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## Original article

# Characterization of patients with ostomy treated at a public municipal and regional reference center

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## ABSTRACT

**Objective:** to characterize patients with ostomy treated at a municipal and regional reference center in the state of Rio Grande do Sul.

**Methods:** this is a retrospective and descriptive study, based on the records of patients with ileostomy or colostomy recorded in this service between 2000 and 2010.

**Results:** a total of 273 patients were studied, of which 145 were females. The mean age was 64.5 years. Patients with incomplete elementary education (43.6%) and retirees/pensioners (44.7%) were the most prevalent. The main cause for the stoma was neoplastic disease, with 45.8% of colorectal cancer and 5.5% of cancers at other sites.

Other causes were: diverticular disease (7%), bowel obstruction (7%), functional bowel disorders (4.8%), abdominal trauma (2.9%), non-traumatic bowel perforation (2.6%), inflammatory bowel diseases (1.8%) and intestinal polyposis (0.7%). Regarding the type of ostomy, 85.7% were performed by colostomy and 15.8% by ileostomy.

**Conclusions:** the study population consisted mainly of patients older than 60 and females. The main intervention performed was permanent colostomy and the most important cause for the procedure performance was colorectal cancer.

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## Caracterização dos usuários com estomia atendidos em um serviço público de referência municipal e regional

### R E S U M O

#### Palavras-chave:

Estomia  
Enteropatias  
Perfil de saúde  
Saúde pública  
Sistema Único de Saúde

**Objetivo:** caracterizar as pessoas com estomia atendidas em um serviço de referência municipal e regional do Rio Grande do Sul.

**Métodos:** estudo retrospectivo e documental, com consulta aos registros dos usuários com ileostomia ou colostomia cadastrados no referido serviço entre 2000 e 2010.

**Resultados:** foram avaliadas 273 pessoas, sendo 145 mulheres e 128 homens. A média de idade foi de 64,5 anos. Prevaleram usuários com ensino fundamental incompleto (43,6%) e da classe de aposentados/pensionistas (44,7%). A principal causa motivadora da estomia foi a neoplásica, sendo 45,8% de neoplasia de intestino e 5,5% de neoplasias em outros sítios. Outras causas encontradas foram: doença diverticular (7%), obstrução intestinal (7%), transtornos funcionais do intestino (4,8%), traumatismo abdominal (2,9%), perfuração não traumática do intestino (2,6%), doenças intestinais inflamatórias (1,8%) e polipose intestinal (0,7%). Quanto ao tipo de estomia, 85,7% eram usuários de colostomias, e 15,8% de ileostomia.

**Conclusões:** a clientela do serviço estudado foi composta principalmente por pessoas acima dos 60 anos de idade e por mulheres. A principal intervenção apresentada foi a colostomia permanente e a mais importante causa motivadora da realização do procedimento foi a neoplasia colorretal.

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## Introduction

The term stoma is derived from the Greek word for “mouth” or “opening”. The stoma is created surgically as an outlet for normal body waste or as an inlet for nourishment or medical treatment.<sup>1</sup> It is known that the ostomies performed in the digestive system, specifically colostomies and ileostomies, are the most frequent ones; they can serve as protection for anastomoses in elective surgeries, be an option in urgency surgeries (to avoid anastomosis in patients without preoperative preparation) or even as definitive procedure for patients without the possibility of future intestinal reconstruction, either as palliative (e.g., desobstruction for unresectable tumors) or curative treatment (e.g., abdominoperineal amputation in rectal tumor resection).<sup>2</sup>

Its origin as a surgical procedure dates back to the eighteenth century, but it was only in the 1950s that new knowledge allowed its improvement. The continuous evolution of Medicine and related areas has allowed the use of better techniques to perform the ostomy and, concomitantly, new materials and equipment have also been developed, so that currently there is a wide range of pouching systems and other products for individuals with ostomies.<sup>3</sup>

The causes that lead to the need for an ostomy are many, comprising a heterogeneous group of disorders, with colorectal cancer as the main one. Other reasons commonly cited in the literature are: diverticulitis, inflammatory diseases, trauma, other abdominal neoplasms and congenital anomalies.<sup>3-7</sup> Thus, it is clear that the population requiring an ostomy is quite diverse, including individuals from all age groups and of different sociodemographic profiles.

