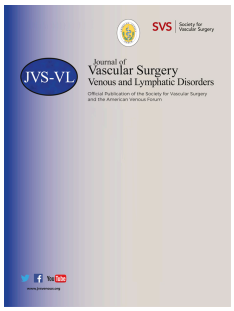
Journal Pre-proof



Evaluation of Patient-Reported Outcomes in Over 10,000 patients Using Pneumatic Compression Therapy for Lower Extremity Lymphedema

Ashna Raiker, M.D., Alisha Raiker, Steven Dean, M.D., Antonios Gasparis, M.D., Nicos Labropoulos, PhD

PII: S2213-333X(26)00108-3

DOI: https://doi.org/10.1016/j.jvsv.2026.102548

Reference: JVSV 102548

To appear in: *Journal of Vascular Surgery: Venous and Lymphatic Disorders*

Received Date: 6 December 2025

Revised Date: 2 May 2026

Accepted Date: 25 May 2026

Please cite this article as: A. Raiker, A. Raiker, S. Dean, A. Gasparis, N. Labropoulos, Evaluation of Patient-Reported Outcomes in Over 10,000 patients Using Pneumatic Compression Therapy for Lower Extremity Lymphedema, *Journal of Vascular Surgery: Venous and Lymphatic Disorders* (2026), doi: https://doi.org/10.1016/j.jvsv.2026.102548.

Evaluation of Patient-Reported Outcomes in Over 10,000 patients Using Pneumatic Compression Therapy for Lower Extremity Lymphedema

Running Short Title: Patient-Reported Outcomes with Pneumatic Compression Device Therapy for Lymphedema

Ashna Raiker M.D.[1], Alisha Raiker[2], Steven Dean M.D.[3], Antonios Gasparis M.D.[4], Nicos Labropoulos PhD[5]

1 Department of Vascular Surgery, The Mount Sinai Hospital, New York, NY

2 Stony Brook University, New York, NY

3 Division of Cardiovascular Medicine, Ohio State University Wexner Medical Center, OH

4 Vascular Surgery, Northwell Health, Huntington, NY

5 Department of Surgery, Stony Brook Medicine, NY

Corresponding Author:

Dr. Nicos Labropoulos

Professor of Surgery and Radiology

Director, Vascular Laboratory

Department of Surgery HSC T19 Rm94

Stony Brook University Medical Center

Stony Brook, NY 11794-8191

Tel: 631-444-2683, Fax: 631-444-8824, E-mail: nlabrop@yahoo.com

No funding was provided.

Presentation Information: Poster Presentation at the 2025 Venous Symposium, Evaluation of Patient Reported Device Usage, Satisfaction and Symptom Improvement with Pneumatic Compression Device Therapy; Stony Brook University Student Research Day Presentations

Article Highlights:

Type of Research: Retrospective Observational Study

Key Findings: Surveying 10, 543 patients receiving pneumatic compression device therapy for lower extremity lymphedema demonstrated high patient-reported satisfaction (85-94%) and symptom improvement (67%) with daily use. Clinical benefit rose with increased device usage and was stable over time. Comparable outcomes with 3-6 days/ week versus daily use supports its practicality.

Take Home Message: Pneumatic Compression Device therapy is a clinically beneficial treatment modality with high patient-reported satisfaction and symptom improvement warranting significant incorporation into treatment regimens for lower extremity lymphedema.

Table of Contents Summary

This survey-based observational study of 10, 543 patients with lower extremity lymphedema demonstrated high patient-reported satisfaction and symptom improvement with pneumatic compression device therapy. It was shown to be a practical treatment regimen with outcomes that improved with device usage and were sustained at 45 and 90 days.

Abstract

Objective

Lymphedema treatment varies from compression and manual lymphatic drainage to surgical measures. While compression demonstrates clinical benefit, poor adherence and dissatisfaction can contribute to treatment failure. This study aimed to assess patient-reported satisfaction, device usage, and symptom improvement with pneumatic compression device therapy.

Methods

This online survey-based study design ranged from 1/1/2024-12/31/2024 with 35, 522 invitations delivered without incentive to respond. Patients with lower extremity edema prescribed a medical pneumatic compression device and within the company database were included. Patients with multiple or different devices over the study time period were excluded. Surveys were administered in English or Spanish at 45 and 90 days, encompassing satisfaction with the device, device usage, and symptom improvement based on a predetermined list of symptoms. Questions were graded on a Likert scale of 1-5 with 5 representing complete agreement or extreme satisfaction.

