Causa mortis and mortality rates: historical aspects coming from death certificates, 1916-1929

Causa mortis e taxas de mortalidade: aspectos históricos a partir de registros de óbitos, 1916-1929

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Resumo

As pesquisas em livros de óbitos, com enfoque histórico, são reveladoras de aspectos cotidianos inexistentes em outros tipos de documentos oficiais. Além de possuírem informações que possibilitam a elaboração de taxas de mortalidade e das respectivas *causa mortis*, pode-se inferir sobre o número de médicos que atestaram óbitos em determinado local e espaço de tempo, sobre os locais aonde ocorriam os óbitos, bem como sobre aspectos oficiais relacionados ao registro civil das pessoas naturais. Este artigo é resultado da análise de 433 registros de óbitos de Marques de Souza, Rio Grande do Sul, do período de julho de 1916 a dezembro de 1929, presentes no livro C-1, pertencente ao acervo do Tabelionato e Registro Civil de Marques de Souza. Os aportes teóricos e metodológicos desta pesquisa baseiam-se na demografia histórica. Como resultados identificamos as causas de morte que acometeram a população marquesense, o cotidiano dos atendimentos médicos, além da proporção de óbitos no período estudado (1916-1929). Deparamo-nos com a problemática da *causa mortis* "natural", que abrange a maioria dos registros (70,66%), sendo um forte indicativo da precariedade e da falta de serviços adequados, tanto na parte da medicina quanto na registral, mas que fazem parte de um contexto histórico-social específico.
Palavras-chave: Demografia histórica; Taxas de mortalidade; *Causa mortis*.

Abstract

The studies of obituary books with a historical approach reveal everyday details that are non-existent in other types of official documentation. Besides having some information that enables the elaboration of mortality rates and the respective causa mortis, it is possible to deduce about the number of physicians who certificated deaths in a given place and space of time, as well as about the places where these deaths occurred and about the official aspects related to civil registration of natural people. This paper results from the analysis of 443 death certificates from Marques de Souza, state of Rio Grande do Sul, Brazil, over a period that goes from July 1916 until December 1929, registered at the C-1 book which belongs to the Registrar's office of Marques de Souza city. The theoretical and methodological basis of this research is based on historical demography. The results identify death causes that affected Marques de Souza population, the medical care daily routine and the death proportion during the study period (1916-1929). We face the problem of "natural" causa mortis, which is found in most of the records (70,66%), as a strong indication of the precariousness and lack of adequate medical and registrar's services, but are part of a specific socio-historical context.

Keywords: historical demography; mortality rates; causa mortis; Marques de Souza.

Introduction

This article discusses the historical aspects of the fifth district of Lajeado, currently known as the municipality of Marques de Souza (RS), by means of registered deaths. This type of registry, performed by the civil register offices for individuals, serves as a source for historical research. This is because, in addition to the elaboration of mortality statistics and *causa mortis*, it provides inferences on the number of doctors who certified deaths in a specific location and time frame, the locations where deaths occurred, and the official aspects related to the civil registry of individuals. In this study, the abovementioned items are addressed.

Other information can be seen in the registry of deaths, depending on the researcher's aim, and the period in which it was performed. In general, the registry of deaths can be interpreted as a pure and simple registry that seeks to correlate in a horizontal sequence of days, months, and years; the rich and the poor; the white and the black; in addition to indicating social differences (Falci, 2004). In this sense, we can affirm that the registries of deaths are indicators of different historical aspects and contexts.

This research was performed at the registries of the Marques de Souza civil register office, currently called Notary and Civil Register Office of Marques de Souza, which opened on July 18, 1916, by the district judge João Guilherme Wayhs[1]. When the office was opened, the registrar was Alvaro da Costa Mello[2], who remained at the post until August 1916.

The Marques de Souza civil register office opened a few days after the district's creation. Marques de Souza was officially created as per the Municipal Act No. 596 of July 4, 1916, becoming the fifth district of the municipality of Lajeado. As per the same municipal act, signed by the intendant João Baptista de Mello, the fifth district was named Nova Berlim[3]. By researches on the Book of Obituaries C-1, variations in the name of the fifth district of Lajeado could be perceived.

