



Is body-contouring surgery a right for massive weight loss patients? A survey through the European Union National Health Systems

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Abstract

Background Obesity is pandemic nowadays, and hanging skin with consequent functional and psychological impairments is a common price to pay for massive weight loss. Plastic surgery in postbariatric patients represents a fundamental step to regain possession of a positive self-image. The authors aimed to investigate how EU countries' National Health System (NHS) behaves regarding reimbursements for body-contouring procedures after massive weight loss.

Methods A 1-item survey was sent to contacts found on the NHS official Web sites of 27 EU countries. The question focused on postbariatric surgery practice and investigated the accessibility criteria for NHS coverage concerning body-contouring procedures after massive weight loss.

Results Responses were collected between January 2020 and February 2020. Response rate was 65%, and access criteria to NHS coverage for postbariatric surgery presented great variation across EU countries. Only one country presented an NHS with no coverage for postbariatric surgeries.

Conclusions Despite the conspicuous variability found among the EU NHS, none of them admit reimbursement in cases of merely aesthetic procedures: postbariatric patients need to display functional or health impairments due to the extensive weight loss. The results of the current study describe a complex situation among EU countries, but a common lead towards postbariatric patients' care shows off. The ultimate goal of bariatric patient's healing should be full restoration of physical and psychological well-being. NHS of EU countries are facing this increasing request in various ways, and more studies should be performed in order to understand which is the best approach.

Level of evidence: Not ratable.

Keywords Body contouring · Postbariatric surgery · European Union · National Health System · Survey · Obesity

Introduction

Frenetic and unhealthy lifestyle led obesity to assume an epidemic trend nowadays [1]. Along with an increased risk of morbidity and mortality, obesity has a strong impact on personal and public health and economy [2]. Bariatric surgery, combined to metabolic and medical treatments, represents a validated therapeutic strategy. If compared to lifestyle change alone, it allows a more effective and stable weight loss, and therefore, it abates the associated comorbidities. An increasing number of patients are reported to undergo bariatric procedures [3]. However, the price to pay for massive decrease of weight is the risk of excessive quantities of hanging skin with poor skin tone, which causes

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functional, aesthetic, and psychological impairments [4]. Hanging skin folds may cause difficulties in carrying on personal hygiene, possibly leading to itching and dermatologic problems. Patients are often embarrassed by their new body image, and they usually complain about specific body parts such as upper arms, breast, abdomen, and thighs. All these problems may affect patients' social life, for a huge impact on relationships, and consequent decay of their psychological state [5].

The role of plastic surgery is to reduce or eliminate these postbariatric deformities and to restore patient's body appearance, thus optimizing functional results and promoting psychological and social reintegration. As long as plastic surgery plays an important role in the path of these patients as a fundamental step to regain possession of a positive self-image, we do believe that postbariatric surgeries cannot be considered as mere aesthetics procedures. We asked ourselves how EU countries' National Health System (NHS) behaves regarding reimbursements for body-contouring procedures after massive weight loss. As long as we know, this is the first study to investigate how each EU country faces the problem of body-contouring procedures in postbariatric patients.

Materials and methods

A 1-item questionnaire was distributed by e-mail to contacts found on the NHS official Web sites of 27 EU countries. The question focused on postbariatric surgery practices. In particular, it questioned the accessibility criteria for NHS coverage that patients must meet in order to undergo body-contouring procedures after massive weight loss:

“Dear Sir/Madame, I'm writing to you in order to have information about postbariatric plastic surgery procedures (such as abdominoplasty, arm and thigh lift, breast lift...) in your country. I would like to know if your NHS reimburses plastic surgery when it is practiced not only for aesthetic reasons but to return the integrity of physical appearance, and if it is available only to patients who underwent bariatric surgery or also to patients who had massive weight loss. I would appreciate it if you could send me more detailed information about that or at least if you can address me to an official site. Thank you for your help in this matter.”

Responses were collected between January 2020 and February 2020. In case of nonresponders, a maximum of five

attempts were made to reach them, using different official e-mail addresses.

