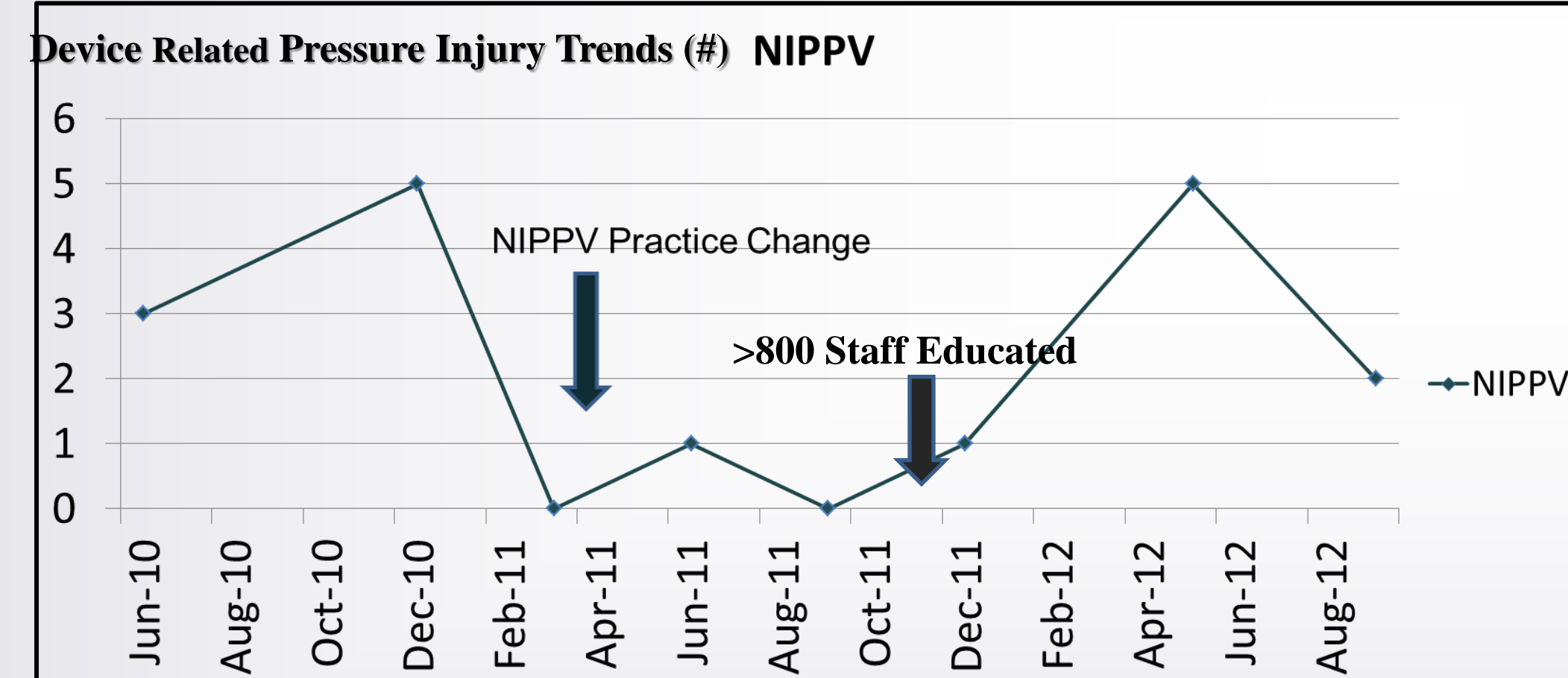
Evidence

- Iatrogenic injuries to the nasal area are associated with the duration of therapy.
- Protection of the nasal septum and the perinasal tissue during NIPPV therapy is identified as an area of concern.
- Regardless of age or length of time on NIPPV, risk of skin injury increases as amount of pressure (settings) increases. (CHOP internal audit data, 12/2010)..

Improvement Strategies Employed

Audit	<ul style="list-style-type: none"> • Feedback of performance (at unit and hospital level) • Quality indicators: SIPS study • Dissemination of performance data • Benchmarking – External and Internal
Provider education (RNs and RTs)	<ul style="list-style-type: none"> • Computer Assisted Learning • Educational Play: Psychomotor skill practice-Just in Time Education • Internal Standard of Practice Revision

