

## Cirurgia plástica reparadora: uma análise do Sistema Único de Saúde

### Reparative plastic surgery: an overview of the Unified Health System

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#### Resumo:

**INTRODUÇÃO** A cirurgia plástica reparadora é uma área de atuação médica que tem como intuito a correção de deformidades ou de déficits funcionais (parciais ou totais) que necessitem recursos técnicos da cirurgia plástica, buscando resgatar as funções anatômicas de forma mais próxima possível da original. **OBJETIVO** O artigo tem como objetivo expor o panorama da cirurgia plástica reparadora no Sistema Único de Saúde (SUS), no ano de 2019, de forma a comparar seus achados com as estatísticas oficiais do ano de 2009. **MÉTODO** Estudo trasnversal, quantitativo baseado nos dados do Departamento de Informática do SUS (DATASUS) em forma de análise de frequência simples com relação às internações hospitalares para procedimentos de cirurgia plástica. **RESULTADO** Foram coletados dados abrangendo 4,5% de todos os procedimentos cirúrgicos reparadores realizados no Brasil em 2019, sendo dentro dessa estimativa, as mais prevalentes, 72,33% cirurgias plásticas reparadoras de mama, 10,22% de correção de retração cicatricial em vários estágios, 6,25% labiopalatais, 5,26% dermolipectomias não relacionadas à cirurgia bariátrica, 4,1% pós-cirurgia bariátrica, 1,35% de deformidades crânio e bucomaxilofaciais congênitas e 0,49% de lipoatrofia facial e lipodistrofias. **CONCLUSÃO** Observa-se um aumento de cirurgias reparadoras entre 2009 e 2019 (de 5,07% para 12,09%). Todavia, o panorama proposto não pode ser realizado com precisão, devido às várias indisponibilidades e inespecificações dispostas pelo Departamento de Informática do SUS quanto ao registro de dados do mesmo.

**Palavras-chave:** Sistema Único de Saúde; Cirurgia Plástica; Pesquisa sobre Serviços de Saúde.

#### Abstract:

**INTRODUCTION:** A repairing plastic surgery is an area of medical practice that has the purpose of correcting deformities or functional deficits (partial or total) that require surgical resources for plastic surgery, such as the anatomy as close as possible to the original. **OBJECTIVE:** The objective of this article is to expose the panorama of reconstructive plastic surgery in the Unified Health System (SUS) in 2019, in order to compare its findings with the official specifications of the year 2009. **METHOD:** A cross-sectional, quantitative study based on data of the Informatics Department of the Unified Health System in the form of a simple frequency analysis regarding hospitalizations for plastic surgery procedures. **RESULTS:** Data covering 4.5% of all surgical repair procedures performed in Brazil in 2019 were collected, being the most prevalent among these, 72.33% breast reconstructive plastic surgeries, 10.22% cicatricial retraction correction 6.25% labiopalatais, 5.26% dermolipectomies not related to bariatric surgery, 4.1% after bariatric surgery, 1.35% of congenital skull and buccomaxillofacial deformities, and 0.49% of facial lipoatrophy and lipodystrophies. **CONCLUSION:** There is an increase in reparative surgeries between 2009 and 2019 (from 5.07% to 12.09%). However, the proposed scenario can not be accurately performed due to the various unavailability and non-specifications provided by the Informatics Department of the Unified Health System regarding the data recording of the same.

**Keywords:** Unified Health System; Surgery, Plastic; Health Services Research.

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## INTRODUCTION

The Unified Health System (SUS), as we know it today, was created in 1988. However, it is often modified in order to improve care and provide a better quality of life for the Brazilian population<sup>1</sup>.

Among the health procedures performed by the system is the reparative plastic surgery. Although it has been part of SUS for many years, it became a legal obligation of the State<sup>2</sup> only recently, in 2011.

