

# OPTIMIZING ORTHOSES COMPLIANCE THROUGH RN-OT COLLABORATION: A CASE-BASED QUALITY IMPROVEMENT INITIATIVE

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## BACKGROUND

Orthoses are vital in the rehabilitation of burn patients to prevent contractures and preserve function and mobility. Despite this, adherence is inconsistent due to challenges such as improper positioning, misplacement of the orthosis device, failure to comply with the placement schedule, lack of awareness, and patient non-compliance. These gaps compromise patient outcomes and can increase risks of pressure injuries.

## PURPOSE

This quality improvement case study examines how interdisciplinary RN-OT collaboration, the use of visual monitoring boards, structured patient and staff education on proper orthoses application, adherence to orthoses placement schedules, and enhanced communication handoffs between Nurses can improve splinting compliance in burn patients.

### SWOT ANALYSIS

#### Strengths:

- Daily monitoring with checklist consistency
- Visual color-coded log motivates staff/patient
- Staff education builds competency

#### Weaknesses:

- Staff turnover affects consistency
- Initial resistance to the new system
- Time-consuming documentation

#### Opportunities:

- Expand the system hospital-wide
- Digitalize logs for EMR integration
- Use compliance data for research & quality improvement

#### Threats:

- Burnout may reduce staff engagement
- Patient refusal due to discomfort
- Limited resources for splint materials

## METHODS

This poster presentation utilizes a multimodal approach. This approach includes:

**Staff education:** Building competency through structured education on the proper application and positioning of orthoses to prevent medical device-related pressure injuries

**Daily RN-OT huddles:** Ensuring consistent communication and addressing barriers during interdisciplinary huddles

**Color-coded log:** Using a visual monitoring board with colored buttons (Red = not applied, Yellow = needs verification, Green = compliant) to track compliance.



## CONCLUSIONS

- A multimodal approach, incorporating staff education, daily RN-OT huddles, and a color-coded log, can significantly enhance orthosis compliance in burn patients.
- Case studies highlight the importance of addressing comfort and psychosocial factors, as well as ensuring staff consistency.
- Future steps include expanding the sample size, integrating the approach into electronic medical records (EMR), and evaluating long-term outcomes.

## CASE STUDIES

#### **CASE 1: HAND BURN**

- Challenge: Patient discomfort and skin maceration.
- Intervention: Provided education on skin checks, modified padding, and implemented a daily compliance log.
- Outcome: Improved tolerance from 40% → 85%.

#### **CASE 2: NECK BURN**

- Challenge: Poor adherence due to visibility and psychosocial concerns.
- Intervention: Reinforce the importance of orthosis through staff education and psychosocial support.
- Outcome: Compliance improved significantly with the psychosocial approach and patient/family education.

#### **CASE 3: LOWER EXTREMITY BURN**

- Challenge: Limited staff awareness during night shifts leading inconsistent orthosis use.
- Intervention: Introduced a daily rounds checklist and provided education to night staff.
- Outcome: Documented compliance improved with the use of color-coded tracking.

### RESULTS:

Compliance rates showed significant improvement across all three cases.

The targeted education, combined with the use of simplified visual tools, notably enhanced staff engagement.

The implementation of a daily round's checklist ensured greater accountability and continuity of care.

## REFERENCES



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