In Brazil, this population is currently treated entirely by the Unified Health System - SUS. Prior to the implementa-

tion of SUS, there was only one pouching system distribution program, with limited coverage to beneficiaries of the National HealthCare Social Security (INAMPS) and no assistance services.<sup>8</sup> Later, in 1993, the Ministry of Health MS/GM Ordinances No. 116 and 146, included, in the Outpatient Information System of SUS (SIA/ SUS) at the national level, the equipment for patients with ostomies (six items), a condition that, in a way, guarantees the basic needs of an individual with a stoma. In 1999, new items and new descriptions were included by the Ministry of Health MS/GM Ordinance No. 1230/1999.<sup>8</sup>

Currently, the new National Guidelines for Health Care of Ostomized Individuals – established by Ordinance No. 400, dated of November 16, 2009 – have defined types of unit for which users should be referred, the minimally necessary resources, professionals that treat this type of patient and interventions to be performed, such as: individual consultations and group care, guidance for self-care, family guidance, guidance for the primary care professionals and the supply of pouching systems (also called collection bags) and adjuvant equipment.<sup>9</sup>

Based on this, the objective of this study was to characterize, by reviewing hospital records, the individuals with ostomies treated in a reference municipal and regional service in the state of Rio Grande do Sul, Brazil.

## Methods

This study is part of the research “Characterization of users of a reference municipal and regional service in medium density technology specialties” developed in the context of PET-Health/ Family Health (Work Education Program, Ministry of Health - Brazil) proposed by a federal university, a philanthropic university center and the health secretariat of the

city/town where the program was carried out in the period 2010-2011. The study was assessed and approved by the Ethics Committee on Human Research of the Federal University under the CAAE - 0091.0.243.000-11.

We performed a retrospective and documental study with a quantitative approach and descriptive analysis based on the medical records of patients with an ostomy from the aforementioned sector, covering all patients registered in a period of ten years from the start of the service in the 2000 until 2010, excluding those from other cities/towns rather than the city where this research was carried out. For the present analysis, only patients with ileostomy or colostomy were included, excluding those who were treated at the service due to other reasons (urostomy, gastrostomy, incontinence, and fistula). The collected data represent sociodemographic variables (gender, age, education and occupation) and specific health data (diagnosis and type of ostomy).

## Results

Information was collected from 347 records, but 273 were analyzed, which were from individuals with ileostomy or colostomy and who lived in the city where the service is located. Table 1 shows the data on socio-demographic variables of these patients.

The mean age of the study population was 64.5 years, ranging from 4 to 98 years. A chart with age for each gender is shown in Fig. 1.

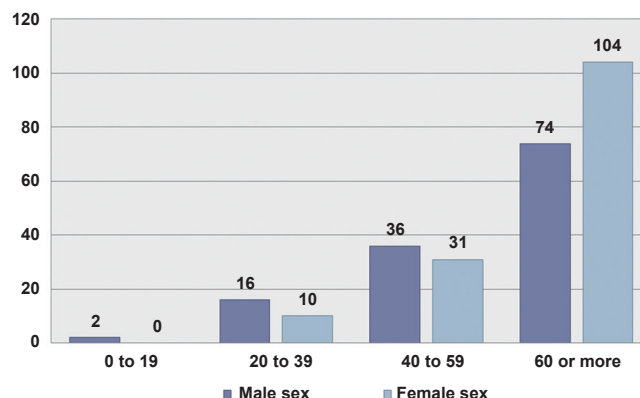
**Table 1 – Sociodemographic characteristics of patients with ileostomy and/or colostomy treated at the service.**