Results

Response rate was 65% with 20 out of 27 countries that answered to our survey. Seven (35%) countries (Austria, Bulgaria, Czech Republic, Hungary, Malta, Portugal, Romania) did not reply even after five attempts to contact them. Responses gathered from the 20 respondents were analyzed and are listed in Table 1. Access criteria to NHS coverage for postbariatric surgery appear to vary greatly across EU countries. None of them admits reimbursement when the surgery aim is merely aesthetic. Patients need to display functional or health disadvantages due to the extensive weight loss.

Only one country (Latvia) clearly states in its response that postbariatric surgeries are not state paid services unlike other plastic surgery procedures such as breast reconstruction after mastectomy or surgical treatment of pressure ulcers.

Among the other 19 responders, the most common criterion for NHS coverage appears to be stable weight for a period ranging from 6 months in Italy and Denmark to 12 months in the Netherlands, Finland, and Slovenia. The time amount during which the weight must be stable is not precisely indicated by Belgium and Estonia. Moreover, stable BMI ranging from less than 27 to less than 35 is required by Estonia, Italy, Luxembourg, Slovenia, and the Netherlands. Alternatively, Belgium and Luxembourg demand for 20% of total body weight loss after surgery. Age restrictions to minimum 18 years old in applications are provided by Estonia and Luxembourg.

Only the Finnish and Slovenian NHS provide reimbursement also for massive weight loss after dieting and not only after bariatric surgery.

Reimbursement is often restricted to specific procedures, and abdominoplasty is the most commonly covered by NHS. Estonia's public health covers abdominoplasty only, with a precise criteria: patients have to present folded skin on the abdomen longer than 8 cm and presence of dermatitis, ulcers and or trophic disorders. Similar parameters are required in Luxembourg, where the abdominal apron has to cover the pelvic area completely in order to be eligible for panniculectomy.

Discussion

Excessive and redundant skin affects 89% of postbariatric patients. Loose skin in these patients is refractory to diet and sport activity, and the so-called natural look appears

Table 1 Responses from EU countries about NHS coverage for postbariatric body-contouring surgeries

Country	Response	Source
Austria	Patients must apply for plastic surgery after massive weight loss at their local healthcare agencies. Approval of medical necessity is obligatory for coverage of body-contouring surgery.	[Post-bariatric body-contouring surgery: fewer procedures, less demand, and lower costs.] Franz X. Felberbauer et al, Dec 2014
Belgium	Reimbursement is provided for excision of excess skin on a limb, causing functional discomfort, following documented and stabilized weight loss of at least 20%.	Arts Attaché inspecteur Secretaris werkgroep heekkunde TGR Secretaris werkgroep interne geneeskunde TGR P: 02 739 70 94 E: alain.vanhende@riziv-inami.fgov.be Rijksinstituut voor ziekte- en invaliditeitsverzekering Dienst Geneeskundige Verzorging Medische directie - Lokaal T 556 Tervurenlaan 211 1150 Brussel W: www.riziv.be
Croatia	Post bariatric procedures can be provided only if there is a medical reason indicated by a specialist, such as chronic inflammation of the skin and then an abdominoplasty should be done.	Croatian Health Insurance Fund – Head Office Margaretska 3, 10 000 Zagreb, Croatia P: +385 (0)1 6444 092 E: ncp-croatia@hzzo.hr W: www.hzzo.hr
Denmark	Eligibility for treatment is given by severe inconveniences because of excess tissue and meet the given criterion for surgery, e.g. the patients must have suffered from severe obese and have managed to be stable in weight for at least 6 months before treatment.	Ministry of Health, Holbergsgade 6 DK-1057 Copenhagen K P +45 7226 9000 F +45 7226 9001 E: sum@sum.dk W: sum.dk
Estonia	Estonian Health Insurance Fund is reimbursing plastic surgery of a folded skin of the abdomen. The patient must be older than 18, BMI must be less than 30, the weight of a person must be stable and the folded skin on abdomen must be longer than 8 cm and there must be a dermatitis, ulcers and/or trophic disorders on abdomen.	Estonia Health Insurance Fund Lastekodu 48, Tallinn 10144 P: +372 6208471 E: tiina.toming@haigekassa.ee
Finland	Tightening of excess abdominal skin, ptotic breasts or inner thigh skin as a result of extensive weight loss can be reimbursed if they cause functional and health disadvantages. Postbariatric plastic surgery procedures are treated when the weight of the patient has stabilized for minimum 1 year and the patient has established sufficient low weight/normal weight.	Suunnittelija / Planerare / International Affairs Counsellor Rajat ylittävän terveystieteiden yhteistyö / Kontaktpunkt för gränsöverskridande hälsovård / Contact Point for Cross-Border Health Care Kela / FPA / Social Insurance Institution of Finland Twitter: @rajayhteyspiste Facebook: @rajayhteyspiste E: yhteyspiste@kela.fi

