



A Review of National Insurance Coverage of Post-bariatric Upper Body Lift

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Abstract

Introduction Recent years have seen an increased utilisation of upper body lift following massive weight loss. Although it is typically considered cosmetic, the recurrent skin conditions and decline in quality of life may warrant medical necessity. We evaluated current insurance coverage and characterised policy criteria for upper body lift in the post-bariatric population.

Methods We defined upper body lift as a combination of mastopexy and upper back excision (UBE) and conducted a cross-sectional analysis of US insurance policies. Insurance companies were selected based on their enrolment data and market share. A web-based search and telephone interviews were conducted to identify the policy. Criteria were abstracted from the publicly available policies that offered coverage.

Results Of the 56 insurance companies assessed, 5% would consider coverage of both procedures. Although fewer companies held established policies for UBE than mastopexy in the post-bariatric population (79% vs 96%, $p = 0.0081$), there were significantly more policies that offered pre-approval for UBE than for mastopexy (30% vs

5%, $p = 0.0017$). Three medical necessity criteria were common to both procedures: evidence of functional impairment, secondary skin conditions, and medical photographs.

Conclusion Policy criteria for coverage of mastopexy or UBE differ greatly between companies. Further evaluation of medical necessity criteria for post-bariatric mastopexy and UBE with the establishment of a standardised guideline is needed. We propose a comprehensive list of reporting recommendations to help optimise authorisation of upper body lift in the post-bariatric population, and we urge plastic surgeons to challenge current definition of “cosmetic” by insurance companies.

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Keywords Body contouring · Bariatric · Insurance coverage · Mastopexy · Public policy

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Introduction

The journey of a morbidly obese patient starts with bariatric surgery and usually ends with plastic surgery that addresses the redundant skin and laxity. Indeed, post-bariatric body contouring has been associated with improved quality of life and career progression [1]. However, there is a large disparity in the numbers that desire the body contouring procedures and those who eventually receive them [2, 3]. In 2017 alone, 228,000 patients underwent bariatric surgery in the USA, and this number is growing each year [4]. Yet less than a quarter of that number received a body

contouring procedure after massive weight loss [5]. Even when the delay from bariatric surgery to contouring procedure is taken into account, the number of body contouring procedures falls far behind that of bariatric surgery. Unpredictable coverage of body contouring procedures by insurance companies has been implicated as a cause for this gap [2, 3, 6, 7].

Breast contouring, with or without concomitant upper back lift, is commonly undertaken following massive weight loss [1, 7–9]. These combined procedures can be performed concurrently or in a staged fashion and are often termed “upper back lift” [10]. Recent years have seen an increased utilisation of both procedures [11]. Dependent on the amount of weight loss, patients may be candidates for reduction mammoplasty versus mastopexy if there is no reduction in size but excess hanging tissue or ptosis [12]. This is not a gender-specific issue and can also occur in men [3]. Although mastopexy and upper back excision would typically be considered cosmetic procedures [12], medical necessity may be warranted in cases of functional impairment and recurrent skin conditions [3, 7]. Indeed, chest contouring after massive weight loss has been shown to improve quality of life [3]. However, insurance coverage criteria are often cloaked in uncertainty, and currently, the literature is void on insurance coverage for upper body lift in the post-bariatric population.

This study assesses insurance coverage of upper body lift in the post-bariatric population which we hypothesise would be low (< 50%). Additionally, we hypothesise that mastopexy would be covered more often than upper back excision. This study also aims to evaluate variation in medical necessity criteria needed for pre-authorisation of mastopexy and upper back excision.

Methods

Insurance policies for coverage of mastopexy and upper back excision in the post-bariatric setting were collected from US third-party payers in January 2019. To select the largest and most commonly used insurance companies, the providers were selected based on individual state enrolment data [13] and company market share, as reported by the National Association of Insurance Commissioners in 2017 [14]. The top three insurers from each state were cross-referenced with market share. Thus, 56 insurance companies were included representing 80% of the market share.

The primary outcome was coverage of mastopexy and upper back excision. This was assessed quantitatively through (i) presence of a policy and (ii) outcome of the policy. A web-based search identified the policies on the corresponding company's website. If a policy was not

located online, we communicated with the individual company directly through a phone call to confirm a lack of established policy for post-bariatric mastopexy (CPT code 19316) and/or upper back excision (CPT code 15839) surgery. From the insurance policy, we recorded whether the procedure was covered. This was categorised into three possible outcomes: never covered, case-by-case basis or covered with established criteria. Case-by-case basis was defined as companies who had established policies for coverage but did not have standardised criteria and would determine coverage only with specific patient details.

