Reducing Healthcare Costs While Improving Patient Health Outcomes and Safety: Checklist and Case Studies in Making Patient-Controlled Analgesia (PCA) Safer

PCA Adverse Events: How Often Do They Occur?

4,500 Adverse Events in 9 Years

Do you know how often patients die from PCA errors? Are you familiar with PCA pump errors and what they entail? Here’s how often PCA adverse events occur:

- More than 5,000 adverse events, and 700 patient deaths linked to PCA pumps (reports 2005 & 2009)
- 6 Years

PCA Errors: Just the Tip of the Iceberg

About PHNHS

Physician Patient Alliance for Health & Safety (PHNHS) is a nonprofit organization dedicated to improving patient health and safety outcomes through innovative technology solutions. We believe that technology can help prevent errors and improve patient outcomes. We are committed to making healthcare safer for all patients.

Three Times as Likely to Result in Injury or Death

Injuries and deaths are caused by PCA pump-related adverse events. Here’s how often PCA errors result in injury or death:

- Injuries: 4,500
- Deaths: 600

Tips on How to Improve Patient Safety With the Help of Technology

1. Focus on what is right for the patient.
2. Don’t be misled by the way things “have always been done.” Let technology help you in caring for patients.
3. Realize that any new technology or technique may have unintended consequences to daily routine, but remember that it is better than having an adverse event.
4. Ensure changes help caregivers better manage their own daily workdays.
5. Get closer to the patient. For more tips on how to improve patient safety, please see "Focus on what is right for the patient.

Cases Studies: Hospitals That Have Reduced PCA Adverse Events

PHNHS has worked with hospitals to reduce patient deaths, errors, and injuries from PCA pumps. Here are a few examples:

- SJ/C: Achieving Zero Code Blues, Eliminating Adverse Events and Improving Patient Safety While Reducing Costs
- SJ/C has used "smart" PCA pumps with integrated capnography, and then 0% in 2011.
- Since using “smart” PCA pumps with integrated capnography, SJ/C has been “error-free”. As they report in their newsletter, these changes averted 450 highest-risk IV medication errors and respiratory monitoring helped save lives.
- SJ/C has reduced its serious medication error rate by 81% since using “smart” PCA pumps with integrated capnography.
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The RCI at Saint Peter’s: Reducing PCA-Related Patient Deaths

A PCA pump with integrated capnography can reduce the risk of respiratory depression in patients with PCA use.

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