1 Book of Obituaries C-1, pg.1. Marques de Souza Notary and Civil Register.

2 Alvaro da Costa Mello also performed the activity of a registrar from December 1918 to February 1929. Book of Obituaries C-1. Marques de Souza Notary and Civil Register.

3 Book of Acts No. 8, p. 64-65 Lajeado/RS Municipal Public Archive..

From the opening day of the civil register up to the obituary registry No. 25 of 12/09/1918, the name was Nova Berlim. On registry No. 26 of 12/19/1918, its name appeared as the fifth district of Lajeado, *Séde da Forqueta.* It is only as of registry No. 1 of 01/07/1919 that the district's name changed to Marques de Souza. This name still remains, even though the district has become a city.

Marques de Souza politically emancipated on December 28, 1995, dismembering from Lajeado. Currently, it is one of the 36 municipalities that comprise the Vale do Taquari region, located in the east-central part of the state of Rio Grande do Sul (UNIVATES, 2010).

Theory and method

The approach to historical aspects by quantitative methods is not new; however its diffusion on an international scale occurred in the 1950s and 1960s (Burke, 1992). This line of research is known as historical demography, which encompasses several interpretations of not only demographics such as graphs, tables, and statistics but also history such as day-to-day aspects of groups of humans. According to Falci (2004), from a strictly quantitative study, historical demography went to become an analysis and interpretation of ideals, ways of life, traditions and customs, rituals, festivals, and genealogy.

Defining historical demography still generates discussions among researchers, despite the fact that Brazil already has a tradition of over 40 years in historical demography (Bacellar et al., 2005). Nadalin (1997) highlights that there is difficulty in establishing a definition of historical demography because the subject was never completely outlined. Its study area has still not been entirely examined and is being mistaken for population history and social history. However, historian Faria (1997) states that historical demography has, without a doubt, clearly defined objectives and goals.

In Brazil, another problem that involves historical demography refers to its methodology. Many theoretical-methodological models were adopted from a different context—the European context—and were not adapted to the Brazilian context (Bacellar et al., 2005). However, this problem does not exist only in Brazil. Historical demographer Reher (1997), for example, criticizes some of the analyses performed for establishing demographic dynamics in European countries, mainly those that use discontinuous sources. Faria (1997) cites the studies of Marcílio regarding parish registries of baptisms, marriages, and deaths as an example of methodologies adapted to Brazilian reality.

Quantitative research such as the use of statistics based on the registry of deaths can generate a certain suspicion among historians. According to Burke (1992), the statistics can be falsified or easily interpreted incorrectly, but this can occur with texts as well. Despite quantification not being the only goal of this study, it allows for

> finding relationships and explanations of behaviors, which many times remain hidden in a qualitative study. The power of quantification essentially offers the possibility of establishing *exact relationships.* But to quantify is never an end in itself (Aróstegui, 2006, p. 538).

This article is part of the theme of historical demography, seeing that it works with quantitative data shown in the registry of deaths. According to Marcílio (1997, p. 135),

> studies on diseases, health, and death are not very frequent in Brazilian historical demography, despite the thematic richness that surrounds it and the little knowledge on the differences in the mortality in the past. Death is a demographic phenomenon filled with socioeconomic and cultural influences that need to be known.

The relevance of this research is justifiable, seeing that

> the systematic survey and census on the vital series of baptism, marriage, and death, among others, would highlight occasional regional and temporal variations, providing more concrete subsidies to understand the demographic systems of the Brazilian past and about the crucial issue of the demographic transition of the country (Bacellar et al., 2005, p. 348).

This research was performed in the Marques de Souza Notary and Civil Register Office in March and April 2010. Data collection was performed with the

goal of establishing mortality rates as well as the *causa mortis* registered in Marques de Souza from July 1916, the month that marked the opening of the civil register, to December 1929. Thus, it focuses on the 1920s. In addition, data such as the reporting physician, location of death, and official aspects related to the civil register were used in this study.