The secondary outcomes were frequency of different policy criteria and reasons for denial. Following review to determine policy coverage, policies that offered coverage with established medical necessity criteria were evaluated. Criteria were abstracted, and we assessed their frequency within policies for each procedure. To better characterise coverage patterns, insurance companies were asked to provide reasons for denial of coverage for mastopexy or upper back excision. Additionally, policies that denied coverage of post-bariatric mastopexy listed settings in which mastopexy would be covered (of which massive weight loss was not included), with all other conditions deemed as not medical necessary. Whereas policies that did not cover upper back excision stated that there was no situation in which a patient would qualify for coverage of the procedure, i.e., upper back excision was never covered.

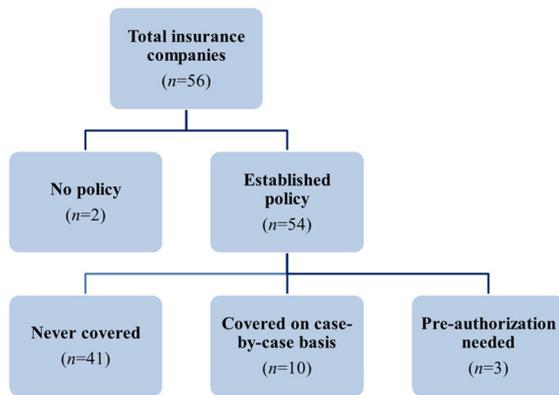
Data were compiled and analysed in Microsoft Excel (Microsoft Corporation, Redmond, Washington, USA). Fisher's exact test was used to calculate significance in differences between categorical data. Statistical significance was defined as $p \leq 0.05$.

Results

Mastopexy

Fifty-six insurance companies were evaluated for coverage of mastopexy in a post-bariatric setting. Although the majority of insurers held an established policy (96%, $n = 54$), almost three quarters of the companies did not cover the procedure for a massive weight loss patient in any circumstance (73%, $n = 41$) (Fig. 1). There were two reasons for denial of coverage of mastopexy in post-bariatric patients: it was deemed “not medically necessary” and “cosmetic”. The third-party payers who would never cover mastopexy in the setting of massive weight loss were evaluated to identify situations in which mastopexy would be covered (Table 1). Coverage was provided by all companies if mastopexy was related to breast cancer reconstruction.

Only three companies (5%, 3/54) offered policies with generalised pre-authorisation criteria for mastopexy in a



Never Covered		Case-by-case basis	Pre-authorization
Aetna	Independence Health	BCBS CA	Excellus BCBS
AmeriHealth	Kaiser Permanente	BCBS KS	Forward Health
Anthem	Medica Grp	BCBS of RI	Highmark
Arkansas BCBS	Medicare	Carefirst	
Avmed	Meridian	Caresource	
BCBS KC	Moda Health	Fidelis	
BCBS NC	Molina	GEHA	
BCBS of MA	Neighborhood Health Plan	Healthfirst Inc	
BCBS Regence	Premiera Blue Cross	Johns Hopkins Healthcare	
BCBS SC	Priority Health	Medicaid	
BlueCross Network of MI	Ticare		
Coventry	Tufts Health Plan		
Emblem	Ucare Grp		
Geisinger	Unicare		
Guidewell	United Healthcare		
Harvard Pilgrim	UPMC Health System		
Healthcare Service Corp	Wellcare		
Health Net	Wellmark Group		
HealthPartners Grp	Wellsense		
Horizon BCBS NJ	West Virginia Family Health		
Humana			

Fig. 1 Insurance coverage of mastopexy for post-bariatric patients

Table 1 Medical conditions in which mastopexy would be covered for the insurers who denied coverage in the setting of massive weight loss

Reason for coverage	Number of companies (n = 51)
Breast cancer reconstruction	51 (100%)
Trauma	13 (25%)
Congenital breast disease	13 (25%)
Infection	1 (2%)

post-bariatric patient. Only four criteria were identified (Fig. 2). Evidence of functional impairment was the only criterion uniformly required by third-party payers. This was followed by medical photographs of the breasts (66%), whereas evidence of secondary skin conditions and psychiatric evaluation were the least popular prerequisites (33% and 33%, respectively).