Variables	n = 273	%
Gender		
Female	145	53.1
Male	128	46.9
Age		
0 to < 20 years	2	0.7
20 to < 40 years	26	9.5
40 to < 60 years	67	24.5
60 years or older	178	65.2
Education		
Preschoolers and children/adolescents at school <sup>a</sup>	2	0.7
Illiterate adults	10	3.7
Adults with incomplete ES	119	43.6
Adults with complete ES and incomplete HS	65	23.8
Adults with complete HS and incomplete College/University degree	41	15.0
Adults with College/University degree	15	5.5
Not informed	21	7.7
Occupation		
Retiree/pensioner	122	44.7
Homemaker	65	23.8
Rural worker	7	2.6
Student	7	2.6
Others <sup>b</sup>	60	22.0
Not informed	12	4.4

ES, elementary school; HS, high school.

<sup>a</sup> One preschooler (4 years) and one attending ES (6 years).

<sup>b</sup> Includes other 37 different occupations.



**Fig. 1 – Ages of patients treated at the Ostomy Service where the study was carried out separated by gender.**

Regarding the type of ostomy, colostomy was the most prevalent one (Table 2), and four patients (1.5%) had both ileostomy and colostomy. As for the prospect of reversing the ostomy, the stomas were classified as temporary or permanent (Table 2).

Among the diagnoses that led to the need for ostomy (Fig. 2), intestinal neoplasia was the most prevalent in the study population, comprising 45.8% of the diagnoses, i.e., 125 individuals. Of these, 69 (25.3%) had a tumor located in the rectum or rectosigmoid junction, 35 (12.8%) in the colon and 21 (7.7%) were unspecified.

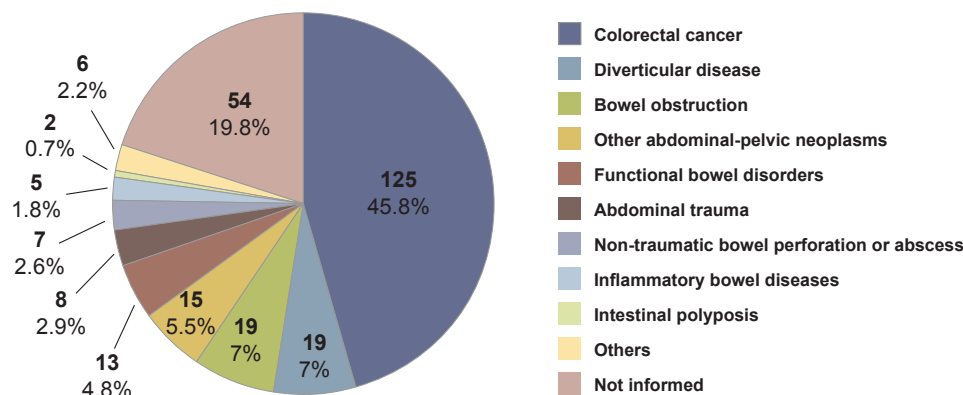
Due to wide variety of diagnoses found in the records, these were grouped into categories. Thus, intestinal obstruction include volvulus, fecal impaction, foreign body obstruction and unspecified obstruction; other abdomino-pelvic neoplasms include prostate, uterus, ovary, bladder and stomach; functional bowel disorders include mega-colon, stroke, spinal cord trauma and diabetic neuropathy and other causes included fistulas, intestinal tuberculosis, gastrointestinal bleeding, abdominal hernias and congenital malformations.

