

PARTNERING UP TO PREVENT PEDIATRIC PERIPHERAL INTRAVENOUS INFILTRATION

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BACKGROUND

• Pediatric patients do not routinely have peripherally inserted venous lines (PIV) replaced every few days, as is common in the adult population → higher risk for complications such as peripheral intravenous infiltrations and extravasations (PIVIE).

PIVIES OCCUR AT RATES UP TO 78% OF PIVS IN SOME PEDIATRIC STUDIES.

- Solutions for Patient Safety (SPS) recommends comprehensive hourly assessments by nurses as best practice for patients receiving continuous infusions.
- Evidence suggests that inattentional blindness and cognitive bias can contribute to failure to notice physiologic differences in patient assessments over time.
- Many nurses work 12-hour shifts, hindering their ability to detect the subtle changes that occur in the early stages of PIV infiltrates.

PURPOSE

This quality improvement (QI) project aimed to promote early recognition of clinical changes in infusing PIVs and ultimately minimize patient harm from PIVIE. This QI project introduces an innovative ‘buddy check’ process in which a second nurse provides an independent assessment of a PIV midway through a 12-hour shift.

Results

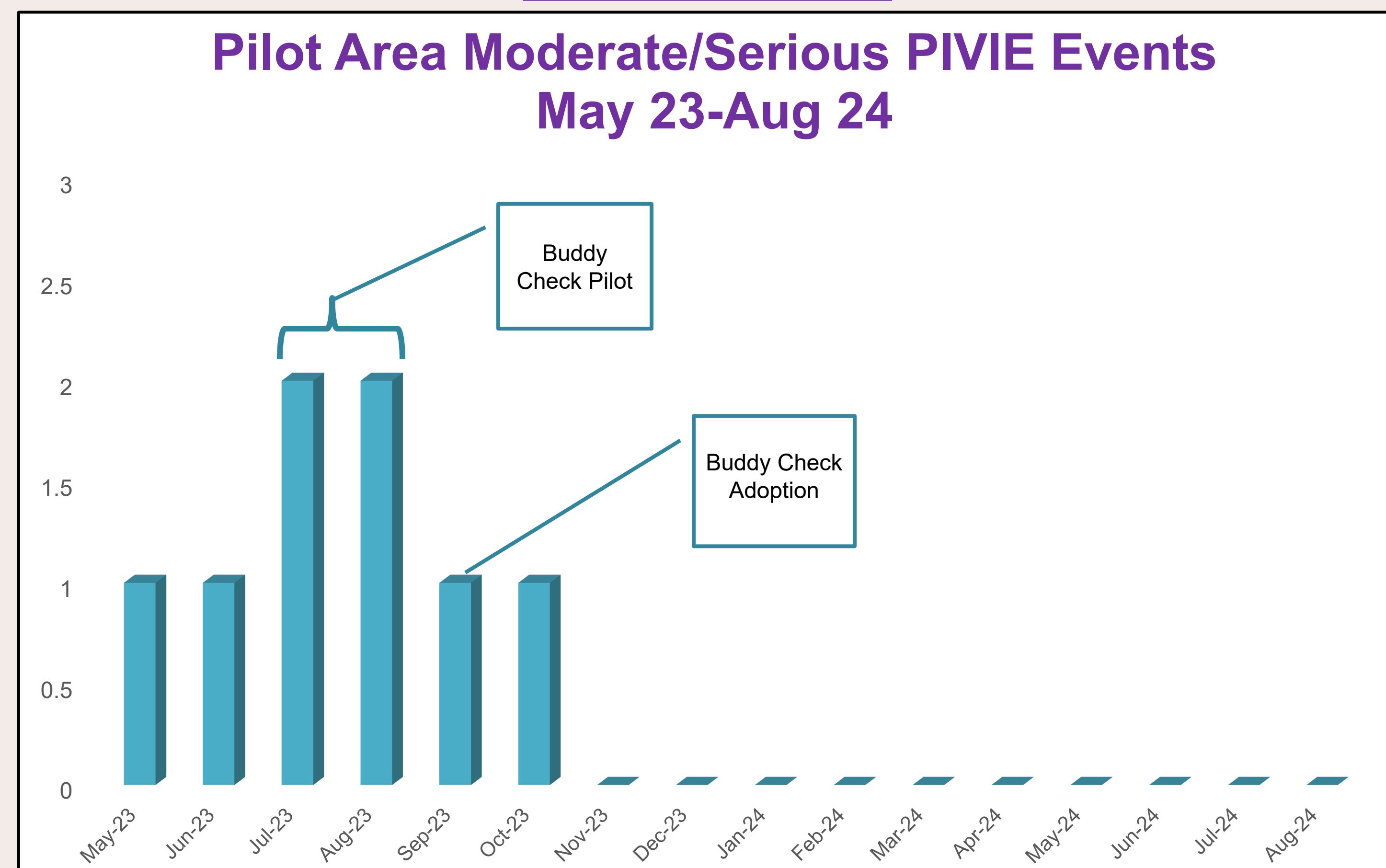


Figure 1 - Pilot Area Moderate & Serious PIVIE Events

PIV buddy check adoption yielded a **76%** reduction in moderate/serious PIVIEs in one Pilot unit after 6 months and both units have now gone 1 year without a clinically significant PIVIE.

