

# **Evaluation of SF97**

Report to the Minnesota Legislature pursuant to Minn. Stat. §62J.26 01/24/2022

## **Contact Information**

Minnesota Department of Commerce 85 7<sup>th</sup> Place East St. Paul, MN 55101 651-539-1734 andrew.kleinendorst@state.mn.us mn.gov/commerce

As requested by Minnesota Statute 3.197: This report cost approximately \$3,115 to prepare, including staff time, printing, and mailing expenses

Upon request, this material will be made available in an alternative format such as large print, Braille or audio recording. Printed on recycled paper.

## Contents

Evaluation of Senate File 97 - Coverage of Lymphedema Treatment	
Contact Information	
Introduction and Policy Context	3
Bill Requirements and Impact	4
State and Federal Law	5
Evaluation of Mandated Health Benefit Proposal	5
Scientific and Medical Analysis	6
Public Health, Economic, and Fiscal Impacts	7
Current Utilization	9
Current Health Insurance Coverage	10
Impact on Insurance Benefits	11
Impact on Health Insurance Premiums	12
Public Comments Summary	12
ACA Benefit Mandate Impact and Analysis	13
Appendix	14

# **Introduction and Policy Context**

Pursuant to Minn. Stat. § 62J.26, subd. 3, the Minnesota Department of Commerce has been requested to perform an evaluation of Senate File 97. The purpose of the evaluation is to provide the legislature with a detailed analysis of the potential impacts of any mandated health benefit proposal. Senate File 97 was first introduced during the 2021-2022 legislative session and meets the definition of a mandated health benefit proposal under Minn. Stat. §62J.26., which indicates the following criteria:

A mandated health benefit proposal" or "proposal" means a proposal that would statutorily require a health plan company to do the following:

- (i) provide coverage or increase the amount of coverage for the treatment of a particular disease, condition, or other health care need;
- (ii) provide coverage or increase the amount of coverage of a particular type of health care treatment or service or of equipment, supplies, or drugs used in connection with a health care treatment or service;
- (iii) provide coverage for care delivered by a specific type of provider;
- (iv) require a particular benefit design or impose conditions on cost-sharing for:
- (A) the treatment of a particular disease, condition, or other health care need;
- (B) a particular type of health care treatment or service; or
- (C) the provision of medical equipment, supplies, or a prescription drug used in connection with treating a particular disease, condition, or other health care need; or
- (v) impose limits or conditions on a contract between a health plan company and a health care provider.
- "Mandated health benefit proposal" does not include health benefit proposals amending the scope of practice of a licensed health care professional.

Commerce is required to consult with the Departments of Health (MDH) and Management and Budget (MMB). Per statute, evaluations must focus on the following areas:

- Scientific and medical information regarding the proposal, including potential for benefit and harm
- Overall public health and economic impact
- Background on the extent to which services/items in the proposal are utilized by the population
- Information on the extent to which service/items in the proposal are already covered by health plans, and to which health plans the proposal would impact

- Cost considerations regarding the potential of the proposal to increase cost of care, as well as its potential to increase enrollee premiums in impacted health plans
- The cost to the State if the proposal is determined to be a mandated benefit under the Affordable Care Act (ACA)

## **Bill Requirements and Impact**

Senate File 97 requires regulated health plans in Minnesota to provide coverage for lymphedema treatment including 1) complex decongestive therapy, 2) outpatient self-management training and education during treatment, 3) compression treatment items. The Department assumes that there are no additional services or items expected to be covered by health plans for lymphedema treatment other than what is explicitly indicated in the language of the bill.

The full text of the bill is available in the Appendix of this document.

Requirements under SF97 would apply to all fully insured health plans regulated in Minnesota, which is approximately 20 percent of the overall covered market. The bill also applies to the State Employee Group Insurance Program (SEGIP). The requirements would not apply to self-insured employer plans, grandfathered plans, and public plans such as medical assistance and MinnesotaCare, and Medicare and Medicare supplemental policies. Figure 1 shows a breakdown of health insurance coverage in Minnesota by type (including uninsured).

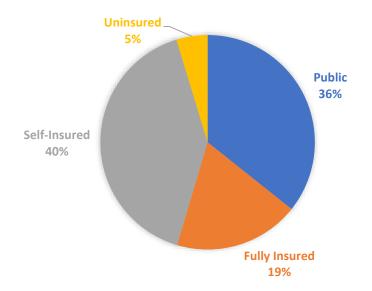


Figure 1. Minnesota Insurance Coverage 2019

Source: Minnesota Department of Health. Chartbook Section 2. Trends and Variations in Health Insurance Coverage. Accessed at https://www.health.state.mn.us/data/economics/chartbook/docs/section2.pdf.