Table 1 (continued)

Country	Response	Source
France	<p>This is a list of body-contouring procedures that can be reimbursed when the following criteria are respected:</p> <ul style="list-style-type: none"> - Abdominoplasty: when the folded skin partially covers the pubis. - Body-contouring procedures: brachioplasty , tight-lift, butt-lift or liposuction, can be reimbursed only when following a significant weight loss, more easily after bariatric surgery. <p>There is no general rule. The patient must apply for the treatment at his statutory health insurance company.</p>	<p>Point de contact national soins transfrontaliers, Rue de la Tour des Dames 75436 - PARIS CEDEX 09 P: 33 (0)1 45 26 80 60 E: jp.letertre@cleiss.fr</p> <p>Head of EU-PATIENTEN.DE National Contact Point for Cross-border healthcare P: +49 228 9530-800 F: +49 228 9530-801 E: info@eu-patienten.de W www.eu-patienten.de</p>
Greece	<p>The insured person may request the coverage of costs for plastic surgeries following bariatric procedures to the EOPYY-Medical Board (AYS). In case of approval, the respective costs are covered.</p>	<p>Hellenic National Contact Point for Cross-border Healthcare P.: +30 210-8110935; +30 210-8110936 F: +30 210-8110944 E: ncp_gr@eopyy.gov.gr W: eu-healthcare.eopyy.gov.gr</p>
Ireland	<p>Cosmetic Surgery is not covered through the Public Health System.</p>	<p>HSELive:Communications Division, St Brigids Complex, Kells Rd. Ardee, Co Louth.</p>
Italy	<p>NHS of Italy covers body-contouring procedures only in case of massive weight loss after bariatric surgery. There are not specific criteria and the eligibility of the patient is determined by the attending physician for each individual case. However, we usually ask the patient to have a BMI < 30 and a stable weight for at least 6 months before treatment. Furthermore, in Italy there are small differences from region to region regarding reimbursements for postbariatric surgery and regarding the use of breast implants in case of mastopexy.</p>	<p>The authors</p>
Latvia	<p>NHS of Latvia informs that plastic surgery procedures like abdominoplasty, arm and tight lift, breast lift, etc. for postbariatric plastic surgery patients are not state-paid services.</p>	<p>Ministry of Health of Latvia, Kitija Irbe Services Development Division senior expert P: +371 67 043 755 E: Kitija.Irbe@vmmvd.gov.lv W: www.vmmvd.gov.lv</p>
Lithuania	<p>Aesthetic plastic surgery procedures are not reimbursed in Lithuania.</p>	<p>Cesu Street 31 k-3, 6th entrance, Riga, LV-1012, Latvia Chief specialist of the Department of International Affairs The National Health Insurance Fund under the Ministry of Health P: (+370 5) 210 1591</p>

Table 1 (continued)