Results

After exclusions were made, survey data from 10,543 (30%) patients was analyzed. Participants had a mean age of 69.8 ± 11.8 years with 64% female and 92% with bilateral lymphedema. At 45 days, patients reported high device satisfaction in all categories: overall satisfaction, ease of use, functionality, quality, and reliability. Satisfaction across all categories improved as device frequency increased from less than once a week (48-77%) to 1-2 days a week (70-91%) to daily (85-94%) for Likert 4 and 5, $p<0.0001$. Furthermore, patient-reported symptoms and ability to

perform activities improved with increased device usage as well from less than once a week (34%), to 1-2 days a week (53%), to everyday use (67%) for Likert 4 and 5 $p<0.0001$. There was minimal additional benefit for both satisfaction and symptom improvement, when comparing 3-6 days/ week versus daily use. With daily use, most reported improvement in swelling (58%), heaviness (34%), and pain (25%). Comparing 45- and 90-day timepoints, across all satisfaction categories, the responses stayed the same for 85-92% of patients (73-88% of which were already Likert 4-5), decreased for 4-8% and increased for 3-7%. For device usage, responses stayed the same for 74%, decreased for 19% and increased for 7%. For symptom improvement, responses stayed the same for 78% (56% of which were already Likert 4-5), decreased for 10% and increased for 13%.

Conclusion

Patient-reported satisfaction and symptom improvement with pneumatic compression therapy was high and improved with higher device usage. The highest improvement was in reduction in swelling, heaviness and pain. Outcomes remained stable comparing 45 to 90 days.

Key Words: Lymphedema, Pneumatic Compression Device, Patient Reported Outcomes, Patient Satisfaction, Treatment Compliance

Conflicts of Interest: SD and AG are consultants for Tactile Medical. NL, AR and AR have no relevant conflicts of interests to declare.

Introduction

Lymphedema is an incurable debilitating condition managed with multi-modality treatments from compression and manual lymphatic drainage to surgery [1 2]. It poses a significant burden to both patients and healthcare systems given its longitudinal treatment course, innumerable hospitalizations, and high expenditure [3]. Compression remains the cornerstone of treatment for lymphedema and is a major component of the standard, complex decongestive therapy (CDT) [2].

Pneumatic compression devices (PCD) have emerged as an effective aid for the home maintenance phase of CDT and have evolved from single chamber versions to advanced iterations that use pressure modulation and sequential compressions to model manual lymphatic therapy [2, 4]. While literature on lower extremity PCD use is limited, its use is recommended in select patient populations by the Lymphedema Framework and American Venous Forum clinical practice guidelines [5]. A large prospective study demonstrated significant reductions in lower limb volumes in 90% of patients and improved quality of life [4]. Another clinical trial further demonstrated success in reducing ulceration, cellulitis, hospital admissions and resource usage [3]. PCD success can be attributed to various mechanisms including reduction of venous reflux, improved calf muscle contractility, and increased lymphatic propulsion [4]. Patient non-adherence remains a major cause for treatment failure with adherence rates widely ranging from 28% to 69% [6]. Uncomfortable devices, 1hour duration of therapy, limitations on activities of daily living, financial constraints, and limited patient education are all contributing factors to low adherence and treatment failure [6].

In recent times, the value of patient-reported outcomes to optimize treatment has become increasingly evident [7]. Metrics to evaluate lymphedema treatment such as reasons for non-adherence, satisfaction, severity of symptoms (e.g. swelling, heaviness), ease of device use and

quality of life can often be subjective [7]. Patient-reported data can reveal discrepancies between treatment expectations and progression, challenges in balancing cost and effectiveness, and identify inadequately addressed needs [7]. However, there is currently a gap in patient-reported data for PCD use that is limiting both the creation of optimal treatment plans, as well as adequate insurance coverage [3, 8].

Thus, this retrospective study aimed to evaluate the clinical benefit of pneumatic compression device therapy for lymphedema utilizing patient-reported outcomes. Specifically, the study investigated the Tactile Medical pneumatic compression devices (Flexitouch and Entre Plus) with respect to frequency of device usage, satisfaction and symptom improvement.

Materials and Methods:

This study was conducted with survey design from 1/1/2024-12/31/2024 to evaluate patient usage, symptom improvement and satisfaction with pneumatic compression device therapy.

Subject Population

Patients that were prescribed a Tactile Medical pneumatic compression device by an independent, private provider in the United States were included in this study. Inclusion criteria included patients with an e-mail address on the company customer relationship management system, an active Territory Account Manager, and who were shipped a Tactile Medical pneumatic compression device in the previous 45 or 90 days.

Data Collection

Patients were sent a link by email to a descriptive survey managed on an online Medallia Experience Cloud platform. Medallia is an independent enterprise experience platform that helps companies capture and analyze patient feedback. Surveys were sent both 45 days and 90 days after the device shipment dates. If no response was received, a reminder email was sent 3 days later. Surveys were administered English and Spanish, with English as the default and the survey window stayed active for 14 days post email.

PHI/Consent:

Patient consent was captured when patients completed a consent form and provided their contact information. Patients reviewed the consent form which provided Tactile Medical's Notice of Privacy Practices and the Privacy Statement available on the company website. The Privacy Statement outlined how patient health information is used and disclosed for research purposes: "We may use your information for research related to the products and services provided by Tactile Medical. For example, we may evaluate the number of patients using our products with a specific clinical diagnosis. If we use or disclose your information for research, your information will be de-identified to ensure you will not be identifiable."