#### State and Federal Law

This evaluation considers the interaction between state and federal law—specifically as it pertains to the potential for the bill to be considered a state benefit mandate understood under Section 1311(d)(3) of the ACA (45 CFR § 155.170), which indicates that new mandates related to specific care, treatment, or services not offered under the general essential health benefits (EHB) package in the state prior to January 1, 2012 must have associated costs defrayed by the state. The state is only required to defray associated costs that would not have been provided by the health carrier without the requirements of the new mandate.

Per the EHB final rule<sup>1</sup>, costs associated with benefit mandates passed prior to or on December 31, 2011 do not need to be defrayed by the state.

# **Evaluation of Mandated Health Benefit Proposal**

The Department's evaluation of SF97 includes the following elements to meet criteria under Minn. Stat. §62J.26:

- Solicitation of feedback from potential stakeholders by publishing a request for information notice in the State Register
- Scoping review of available literature in existing databases
- Hybrid umbrella/systematic literature review of available resources
- Consultation with the Department of Health and Minnesota Management and Budget (MMB)
- Solicitation of comments from health plans, including request for actuarial analysis
- Internal actuarial analysis

Additional information regarding the Department's literature review and search criteria may be found in the Appendix.

In the Department's evaluation, the requirements of SF97 do not constitute a benefit mandate requiring state defrayal of associated costs, as understood under the ACA.<sup>2</sup> The bill does not establish any new benefit related to specific care, treatment or services not already covered by the benchmark plan, and thus does not constitute a new benefit mandate requiring defrayal by the state under federal regulations.

The Department's conclusion is consistent with previous analyses of potential state mandated benefits in previous legislative sessions. While a mandated health benefit proposal may contain language that is related to care and treatment of a specific health condition, it is necessary to consider if the mandated health benefit proposal contains new benefits not already covered under state's benchmark plan. If the services/items are not

<sup>&</sup>lt;sup>1</sup> 45 CFR Parts 147, 155, and 156 Patient Protection and Affordable Care Act; Standards Related to Essential Health Benefits, Actuarial Value, and Accreditation; Final Rule. Accessed at https://www.govinfo.gov/content/pkg/FR-2013-02-25/pdf/2013-04084.pdf.

<sup>&</sup>lt;sup>2</sup> 45 CFR § 155.70. Additional required benefits. Accessed at: https://www.law.cornell.edu/cfr/text/45/155.170

currently covered or have not been covered by the benchmark plan previously, then there is reason to conclude that the proposal is a new state mandated benefit, requiring defrayal of cost from the state.

The Department illustrates this conclusion with previous analyses of two specific pieces of proposed legislation during the 2019 Minnesota legislative session—specifically Senate File 1038 and House File 306.

Senate File 1038 established requirements for health plans to provide coverage to enrollees for breast tomosynthesis (3-D mammography services) in a manner consistent with other preventive care services under the ACA. The ACA generally identifies preventive care services as those that have an "A" or "B" rating by the United States Preventive Services Task Force (USPSTF) or have been evaluated and recommended by the Health Resources Services Administration (HRSA). Neither entity has listed breast tomosynthesis as a recommended preventive screening service.

The services listed in SF1038 had been generally covered under most health plans, including the benchmark plan, but at a non-preventive level. The passage of SF1038 did not constitute a new state mandated benefit in the Department's analysis<sup>3</sup>, as the bill's requirements only altered the cost-sharing arrangement of an existing benefit under regulated plans, rather than adding an entirely new and previously uncovered benefit.

House File 306 established coverage requirements for health plans to provide treatment related to pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS) and pediatric acute-onset neuropsychiatric syndrome (PANS). The bill established coverage requirements for outpatient mental health services, prescription drugs, and intravenous immunoglobulin services. While some health insurers covered certain prescription drugs, services or therapies in conformity with Minnesota's benchmark plan, Commerce determined the proposal was a new state-mandated benefit as defined under the ACA because it imposed new coverage requirements on health insurers.

The provisions of SF97 do not mandate benefits that have not previously been, or are not currently, covered under the Minnesota benchmark plan. The rationale for SF97 not being considered a new state mandated benefit under the ACA is based entirely on how coverage is already provided by the benchmark and other ACA-compliant health plans in the state, and is consistent with previous Department analysis.