Country	Response	Source
Luxembourg	<p>The Health Insurance covers the procedures of abdominoplasty, 360° body lift and tigh lift only in the case of prior authorization from the Contrôle médical de la sécurité sociale (CMSS) and if the following conditions are respected:</p> <ul style="list-style-type: none"> → The patient is at least 18 years old. → BMI < 30 and a skin-fat excess causing functional discomfort which is the consequence of a documented and stabilized weight loss of at least 20%; or, the patient must have a documented and stabilized weight loss of at least 40% from baseline. → The patient must have functional or health disadvantages on the anterior abdominal wall region with abdominal apron covering the pubis. → In the event of weight loss following bariatric surgery, this must have been the subject of a prior authorization from the CMSS. → None of the following procedures have already been performed for the same region of the body under the Health Insurance coverage. 	<p>E: neringa.safranaviciene@vlk.lt W: www.vlk.lt Caisse Nationale de Santé Département Communication, 125, route d'Esch – L-2980 Luxembourg P: (+352) 2757 - 1 F: (+352) 2757 - 2758 W: www.cns.lu E: cns@secu.lu https://cns.public.lu/fr/legislations/textes-coordonnes/status-cns.html, pages 133 to 140. The legislation is only available in French.</p>
Netherlands	<p>Plastic surgery to improve body contour in patients with extreme weight loss is insurable performance under following criteria:</p> <ul style="list-style-type: none"> - Complete weight loss and stabilized weight (during at least 12 months) - BMI < 35; with a higher BMI only if this is medically necessary (functional impairment, herniation) - Good condition (protein, vitamins, iron) - Stopped smoking (at least 2 weeks before the procedure) <p>The decision to qualify the patient for the procedure is taken by the doctor, taking into account the health needs of the patient. The specialist who will perform the procedure decides about the procedure and manner of performing the service.</p>	<p>National Health Care Institute Web: https://english.zorginstituutnederland.nl E: vragenaanzin@zinl.nl https://www.zorginstituutnederland.nl/publicaties/standpunten/2009/11/16/plastische-chirurgie-ter-verbetering-van-de-lichaamscontour-zoals-de-lower-body-lift-bij-patienten-met-extrem-gewichtsverlies-is-een-te-verzekeren-prestatie. The legislation is only available in Dutch.</p>
Poland	<p>The decision to qualify the patient for the procedure is taken by the doctor, taking into account the health needs of the patient. The specialist who will perform the procedure decides about the procedure and manner of performing the service.</p>	<p>Wydział Koordynacji i Współpracy Międzynarodowej Departament Współpracy Międzynarodowej Centrała Narodowego Funduszu Zdrowia P: +48 22574 1975 F: +48 22572 6319 W: www.nfz.gov.pl E: ca17@nfz.gov.pl</p>
Slovenia	<p>Body-contouring surgeries after weight loss are covered by health insurance if they follow these criteria:</p> <ul style="list-style-type: none"> - Weight loss of at least 60 kg or BMI < 25–27 	<p>Consultant of Field Field for Arranging of Insurances and International Health Insurance Directorate</p>

Table 1 (continued)

Country	Response	Source
	<ul style="list-style-type: none"> - Maintaining a stable weight loss for at least 1 year - The effects of weight loss must be a functional and not just an aesthetic problem for the patient - In the case of severe functional problems (severe form of dermatitis, ulcers and/or trophic disorders continuous for at least 6 months) surgery is covered although the preceding criteria are not met. 	<p>Health Insurance Institute of Slovenia Miklošičeva cesta 24, 1507 Ljubljana, Slovenia P: +386 1 30 77 229 F: +386 1 43 13 245 E: tanja.nose@zzzs.si W: www.zzzs.si</p>
Spain	<p>It is up to the treating physician to individually assess the clinical indication to prescribe such procedures. Based on such judgement, reimbursement within the NHS would be admitted or not.</p>	<p>SG Cartera de Servicios del SNS y Fondos de Compensación DG Cartera Básica de Servicios del SNS y Farmacia Ministerio de Sanidad, Consumo y Bienestar Social E: sgcfc@mscbs.es</p>
Sweden	<p>Only plastic surgery after gastric bypass or gastric sleeve is reimbursed. Often it is restricted to abdominal plastic surgery and breasts but not arms or legs. The possibility to get it reimbursed differs between different regions.</p>	<p>National Board of Health and Welfare Department for Knowledge-Based Policy of Health Care Patient Safety Unit S-106 30 Stockholm P: +4675-247 30 00 W: www.socialstyrelsen.se E: Carl-Erik.Flodmark@socialstyrelsen.se</p>

to be a far away mirage [6]. Almost 74% of postbariatric patients express the will to undergo body-contouring surgery [7], seeking to solve skin irritations and infections, mobility impairment, and psychologic distress. The overcoming of mobility obstacle improves patient's physical activity and reduces the risk of weight regain [8]. The achievement of a positive body image is eased, and self-confidence improves [9]. Moreover, postbariatric surgery is reported to cause anti-inflammatory and metabolic advantages [10]. Despite these achievements and rising patients' demand for body-contouring procedures, lack of insurance coverage represents the main limiting factor [11].