100%

Of nurses reported confidence in PIV buddy check assessments

90%

Of nurses reported zero or minimal disruption to the current workflow

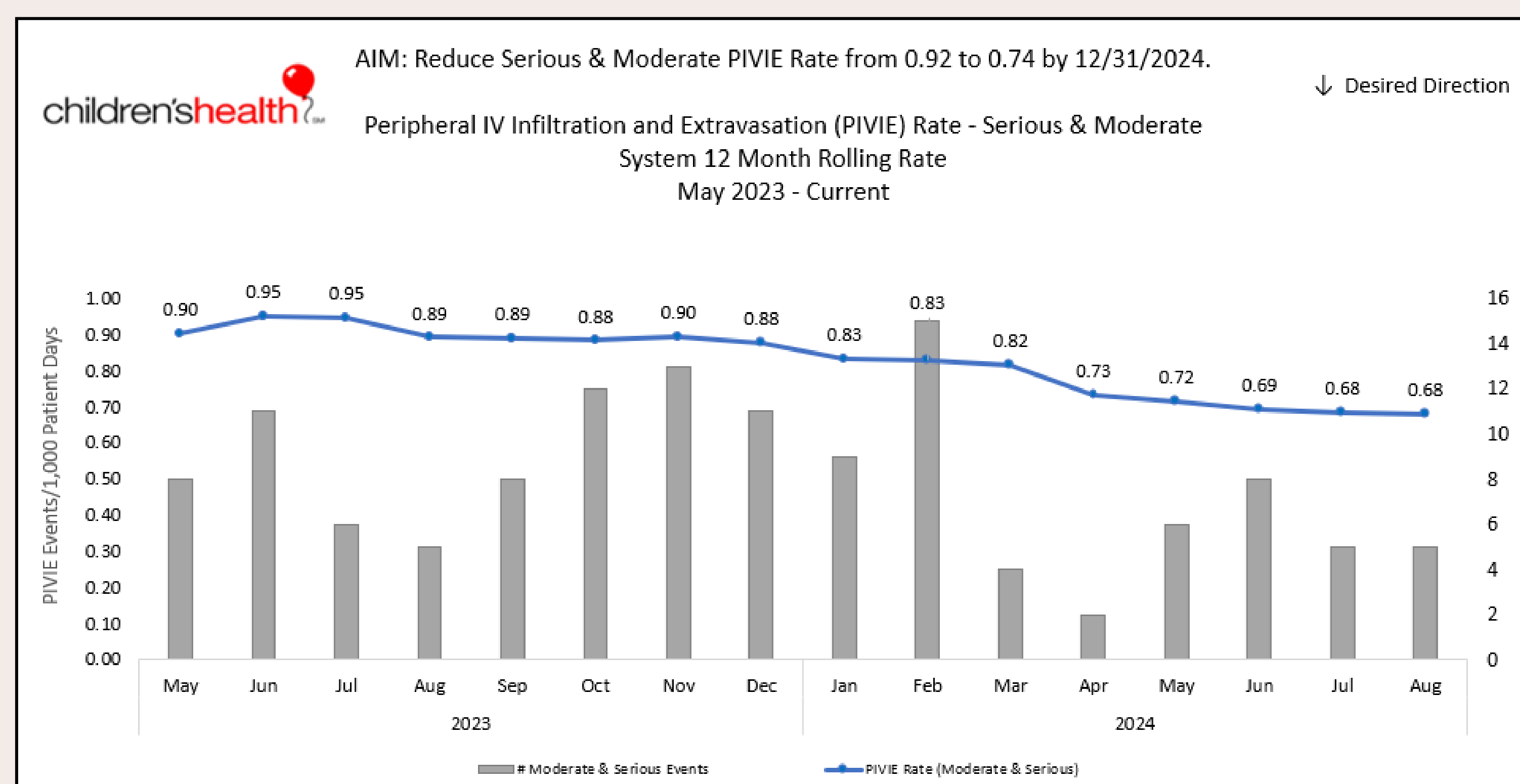


Figure 2 - System Moderate & Serious PIVIE Rolling Rate

January 2024, the practice was integrated system-wide, with early data demonstrating a decrease in moderate/serious PIVIE rate from **0.88 to 0.68**

QI METHODOLOGY

Plan

- Bedside nurse completes PIV buddy check between 11-2 (am & pm)
- Charge nurse facilitate buddy assignments

Do

- Qualitative data: Nurse confidence in buddy assessment & perception of work-flow impact
- Quantitative data: Moderate/Serious PIVIE events

Study

- Noncompliance with the buddy check process revealed higher degrees of harm
- Nurses had confidence in buddy check and saw minimal workflow disruption

Act

- System-wide integration
- Buddy check compliance tracking

BUDDY CHECK +

What is a Buddy Check?