### **Scientific and Medical Analysis**

Scientific and Medical Background

Lymphedema refers to localized swelling in the body caused by accumulation of lymphatic fluid. Lymphedema may be primary or secondary. Primary lymphedema is characterized by an inherited or congenital malformation of the lymphatic system. Secondary lymphedema occurs as a result of injury to the lymphatic system, generally caused by cancer or treatment of cancer.

<sup>&</sup>lt;sup>3</sup> https://mn.gov/mmbapps/fnsearchlbo/?number=SF1038&year=2019

Most recent figures estimate 1 in 100,000 individuals in the U.S. have primary lymphedema and 10 in 100,000 have secondary lymphedema.

Treatment for lymphedema can include the following:

- Decongestive lymphedema therapy (DLT)
- Manual lymph drainage (MLD)
- Compression
- Skincare (dealing with secondary complications)
- Exercise
- Drug therapy (secondary complications only)
- Vascularized Lymph Node Transfer (VLNT)
- Lymphaticovenous Anastomoses (LVA)
- Suction-Assisted Protein Lipectomy (SAPL)

Compression helps with necessary drainage of lymphatic fluids that occur because of lymphedema. VLNT and LVA are microsurgical procedures that can improve an individual's ability to drain lymphatic fluid and eliminate the need for compression garments. Most upstream treatment efforts are patient-focused, addressing exercise and certain behavioral modifications that may help mitigate lymphedema symptoms. Surgical intervention for lymphedema is not generally viewed as a first-line tool in treatment.

Requirements under SF97 specifically indicate coverage must be provided for decongestive therapy treatment (which includes physical therapy exercises), patient education (including exercises and skincare routines) and compression therapies. None of the other interventions above are explicitly identified in the bill, however.

#### Harm and Benefit Analysis

Overall, the potential for harm or benefit resulting from the passage of SF97 should be low. The bill addresses the most accepted modalities used in treatment of lymphedema; it does not require coverage of a new treatment or service for which additional scientific or medical analysis is necessarily required. None of the treatment requirements listed under SF97 are new, as health insurers already cover compression garments, outpatient services, and patient education. If passed, SF97 would likely be beneficial for the impacted population.

#### **Public Health, Economic, and Fiscal Impacts**

For the purposes of this section, the following definitions apply:

**Public Health**: The science and practice of protecting and improving the health and wellbeing of people and their communities. The field of public health includes many disciplines, including medicine, public policy, biology, sociology, psychology and behavioral sciences, and economics and business.

**Economic Impact:** The general financial impact of a drug, service, or item on the population prescribing or utilizing a particular drug, service or item for a particular health condition.

**Fiscal Impact:** The quantifiable dollar amount associated with the implementation of the mandated health benefit proposal. The areas of potential fiscal impact that the Department reviews for are the cost of defrayal of benefit mandates as understood under the ACA, the cost to SEGIP, and the cost to other state public programs. The fiscal impact is expressed in number of dollars required for the state to implement a proposal.

The impact of SF97 on public health generally, as well as its overall economic and fiscal impact, are contingent on understanding the prevalence of lymphedema and the projected utilization of services to treat the condition. Commerce did not receive public comment regarding this bill that provided additional information on potential public health impact. The Department did, however, receive comments regarding potential economic and fiscal impact of the bill.

Commerce used national data regarding the prevalence, incidence, and treatment of lymphedema. Additionally, the Department relied upon previous fiscal analysis from SEGIP. SEGIP provides health, dental, life and other benefits to eligible State employees and their dependents.

#### Public Health

The public health impact for SF97 would be a net positive, as increased coverage for medical care generally is associated with increased utilization.<sup>4</sup> There are many variables to consider regarding individual behavior and subsequent utilization of health care services but having assured coverage is an extremely important variable to consider. The specific services and items identified in SF97 for lymphedema treatment are not new and are covered under the state's benchmark plan. Nonetheless, by specifically adding these services into statute, consumers and patients could be more reasonably assured that they will receive coverage for services.

#### Economic

Senate File 97 does not include language that suggests additional coverage would be required beyond what services and items are already explicitly listed. The listed interventions appear to be commonly used in treatment of lymphedema and are expected to be generally used by individuals with either primary or secondary lymphedema. While an increase in utilization is to be expected should SF97 become law, it is unlikely that there would be a such a significant uptake that would impact cost of the care being provided.