## Discussion

It is noteworthy the fact that the present is the first study related to epidemiological data regarding the ostomized population in the city in where it was carried out. However, there has been a qualitative study<sup>10</sup> aimed to understand the feelings of the ostomized individual in relation to his/her body after

**Table 2 – Type of ostomy and condition of use.**

Type	n = 273	%
Colostomy	234	85.7
Permanent	127	54.3
Temporary	94	40.2
Not Informed	13	5.6
Ileostomy	43	15.8
Permanent	13	30.2
Temporary	28	65.1
Not Informed	2	4.7



**Fig. 2 – Colostomies and ileostomies: diagnosis that led to the procedure.**

the surgery. In this study, seven ostomized individuals were interviewed; the analysis/interpretation of their discourses showed that these people see their world as restricted, while facing fears and suffering. It is understandable that the ostomy causes a negative emotional impact on the patient's life; however, it is for health professionals to help the individuals cope with these feelings, so they can develop their own mechanisms of psychosocial adaptation to the new reality.<sup>3,11</sup>

In this study, the main cause for undergoing an ostomy was neoplastic disease, totaling 51.3% of cases, with bowel cancer being identified in 45.8% of patients and cancers at other sites in 5.5%.

This is consistent with recent and similar studies,<sup>4-7,12</sup> where the prevalence of neoplasia ranged from 38% to 86.2%, being the main cause of the need for an ostomy. Other studies, particularly those based on hospital samples, found traumatic<sup>13</sup> and obstructive<sup>14</sup> causes as the most prevalent ones. This is justified by the authors as being due to a prevalence of emergency medical services provided at those services.

Colorectal cancer appears as the third most common cancer worldwide in both sexes and the second leading cause in developed countries.<sup>15</sup> According to data from the National Institute of Cancer - INCA, 13,310 new cases of cancer of the colon and rectum in men and 14,800 in women were expected in Brazil, in 2010.

This study showed a predominance of females, dissimilar from other studies<sup>4,7,12-14,16</sup> that show a male prevalence. It is observed that in studies where trauma is the primary cause of ostomy<sup>13,16</sup> the percentage of male individuals is high — 76.7% to 81%. In others,<sup>4,7,12,14</sup> which indicate trauma as a minor cause, the percentage of males decreases, ranging from 52.6% to 61.6%. Moreover, in studies<sup>5,6</sup> in which tumors are the main causes of ostomy (75% to 86.2%) there is a predominance of females (62.5% to 66.7%). This may reflect a greater vulnerability of male individuals to violence and, on the other hand, the highest rate of colorectal cancer among women.<sup>15</sup>

The level of schooling of the patients in this study is similar to the data on the population of Rio Grande do Sul,<sup>17,18</sup> with a predominance of individuals with Elementary education (43.6%, compared to 48.2% the state population). The percentage of illiterates is also similar: 3.7% vs. 4.2% in the state population.

Regarding the educational level, illiteracy in Brazil has decreased from 13.6% in 2000 to 9.6% in 2010.<sup>19</sup> Education in Brazil is improving, although it remains far from the ideal situation or when compared to other countries. The US and the UK have a 1% rate of illiteracy;<sup>20</sup> Cuba, the country with the best position in the world's ranking, has only 0.2% of illiterates in its population. Argentina and Uruguay have 2.7 and 2.4%, respectively.

Most patients in this sample were retired or pensioners, totaling 44.7%, which is consistent with the large number of elderly individuals. These results are comparable to those of similar studies.<sup>5,6,14</sup> Another similarity between the present study and the others reported here concerns individuals' occupations: most were rural workers and homemakers, although most were identified as pensioners or retirees, thus making it impossible to know the previous occupation these individuals had before current retiree/pensioner status.

The type of ostomy more often performed in this population was a permanent colostomy. In all studies<sup>2,4,6,7,14,21</sup> that included this information, the colostomy was more prevalent than the ileostomy. The definitive characteristic of the ostomy was also the one most commonly found in most studies.<sup>2,6,7,21</sup> This is consistent with the underlying cause of the stoma, in which colorectal neoplasia is usually the most important one, determining resections that often preclude future reconstructions.

## Conclusions

This study identified patients and the causes of colostomies, but especially favored the improvement of the service, as it allowed the identification of other possible actions to be undertaken by the ostomy health care team, such as, for instance, the inclusion of professionals working in primary health care to improve health overall ostomy care. It also showed the need for investment in prevention programs and early detection of colorectal cancer, the primary cause of ostomies.

## Conflict of interest

The authors declare no conflicts of interest.

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