Patients were informed of their rights as well through these documents. Medallia's privacy policy was provided on the invitation and reminder emails. Patients could opt out of surveys at any time utilizing the link in the email.

Patient health information was protected through several methods. Patient health information was transmitted to Medallia, through secure files. Medallia security is compliant with GDPR, CCPA, HIPAA as well as HITRUST, CBPR and PRP certified. Medallia also holds SOC 2 Type II platform compliance. Data centers have common security practices including 24/7-manned

guards, biometric access controls, and closed-circuit video. A business associate agreement was executed between Tactile Medical and Medallia.

Survey Instrument

The emailed survey was created at Tactile Medical based on the needs of the organization. The survey consisted of 9 clinical questions with varying response types including, Likert scales 1-5, open text, single selection, and multiple selection.

The domains evaluated through the survey were satisfaction of the device (overall, ease of use, functionality, quality, reliability), reported adherence to prescribed therapy, and reported symptom improvement.

Statistical Analyses

The analyses presented are generally exploratory in nature, as there is no pre-specified statistical analysis plan.

Continuous variables are presented as means, standard deviations and 95% confidence intervals. Categorical variables are presented as per level counts, percentages and 95% confidence intervals using the Wilson Score method.

Associations between patient survey Likert (1 – 5) responses and device usage, for combined Likert values of 4 - 5 (favorable responses) versus 1 - 3 (unfavorable to neutral responses) as two derived groups, are assessed using chi-square tests.

For patients with survey responses at both 45-days and 90-days, comparisons of paired survey response changes between the two timepoints are assessed using non-parametric tests for the three derived ordinal values of decreased, no change and increased.

Missing data are not imputed, and all results are reported on the available data only.

Two-sided p values of £0.05 are used to reject the null hypothesis.

All data processing, summarization, and analyses are performed using R Version 4.4.3 or higher. R Core Team (2025). R: A Language and Environment for Statistical Computing. R Foundation for Statistical Computing, Vienna, Austria. <https://www.R-project.org/>.

Data analysis was conducted independently and without any influence from the device manufacturer.No IRB approval was necessary given it was a survey-design study.

Results

Study Group

From the study range of 1/1/2024-12/31/2024, 35522 surveys were successfully delivered, with 10749 responses received. 10,543 (30%) patients were analyzed after exclusions were made (Figure 1). Patients had a mean age of 69.8 +/-11.8 years with 64% being females and 92% diagnosed with bilateral lymphedema.

45- day Outcomes

Patients reported high satisfaction with the device overall, including its ease of use, functionality, quality, and reliability (Table I). Satisfaction was directly proportional to the frequency of device usage. Satisfaction across all categories rose as usage increased from less than once a week (48-77%) to 1-2 days a week (70%-91%) to 3-6 days a week (77%-93%) to daily (85-94%) for Likert 4 and 5 combined, $p<0.0001$. Increasing usage from 3-6 days a week to daily use offered minimal additional benefit overall (Figure 2).

Patients reported high levels of symptom improvement and ability to perform normal activities (Table II). It similarly improved with increased frequency of device usage from less than once a week (34%), to 1-2 days a week (53%), 3-6 days a week (63%) to everyday use (67%) for Likert 4 and 5 $p<0.0001$. Increasing usage from 3-6 days a week to daily use offered no real benefit (Figure 3). Amongst patients who used the device daily, most patients reported symptom improvement in reduction of swelling (58%), heaviness (34%), and pain (25%) (Table III). All three improved with device usage from less than once a week (22%, 12% and 12%) to daily use (58%, 34%, 25%) respectively ($p<0.0001$).

Several other characteristics improved with increased device use from less than once a week to daily use. Ability to walk long distances and stand for long periods of time improved from 9% and 7% to 19% and 20% respectively ($p<0.0001$). Ease of wearing compression garments also increased from 7% to 21% ($p<0.0001$). Finally, patient self-image rose from 1% to 11% ($p<0.0001$).

Most patients (61%) reported daily usage of the device, whereas 28% reported 3-6 days/ week, 6% reported 1-2 days/week and 1% reported less than once a week at the 45-day timepoint (n=7524).

Comparing 45 and 90- day Outcomes

Patients were surveyed again at 90 days to assess change in outcomes over time and were compared to 45 days. Across all satisfaction categories, the responses stayed the same for 85-92% of patients (73-88% of which were already Likert 4-5), decreased for 4-8% and increased for 3-7%. For change in how often the device was used, responses stayed the same for 74%, decreased for 19% and increased for 7% (Figure 4).

For symptom improvement and ability to perform normal activities, responses stayed the same for 78% (56% of which were already Likert 4-5), decreased for 10% and increased for 13% (Figure 4). The significant improvement in swelling, heaviness and pain at 45- days stayed the same for 73%, 75%, and 79% respectively.