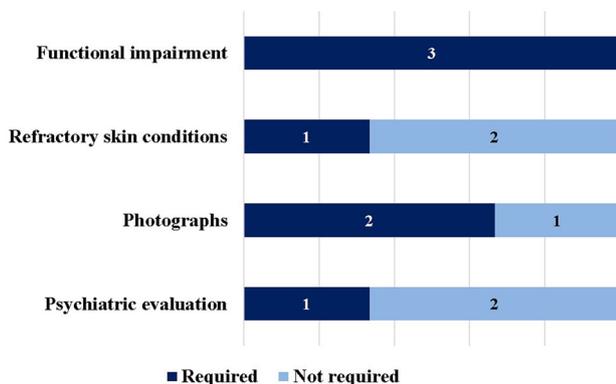


Fig. 2 Pre-authorization criteria in insurance policies for coverage of mastopexy for post-bariatric patients

Upper Back Excision

Of the 56 insurance companies evaluated, 12 did not have established policies on coverage of upper back excision. More than half of the remaining companies did not cover upper back excision in any situation, whereas 16% (7/44) provided coverage on a case-by-case basis and 30% (13/44) covered the procedure pending pre-authorization (Fig. 3). Insurers were asked to provide reasons for denial of coverage of upper back excision, the most common of which was “upper back excision is considered a cosmetic procedure” (Table 2).

Policies from the 13 companies with generalised requirements for pre-authorization were reviewed and five criteria were identified (Fig. 4). The most frequent criteria among the policies were evidence of impaired function (77%) and secondary skin conditions (77%). For the latter, almost half of the insurers (46%, n = 6) stated that the evidence of failed medical treatments must be included. Three months was the most commonly described duration for refractory medical therapy (15%, n = 2), and one company detailed the number of failed conservative treatments (three). Medical photographs of the rash were requested by 15% of companies (2/13). Almost two-thirds of insurers required evidence of a stable body weight of which six months was the consensus (46%). More than half of the companies (54%) required a period of 12–18 months following bariatric surgery before the patient was eligible for upper back excision. The least prevalent criterion was requirement of a minimum weight loss (8%, n = 1).

Upper Body Lift

Although fewer companies held established policies for upper back excision than mastopexy in the post-bariatric population (79% vs 96% (p = 0.0081), a significantly higher proportion of policies offered affirmative coverage

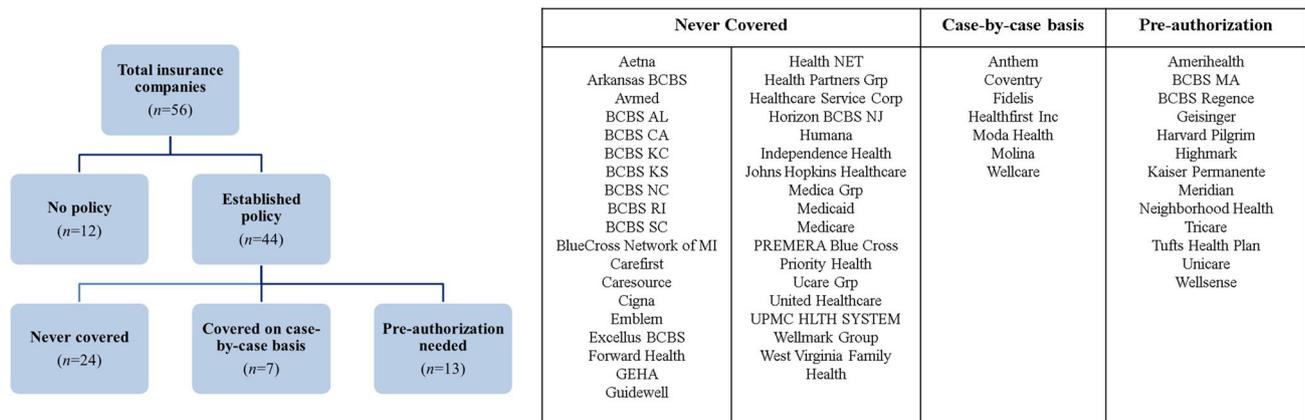


Fig. 3 Insurance coverage of upper back excision for post-bariatric patients

Table 2 Reasons for denial of upper back excision by insurance companies with policy

Reason for denial	Number of companies (n = 24)
Upper back excision is considered a cosmetic procedure	19 (79%)
Redundant skin is an expected outcome of bariatric surgery	1 (4%)
Scientific evidence of efficacy not established	1 (4%)
No explanation provided	3 (13%)

