

EVALUATION OF A NEW AIR-ASSISTED LATERAL TURNING DEVICE IN A LONG-TERM CARE SETTING AND ITS EFFECT ON WOUND CARE AND PATIENT CARE

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OBJECTIVE

The objective of the study is to determine if the Q2Roller® Lateral Turning Device has a positive impact on wound care prevention and/or healing of existing pressure ulcers in at-risk long-term care skilled nursing patients. Additional research questions included staff applications for ease of use, as well as care applications for this patient population.

INTRODUCTION

Phoebe Richland is a non-for-profit community of Phoebe Ministries, located in Richlandtown, PA, offering a variety of services including rehabilitation, skilled nursing, personal care and dementia care.

Recent analysis shows that pressure ulcer prevalence rates in nursing homes range between 8-12%.¹ In an effort to support Phoebe's optimal standard of care, an eight week clinical trial was conducted using the Q2Roller for patients with limited mobility.



Q2Roller® Lateral Turning Device,
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Designed to reduce interface pressure through immersion while positioning the patient, the Q2Roller comprises two inflatable chambers that are controlled by the clinician. This air-powered device eliminates the need for manual force and provides optimal positioning for patient care while providing pressure relief from bony prominences.

METHODS

Three patients were selected for this trial. Patients with similar risk factors were chosen based on their overall Braden Scale score, which includes sensory perception, moisture, activity, mobility, nutrition, and friction/shear assessment. At-risk patients have been identified to have a Braden Scale score of 9-18.

- Patient 1 (control)- Is at risk for breakdown (has no history of breakdown) and was placed on an Aire Express low air loss mattress
- Patient 2 (control)- Has a history of recent/current breakdown and was placed on an Aire Express low air loss mattress
- Patient 3- Has a history of recent/current breakdown and was placed on the Q2Roller

Interventions:

Nursing Staff received education and training on the proper use of the Q2Roller, and the importance of turning and repositioning all 3 residents q2 hours while in bed.

Patients were assessed weekly to evaluate and document any decline or improvement in condition. Assessments were conducted weekly for a period of 8 weeks. The study began on 12/20/16 and ended on 2/13/17.

Patient 1 (control group) - Remained on low air loss mattress and was turned and repositioned q2 hours.

Height	65"
Weight	213 lbs.
Braden Scale	14 (moderate risk)
Dependency	Total dependency (2 staff minimum)
Diagnosis	Quadriplegia, frequently incontinent of bowel and bladder, osteoporosis

- On an Aire Express low air loss mattress p/1500 (set at level 4)
- 2/13/17 end of study assessment: no skin breakdown/no wounds observed.

Patient 2 (control group) - Remained on low air loss mattress and was turned and repositioned q2 hours.

Height	66"
Weight	129 lbs.
Braden Scale	12 (high risk)
Dependency	Extensive assist (2 staff minimum)
Diagnosis	Hip fracture, occasional incontinence of bladder

- On an Aire Express low air loss mattress p/1500 (set at level 4)
- Prior history of wounds
--10/13/16 DTI to right heel 2x2 healed on 11/22/16
-- 11/30/16 stage 3 wound on buttocks 1 X 1 healed on 12/20/16 shortly after study began
- 12/27/16 follow up, skin intact
- 1/30/17 sent to hospital for medical issue, skin intact at that time. Resident still out at hospital when study concluded.

Patient 3 Received Q2Roller (Prior to study, patient was on a Skil-Care™ corp pressure check redistribution mattress)

Height	62"
Weight	187 lbs.
Braden Scale	16 (mild risk)
Dependency	Extensive assist (2 staff minimum)
Diagnosis	cerebral infarction with hemiplegia to right side, heart failure, diabetes, always incontinent of bladder, frequently incontinent of bowel

- Prior history of wounds:
--3/6/16 stage 1 left buttocks 1 x 1.4 healed on 3/8/16
--9/11/16 DTI to right heel 1 cm around healed on 10/11/16
--10/25/2016 MASD to right buttocks, red raw skin with bleeding
--12/20/17 Q2Roller started, skin improved gradually each week throughout study
-- 2/13/17 end of study assessment: pink epithelial tissue, MASD almost healed. Team believes that the Q2Roller assisted in healing as it promoted pressure off-loading and did not promote moisture. It also did not allow for friction or shearing to occur.

CONCLUSION

Staff found the Q2Roller to be very easy to use and felt that it would significantly decrease their risk of personal injury related to turning, repositioning and moving patients. The Q2Roller performed well and provided a better quality of care for patients who are difficult to turn and reposition due to mobility issues and/or size. With the Q2Roller, positioning these patients can be accomplished with minimal staff while keeping supply and time related costs down.

The inflated Q2Roller helped ensure that the patient three was off the buttocks, and promoted wound healing without the use of a low air loss bed. The patient reported that the Q2Roller was very comfortable, and felt safe when being repositioned. Additionally, neither staff nor the patient noticed any moisture, friction or sheer while using the Q2Roller.

The Q2Roller saved staff time when positioning patients, and was a better alternative to using pillows, which often moved out of place. It also provided greater stability and comfort, and was preferred over using bolsters for positioning, as these may increase pressure to areas of the body.

Staff further noted that because the Q2Roller is anchored securely and stays in place, it can actually decrease the risk of patients falling out of bed compared to pillows, bolsters, air overlays or low air loss mattresses, which may increase the risk of falls due to their instability and/or slippery surface.