Patient ability to walk longer distances or stand for longer periods of time stayed the same for 82% and 80% respectively. Ease of wearing garments was unchanged for most patients (79%). Finally, patient self-image stayed the same for 89%.

Discussion

This lower extremity lymphedema patient population revealed high satisfaction across various categories and significant symptom improvement with PCD usage. Most of the study population was made up of middle aged-older females with bilateral lower extremity lymphedema which aligns with the predominant demographic impacted by lymphedema [4, 8, 9]. Multiple studies have demonstrated significant benefits to PCD use for lower extremity lymphedema with improvements in objective outcomes of limb girth, cellulitis, hospitalizations, resource usage, ulcerations, and quality of life [3, 4, 10]. This study aimed to expand upon this literature with a sole focus on patient-reported outcomes.

Patients reported a high-level of satisfaction with the device overall, including its ease of use, functionality, quality, and reliability at both 45-days and 90-days. It is critical to assess such subjective patient-reported outcomes, as even small changes in objective metrics like limb volume reduction can result in large changes in subjective quality of life and vice versa [4]. Other studies utilizing patient-reported metrics to assess advanced PCD outcomes have similarly

reported high patient satisfaction rates reaching 96% and significantly higher quality of life scores over one year [3, 4]. Ease of use for PCD therapy was also reported to be high (86%) in a survey-based study on phlebolymphedema [8]. Given that high satisfaction is a major contributor to high adherence rates, which in turn leads to treatment success, these findings highlight the substantial advantage to incorporating a PCD in longitudinal lymphedema therapy [8].

Furthermore, patient satisfaction significantly rose with increased frequency of device use from less than once a week (48-77%) to 3-6 days a week (77-93%), Likert 4 and 5 combined, incentivizing the frequent usage of pneumatic compression devices. Most patients in this study used the device daily (61%), compared to the widely ranging adherence rates of 28-69% reported in the literature [6]. However, as frequency of device use rose from to 3-6 days a week (77-93%) to daily (85-94%) use, there was minimal improvement observed in patient satisfaction overall (Likert 4 and 5 combined). While data is limited on optimal dosing and frequency of PCD use, this study finding suggests a potential plateauing of optimal response achievement at 3-6 days/week that should be explored further [11].

Patients reported significant symptom improvement and ability to perform daily activities while using the PCD that improved with increased device usage from less than once a week (34%) to 3-6 days a week (63%) Likert 4 and 5 combined. Most subjects reported improvement in swelling (58%), heaviness (34%), and pain (25%) with daily use. An observational study assessing patient-centered outcomes (n=52 patients) with advanced PCD usage for phlebolymphedema also reported significant improvements in swelling (91%) and pain (86%), both major symptoms that would otherwise result in poor function in these patients [8]. Minimal additional benefit was derived from utilizing the device 3-6 days a week (63%) vs daily (67%).

Patient satisfaction (85-92%), device usage (74%) and symptom improvement (78%) trends remained the same for the majority of patients when comparing 45-day and 90-day timepoints. Thus, all measured outcomes in this study were achieved by 45-days and were sustained over time.

Limitations of this study include its inherent survey-based design that may introduce response bias into the sample such as toward satisfied users. Given both device usage and outcomes were self reported, it may introduce susceptibility to common method bias and reverse causation. Data was not available on patients who did not complete the survey and there may be a degree of non-response bias. It was also limited to patients who had active territory account managers and emails, recruiting more engaged patients. Furthermore, it has a 30% response rate although this is in the higher rate of survey returns. The survey itself was also not validated, although it had components similar to others. Statically, the likert scale was analyzed by dichotomizing it into 1-3 and 4-5 to make clinically meaningful comparisons but it could inadvertently introduce potential inflation of effects. Our outcomes were focused on patient-reported subjective rather than objective measures. Although noted, no direct adjustment was made in this study for factors such as disease severity, etiology, BMI, and could be assessed in future studies. Finally, the questionnaire was exclusively administered to outpatients using devices from a single manufacturer.

Conclusion

Overall, pneumatic compression device therapy offered safe and substantial benefit in the treatment of lower extremity lymphedema when evaluated via patient-reported outcomes. It

demonstrated a high satisfaction with the device overall, including its ease of use, functionality, quality, and reliability. Symptom improvement, especially of swelling, heaviness and pain, was also high. Both satisfaction rates and symptom improved increased with device usage, underscoring the importance of patient adherence to treatment. Considering the time and burden of PCD usage, the observation of therapeutic equipoise achieved with only 3 to 6 days/week versus daily use is novel and warrants further clinical evaluation. These clinical benefits were achieved as early as 45-days and maintained through 90 days. This study advocates to incorporating a PCD into lymphedema treatment algorithms, expanding of insurance coverage for home-based therapy, and future studies investigating their optimal frequency of usage.