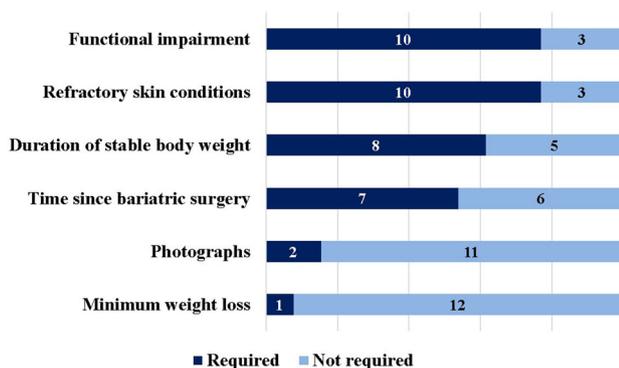


Fig. 4 Pre-authorization criteria in insurance policies for coverage of upper back excision for post-bariatric patients

for upper back excision than for mastopexy (45% vs 24%, $p = 0.0325$), and this difference remained significant when comparing proportion of insurers offering pre-approval criteria (30% vs 5%, $p = 0.0017$). Of the 56 companies reviewed, only three (5%) possessed favourable policies that could be combined to establish coverage of upper body lift. Healthfirst Inc. and Fidelis Care would consider coverage on a case-by-case, and Highmark Inc. provided pre-authorization criteria.

Only three medical necessity criteria were common to both procedures: evidence of impaired function, secondary skin conditions, and medical photographs. However, no significant difference was noted in the frequency of each of these prerequisites between mastopexy and upper back

excision policies ($p = 1.0000$, $p = 0.2143$, and $p = 1.0000$, respectively).

Based on the results of this study and recommendations by ASPS [12], we compiled a comprehensive list of recommended criteria to include when filing for coverage of upper body lift (Fig. 5).

Discussion

Redundant skin in the chest and upper back are sequelae of massive weight loss and can lead to recurrent skin infections, sores, impaired mobility, and reduced quality of life [3]. This can be corrected with surgical excision in the form of upper body lift. However, we report a very low proportion of insurance companies that possessed favourable policies on upper body lift procedures. We have also compiled a comprehensive list of reporting recommendations to help optimise authorisation of upper body lift in the post-bariatric population (Fig. 5). Additionally, there was vast inter-company variability in coverage criteria for mastopexy and upper back excision and only 5% of insurers would potentially cover both, and therefore cover an upper back lift, a far smaller proportion than hypothesised. More worrisome is the size of the patient population that has access to affirmative coverage of upper body lift. The three companies that provide coverage (Healthfirst Inc., Fidelis Care, and Highmark Inc.) account for an estimated 65,000 patients in the USA (0.004% of the

Reporting Recommendations for Upper Body Lift

HISTORY

- Consultation and supporting documentation from physician responsible for prior attempted treatment (NOT surgeon)
- Evidence that initial bariatric procedure was covered by insurer
- 12-18 months since bariatric surgery
- Psychiatric evaluation documenting the procedure's necessity based on significant impairment of the patient's social or personal adjustment
- Chronic or recurring associated symptoms¹ with documentation over three months
- Failed conservative treatments: three courses of antibiotics
- History of excess skin interfering with activities of daily living and/or mobility
- Significant weight loss (weight loss ≥ 100 lbs, or BMI ≤ 30 , or weight loss $\geq 40\%$ excess weight)
- Documentation of a stable weight for a minimum duration of six months

PHYSICAL EXAMINATION

- Current weight and BMI²
- Measurement of overhanging skin as graded by ASPS
- Pre-operative photos of breasts
- Pre-operative photos of skin conditions: anterior, posterior, lateral, and undersurface views
- Documentation of observed functional impairment if present

FURTHER INVESTIGATION

- Surgical assessment and plan including anticipated improvement in functional impairment as a direct result of surgical intervention
- Consultation and supporting documentation regarding skin complications
- Pathology reports and documentation, as appropriate

¹denotes chronic or recurring rash, skin necrosis, intertrigo, dermatitis, or candidiasis

²BMI ≤ 30 preferred

Fig. 5 Reporting recommendations for upper body lift (mastopexy and upper back excision)

insured US population) and only 1.77% of the overall market share [13, 14]. This echoes earlier theories that insurance coverage may impede access to body contouring [2, 3, 6, 7]. It has been shown that insurance coverage increases access to care and improves health outcomes

[15]. Thus, the impact of a policy shift would be tremendous in increasing access to care.

Although policies on mastopexy are more established in comparison with upper back excision, only a quarter of insurers would consider coverage in the setting of massive weight loss. This finding was contrary to our hypothesis.

