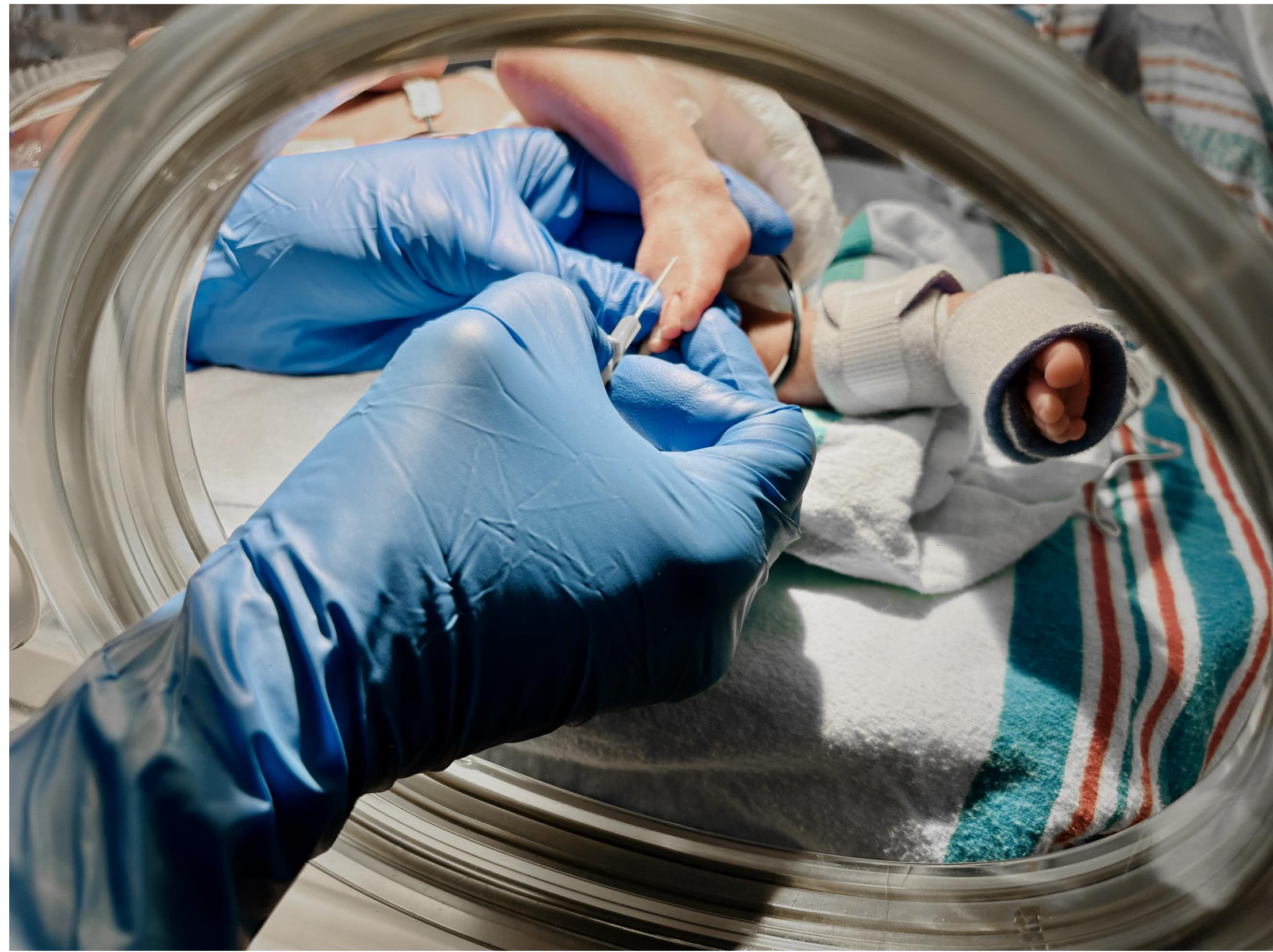


# Analyzing skin breaks and its impact on nosocomial infections

## Our experience at the Jewish General Hospital

Roxane Samson RN, Valerie Malone RN, Marianna Kagelidis RN, Emelie Elkrief NNP, Phoukim Savanh NNP, Victoria Bizgu MDCM



### Background

- Bloodstream infections (BSI) are associated with increased morbidity and mortality in VLBIs admitted to the NICU.<sup>1,2</sup>
- Care bundles have been shown to reduce central line associated blood stream infections (CLABSIs) related to insertion and maintenance practices in the neonatal population.<sup>3,4</sup>
- There is a higher prevalence of peripheral Intravenous lines (PIV) in comparison to central access in the NICU.<sup>5</sup>
- Evidence suggests that units who implement a bundle of care for the insertion and management of PIVs can reduce the incidence of related complications and late onset sepsis.<sup>1,5,6,7</sup>

### Plan

- Decrease the rate of late onset sepsis (LOS) related to peripheral access blood stream infections (PABSIs) by 50% to reach an overall rate of LOS of <5% .
- Review the literature regarding rate of LOS and BSI in the NICU and the impact of protocolization.
- Evaluate how the number of venipunctures throughout hospitalization can impact the incidence of nosocomial infections (NIs).
- Reduce the harmful effects and complications of multiple venipunctures on preterm infants.
- Compare our NICU rates of late onset sepsis from skin venipunctures with the cumulative rates of infection in the NICU.

### Do

- Initial PIV protocol implemented in 2015.
- In 2021, our team questioned if our rate of NIs was attributed to the number of skin breaks and current PIV insertion practice.
- In 2022, our team implemented “Poke sheets” and a PIV insertion algorithm in the attempt to assess the number of skin breaks per infant admitted.
- With this poke sheet, the aim was to assess whether infants who had more skin breaks during their hospital stay would have a higher risk of NIs.
- The PIV insertion algorithm was implemented to decrease the number of skin breaks per patient.

**NICU SKIN BREAK EVALUATION**

The aim of this tool is to evaluate the number of skin breaks each infant has over a one week period. Infants eligible for this tool are those admitted in POD A, B and C of the NICU. Please place a check in the appropriate box for EVERY skin break, including procedures, failed attempts at sampling or vascular access. Please indicate the total number of skin breaks for your shift.

DATE	SHIFT	Heel sticks (each use)	PIV insertion (each attempt)	Blood culture (each attempt)	Other skin breaks (eg LP, chest tube, venous or arterial puncture)	PICC insertion (each attempt)	Shift totals
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