References

1. Farid Y, Pozzi M, Bolletta A, Cigna E, Losco L, Mendes VM, et al. Effective Management Strategies for Primary Lymphedema of the Lower Extremities: Integrating Conservative and Surgical Therapies in Early and Late Stages. Microsurgery. 2025;45(1):e70014.

2. Franks PJ, Moffatt CJ. Intermittent Pneumatic Compression Devices in the Management of Lymphedema. JAMA Dermatol. 2015;151(11):1181-2.

3. Maldonado TS, Rokosh RS, Padberg F, Rotella V, Miller H, Nassiri N, et al. Assessment of quality of life changes in patients with lower extremity lymphedema using an advanced pneumatic compression device at home. J Vasc Surg Venous Lymphat Disord. 2021;9(3):745-52.

4. Muluk SC, Hirsch AT, Taffe EC. Pneumatic compression device treatment of lower extremity lymphedema elicits improved limb volume and patient-reported outcomes. Eur J Vasc Endovasc Surg. 2013;46(4):480-7.

5. O'Donnell TF, Jr., Allison GM, Iafrati MD. A systematic review of guidelines for lymphedema and the need for contemporary intersocietal guidelines for the management of lymphedema. J Vasc Surg Venous Lymphat Disord. 2020;8(4):676-84.

6. Medina Rodriguez ME, Socorro Suarez R, Albornoz Cabello M, Aranda Rodriguez C, Dominguez Trujillo PD, Pena Curbelo V. Adherence to Compression Garments in Lymphedema Patients: A Cross-Sectional Study. Medicina (Kaunas). 2025;61(4).

7. Mercieca-Bebber R, King MT, Calvert MJ, Stockler MR, Friedlander M. The importance of patient-reported outcomes in clinical trials and strategies for future optimization. Patient Relat Outcome Meas. 2018;9:353-67.

8. Murray-Ramcharan M, Escurra MF, Donaldson B, Raza Rizvi SA. Patient-Centered Outcomes of a Lymphedema Pump in Patients with Symptomatic Lower Extremity Edema. Ann Vasc Surg. 2024;108:333-7.

9. Barfield M, Winokur R, Berland T, Davis S, Ralph V, Chatham N, et al. Results from a comparative study to evaluate the treatment effectiveness of a nonpneumatic compression device vs an advanced pneumatic compression device for lower extremity lymphedema swelling (TEAYS study). J Vasc Surg Venous Lymphat Disord. 2025;13(1):101965.

10. Padberg FT, Jr., Ucuzian A, Dosluoglu H, Jacobowitz G, O'Donnell TF. Longitudinal assessment of health-related quality of life and clinical outcomes with at home advanced pneumatic compression treatment of lower extremity lymphedema. J Vasc Surg Venous Lymphat Disord. 2024;12(4):101892.

11. Keeley V, Riches K, Ward L, Franks PJ. A Prospective Preliminary Study Examining the Physiological Impact of Pneumatic Compression Dosing in the Treatment of Lower Extremity Lymphedema. Lymphat Res Biol. 2023;21(5):456-62.

Tables

Table I

Patient-reported satisfaction with pneumatic compression device use across various categories including reliability, quality, functionality, ease of use and overall satisfaction measured on a Likert Scale of 1- 5 at the 45- day timepoint (n=7552 patients).

Patient Response Summary	**Number of Patients**
Overall Satisfaction	
Mean +/- SD (CI)	4.4 +/- 0.9 (4.4, 4.4)
Likert Scale Responses (% [CI])	
1	187 (2.5% [2.1, 2.9])
2	179 (2.4% [2.1, 2.7])
3	610 (8.1% [7.5,8.7])
4	1884 (24.9% [24.0, 25.9])
5	4692 (62.1% [61.0, 63.2])
Ease of Use	
Mean +/- SD (CI)	4.2 +/- 1.0 (4.2, 4.2)
Likert Scale Responses (% [CI])	
1	258 (3.4% [3.0, 3.9])
2	315 (4.2% [3.7, 4.6]
3	1007 (13.3% [12.6, 14.1]
4	2050 (27.1% [26.2, 28.2])
5	3922 (51.9% [50.8, 53.1])

Functionality	
Mean +/- SD (CI)	4.4 +/- 0.9 (4.4, 4.5)
Likert Scale Responses (% [CI])	
1	183 (2.4% [2.1, 2.8])
2	157 (2.1% [1.8, 2.4])
3	576 (7.6% [7.0, 8.2])
4	1881 (24.9% [23.9, 25.9])
5	4755 (63% [61.9, 64.0])
Quality	
Mean +/- SD (CI)	4.6 +/- 0.8 (4.5, 4.6)
Likert Scale Responses (% [CI])	
1	136 (1.8% [1.5, 2.1])
2	105 (1.4% [1.1, 1.7])
3	405 (5.4% [4.9, 5.9])
4	1594 (21.1% [20.2, 22.0])
5	5312 (70.3% [69.3, 71.4])
Reliability	
Mean +/- SD (CI)	4.6 +/- 0.8 (4.6, 4.6)
Likert Scale Responses (% [CI])	
1	153 (2.0% [1.7, 2.4])
2	89 (1.2% [1.0, 1.4])
3	432 (5.7% [5.2, 6.3])
4	1502 (19.9% [19.0, 20.8])

5	5376 (71.2% [70.2, 72.2])

SD: Standard Deviation. (CI): 95% Confidence Interval. [CI]: 95% Confidence Intervals (Wilson Method). Likert scale data is represented as the number of patients (% [CI]). Likert Scale is on a scale of 1-not at all satisfied to 5- extremely satisfied.

