



Reducing Lymphedema-Related Infections and Hospitalizations Through the Use of Compression Therapy

The Lymphedema Treatment Act will provide for Medicare coverage of doctor-prescribed medical compression supplies under the Durable Medical Equipment (DME) category, which will improve patient health and quality of life while reducing healthcare costs for our governmental programs.

The first study outlined quantifies the economic burden of lymphedema-related hospitalizations in the US, followed by four studies showing compression therapy's effectiveness in reducing lymphedema-related infections and hospitalizations.

Epidemiology of Lymphedema-Related Admissions in the United States: 2012-2017, *Surgical Oncology*, 2020 ¹

- **Lymphedema is a debilitating chronic condition that has no cure.** The primary treatment for these patients are therapies consisting of **compression**, manual lymphatic drainage, meticulous skin care, and exercise.
- **Lymphedema-related hospitalizations are a significant burden to the US healthcare system.**
- In the period between 2012 and 2017, there were **165,055 Lymphedema-related hospital admissions** with the median age of 62 years representing a **total cost of \$5.1 billion** during that period. (Note: the study does break out the Medicare and Medicaid populations by both number of patients and total costs.)
- **A significant rise in the number of lymphedema hospitalizations were reported** over the course of the 7 years of the study, while all-cause hospitalizations declined. The increasing lymphedema hospitalizations is likely due to the improved survival after cancer treatment, which has led to increasing prevalence of patients who have had nodal treatment.
- **Nearly half of all lymphedema-related hospitalizations required ongoing care after discharge**, at either another facility or through home health care, and these costs are not captured in this study.
- Potential missing diagnosis codes for lymphedema may have resulted in the incorrect exclusion of hospitalizations from the study analysis, which means **the overall burden of lymphedema and cellulitis on the US healthcare system was likely underestimated.**

¹ <https://www.sciencedirect.com/science/article/abs/pii/S0960740420303868>

Compression Therapy to Prevent Recurrent Cellulitis of the Leg, *New England Journal of Medicine*, 2020 ²

Roughly 80 patients with chronic edema of the leg and a history of cellulitis were randomized to receive compression therapy plus education about cellulitis prevention, or education alone.

- **In the control group not receiving compression therapy the rate of cellulitis recurrence was three times greater, and the rate of hospitalization for cellulitis infection was double.**
- For patients with chronic leg edema and recurrent cellulitis, **the risk for future cellulitis was reduced by 77%** through the use of compression stockings or other compression therapy supplies.
- **The effect was so profound the trial was stopped early, and all patients were given compression therapy.**
- ***"In a climate of increasing antibiotic resistance, we are delighted to have discovered a nondrug management strategy that has such a dramatic impact on the risk of cellulitis,"*** senior author Bernie Bissett, PhD, Discipline of Physiotherapy, Faculty of Health, University of Canberra.

A Ten-Year Review of Compression Coverage in the Commonwealth of Virginia, *Health Economics Review*, 2016 ³

The following highlights the findings of a ten-year review of Virginia's experience with their state mandate for compression supplies. The mandate applied to private insurance, and later to Medicaid and state employees.

- **Visits to providers (physician or therapist) dropped by over 40%** (figure 3 page 5).
- **Hospital days dropped by over 50%** to nearly zero (figure 3, page 6) over the last 5 years.
Note: Medicare patients would be expected to benefit even more from the mandate as they have a higher risk for hospitalization at baseline.
- ***"The Virginia data confirmed previous clinical data that the treatment of lymphedema by management of swelling results in lower medical costs and fewer hospitalizations."***

² <https://www.nejm.org/doi/full/10.1056/NEJMoa1917197>

³ <https://healtheconomicsreview.biomedcentral.com/articles/10.1186/s13561-016-0117-3>

Effects of Complete Decongestive Therapy on the Incidence Rate of Hospitalization for the Management of Recurrent Cellulitis in Adults with Lymphedema, *Rehabilitation Oncology Journal*, 2011 ⁴

- Lymphedema was recognized as one of the most potent risk factors for the development of recurrent cellulitis, which frequently requires hospitalization.
- The authors remarked that enrollment in the study removed a significant barrier to idealized treatment by covering the cost of bandages and garments through the study's funding.
- **The study revealed that treatment, primarily consisting of compression including bandaging and compression garments, reduced the average annual hospitalizations among the study participants from 8.5/year down to 0.67/year, a decrease of 12-fold.**

Cellulitis in Chronic Oedema of the Lower Leg: An international cross-sectional study. *British Journal of Dermatology*, Accepted for Publication, 2021 ⁵

- The authors investigated the prevalence and risk factors of cellulitis in 7,477 patients at 40 healthcare sites in nine countries between June 2014 and August 2017. Statistical ranges may reflect differences between sites for the type of clinical setting and patients served.
- 5 to 78% of patients with chronic edema were diagnosed with cellulitis within the last 12 months, with a lifetime prevalence of 37 to 47%. Of those patients, 31.2% were hospitalized for treatment.
- Clinicians evaluated a subgroup of 996 patients for the severity of lymphedema. Control of swelling was associated with a significantly lower risk of cellulitis during the previous 12 months while advanced stages of chronic edema were strong risk factors for cellulitis. For stage I, the authors reported cellulitis incidence of 9 - 70%; stage II, 18 - 40%; and stage III, 41 - 67%.
- **Based on these findings, the authors conclude compression therapy to control swelling and halt progression into advanced stages of lymphedema may have a significant effect on reducing the risk of cellulitis, thereby reducing healthcare costs. They assert that compression therapy should be mandatory.**

⁴ <https://www.jwatch.org/fw116931/2020/08/12/compression-therapy-effective-preventing-recurrent-leg>, <https://www.medscape.com/viewarticle/935845>

⁵ <https://onlinelibrary.wiley.com/doi/10.1111/bjd.19803>