Implementing Reactive Air Overlays for Pressure Injury Prevention in the Long-Term Care Setting

Symphony Joliet, South Shore, Morgan Park, Bronzeville, Aria – Linda Montoya BSN, RN,CWOCN,APN – Corporate Wound Consultant, Symphony Care Network

Introduction

Across all healthcare settings, preventing pressure injuries and being proactive by implementing early interventions has always been the gold standard of care. With recent Covid-19 isolation precautions and limited staff interaction, the rapid development of pressure injuries, along with falls and resident comfort is an ongoing challenge for many high-risk residents in long-term care facilities.

Five long-term care facilities participated in a 4-month product trial with a reactive air overlay* and documented the outcomes.

Objective

Prevent pressure injury development, avoid falls, promote comfort and provide pressure redistribution to high-risk residents in long-term care by implementing a reactive air overlay.

Method

Data was reviewed for high-risk residents according to their risk assessment. Skin assessments were performed by the wound team. Residents with current pressure injuries were excluded. We selected residents that had at least 1 of the following:

- High-risk according to their risk assessment
- Decreased oral intake
- Weight loss
- Isolation rooms
- Recent decline in health
- Any Covid-19 residents

An easy visual education tool was developed to determine the appropriate residents. 42 reactive air overlays were initially delivered to the 5 facilities. Training and in-service were provided. Residents were monitored weekly for any skin impairment and/or pressure injuries. Performed hand checks under the buttocks area to ensure proper air inflation.

*** WAFFLE® Overlay is a registered trademark of EHOB, Inc. Indianapolis, IN**

Challenges

Covid-19

- Resident's health and mental well-being were declining quickly
- Staff were hesitant and reluctant to enter resident's rooms
- Overall, resident/staff contact decreased

Staff Challenges

- Staffing greatly decreased for various reasons
- Shortage of Wound Coordinators and Wound Nurses

Remote Staff Training

- CDC guidelines mandated virtual training
- More challenges with virtual training vs. hands on training
- Staff was provided with 1-page educational sheet on how to use and apply the reactive air overlay

Study Obstacles

- Staffing challenges in the wound care department
- Due to turnover & limited staff, proper hand checks & air inflation was not performed routinely
- Overlay was not transferred consistently with residents as they moved from one room to another
- Product training could not keep up with staff turnover

Results – Prevented Pressure Injuries • No Falls • Enhanced Patient Comfort

Joliet (16 on Overlay)

- Zero skin breakdown in 15 residents.
- 1 resident on hospice developed a Stage 2 heel ulcer History included Adult Failure to Thrive, Coronary Artery Disease, Anemia and Dementia Resident came into the facility and was placed on a reactive air overlay and heel protectors. Despite all the proactive interventions, along with frequent repositioning, the resident developed a Stage 2
- Zero falls

South Shore (35 on Overlay)

- Zero skin breakdown
- Zero falls

Morgan Park (35 on Overlay)

- Zero skin breakdown
- Zero falls
- Residents reported liking the overlay

Bronzeville (36 on Overlay)

- Zero skin breakdown
- Zero falls

Aria (36 on Overlay)

- Zero skin breakdown in 35 residents
- 1 resident develop a Stage 2 to the right buttock area. He was admitted with MASD to the bilateral buttock/sacral area. Incontinent of bowel and bladder. Multiple co-morbidities which included history of Covid-19, CVA, protein-calorie malnutrition, anemia and developed a stage 2 just 1 week after being admitted to Aria.
- Zero falls

Additional Study Feedback

- Residents appreciated the comfort of the reactive air overlay
- Non-powered, adding an advantage of no tubing on the floor
- Decreased the usage/rentals of low air Loss mattress – financial benefit
- Prevented shear and friction with transfers and transportation (i.e. dialysis, outpatient appointments, etc.)

Conclusions

- **Out of 158 residents, only 2 pressure injuries developed**
- **Zero falls were reported**
- **Patient comfort increased**
- **Excellent staff & resident satisfaction**
- **Cost savings achieved using this overlay vs. the rental of a low air loss mattress**

As a result of this trial, we have incorporated the use of this overlay across all our facilities. Additional follow-up is recommended to determine long term benefits.

Discussion

Recent Covid-19 challenges were detrimental to resident care. Implementing early interventions with the reactive air overlays resulted in only two Stage 2 pressure injuries, suggesting that early interventions for high-risk residents can decrease pressure injuries and improve quality of life.