Increased coverage (or in this case, affirmation of coverage) can lead to increased utilization by the population impacted. Although lymphedema is a condition that impacts a small segment of the population, there may still be a marginally noticeable increase in utilization if SF97 were passed. The result of an increase in utilization may have an impact on raising prices of associated services. Massachusetts, North Carolina, and Virginia are three

<sup>&</sup>lt;sup>4</sup> Baicker K, Congdon WJ, Mullainathan S. Health insurance coverage and take-up: Lessons from behavioral economics. *Milbank Quarterly*. 2012;90(1):107–134. doi: 10.1111/j.1468-0009.2011.00656.x.

states that have passed similar legislation regarding coverage for lymphedema treatment. All states have generally affirmed a negligible increase in cost of services. <sup>567</sup>

#### Fiscal

Commerce's analysis concludes that the State will not need to defray associated costs with implementing the law, as it is not considered to be an ACA benefit mandate. According to MMB, the bill does not have a fiscal impact on SEGIP. Because the bill does not apply to other state public programs, there is no fiscal impact anticipated in those areas either. Thus, overall, the bill will have no fiscal impact on the State.

#### **Current Utilization**

Commerce consulted with both MMB and the Department of Health (MDH) in order to determine current utilization of services and items used to treat lymphedema. Commerce also referenced obtained information from its consultations against national trends in utilization for lymphedema treatment.

Treatment of lymphedema involves a multidisciplinary approach, including office visits, physical therapy, and use of durable medical equipment.

Locally, estimated prevalence, utilization of services, and paid prices are based on available data from the Minnesota All Payer Claims Database (APCD). APCD data comes from commercial health insurance plans that report to the state. Commercial health insurance data in the APCD comes from fully insured plans primarily (including individual and small group plans). Commercial plans that are self-funded and/or governed by the Employee Retirement Income Security Act (ERISA) are not required to report data to the MN APCD, but some plans do report voluntarily.

Data from 2019 indicate that less than one percent of Minnesotans covered by commercial insurance plans that report data to the MN APCD had a diagnosis of either primary or secondary lymphedema. Specifically, 5 per 100,000 had a diagnosis of primary lymphedema, and 192 per 100,000 had a diagnosis of secondary lymphedema. Specific to the individual or small group market, 3 per 100,000 had a diagnosis of primary

<sup>&</sup>lt;sup>5</sup> https://rga.lis.virginia.gov/Published/2003/RD15/PDF

<sup>&</sup>lt;sup>6</sup> https://www.ncleg.net/Sessions/2009/FiscalNotes/House/PDF/HAH0535v1n1.pdf

<sup>&</sup>lt;sup>7</sup> https://healtheconomicsreview.biomedcentral.com/track/pdf/10.1186/s13561-016-0117-3.pdf

lymphedema, and 164 per 100,000 had a diagnosis of secondary lymphedema. The data from the APCD is not significantly dissimilar to what one would expect for prevalence on a national level.

According to APCD data and analysis by MDH, approximately 30% of Minnesotans with lymphedema (primary or secondary) had at least one paid health care claim in 2019 for either an application of a compression device in or related durable medical equipment (DME). There were no claims for education during this time period.

Specifically, 822 (28.6%) of 2,873 Minnesotans (with commercial coverage in the MN APCD) with lymphedema had at least one paid claim for either application of a treatment or DME. Similarly, 212 (29.9%) of 708 Minnesotans (with small/individual market coverage in the MN APCD) with lymphedema had at least one paid claim for either application of a treatment or DME. The APCD data suggest low levels of uptake for one of the primary interventions associated with lymphedema.

Table 1. Claims and Paid Amounts for Commercially Insured Minnesotans with Lymphedema, 2019.

Type of Service	Number of Insured with Lymphedema AND $\geq$ 1 Claim	Total Claims	Total Patient Paid	Total Plan Paid	Total Paid (plan + patient)
Application of Compression System	78	391	\$7,773	\$39,804	\$47,576
Durable Medical Equipment (DME)	779	6,607	\$173,377	\$1,193,773	\$1,367,151
Education and Training	0	0	N/A	N/A	N/A
TOTAL	822	6,998	\$181,150	\$1,233,577	\$1,414,727

Source: Health Economics Program (MDH) analysis of data in the Minnesota All Payer Claims Database (MN APCD).