Outcome Data

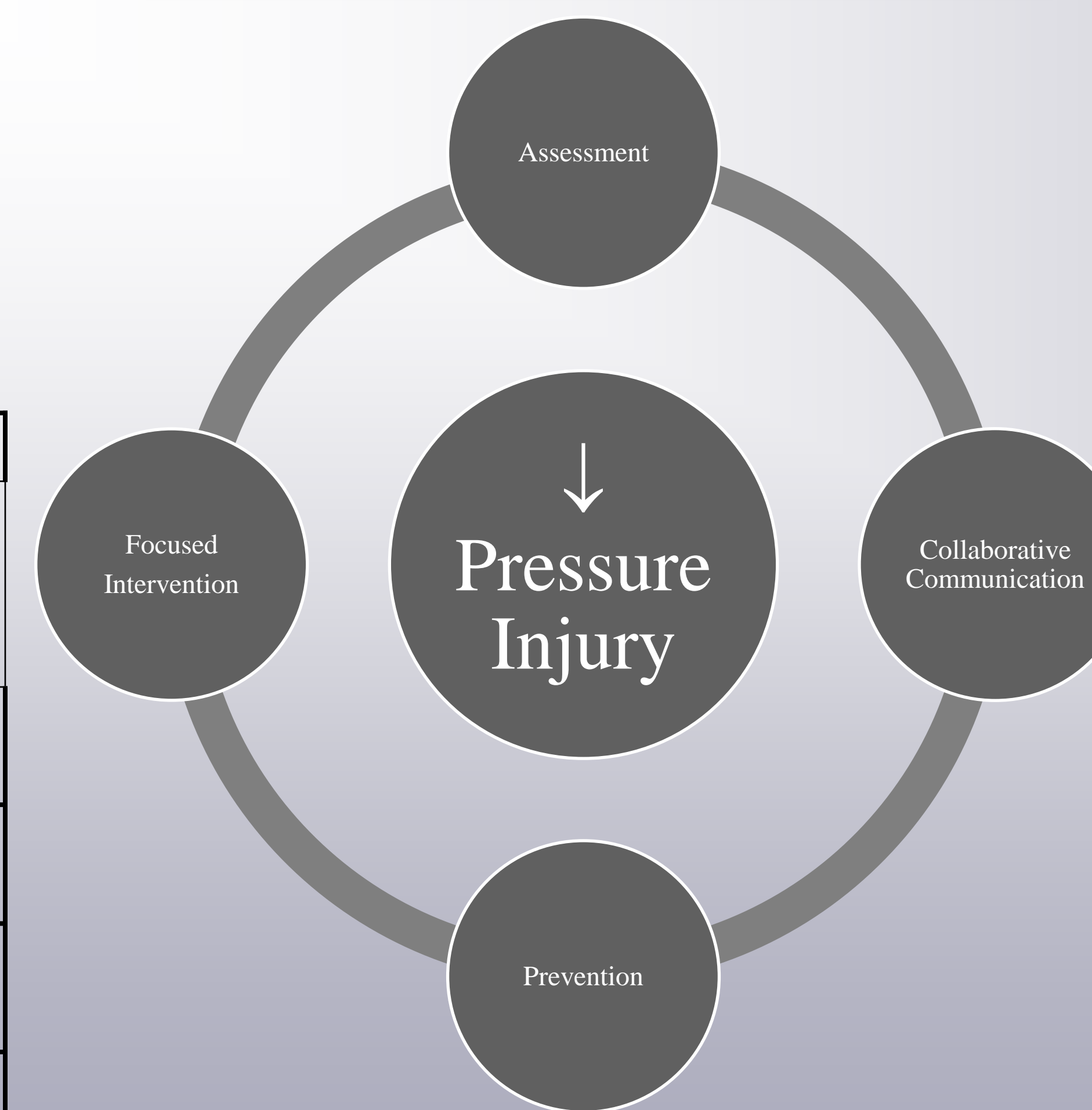


Patient Demographics Pre and Post Implementation

Variables	Nov. 2010 (n=91)	Nov. 2011 (n=72)	P value
Age	3 (0.42, 13)	2 (0.25, 12.5)	0.54
Weight	14.2 (5.7, 44.7)	12.0 (3.9, 30.2)	0.17
Therapy Days	6 (2, 13)	5.5 (3, 11)	0.48
Hrs on NPPV	16.5 (9, 24)	17.5 (10.5, 24)	0.74



Focused Education



Discussion

- A blended approach to bedside evidence implementation promotes practice change through identification of learning style differences.
- Commitment to standardized process across disciplines contributes to improved patient outcomes by promoting:
 - Team empowerment and process ownership
 - Commitment to continued quality improvement
 - Teamwork

Implications for Practice

Implementing programs that support practice review, collaborative discussion and engage front line clinicians in evidence implementation strengthen structure, and improve both process and outcomes.

Sustainability

- Issue awareness can impact variability in audit data.
- Quality drivers need to maintain focused attention to quality outcomes to sustain improvement.
- Maintain standardized care processes.
- Flexibility/adaptability in education, evaluation and dissemination.