Unlike aesthetic plastic surgery, the objective of restorative plastic surgery is the correction of deformities or functional deficits (partial or total) that require technical resources of plastic surgery<sup>3</sup>, seeking to rescue the anatomical functions as close as possible to the original, being therefore as necessary as any other surgical procedure.

Currently this competence covers three areas<sup>4</sup>: labiopalatal (skull and maxillofacial), facial lipoatrophy and lipodystrophy and burns. Lipopalatal deformities are those in which the child is born with cleft lip or palate. Liposuction and lipodystrophy-related pathologies are those in which there is loss or accumulation of fat in the face or body due to other diseases.

With this in mind, the main repairing plastic surgeries performed by SUS<sup>5</sup> are: reconstructive or corrective mammoplasty, gynecoplasty, correction of cleft palate, correction of congenital or acquired facial deformities, correction of facial lipoatrophy and lipodystrophy, corrective procedures after bariatric surgery, dermolipectomies not associated with bariatric surgery, surgery to correct scar retraction in several stages and correction of burns deformities, in addition to including interventions in women who have suffered deformities due to domestic violence, the latter being approved by law in 2015.

Due to its universal character<sup>1</sup>, SUS provides the citizen with the right of access to repairing plastic surgeries when they allow the recovery of its integral health, in its broadest sense: “a state of complete physical, mental and social well-being and not only the absence of affections and illnesses”, that is, far beyond the purely aesthetic purposes.

However, despite the undeniable importance of this surgical resource, there are still few absolute statistical data on the performance of the SUS related to such service.

In Brazil, in 2009, the total number of hospitalizations to the surgical clinic corresponded to 28.8% of all hospital admissions, and only 5.7%<sup>6</sup> of these were related to repair surgery.

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Among the total hospital admissions in 2009, it was estimated that 1.65% of those referred were for the procedures of repair surgery. And the number decreases even more when considering the total medical procedures performed in that year, in which the recourse to restorative surgery occupied only 0.0056% of this technical space<sup>6</sup>. There was no specification regarding the plastic or non-plastic character of the interventions and no specification of the surgical procedures performed.

Thinking that the last absolute data related to repairing plastic surgery in SUS, in a non-specific manner and included in the general category of repairing surgery, are from the year 2009, and such assistance resource became an obligation of the State by law two years later, in 2011, it is noticeable that besides the estimates dating from the past decade, they also do not cover an updated panorama of this medical technique, which evaluates the practice after the legislative change.

With this in mind, this study aims to present an overview of the practice of the plastic surgery repair service in the Single Health System during the year 2019, in order to compare its findings with the official statistics of 2009.

## **METHODS**

This is a cross-sectional, quantitative study based on data collected from the Informatics Department of the Unified Health System<sup>7</sup>, aiming at a simple frequency analysis regarding hospital admissions related to repair surgery in Brazil in 2019.

The number of total hospital admissions in 2019 was collected, as well as the number of total hospital admissions for the surgical clinic and the number of total hospital admissions for the restorative surgery in the same year.

In addition, the numbers of the procedures thought by the group as most relevant and frequent in the practice of reparative plastic surgery in all the months of 2019 were collected: Breast repair surgery (non-aesthetic female breast plastic surgery, male breast plastic surgery, post-mastectomy reconstructive breast plastic surgery with prosthesis implant and bilateral reconstructive breast plastic surgery including bilateral silicone breast implant in the process), palatolabial repair surgery (primary palatoplasty in a patient with craniofacial and buccomaxillofacial anomaly, secondary palatoplasty in a patient with craniofacial and buccomaxillofacial anomaly and secondary labioplasty in a