### **Current Health Insurance Coverage**

Health plans offering EHBs must provide coverage substantially equal to that of the state's benchmark plan. The HealthPartners Open Access Choice Small Employer health plan from 2017 remains Minnesota's benchmark plan. This plan contains no exclusions for any services related to lymphedema treatment identified under Senate File 97. Additionally, HealthPartners has a related medical coverage policy (applicable to the benchmark plan) confirming that coverage is provided for compression support garments, which is a significant component of

SF97.8 Other treatment under SF97, including patient education, is also a covered service explicitly listed in the benchmark plan, and also with an associated coverage policy.9

Further, comments received by Commerce on this proposed health benefit mandate confirmed that the services required under SF97 are already covered by health plans—supporting the Department's understanding regarding both the overall fiscal and economic impact.

There are lymphedema treatments that may be considered experimental or investigational by most health plans, but SF97 does not mandate coverage for any such service.

Based on the benchmark plan coverage of the services and items listed in SF97, it is reasonable to conclude that all carriers provide a similar level of coverage or do not outright exclude coverage for established lymphedema treatment services.

Senate File 97 does not include language that prohibits health plans from utilization management techniques, which should be taken into consideration regarding analysis current health plan coverage. There is no evidence in the benchmark plan policy or associated medical coverage criteria that utilization management would be employed for any of the services or items specified in SF97. The lack of utilization management requirements for the specific items in the bill suggest that there are few if any barriers to coverage currently.

## **Impact on Insurance Benefits**

Senate File 97 applies coverage requirements to all health plans, including individual health plans, group health plans, health carriers, health maintenance organizations (HMOs) and health service plan corporations defined under Minn. Stat. §62A.011. The requirements of SF97 also apply to health plan companies defined under Minn. Stat. §62Q.01.

Requirements of SF97 do not apply to self-insured employer plans, Medicaid, MinnesotaCare, Medicare, or Medicare supplemental policies.

Given that the state benchmark plan already provides coverage for the services and items listed in SF97, it is unlikely that there would be any notable change to existing insurance benefits. SF97 codifies specific services and items as required coverage for the applicable plans listed above, but it does not include any language indicating alteration to cost-sharing for enrollees. Given that the benefits proposed already exist under Minnesota health plans, and that there are no requirements in the bill to alter or reduce enrollee cost-sharing

<sup>&</sup>lt;sup>8</sup> Compression support garments. HealthPartners Medical Coverage Criteria. Accessed at https://www.healthpartners.com/public/coverage-criteria/policy.html?contentid=AENTRY\_045858

<sup>&</sup>lt;sup>9</sup> Health Education. HealthPartners Medical Coverage Criteria. Accessed at: https://www.healthpartners.com/public/coverage-criteria/policy.html?contentid=AENTRY 045940

for these services/items, it is unlikely that there will be any notable change in health insurance benefits under any regulated health plan.

The Department assumes that health plans may need to alter language in their policies explicitly affirming coverage for the services listed in SF97, should the bill be signed into law.

Overall, if SF97 were law, it is unlikely that there would be a significant impact on overall health insurance benefits. Benefits offered by health plans would not need to change as a result of the bill's passage, and it is likely that there would only be minor changes to filed health plan policies incorporating specific coverage requirements outlined under SF97. Additional cost information, including impact on health insurance premiums follows this section.

## **Impact on Health Insurance Premiums**

Commerce performed an actuarial analysis regarding SF97 utilizing a number of sources, including national data regarding prevalence of primary and secondary lymphedema, Medicare fee schedule information related to the potential codes associated with SF97's treatment requirements, APCD information, and the analysis of local health plan actuaries. A full list of codes used in the analysis are located in the Appendix for reference.

## **Public Comments Summary**

Commerce placed a request for information in the November 22, 2021 publication of the State Register, soliciting comments regarding all mandated health benefit proposals, including SF97. Commerce received feedback from health plans, generally. No specific comment from any other stakeholder or advocacy group was submitted for this bill.

Comments received from health plans affirmed the Department's analysis regarding the overall economic impact of SF97 and the potential for it to increase enrollee premiums by a very small degree. According to their comments, there is low prevalence associated with the condition and it would be unlikely that SF97 would increase enrollee premiums in a substantial amount. Health plans also affirmed existing coverage of lymphedema treatment listed in the bill, supporting the Commerce's assessment that SF97 would not be considered a new state mandated benefit under the ACA. potentially be a very small increase to health insurance premiums as a result of SF97 becoming law.

It is useful to include a low- and high-end estimation of potential increases to evaluate the potential impact on health insurance premiums. The estimated increase to premiums is based on data from individual and group plans that are regulated by the state. but the underlying concepts for determining these increases can be feasibly applied to other markets (on a different scale).

