Pressure Ulcer Interventions and Quantitative Studies
A Review of the Literature

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INTRODUCTION
Pressure ulcers are a major concern for nursing homes and home health agencies.
Prevalence and incidence rates are high;
Long-term care settings:
- Prevalence ~ 30% in LTC settings
- Incidence ~ 24%
Home health care settings
- Incidence ~ 17%
Costs of pressure ulcer treatment
- Estimated at $1.3-$1.5 billion/year or
- $2,000-$40,000 per case
Pressure ulcer development is complex and involves many factors.
Systematic data on the effectiveness of intervention is not yet available. The literature review is to better understand the types of interventions currently being implemented and how successful each intervention is.

METHODS
Review Criteria
1. PubMed online database
2. Searchable terms: “Pressure Ulcer” + “Intervention” – 525 articles through July 2012
3. To target more recent literature, boundaries were created of 2000-2012 removing 229 articles from the sample.
4. 296 articles were reviewed by title and/or abstract: Any articles with the terms “Pressure Ulcer” “Intervention,” or of clinical relevance was retrieved electronically for review.
5. A total of 91 articles were collected and reviewed completely – Articles without clear methods, results sections, or that were literature reviews were discarded so only empirical studies were included.
6. The final analysis contained 46 articles: 43 obtained from the search criteria and an additional 3 articles dealt with special populations
A majority of the literature (61.2%) came from the U.S. Other countries represented in the review included Australia, India, Italy, Japan, the Netherlands, Nigeria, Sweden, and the United Kingdom.

RESULTS
Study Design:
Experimental studies were performed over the last decade to address pressure ulcers—but more than half were observational in nature.
Experimental or Randomized Control trials (n = 10)
Cohort designs (n = 12)
pre-post studies (n = 6)

Study Settings:
Hospitals = 20 studies
8 = single entire hospitals or multiple hospitals
12 = specific hospital departments such as ICU
Nursing homes = 8 studies
Long term care facilities = 6 studies
Other settings utilized included rehab centers, health clinics, and home health settings

Study Populations
Sample sizes varied greatly between study (range n = 9 patients to n = 12,566 patients)
12 studies used 99 or fewer patients,
17 studies used 100-999 patients, and
5 studies used 1000+ patients
Age varies
9 studies used individuals 50 yrs of age or older
3 studies used individuals 65 yrs of age and older
Many studies looking at younger populations included individuals with spinal cord injuries, surgery patients, or specialty pediatric patients.

DISCUSSION
• This literature review contributes to better understanding of the current state of pressure ulcer reduction efforts through quantitative studies.
• Study design, setting and populations vary, making outcome comparison difficult.
• There was good evidence for the effectiveness of interventions that had some form of education or were multifaceted.
• The previous best example of the effectiveness of a collaborative effort in combating pressure ulcers was seen in the New Jersey Hospital Association’s 150 organization effort which decreased pressure ulcers by 25%.
• Outcomes and Intervention strategies are not well defined.
• Results are difficult to replicate.

CONCLUSIONS
• This literature review shows that many efforts were being made to reduce pressure ulcers.
• International guidelines on pressure ulcer prevention available
• More rigorous evaluation plans are needed, so that effective intervention programs can be replicated.