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patient with craniofacial anomaly), repairing plastic surgery of other congenital skull and maxillofacial deformities (total lip reconstruction in a patient with skull and maxillofacial anomaly, repairing surgical treatment of facial cleft in patients with skull and maxillofacial anomaly and craniofacial remodeling in a patient with skull and maxillofacial anomaly), repairing plastic surgery of facial lipoatrophy and lipodystrophy (facial filling with fat tissue in a patient with facial lipoatrophy due to the use of antiretroviral, breast reduction in patients with lipodystrophy due to the use of antiretroviral, gynecomastia treatment or pseudogynecomastia in patients with lipodystrophy due to the use of antiretroviral, giba liposuction or submandibular region in patients with lipodystrophy due to the use of antiretroviral, abdominal wall or dorsal liposuction in patients with lipodystrophy due to the use of antiretroviral, buttock liposuction in patients with gluteal lipodystrophy due to the use of antiretroviral and gluteal and/or perianal reconstruction in patients with gluteal lipodystrophy due to the use of antiretroviral), restorative plastic surgery after bariatric surgery (abdominal dermolipectomy after bariatric surgery, brachial dermolipectomy after bariatric surgery, crural dermolipectomy after bariatric surgery, circumferential abdominal dermolipectomy after bariatric surgery and mammoplasty after bariatric surgery), dermolipectomy not associated with bariatric surgery (non-esthetic abdominal dermolipectomy and dermolipectomy of one or two lower limbs) and plastic surgery to correct scar retraction in several stages.

No data were collected on repairing skull and buccomaxillofacial deformities, on burn plastic surgery, or on repairing plastic surgery on women who were victims of domestic violence in a specified manner.

The figures collected were then transformed into percentage estimates and compared with each other and also compared with the official Brazilian statistics for 2009 according to the Health Information Booklet of the Executive Secretariat of the Ministry of Health (May/2010 version)<sup>6</sup>.

## **RESULTS**

According to detailed data on Hospital Admissions (AIH) accessed through DATASUS, in Brazil (considering its five regions), in 2019, there were a total of 308 663 319 (three hundred and eight million, six hundred and sixty-three thousand, three hundred and

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nineteen) hospital admissions. Of these, 10 141 716 (ten million, one hundred and forty-one thousand, seven hundred and sixteen) were hospitalizations for the surgical clinic and of these, 1 226 245 (one million, two hundred and twenty-six thousand, two hundred and forty-five) were hospitalizations for the restorative surgery.

Considering the areas of coverage of repairing plastic surgery, seven major surgical groups were separated (breast repairing plastic surgery, palatolabial repairing plastic surgery, cranial and congenital maxillofacial repairing plastic surgery, facial lipoatrophy repairing plastic surgery and lipodystrophy, post bariatric repair surgery, dermolipectomies not related to bariatric surgery and plastic surgery for correction of scar retraction in several stages), each with its specified procedures, and analyzed the total numbers of AHI approved for them, on which the results were presented in table 1.

It was evaluated that, in 2019, the total hospitalizations to the surgical clinic corresponded to 3.28% of all hospital admissions, being 12.09% of these related to repair surgery. And among the total hospitalizations in 2019, it was estimated that 0.39% of those referred were for restorative surgery procedures, with no data specifying the plastic character or not of the procedures.

Data were collected covering 4.5% of all surgical repair procedures performed in Brazil in 2019, and within this estimate 72.33% were breast repair surgeries, 6.25% were labiopalatal repair surgeries, 1.35% were skull and buccomaxillofacial congenital repair surgeries, 0.49% corrective plastic surgeries of facial lipoatrophy and lipodystrophies, 4.1% corrective plastic surgeries after bariatric surgery, 5.26% dermolipectomies not related to bariatric surgery and 10.22% plastic surgeries for correction of scar retraction in several stages.

Considering the absolute estimated parameters of the repair surgery in 2019, it was evaluated that 3.27% were breast repairing plastic surgeries, 0.28% were lipopalatal repairing plastic surgeries, 0.006% were skull and buccomaxillofacial congenital deformity repair surgeries, 0.02% were facial lipoatrophy and lipodystrophy repair surgeries, 0.18% were post bariatric plastic surgery repair surgeries, 0.23% were dermolipectomies not associated with bariatric surgery and the plastic surgery for correction of scar retraction in several stages corresponded to 0.46%, totaling the 4.5% repair surgery procedures

analyzed.

