

## Background

- ❖ With increasing complexity of medical care, a multidisciplinary approach to medicine has become paramount.
- ❖ Bedside rounds are an important means of interdisciplinary communication, but coordinating to ensure team members are present for rounds can be challenging.
- ❖ As a quality improvement project, we sought to introduce means to increase nursing presence on bedside rounds.
- ❖ Our primary outcome measured was nursing presence on rounds. We also assessed frequency at which nurses were invited to rounds and duration of rounds.

## PDSA Cycle 1 - Methods

- ❖ A Vocera mobile and desktop application for calling or texting nurses' Vocera devices was introduced to residents.
- ❖ Residents were encouraged to use this application to invite nurses to rounds.
- ❖ An independent observer shadowed rounds of a general pediatrics ward team (PMB) and documented:
  - ❖ If the nurse was invited to rounds.
  - ❖ If the nurse was present for rounds.
  - ❖ The duration of rounds.
- ❖ The team was aware of the observer, but was blinded to the purpose of the study and the data being recorded.
- ❖ Observations were made before and after the introduction of the Vocera application.

## PDSA Cycle 1 – Primary Outcome

- ❖ In total, 223 patient encounters were observed.
  - ❖ 114 pre-intervention, 109 post-intervention.
- ❖ The introduction of the application **did not** produce a statistically significant increase in nursing attendance on rounds:
  - ❖ **71.6%** nursing presence pre-intervention vs. **69.3%** post-intervention (**p=0.71**)

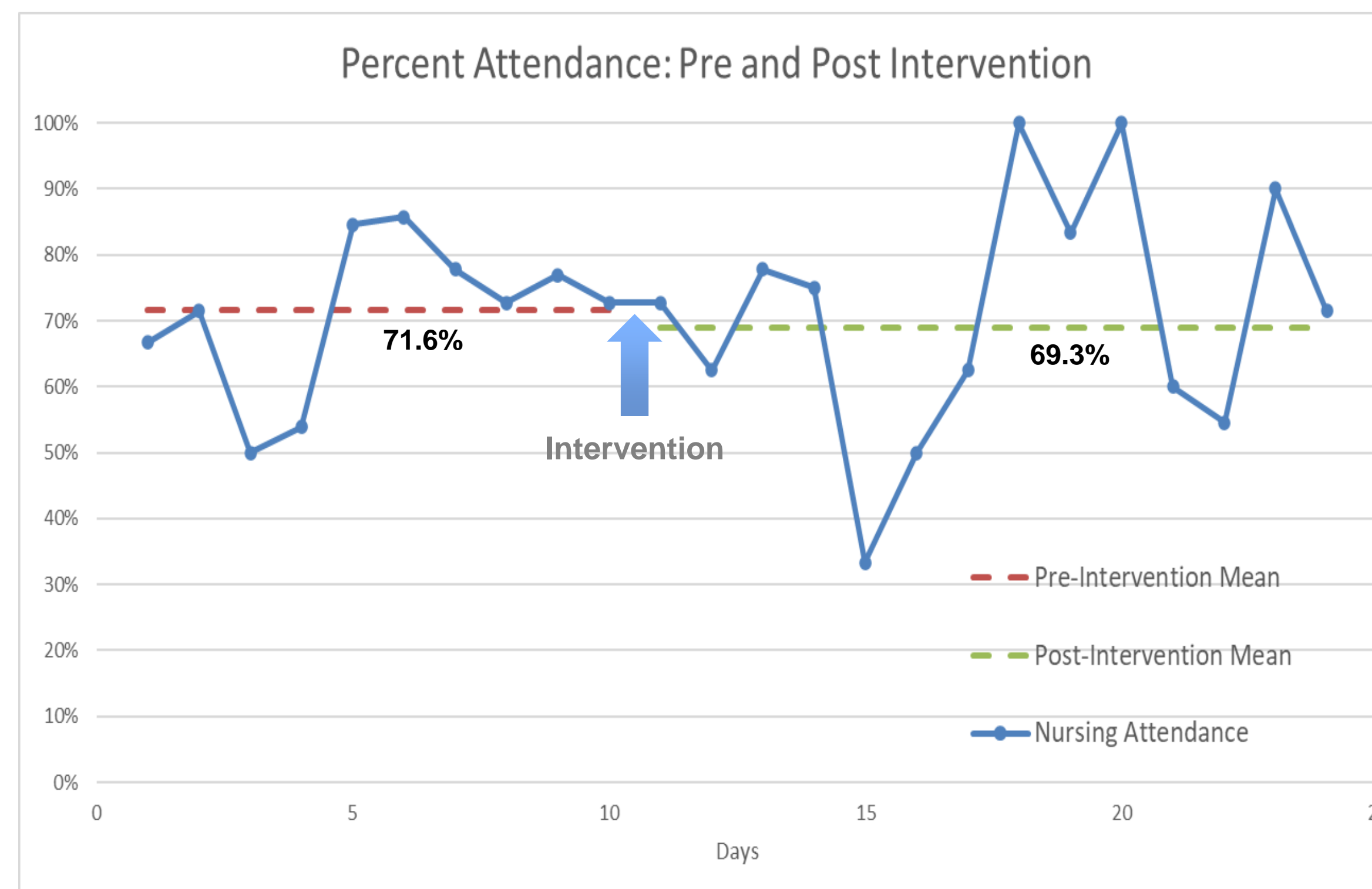


Figure 1: Run chart showing the daily percent of patients the team rounded on with the nurse present, pre and post introduction of the Vocera application.

## PDSA Cycle 1 – Secondary Outcomes

Question:	Result:	Significance	Interpretation:
Was the nurse invited to rounds?	Pre-Intervention: <b>56% were invited</b> Post-Intervention: <b>57% were invited</b>	<b>p = 0.88</b>	Our intervention <b>did not</b> improve the rate at which nurses were invited.
Did inviting a nurse to rounds increase attendance?	When Invited: <b>81% attendance</b> When Not Invited: <b>57% attendance</b>	<b>p = 0.0001</b>	Inviting the nurse <b>did</b> significantly improve the rate at which nurses attended rounds.
Did the Vocera application decrease duration of rounds?	Pre-Intervention: <b>587 seconds/patient</b> Post-Intervention: <b>701 seconds/patient</b>	<b>p = 0.008*</b>	Time of rounds was significantly longer in the post intervention data set. *Note this does not demonstrate causation.

## PDSA Cycle 1 - Discussion

- ❖ The introduction of the Vocera application among residents did not improve nursing presence on rounds.
- ❖ Our intervention was limited by variable user uptake and a cross-over effect due to non-resident team members utilizing the Vocera application to invite nurses to rounds pre-intervention.
- ❖ Even when invited, the nurse was only present for 81% of patients. This supports the notion that there are other barriers to nurses being present for rounds.
- ❖ We demonstrated proof of concept as nursing presence significantly increased when invited.

## PDSA Cycle 2 – Briefly ...

- ❖ **Hypothesis: Standardizing who calls the nurse could improve calling rates and subsequently nursing attendance.**
- ❖ **Ward team coordinators were designated to call nurses.**
- ❖ **Self reported data from the PMB ward team coordinator was collected.**
- ❖ **50 patient encounters were documented**
- ❖ **No significant difference was seen.**
- ❖ **68% attendance post vs 69.1% pre, p = 0.87**

## Conclusion

- ❖ Neither the introduction of the Vocera application nor designating a team member to invite nurses to rounds increased nursing presence.
- ❖ More work is needed to improve the rate at which medical teams invite nurses to rounds.

Acknowledgements: The hard-working residents and nurses at UNC!