Using the data sources mentioned above, Commerce concludes that the passage of SF97 may potentially result in a \$0.01 to \$0.09 increase of per member per month premium. This range estimate reflects an average cost per patient for the treatments listed in SF97, with consideration to patient cost and plan share cost. Additionally, the estimation considers an uptake in utilization as a result of passage of the bill, ranging from 10 to 30 percent.

## **ACA Benefit Mandate Impact and Analysis**

The services required under SF97 are generally covered by the benchmark plan in Minnesota and therefore also by most other plans offering EHBs. The ACA requires states to defray the cost of benefit mandates passed after December 31, 2011. According to the ACA, a benefit mandate is one passed by the state that imposes requirements of health plans to cover new services or items related to specific care or treatment.

Under the ACA, a state may enact requirements unrelated to specific care, treatment, or services and not be responsible for defraying the cost, generally falling into the following:

- 1. *Provider Types.* Mandates that require a covered service to be covered by additional health care provider types.
- 2. *Cost-Sharing.* Mandates that require or change cost-sharing amounts for covered services, including deductibles, copayments, and coinsurance.
- 3. **Delivery Methods**. Mandates that require health carriers to cover new methods of delivering covered services (telehealth for example).
- 4. **Reimbursement Methods.** Mandates that require health carriers to reimburse health care providers for covered services provided in new ways.
- 5. **Dependent-Coverage.** Mandates that require health carriers to define dependents in a certain way or to cover dependents under specific circumstances.
- 6. ACA Conforming Coverage. Mandates required to comply with ACA requirements.

Although Senate File 97 applies to specific care and treatment, all items included in the bill are already covered by the state benchmark plan. As a result, Commerce concludes that this proposed health benefit mandate is not considered a state benefit mandate requiring defrayal of cost.

# **Appendix**

Bill Te	<u>xt</u>
1.1	A bill for an act
1.2	relating to health coverage; requiring coverage for lymphedema compression
1.3	treatment items; proposing coding for new law in Minnesota Statutes, chapter 62A.
1.4	BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:
1.5	Section 1. [62A.255] COVERAGE OF LYMPHEDEMA TREATMENT.
1.6	Subdivision 1.Scope of coverage. This section applies to all health plans that are sold,
1.7	issued, or renewed to a Minnesota resident.
1.8	Subd. 2.Required coverage. (a) Each health plan must provide coverage for lymphedema
1.9	treatment, including coverage for compression treatment items, complex decongestive
1.10	therapy, and outpatient self-management training and education during lymphedema treatment
1.11	if prescribed by a licensed health care professional. Lymphedema compression treatment
1.12	items include: (1) compression garments, stockings, and sleeves; (2) compression devices;
1.13	and (3) bandaging systems, components, and supplies that are primarily and customarily
1.14	used in the treatment of lymphedema.
1.15	(b) If applicable to the enrollee's health plan, a health carrier may require the prescribing
1.16	health care professional to be within the enrollee's health plan provider network if the
1.17	provider network meets network adequacy requirements under section 62K.10.
1.18	(c) A health plan must not apply any cost-sharing requirements, benefit limitations, or
1.19	service limitations for lymphedema treatment and compression treatment items that place
1.20	a greater financial burden on the enrollee or are more restrictive than cost-sharing
1.21	requirements or limitations applied by the health plan to other similar services or benefits.
2.1	EFFECTIVE DATE. This section is effective August 1, 2021, and applies to any health
2.2	plan issued, sold, or renewed on or after that date.

#### **Associated Codes**

#### Diagnosis (ICD-10) Code(s):

189.0 – Lymphedema, not elsewhere classified;

197.2 - Postmastectomy lymphedema syndrome;

197.89 - Other postprocedural complications and disorders of the circulatory system, not elsewhere classified

Q82.0 - Hereditary lymphedema

#### CPT Code(s):

29581 - Application of multi-layer venous wound compression system; below the knee;

29582 - Application of multi-layer compression system; thigh and leg, including ankle and foot;

29583 - Application of multi-layer compression system; upper arm and forearm;

29584 - Application of multi-layer compression system; upper arm, forearm, hand and fingers;

98960 through 98962 – Education and training for patient self-management by a qualified, nonphysician health care professional using a standardized curriculum, face-to-face with the patient

#### **HCPCS Code(s):**

A4490 through A4510 - Surgical stockings;

A6530 through A6549 – Gradient compression stockings;

A6448 through A6450 - Light compression bandage; A6451 - Moderate compression bandage;

A6452 - High compression bandage;

E0650 through E0652 - Pneumatic compressor;

E0655, E0660 through E0666 - Non-segmental pneumatic compression appliance

E0656, E0667 through E0670 – Segmental pneumatic compression appliance

E0671 through E0673 – Segmental gradient pressure pneumatic appliance

E0675 – Pneumatic compression device

E0676 - Intermittent limb compression device

#### NDC Code(s):

N/A

## **Description of Review**

The Department performed an umbrella review of available information related to lymphedema. An umbrella review is similar to a systematic literature review, but with a focus on reviewing relevant information or studies that are essentially other systematic reviews and/or meta-analyses. This approach allows for gathering of significant high-level, but pertinent information regarding the topic being researched.

