



A Comparative Study of Two Methods for Turning and Positioning and the Effect on Pressure Ulcer Development



Jan Powers PhD, RN
St. Vincent Hospital, Indianapolis, Indiana

Background

Pressure Ulcers occur in 3 million people in the US. Patients must be effectively turned in order to relieve pressure that can result in skin breakdown. Multiple studies have demonstrated that appropriate turning does not get accomplished for patients as needed.

Purpose

The purpose of this study was to compare two methods for turning and positioning ICU patients and evaluate the effect on incidence of hospital-acquired pressure ulcers. Secondary aims for this study were to measure degree of turn and nurse satisfaction with turning methods.

Methods

A blocked design with a convenience sample of 60 patients was used for this study. The comparison study was completed between standard of care (SOC) involving traditional turning using pillows and a new Turning and Positioning device (TAP).

Results

- There was a statistically significant difference in the number of pressure ulcers between groups (6 vs.1) $p=.042$.
- There is not a statistically significant difference between groups for Mobility score ($p=1.00$), Braden score ($p=.463$), gender ($p=.430$), age ($p=.998$) or BMI ($p=.650$).
- In a nurse satisfaction survey, 87% of nurses surveyed stated they preferred the TAP system for turning their patients and felt that it provided a more effective means for turning patients compared to 34% who preferred SOC.
- During study period we had no nurse injuries in either group

Results

- Patients were pulled up in bed significantly more in the SOC group, (3.28 vs. 2.58) $p= 0.028$
- The number needed to turn for SOC was significantly higher ($p\leq 0.0001$) than the TAP group.
- Patients in the TAP group typically achieved a 30 degree turn, where SOC achieved a 0-15 degree turn.
- Repeated measure analysis on difference in degree of turn at one hour was 7.12 for SOC and 1.10 for TAP ($p < .0001$).
- Patients in the SOC group required more resources for repositioning and increased linen usage.

Conclusion

There is a statistically significant difference in the number of pressure ulcers between groups. This difference could not be explained by other variables (i.e. Braden score, age or BMI).

Patients in the SOC group required repositioning up in bed more often and required more resources for turning.

SOC for turning and positioning patients may be ineffective in preventing pressure ulcer development when compared to TAP. SOC also does not achieve the desired 30 degree turn and does not maintain the initial turn achieved.

More nurses felt the TAP system was easier to use and more effective than SOC turning.

A larger sample size is required to discern a difference in nurse injuries.

Turn and Positioning Device



Combines microclimate management with safe, effective turning

	SOC	TAP
Time on Product	7 days (1-29)	7 days (1-45)
Age	57.72 (SD 18.45) (18-89)	57.73 (SD 17.67) (23-92)
Gender	14 Female 16 male	10 Female 20 Male
Braden	12.77	13.23
Mobility	0-1	0-1
BMI	29.62	30.97
PU development	6	1*
Pulled up in bed	3.28	2.58
Number to turn	1.97	1.35