

# Pressure Injury Prevention in Critically Ill Hospitalized Adult Patients

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## Background

- Pressure injuries are one of the most prevalent hospital-acquired conditions (HACs) not just in the U.S but globally<sup>1</sup>
- In the U.S alone, 2.5 million people develop pressure injuries annually<sup>1</sup>
- Hospital –acquired conditions (HACs) are harmful and deadly to patients and costly to hospitals<sup>1</sup>
- Cost to treat a pressure injury can reach up to \$50,000 and \$26.8B is spent cumulatively in the U.S<sup>1,2</sup>
- Pressure injuries have mental, physical and psychological implications for patients and hospital organizations<sup>2,3</sup>
- 60 000 deaths are reported annually<sup>1</sup>
- Gold standard for pressure injury prevention is manual repositioning every two hours<sup>4,5</sup>
- Manual repositioning predisposes nurses to back injuries <sup>6</sup>
- Purpose of project is to implement continuous lateral rotation therapy (CLRT) to reposition immobilized patients

## PICOT

In critically ill, bedridden patients (P), what is the effect of continuous lateral rotation therapy (I) compared to manual repositioning every two hours (C) in preventing pressure injuries (O) over a three-month period (T)?

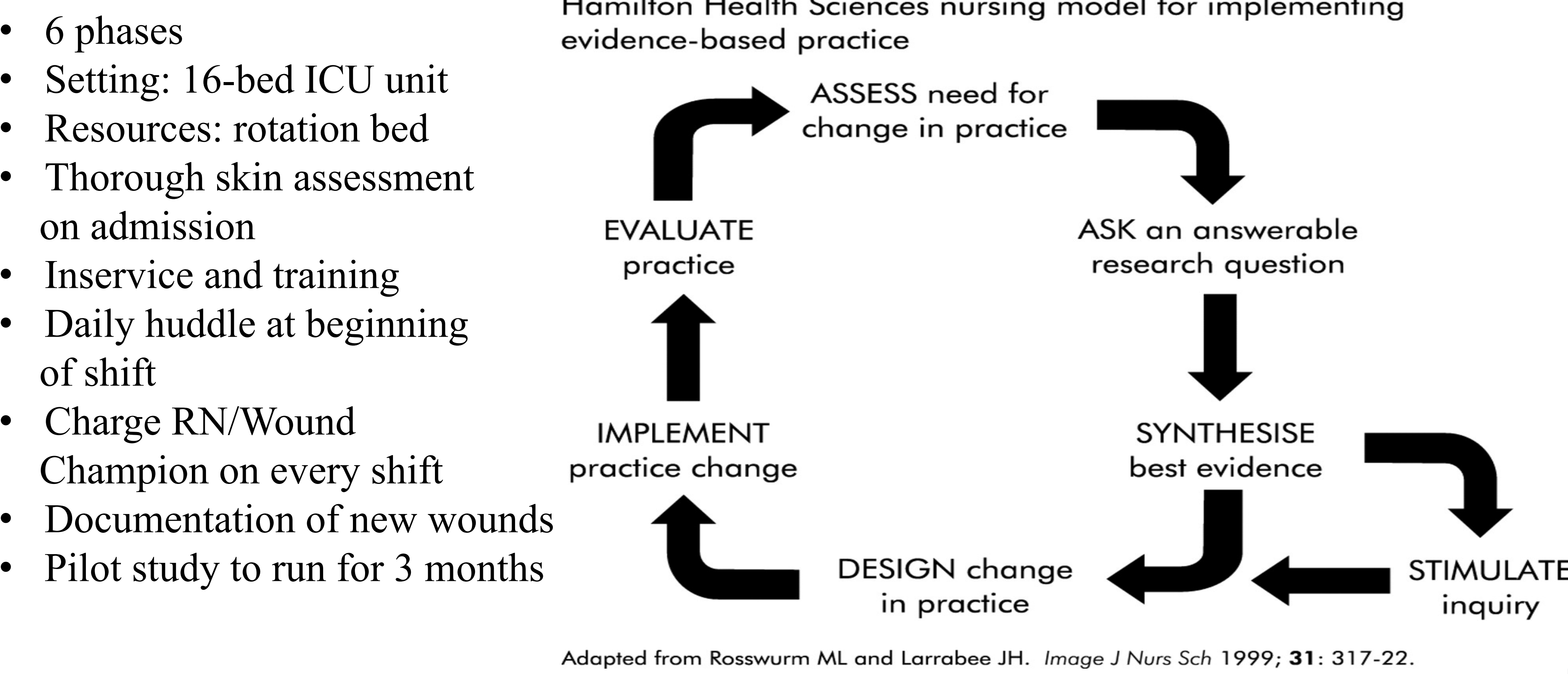
## Literature Search

- **Databases:** CINAHL, Cochrane Library, Ovid Nursing, PubMed
- **Key Words:** “pressure injuries”, “pressure sores”, “critical illness”, “adults”, “bed rotation”, “bedridden” pressure ulcers”, “continuous lateral rotation therapy” “CLRT”, “manual turning, “prevention of”, “patient positioning”
- **Inclusion Criteria:** clinical trials, RCT’s free full texts , English, published in the last 5 years
- **Exclusion Criteria:** no mention of pressure ulcers, primary focus was treatment only
- **Number of articles:** 8
- **Levels of Evidence:** Level 1 – 3 articles, Level III – 2 articles, Level IV – 2 articles, Level VI – 1 articles
- **Summary of Findings:** manual repositioning is the gold standard for prevention of pressure injuries in hospitalized patients. However, manual repositioning predisposes nurses to back injuries. Continuous lateral rotation therapy (CLRT) is superior to manual turning in pressure ulcer prevention.

## Synthesis of Findings & EBP Guidelines

- Manual repositioning is an integral component of pressure ulcer prevention<sup>3,4</sup>
  - Manual repositioning puts health care workers at risk of musculoskeletal complaints which sees an estimated 12-18% leaving the profession annually<sup>6</sup>
  - Beds with CLRT functionality delayed pressure injury development and decreased patient hospital stay<sup>4, 7,8</sup>
  - CLRT effectively relieved pressure at targeted sites more than manual repositioning<sup>8</sup>
- EBP Guidelines**<sup>1,6,7</sup>
- Risk Assessment: Braden Scale; Norton Scale; Bates-Jensen Wound Assessment Tool
  - Skin Assessment and care
  - Nutrition
  - Position changes
  - Training of health care professionals

## Implementation Plan/Theoretical Framework



## Rotation Bed



## Recommendation for Change

- Pilot CLRT bed for three months
- All critical care rooms to be equipped with rotation beds
- Integrate rotation therapy into standard of practice: all immobilized critical care patients to be placed on CLRT
- Educate all healthcare workers on the new standard of practice
- Educate patients, family members and collect data

## Evaluation Plan

- Decrease occurrence and severity of pressure ulcers
- Track the occurrence and severity of pressure ulcers monthly
- Track length of hospital stay and overall healthcare cost
- Measure patient satisfaction scores
- Decrease in healthcare worker’s musculoskeletal injuries

## References

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