The Department searched PubMed utilizing combinations of the terms "lymphedema," "primary lymphedema," "secondary lymphedema," "treatment," "standard of care," "experimental," "investigative," and "alternative treatment." The search limited these terms to peer-reviewed articles published in the last 20 years.

## **Bibliography**

Baicker K, Goldman D. Patient cost-sharing and healthcare spending growth. *The Journal of Economic Perspectives*. 2011;25(2):47–68. doi: 10.1257/jep.25.2.47.

Baicker K, Congdon WJ, Mullainathan S. Health insurance coverage and take-up: Lessons from behavioral economics. *Milbank Quarterly*. 2012;90(1):107–134. doi: 10.1111/j.1468-0009.2011.00656.x.

Chernew M, Gibson TB, Yu-Isenberg K, Sokol MC, Rosen AB, Fendrick AM. Effects of increased patient cost sharing on socioeconomic disparities in health care. *Journal of General Internal Medicine*. 2008;23(8):1131–1136. doi: 10.1007/s11606-008-0614-0.

Gupta N, Verhey EM, Torres-Guzman RA, Avila FR, Jorge Forte A, Rebecca AM, Teven CM. Outcomes of Lymphovenous Anastomosis for Upper Extremity Lymphedema: A Systematic Review. Plast Reconstr Surg Glob Open. 2021 Aug 25;9(8):e3770. doi: 10.1097/GOX.000000000003770. PMID: 34476159; PMCID: PMC8386908.

Gasteratos K, Morsi-Yeroyannis A, Vlachopoulos NC, Spyropoulou GA, Del Corral G, Chaiyasate K. Microsurgical techniques in the treatment of breast cancer- related lymphedema: a systematic review of efficacy and patient outcomes. Breast Cancer. 2021 Sep;28(5):1002-1015. doi: 10.1007/s12282-021-01274-5. Epub 2021 Jul 12. PMID: 34254232; PMCID: PMC8354929.

Brandão ML, Soares HPDS, Andrade MDA, Faria ALSC, Pires RS. Efficacy of complex decongestive therapy for lymphedema of the lower limbs: a systematic review. J Vasc Bras. 2020 May 29;19:e20190074. doi: 10.1590/1677-5449.190074. PMID: 34178058; PMCID: PMC8202203.

Jarvis NR, Torres RA, Avila FR, Forte AJ, Rebecca AM, Teven CM. Vascularized omental lymphatic transplant for upper extremity lymphedema: A systematic review. Cancer Rep (Hoboken). 2021 Aug;4(4):e1370. doi: 10.1002/cnr2.1370. Epub 2021 Apr 7. PMID: 33826249; PMCID: PMC8388172.

Sheikhi-Mobarakeh Z, Yarmohammadi H, Mokhatri-Hesari P, Fahimi S, Montazeri A, Heydarirad G. Herbs as old potential treatments for lymphedema management: A systematic review. Complement Ther Med. 2020 Dec;55:102615. doi: 10.1016/j.ctim.2020.102615. Epub 2020 Nov 9. PMID: 33221590.

Forte AJ, Boczar D, Kassis S, Huayllani MT, McLaughlin SA. Use of magnetic resonance imaging for evaluation of therapeutic response in breast cancer-related lymphedema: A systematic review. Arch Plast Surg. 2020 Jul;47(4):305-309. doi: 10.5999/aps.2020.00115. Epub 2020 Jul 15. PMID: 32718108; PMCID: PMC7398803.

Hartiala P, Suominen S, Suominen E, Kaartinen I, Kiiski J, Viitanen T, Alitalo K, Saarikko AM. Phase 1 Lymfactin Study: Short-term Safety of Combined Adenoviral VEGF-C and Lymph Node Transfer Treatment for Upper Extremity Lymphedema. J Plast Reconstr Aesthet Surg. 2020 Sep;73(9):1612-1621. doi: 10.1016/j.bjps.2020.05.009. Epub 2020 May 18. PMID: 32513642.