The data in this research derives from a single book of registry, Book of Obituaries C-1, which covers the period from 07/18/1916 to 04/02/1930. For data collection, forms were elaborated with main information such as the page of the book; number, date, and location of the register; declaring person; date and location of death; *causa mortis*, if the death occurred with medical assistance; gender and age of the deceased; place of burial; and name of the registrar. Following data collection, thematic tables and graphs were elaborated. It is important to note that all registries of deaths in the proposed period, July 1916–December 1929, contained in Book of Obituaries C-1, were analyzed. In all, 433 registries were accounted for.

Empire and Republic: aspects related to the proposed theme

The sources used by Brazilian historians in historical demography are usually related to parish registries, as is the case in the work *A colônia em movimento: fortuna e família no cotidiano colonial*, by Faria (1998). In this study, we used the registry of deaths shown in a book of a civil register office.

In Brazil, according to Quintanilha (1981), the organization of civil register is dated as of September 9, 1870, by Law Nº 1829, regulated by Decree No. 9886 of March 7, 1888[4]. This decree regulated the registry of births, marriages, and deaths. With the advent of the Republic, determinations were made with regards to the maintenance and requirements of public registries (Silveira and Laurenti, 1973). Furthermore, other measures were taken at the beginning of the Republican period, especially those referring to the project of the new Constitution:

> [...] the project of the new Constitution, made public by the provisional government on June 22, 1980, presented evident proposals on the limitation of the scope of action of the church and religious people: recognition and compulsory civil wedding; secularization of public school; secularization of cemeteries; prohibition of public grants to religious cults; impediment in opening new religious communities, especially the Company of Jesus; and ineligibility of clergy and religious people of any faith to run for positions in the congress (Hermann, 2003, p. 123).

The secularization of cemeteries is an aspect that can be perceived in the Marques de Souza registry of deaths. According to Flores (2006), with this measure, the cemeteries passed permanently to public administration, without church intervention and distinction of sects or religious faiths. Despite decreeing this measure in 1890 (Flores, 2006), in Marques de Souza, its effects were felt only in 1918, at least on "paper." As per registry No. 26 of 12/19/1918, the designation of cemeteries as burial locations went on to appear as *public*, and no longer distinguished between Catholic and Protestant cemeteries. However, it is important to observe that as per registry No. 20 of 08/13/1923, all cemeteries with the designation *"public"* would be called "*non-catholic,"* except for the registries where the registrar omitted such information. On the basis of this data, it is possible to affirm that in Marques de Souza, the secularization of cemeteries, imposed by the Republican regime, did not actually occur.

In Marques de Souza, as observed in the Book of Obituaries C-1, there is religious distinction between social groups that lived and still live there, between Catholics and Protestants. In this case, we have a Protestant majority since the German immigrants who came to Rio Grande do Sul were mostly Lutheran, and therefore, Lutherans were the first religious communities in the colonies of the South (Alencastro and Renaux, 1997). The quantification of Catholics and Protestants based on the Book of Obituaries C-1 is slightly problematic since, as mentioned above, there was a change in the nomen-

4 To perform the registry of death in Marques de Souza during the study period, the registrars would refer to this decree. Only in the end of April 1929, a new regulation went into force: Art. 358 of the Decree 18,542 of 12/24/1928. Book of Obituaries C-1, pgs. 176-177. Marques de Souza Notary and Civil Register.

clature of the burial locations in 1918.

The issue of German immigration in Rio Grande do Sul is quite widespread by regional historiography. German colonization in Rio Grande do Sul dates back to 1824 (Cunha, 2006; Kühn, 2004; Relly et al., 2008). In this period, the first German colonies were established mainly in the Vale do Rio dos Sinos region, particularly in São Leopoldo. The Vale do Taquari region, however, is part of the second phase of German colonization in Rio Grande do Sul, delimited by historiography between 1844 and 1889 (Cunha, 2006). According to Kühn (2004), as of 1846, German colonies were being founded in the territories of the valleys of Rio Taquari and Rio Pardo, Lajeado being one of them.