When NHS does not cover body-contouring procedures, third-party payers can follow medical criteria guidelines for insurance authorization. Usually, a "medical necessity" occurs when an illness, injury or disability requires a cure. If addressed to plastic surgery in postbariatric patients, "medical necessity" and "cosmetic surgery" get mixed up by the insurance companies. A surgery is defined "reconstructive" when it improves loosed function or it repairs congenital or developmental abnormal structures of the body. Meanwhile, a surgery that remodels normal body structures to improve patient's self-esteem is considered "cosmetic surgery" [12]. The boundary between "reconstructive" and "cosmetic" can be fuzzy, and postbariatric patients may meet impediments obtaining reimbursement for body-contouring surgeries. Song et al. [13] aimed to prove that bariatric surgery reaches its maximum effect when combined to body-contouring. In the UK, despite the majority of bariatric surgeons agree on problems caused by loose skin and the utility of body-contouring surgery to be covered by NHS, there are no national guidelines for postbariatric surgery [14].

To our knowledge, there are no reports that resume EU countries' NHS coverage for postbariatric body-contouring surgeries. This is the first attempt to describe how EU faces the growing postbariatric patients' needs. Twenty of 27 EU countries answered to our survey. Among them, only one clearly states that postbariatric surgeries are not covered by NHS. In other 19 countries, public health provides coverage for some specific body-contouring procedures, only if patients can prove functional or health problems. Some of the respondents gave detailed information with regard to the bariatric surgery pathway; others were vaguer. In Spain and Croatia, patients are eligible for massive weight loss surgery only after assessment by the treating physician, when he deems there is a clinical justification to prescribe the procedure.

In Greece and Germany, the clinical approval lies with the statutory health insurance which evaluates patient's request and confirms a possible coverage of costs.

In France, plastic surgery consultation must be followed by further approval by a medical board of the "Assurance maladie."

In general, stable weight and BMI maintained inferior to precise levels are the most common criterion for European NHS coverage.

Our results describe a complex situation with many differences among EU countries, but a common lead towards post bariatric patients' care shows off.

Conclusions

This study does not provide a complete view of EU approach to post bariatric procedures, as 35% of the contacted countries did not reply. We hope that our colleagues from all over Europe will wish to help us in completing this study, giving their comments to this first sketch.

Patient's healing from obesity is a course of personal transition [15], in which postbariatric surgery represents a fundamental final step [16]. The ultimate goal of bariatric patient's healing should be his/her conversion to a productive member of society, with full restoration of physical and psychological well-being. NHS of EU countries are facing this increasing request in various ways, and more studies should be performed in order to understand which is the best approach.

Availability of data and material Not applicable.

Authors' contributions All authors contributed to the study conception and design. Material preparation, data collection, and analysis were performed by Jacopo M. Frattaroli, Juste Kaciulyte, Ugo Redi, and Marco Marcasciano. The first draft of the manuscript was written by Federico Lo Torto, and the final revisions were performed by Donato Casella and Diego Ribuffo. All authors commented on previous versions of the manuscript. All authors read and approved the final manuscript.

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Compliance with ethical standards

Conflict of interest Federico Lo Torto, Jacopo M. Frattaroli, Juste Kaciulyte, Ugo Redi, Marco Marcasciano, Donato Casella, and Diego Ribuffo declare that they have no conflict of interest.

Ethical approval This is a survey-based study. The Research Ethics Committee of the institutions involved have confirmed that no ethical approval is required.

Informed consent This is a survey-based study; there was no necessity for informed consent.

Code availability Not applicable.

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