

# Decreasing Medical Device-Related Pressure Injuries on the Burn Unit

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## Problem Statement

- Medical Device-Related Pressure Injuries (MDRIs) are injuries that cause physical and emotional harm to patients.
- MDRI's occur in burn patients due to the misapplication of monitoring devices, splints, and ace wraps.
- Burn patients have increased risk of MDRI due to poor nutrition, immobility, changes in sensory function, and injury to soft tissue.
- A burn unit continues to have worsening MDRI cases from 3 in 2022 to 4 in the first half of 2023.

## Purpose & Project Goals

The purpose of this quality improvement project was to have zero MDRIs and increase nursing documentation compliance through the implementation of an evidenced-based standardized guideline created by a multidisciplinary team to improve patient outcomes.

**Process goals:** As per the guideline, nursing staff committed on documenting the Braden Scale, Johns Hopkins Highest Level of Mobility Scores, and interventions based off the guideline.

**Outcome goals:** Zero MDRIs and an increase in nursing documentation of the Braden and JH-HLM scores, and interventions completed during their shift.

## Method

**Setting:** 20- bed mixed acuity burn unit

**Population:** All patients admitted from September to December 2023.

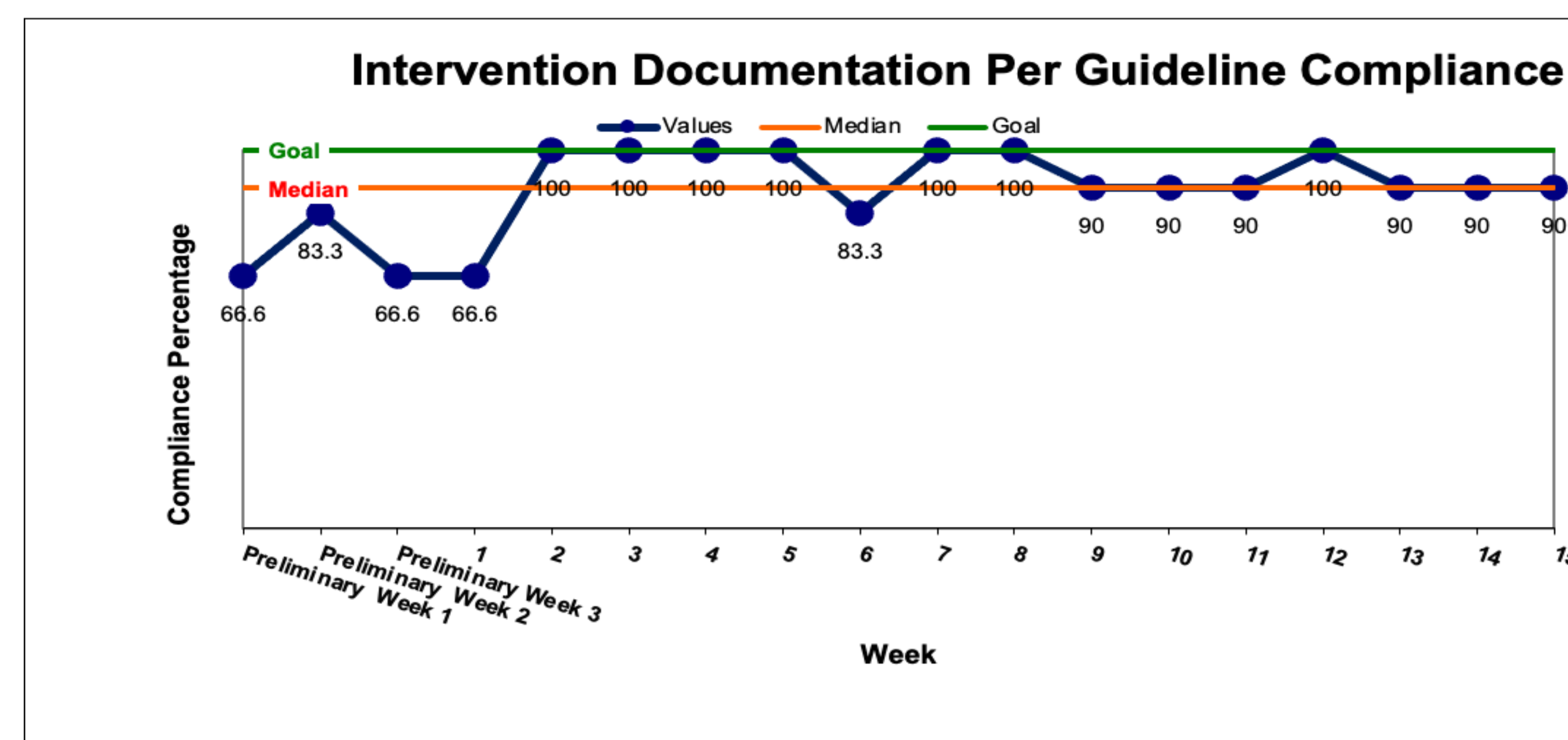
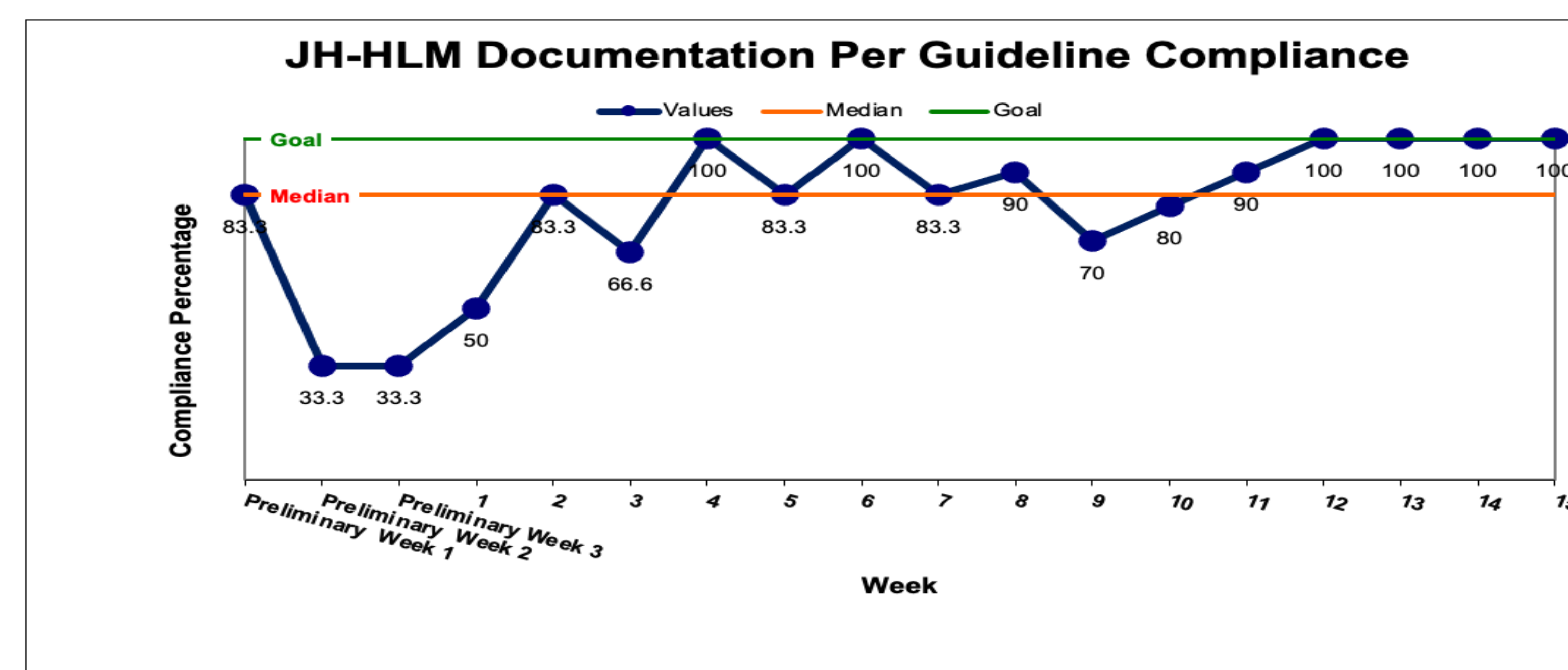
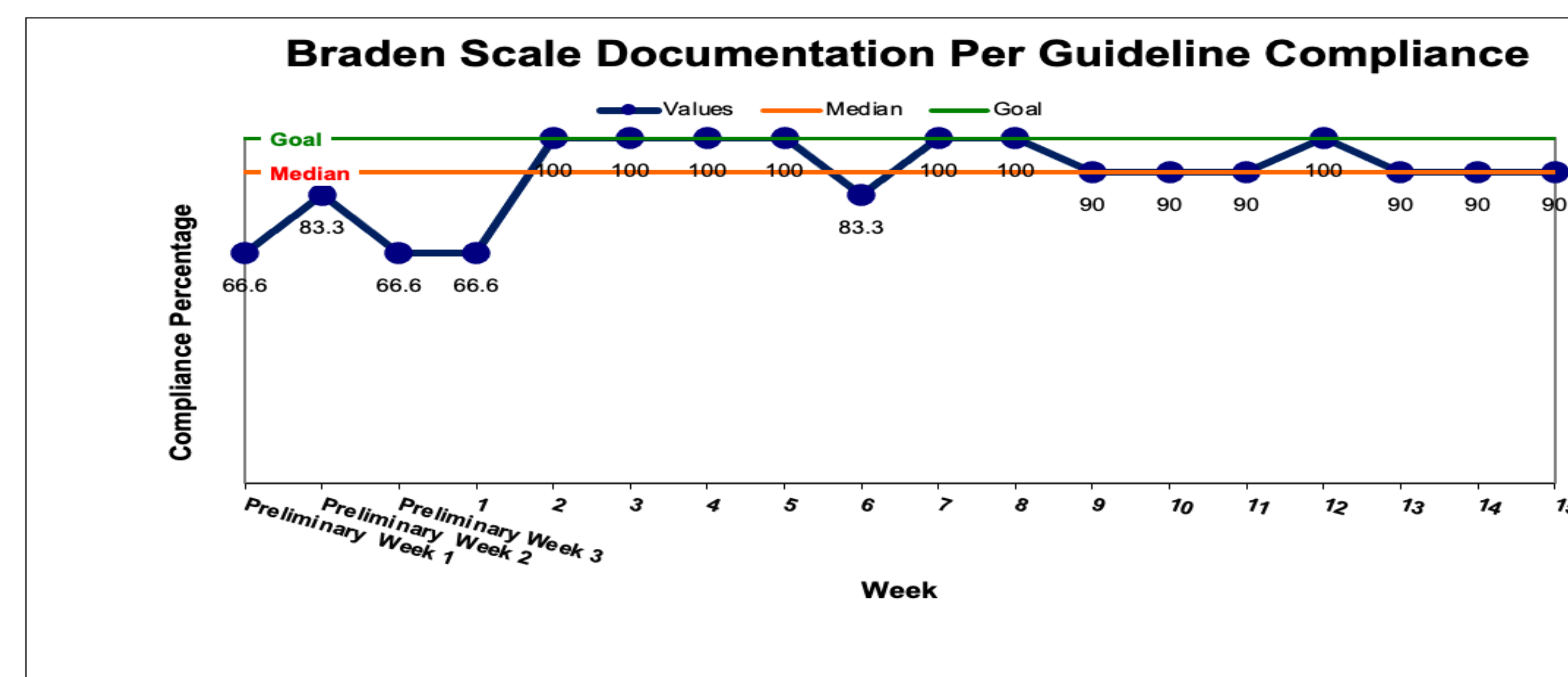
### Implementation:

- The PARIHS Model helped guide EBP into practice.
- The standardized guideline was created by a multidisciplinary team to improve patient outcomes.
- The guideline assigned EBP interventions to low, moderate, or high-risk individuals based on the patients Braden score.
- Staff were educated via guideline and recorded videos regarding splint management and ace wraps.
- Pre and Post test was done to assess staff knowledge.
- Implementation strategies included communication, collaboration, and education.

### Data collection:

- Weekly chart audits completed by project leader.
- Data was directly entered into RedCap using a HIPPA compliant password VPN.

## Results



## Discussion

•(n=130) charts were audited during implementation. Results reveal an **overall increase in documentation**. Documentation on the Braden score increased by 21%, the JH-HLM score by 46%, interventions guided by the guideline by 32%, daily weights by 5%, and 4 eyes in 4 hours, a two-nurse skin check by 3%. **There were no MDRIs during implementation.**

**Thus, there was an overall improvement in documentation and no MDRIs were noted during implementation.**

### Literature

•Guidelines are practice recommendations that improve the care and patient outcomes.

### Barriers and Limitations:

- Short implementation period (15 weeks)
- Staff shortages and increased number of float staff

## Conclusion

The implementation of the standardized guideline resulted in improved documentation as well as compliance from nursing. Hence, **zero MDRIs occurred** during the implementation of this QI project.

**Implications for Practice:** Outcomes supported that the implementation of the standardized guideline had a positive effect on decreasing MDRIs.

**Sustainability:** Incorporating the standardized guideline into nursing practice and performing chart audits can aid in sustainability. The guideline could be added to the monthly National Database of Nursing Quality Indicators (NDNQI) for pressure injuries to assess pressure injury rates and nursing processes.

## MDRI Standardized Guideline



## References