Based on the bibliography used as a parameter for the study, a comparison of the performance of repair surgery in 2009 and 2019 was made, in percentage statistics, referring to the estimate of this service within the total hospital admissions and total hospital admissions to the surgical clinic in both years, and within the seven major groups of repair surgery analyzed, only in 2019 (see table 2).

Table 1 - Overview of procedures in restorative plastic surgery by area in 2019

<b>Surgical procedure group and subgroup</b>	<b>Total hospitalizations per procedure</b>
Breast Repair Plastic Surgery	40 176
Non aesthetic female plastic	32 534
Male breastplastic	7 624
Post-mastectomy reconstructive breast plastic surgery prosthetically implanted	6 237
Bilateral reconstructive breastplasty including bilateral silicone prosthesis in the process	18
Lip and palate repair surgery*	3 469
Primary Palatoplasty in Patient with Anomaly cranium and maxillofacial	1 835
Secondary palatoplasty in a patient with skull and maxillofacial abnormality	1 028
Secondary labioplasty in a patient with an anomaly cranium and maxillofacial	606
Plastic surgery repairing skull deformity and congenital maxillofacial**	747
Total lip reconstruction	531
Surgical treatment for facial cleft	185
Craniofacial remodeling	31
Facial lipoatrophy repair surgery and Lipodystrophy***	271
Facial filling with fatty tissue in patient with face lipoatrophy due to the use of TARV****	66
Breast reduction in a patient with lipodystrophy due to the use of TARV	11
Gynecomastia treatment or pseudogynecomastia in a patient with lipodystrophic due to the use of TARV	13
Liposuction of giba or submandibular region in a patient with lipodystrophy due to the use of TARV	47

Liposuction of abdominal wall or back in patient with lipodystrophy due to the use of TARV	70
Gluteal Liposuction in Patient with gluteal lipodystrophy due to the use of TARV	13
Gluteal and/or perianal reconstruction in patient with lipodystrophy due to the use of TARV	51
Post-surgery repair plastic surgery bariatric***	2 275
Abdominal dermolipectomy	716
Brachial dermolipectomy	157
Crural dermolipectomy	175
Circumferential abdominal dermolipectomy	72
Mammoplasty after bariatric surgery	1 155
Dermolipectomy not associated with bariatric surgery non-esthetic abdominal dermolipectomy	2 923
One or two limb dermolipectomy	2 809
Plastic surgery for correction of scar retraction in various stages	5 680

\*There was no record of: surgery for cleft lip and/or palate treatment, partial or total palatoplasty, transpalatal plastic surgery and surgical treatment of cleft lip. \*\*No sequential procedures of repair plastic surgery in skull and buccomaxillofacial anomaly have been recorded. \*\*\*No sequential procedures of post bariatric restorative plastic surgery have been recorded. \*\*\*\*Anti-retroviral Therapy.

Table 2 - Comparative context of the reconstructive surgery in 2009 and 2019

	Repair Surgery in 2009 (%)	Repair Surgery in 2019 (%)
Total of AIH	1,65	0,39
Total HIA for the surgical clinic	5,7	12,09
Mammoplasty	-	3,27
Labiopalatoplasty	-	0,28
Repair of deformities craniofacial	-	0,006
Facial lipoatrophy repair and lipodystrophies	-	0,02
Post-surgery plastic surgery bariatric	-	0,18
Other dermolipectomies	-	0,23
Correction of scar retraction in various stages	-	0,46

## DISCUSSION

When comparing repair surgeries in 2009 and 2019, as can be analyzed from Table 2, it is assumed that the decrease in hospital stays in a surgical clinic can be attributed to several factors, such as: better basic health care and changes in care protocol<sup>8</sup>. However, an increase in repair surgeries between 2009 and 2019 (from 5.07% to 12.09%) is observed, which suggests as causes, a greater number of accidents in general<sup>9</sup> that require repair surgery, a greater number of diagnosed cases of breast cancer with subsequent reparative mammoplasty, a greater access of the population to specialized care, a greater availability of treatments offered by the SUS, and a greater knowledge of the population regarding the treatments covered by the health system.