Table II

Patient-reported symptom improvement and/or overall ability to perform normal activities with pneumatic compression device measured on a Likert Scale of 1- 5 at the 45- day timepoint (n=7450 patients).

Patient Response Summary	**Number of Patients**
Mean +/- SD (CI)	3.8 +/- 1.2 (3.8 3.8)
Likert Scale Responses (% [CI])	
1	473 (6.3% [5.8, 6.9])
2	427 (5.7% [5.2, 6.3])
3	1887 (25.3% (24.4, 26.3)
4	2087 (28.0% [27.0, 29.0)
5	2576 (34.6% [33.5, 35.7])

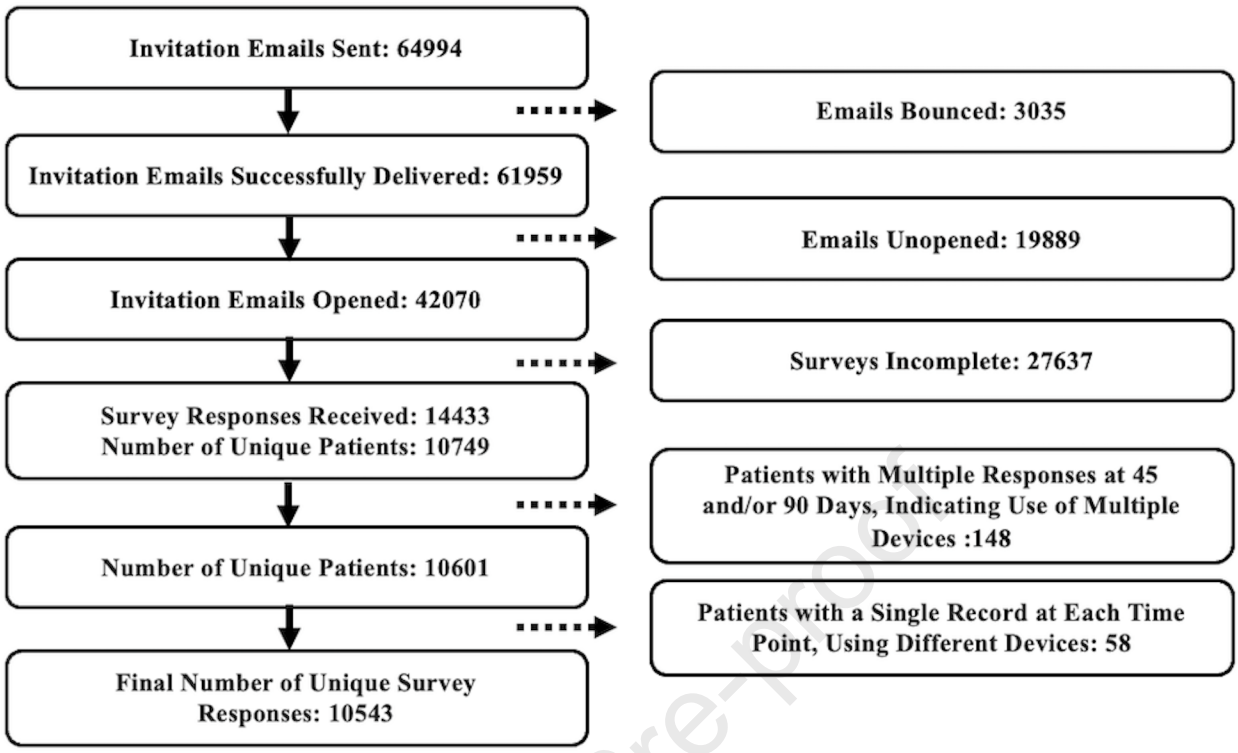
SD: Standard Deviation. (CI): 95% Confidence Interval. [CI]: 95% Confidence Intervals (Wilson Method). Likert scale data is represented as the number of patients (% [CI]). Likert Scale is on a scale of 1-not at all satisfied to 5- extremely satisfied.