This is surprising given that patients experience surplus skin more often in the breasts than the upper back. The restrictive coverage of post-bariatric mastopexy may stem from the role of third-party payers in resource allocation. Indeed, similar restrictions have been seen in insurance of gynaecomastia surgery [16]. It is possible that the acceptable indications for mastopexy were limited in response to a high number of requests and to avoid inappropriate claims.

Mastopexy was deemed medically necessary and covered for other causes such as cancer-related, trauma, or congenital deformity. Therefore, this difference in coverage may be indicative of the view of post-bariatric mastopexy as cosmetic. It is also seen with upper back excision wherein the majority of denials were due to the view of upper back excision as not “medically necessary”. The label of “not medical necessary” ignores the secondary skin conditions, such as intertrigo, infection, and cellulitis that results from increased skin folds. Panniculectomy is now widely accepted as a medical necessary procedure [17], and its primary indication is the presence of associated skin conditions [18, 19]. Yet the same standard has not been applied to upper body lift. Post-bariatric patients have excessive folds in axilla, back, and chest. Additionally, the breast can become deflated with significant ptosis. This leads to the development of dermatological problems, such as infections, rashes, and sores, in the chest and breast areas [3, 7]. Yet, this criterion was not universal to upper back excision policies and was requested by a single insurer for post-bariatric mastopexy. Furthermore, the policies lack common details seen in the panniculectomy data, such as duration of medical therapy and number of antibiotic courses. Moreover, the weight of this excess skin tissue and folds can also cause functional impairment in addition to back and shoulder pain. A detail that is seemingly ignored by insurers who seek to classify mastopexy and upper back excision as cosmetic. It is true that in some cases, the skin laxity is not enough to warrant medical necessity. However, there are patients who suffer from excess skin that results in severe dermatological problems and functional impairment. It is these patients that would benefit from skin excision and upper body lift but may not have the funds to cover these procedures. Therefore, any policy changes will need clear medical necessity criteria to delineate appropriate requests from unsuitable claims.

Insurers in the USA do not value improved psychological functioning as an endpoint for upper body lift procedures. Indeed, part of their definition of cosmetic includes any procedure to “treat an individual’s psychological symptoms or psychosocial complaint related to the individual’s appearance”. This is a contrast to other healthcare systems, such as the UK’s National Health Service, whose guidelines encompass psychosocial dysfunction into

criteria and in fact promote psychological assessment as a key component in determining medical necessity [20]. The benefit of incorporating psychological assessment into preoperative evaluation has also been supported by the literature [21, 22]. Patients have improved quality of life following upper back lift [3, 8] and psychological and physical well-being after breast reshaping [23]. The change in psychosocial functioning may also have unforeseen additional benefits. Body contouring following massive weight loss has been associated with career progression compared to weight-matched patients who have not had reconstructive surgery [1]. Thus, the current definition of cosmetic by insurance companies may be outdated. Given the increased utilisation of upper body lift procedures following massive weight loss [5, 11] and the small cohort of patients currently covered by a favourable policy, it is imperative that plastic surgeons establish a formal guideline for coverage of post-bariatric mastopexy and upper back excision, challenging the current definition of “cosmetic”.

This paper is limited due to its cross-sectional nature. The possible changes in company policies may mean that the recommendations made may not be applicable to all cases. The small number of policies that covered either procedure meant that there was insufficient power for data analysis. In selection of insurance companies, we omitted small insurance providers whose coverage status is unknown, so it is possible that our results have over- or underestimated coverage. Additionally, case-by-case basis was assumed to mean that coverage was provided. Therefore, coverage of the procedures may be overestimated. Another factor that may overestimate this study’s findings of affirmative coverage is the difference between what is written in a policy (or stated in a telephone interview) and actual coverage patterns. In reality, meeting pre-approval is not always synonymous with provision of coverage. Therefore, this study offers information on hypothetical coverage of upper body lift only. However, we believe these reporting recommendations will overcome the previous challenges in achieving reimbursement because it encompasses the most detailed and most popular requirements. Future studies may characterise the coverage patterns in reality and investigate the disparities in coverage by insurer.

Conclusion

We have provided a comprehensive list of reporting recommendations for insurance coverage criteria for upper body lift procedures. There is a great variation in criteria required by insurance companies for coverage of mastopexy and upper back excision. Further evaluation of

medical necessity criteria for post-bariatric upper body lift with the establishment of a standardised guideline is needed. We urge plastic surgeons to challenge current definition of “cosmetic” by insurance companies.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interests.

Ethical Approval This article does not contain any studies with human participants or animals performed by any of the authors.

Informed Consent For this type of article, informed consent is not required.

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