Ciudad P, Manrique OJ, Bustos SS, Agko M, Huang TC, Vizcarra L, Nuñez ML, Lo Torto F, Forte AJ. Single-stage VASER-assisted liposuction and lymphatico-venous anastomoses for the treatment of extremity lymphedema: a case series and systematic review of the literature. Gland Surg. 2020 Apr;9(2):545-557. doi: 10.21037/gs.2020.01.13. PMID: 32420290; PMCID: PMC7225499.

Forte AJ, Boczar D, Huayllani MT, Lu X, McLaughlin SA. Pharmacotherapy Agents in Lymphedema Treatment: A Systematic Review. Cureus. 2019 Dec 5;11(12):e6300. doi: 10.7759/cureus.6300. PMID: 31815082; PMCID: PMC6897350.

Forte AJ, Boczar D, Huayllani MT, McLaughlin SA, Bagaria S. Topical Approach to Delivering Targeted Therapies in Lymphedema Treatment: A Systematic Review. Cureus. 2019 Dec 1;11(12):e6269. doi: 10.7759/cureus.6269. PMID: 31815081; PMCID: PMC6886732.

Forte AJ, Cinotto G, Boczar D, Huayllani MT, McLaughlin SA. Omental Lymph Node Transfer for Lymphedema Patients: A Systematic Review. Cureus. 2019 Nov 25;11(11):e6227. doi: 10.7759/cureus.6227. PMID: 31807393; PMCID: PMC6881079.

Forte AJ, Boczar D, Huayllani MT, McLaughlin SA, Bagaria S. Use of Gene Transfer Vectors in Lymphedema Treatment: A Systematic Review. Cureus. 2019 Oct 10;11(10):e5887. doi: 10.7759/cureus.5887. PMID: 31772857; PMCID: PMC6837272.

Forte AJ, Huayllani MT, Boczar D, Ciudad P, McLaughlin SA. Lipoaspiration for the Treatment of Lower Limb Lymphedema: A Comprehensive Systematic Review. Cureus. 2019 Oct 15;11(10):e5913. doi: 10.7759/cureus.5913. PMID: 31754590; PMCID: PMC6827692.

Forte AJ, Huayllani MT, Boczar D, Ciudad P, Manrique O. Lipoaspiration and Lymph Node Transfer for Treatment of Breast Cancer-related Lymphedema: A Systematic Review. Cureus. 2019 Nov 8;11(11):e6096. doi: 10.7759/cureus.6096. PMID: 31723482; PMCID: PMC6844538.

Forte AJ, Boczar D, Huayllani MT, Lu X, McLaughlin SA. Sympathetic Nerve Block in Lymphedema Treatment: A Systematic Review. Cureus. 2019 Sep 19;11(9):e5700. doi: 10.7759/cureus.5700. PMID: 31720168; PMCID: PMC6823032.

Forte AJ, Boczar D, Huayllani MT, Bagaria S, McLaughlin SA. Use of Autologous Blood Components in Lymphedema Treatment: A Systematic Review. Cureus. 2019 Sep 12;11(9):e5638. doi: 10.7759/cureus.5638. PMID: 31700741; PMCID: PMC6822891.

Forte AJ, Boczar D, Huayllani MT, Cinotto GJ, McLaughlin S. Targeted Therapies in Surgical Treatment of Lymphedema: A Systematic Review. Cureus. 2019 Aug 16;11(8):e5397. doi: 10.7759/cureus.5397. PMID: 31431851; PMCID: PMC6697455.

Sleigh BC, Manna B. Lymphedema. [Updated 2021 Jun 4]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2021 Jan-. Available from: https://www.ncbi.nlm.nih.gov/books/NBK537239/

Wang C, Yang M, Fan Y, Pei X. Moxibustion as a Therapy for Breast Cancer-Related Lymphedema in Female Adults: A Preliminary Randomized Controlled Trial. Integr Cancer Ther. 2019 Jan-Dec;18:1534735419866919. doi: 10.1177/1534735419866919. PMID: 31422715; PMCID: PMC6700867.

Park MW, Lee SU, Kwon S, Seo KS. Comparison Between the Effectiveness of Complex Decongestive Therapy and Stellate Ganglion Block in Patients with Breast Cancer-Related Lymphedema: A Randomized Controlled Study. Pain Physician. 2019 May;22(3):255-263. PMID: 31151333.