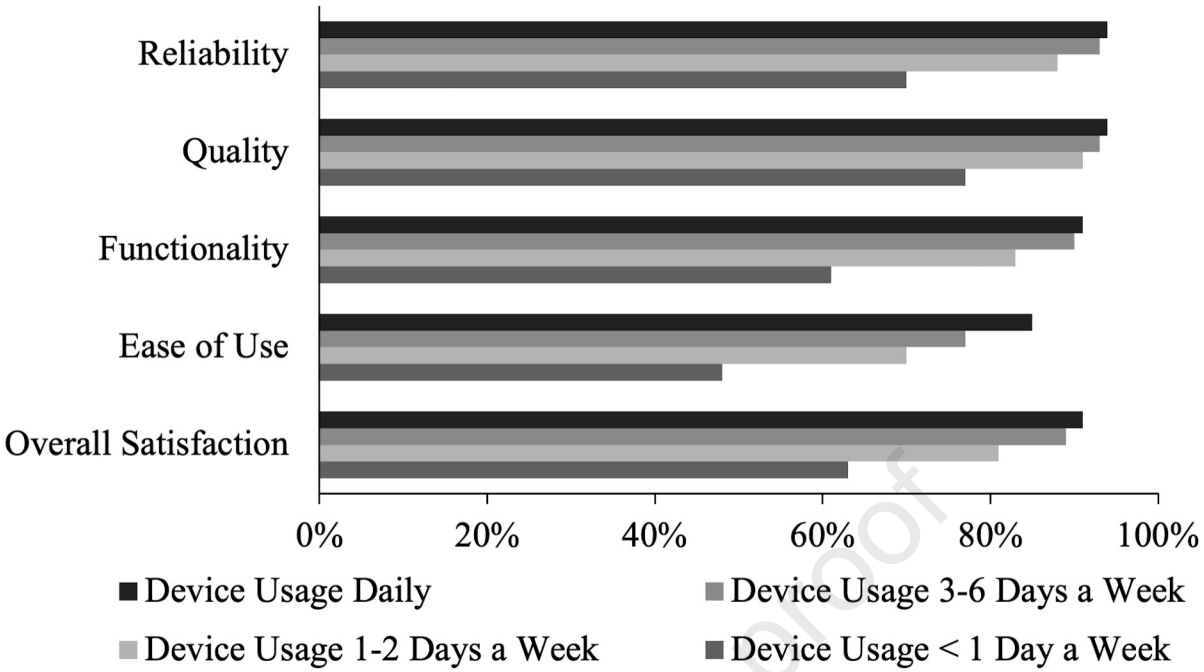
Table III

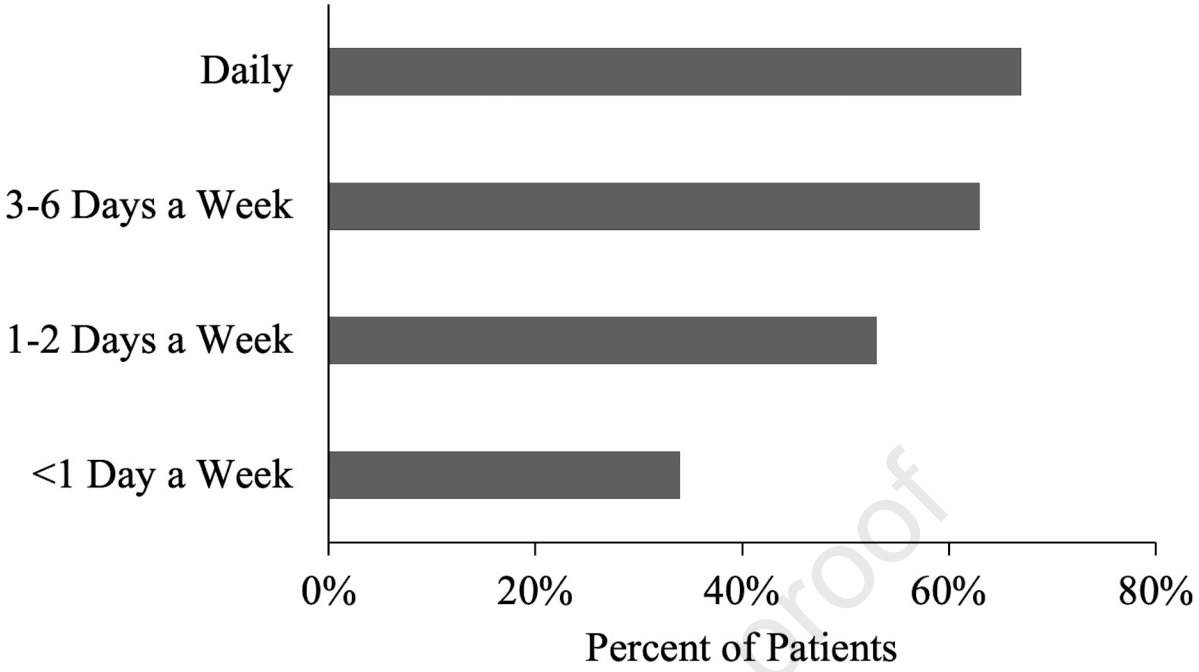
Patient-reported improvement in various lower extremity symptoms with pneumatic compression device therapy at the 45- day timepoint (n= 7552).