An independent assessment (ACT) performed by a second RN on all continuously infusing PIVs

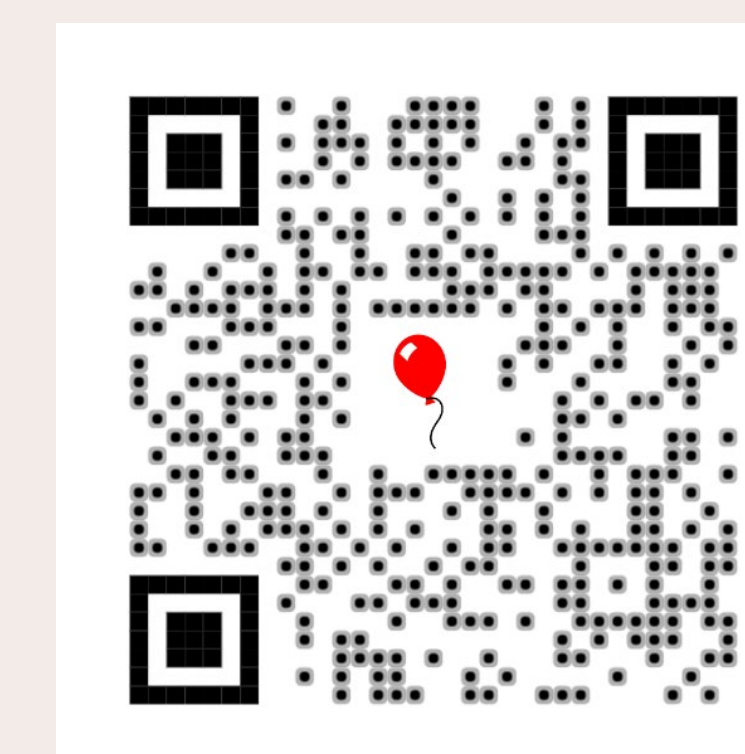
Who is my Buddy?
Any nurse with comps to assess and document on IVs

When do Buddy Checks happen?
Buddy checks should be performed between 11-2 (approximately halfway through shift). Primary RN remains responsible for timely hourly assessments of PIV.

Why do I need a Buddy?
After 6 hours, your ability to detect small changes decreases. A Buddy is a second set of eyes to help prevent harm to your patient.

How do I document?
Document independent Buddy Check on IV flowsheet

Figure 3 - Buddy Check Education Flyer



References

CONCLUSION

- PIVIE ‘buddy checks’: thwart inattentional blindness and cognitive bias.
- Feasibly augment current PIV assessment practices.
 - Minimally disrupt nursing workflow.
 - Are generalizable across pediatric populations.
 - Can be easily adopted in inpatient settings.