Among the groups of corrective plastic surgery analyzed, breast repair surgery was the category with the highest rate of performance, which matches the epidemiological reality of the country, since there are more than 2 million new cases of breast cancer diagnosed per year<sup>9</sup>, and this is one of the major reasons for performing this procedure. While conditions such as cleft palate or procedures such as bariatric surgery have less epidemiological importance when compared<sup>10</sup>, with about 150,000 new cases per year and about 100,000 surgeries being performed in 2016, respectively, making it the lowest rate of performing restorative plastic surgery procedures related to these situations.

Considering the rate of procedures observed in the study compared to the total number of procedures performed, the statistics of repairing plastic surgery collected represent a very small portion (only 4.5%) of the total number of repairing surgeries performed in SUS in the year 2019, since the parameter exposed by DATASUS<sup>7</sup> occurs without specifying the plastic character or not of the procedures, thus covering a much larger number of interventions than the one analyzed. It is also important to remember, in the referred system, the absence of data referring to the repairing plastic surgery in burns, acquired deformities and women who suffered domestic violence, factors that decreased the percentages of the study.

According to the tabulation of data from the Hospital Information System of the Unified Health System for the year 2019, 12,295 people were hospitalized in the Brazilian public health system for injuries resulting from burns receiving treatment for large and medium burns. However, there is no specification of how many cases required repair



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surgery, a fact that also generates a decrease in the final data collected, i.e., it is suggested that the lack of this data led to a decrease in the absolute value of procedures for repair surgery, since burns represent the fourth most common type of trauma in the world<sup>11</sup>, behind only traffic accidents, falls and interpersonal violence.

Moreover, according to the study Department of Judicial Research of the National Council of Justice (CNJ) it is known that the number of cases of domestic violence registered in Brazil had an increase<sup>12</sup>: in the total, there were 1,273,398 cases in progress in the state courts throughout the country, and last year alone 388,263 new cases of domestic violence were registered, an increase of 16% in relation to the previous year. With this in mind, it is to be thought that due to the lack of data related to this subject, there were a great number of cases of reparatory plastic surgery in women who suffered domestic violence incapable of being accounted for in the study. Without counting the known great prevalence of traumas which have as one of its several sequels the acquired functional deformity (partial or total) that also cannot be accounted for by the lack of data related to it in the system.

## **CONCLUSION**

From the study, it is concluded that, compared to 2009, there was a decrease in the total number of hospital admissions to the surgical clinic, however, within this parameter, there was an increase in the total number of hospital admissions to perform restorative surgery in 2019.

However, the proposed panorama cannot be accurately performed due to the several unavailabilities and unspecification provided by the SUS Department of Informatics regarding its data registration, and it is not possible to estimate with accuracy the real scenario of the repairing plastic surgery service in Brazilian public health.

Among the various limitations for the study, the one considered the main one was the scarcity of published literature on the subject so that it could serve as a basis. Moreover, the statistics of repairing plastic surgery collected are tiny when related to the total exposed parameter of repairing surgeries performed in SUS in the year 2019, as such parameter occurs without specifying the plastic content or not of the procedures, thus covering a much larger range of surgical interventions to be considered. Another issue was the

inability to collect data regarding the reparative plastic surgery of acquired deformities, the reparative plastic surgery for burns and the reparative plastic surgery in women who suffered domestic violence.

Although there were such difficulties, the growth of this group of surgical procedures in 2019 was remarkable when compared to official national data for 2009, for incalculable reasons, which can only be assumed, due to the lack of data and literature available in this respect.

Therefore, it is necessary to make more information available to characterize SUS assistance support related to repairing plastic surgery, given the great variability of procedures it entails, as well as the several conditions treated by it, which are extremely important in society, due to its high prevalence and social impact.

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