Symptom	**Number of Patients (% [CI])**
Ability to walk longer distances	1276 (16.9% [16.1, 17.8])
Ability to stand for longer periods of time	1450 (19.2% [18.3, 20.1])
Self-image	715 (9.5% [8.8, 10.1])
Less pain	1723 (22.8% [21.9, 23.8])
Less heaviness	2341 (31.0% [30.0, 32.1])
Less swelling	4019 (53.2% [52.1, 54.3])
Sleep	655 (8.7, [8.1, 9.3])
Compression garments are easier to put on	1374 (18.2% [17.3, 19.1])
Fit of clothing/ jewelry	568 (7.5% [6.9, 8.1])

[CI]= 95% Confidence Intervals (Wilson method)







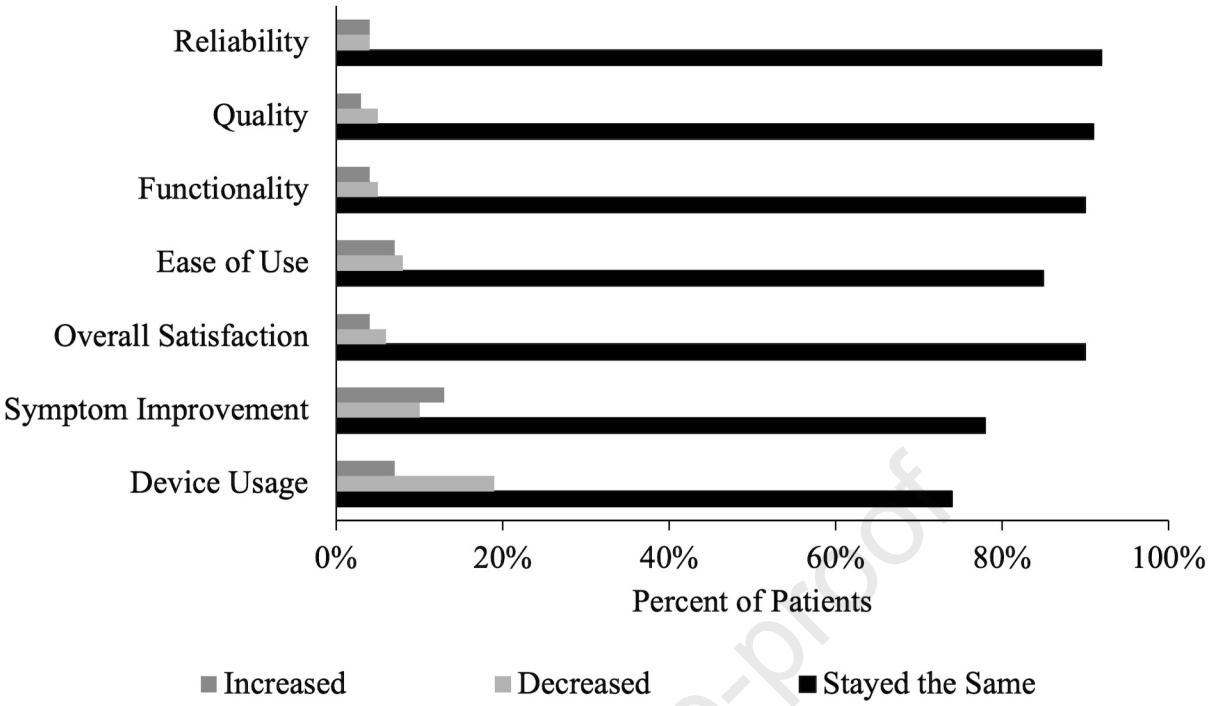


Figure 1

Flow diagram illustrating the process of survey dissemination to patients prescribed pneumatic compression devices, combined for both 45- and 90-day time points. The response rate of 30% was calculated as the number of survey responses /number of invitations delivered to unique patients. Number of survey responses was 10543, and the total number of invitations delivered over the 45- and 90-day time points were 64994 invitations to 35522 unique patients.

Figure 2

Change in patient-reported satisfaction across various categories (reliability, quality, functionality, ease of use and overall satisfaction) with increase in frequency of device usage. Patient-reported satisfaction was measured to be Likert 4 and 5 combined ($p<0.0001$) at the 45-day timepoint (n= 7524 patients).

Figure 3

Change in symptom improvement and/or overall ability to perform normal activities with increase in frequency of device usage. Patient-reported satisfaction was measured to be Likert 4 and 5 combined ($p<0.0001$) at the 45- day timepoint (n= 7430 patients).

Figure 4

Comparing changes in patient-reported satisfaction across various categories (reliability, quality, functionality, ease of use and overall satisfaction), frequency of device usage, and symptom improvement and/or overall ability to perform normal activities between the 45-day and 90-day

time points (Satisfaction categories n= 3346 patients, Device usage n=3330 patients, Symptom Improvement n=3267 patients). Confidence intervals are 95% confidence intervals (Wilson's method).