Doctors and their workplaces

From the Book of Obituaries C-1, it was possible to determine the doctors that certified deaths in Marques de Souza between 1916 and 1929, as well as the locations of their medical practice. In this aspect, it is necessary to consider that it does not cover an exact reality; however, it enables the understanding of the origins of health system in the provincial district of German colonization in Rio Grande do Sul.

In the study period, Marques de Souza did not have hospitals. This reality came to be known only from the 1940s (Sydow, 1987). However, it had specialized doctors, in addition to locations for the respective care services. Based on the research, we identified the following five doctors who certified deaths in Marques de Souza in the study period[5]: Arnoldo Boeni (1921–1929), Antonio Haffner (1923–1926), Eduardo Vogt (1925–1928), Wolfram Metzler (1927), and Joaquim Lamprecht (1928–1929). Considering that the analyzed registries started in July 1916, it is possible to affirm that medical activities in Marques de Souza started only in the 1920s, which were performed by German doctors or doctors of German descent. In general, in Vale do Taquari, it was only in the 1930s that the region experienced a surge of professionalization in medical services (Relly et al., 2008).

Another aspect related to doctors who worked in the interior of Rio Grande do Sul at the start of the 20th century is that their activities were not restricted to health services. According to Schwartsmann (2006), it was common for a doctor to accumulate other activities in the city or district in which he worked. In Marques de Souza, Dr. Arnoldo Boeni also held the position of district judge[6].

Despite the availability of medical care, as of 1921, 77.23% of the deaths registered in Marques de Souza occurred without medical assistance. Of this total, only 10.62% of the deaths were certified by doctors.

In the 1920s, Marques de Souza had three medical clinics: those of Antonio Haffner, Arnoldo Boeni, and Joaquim Lamprecht[7]. Other than the spaces described in the registry of deaths as health clinic, there was Wommer Hotel[8]. Under the ownership of Alberto Wommer, the hotel also functioned as a health clinic. In all, 18 registries between December 1925 and December 1929 are shown with the location of death as being Wommer Hotel.

In the researched registries, Taffe Hotel is also indicated as being a location of death. It is possible to affirm that Dr. Arnoldo Boeni worked in this establishment, as per registry No. 23 of 07/16/1927; the designation of the location of death is *"Taffe Hotel, in the clinic of Dr. Arnoldo Boeni."* Probably this same hotel and clinic received the designation Reinholdo Taffe's Health Center[9]. In all, five deaths were registered in "Taffe," whether it was the hotel or the health center. These deaths were registered between March 1926 and December 1929.

Despite the existence of health clinics and hotels that served as health centers, the majority of deaths registered in Marques de Souza occurred at home (84.98%). In health clinics and "hotels," the number of deaths decreased tremendously (5.77%) (Annex).

5 The timeline established in the period in which the doctors certified deaths only refer to the period 1916–1929. Book of Obituaries C-1. Marques de Souza Notary and Civil Register.

6 Opening terms of the Book of Obituaries C-2, pg. 1. Marques de Souza Notary and Civil Register.

7 Book of Obituaries C-1. Marques de Souza Notary and Civil Register.

8 In registries No. 11, 16, 19, 21, 22, 24, 30, and 32 of 1929, Wommer Hotel receives the name Wommer "hospital." It is also described as the location of deaths on the registries cited above. Book of Obituaries C-1. Marques de Souza Notary and Civil Register.

9 Registry No. 5, pg. 179. Book of Obituaries C-1. Marques de Souza Notary and Civil Register.

Causa mortis and mortality rates

Researches involving causes of death and mortality rates should be treated with certain caution. Researchers warn about problems with this issue, especially with regards to Brazil:

> often the presentation of mortality by cause is not completely true since the real causes of death is not always specified on the certificates by doctors. What can be noticed is that doctors, most times, only register terminal causes or even causes that never existed (Silveira and Laurenti, 1973, p. 45).

Paes (2007) states that in addition to the problem of research involving the compilation of death statistics, there is a need to compile deaths that were not registered and the basic causes that lead these individuals to die, which are consequently unknown.

Another aspect related to the cause of death refers to the classification of illnesses. According to Laurenti (1991), the first classification used internationally was approved in Europe in 1893, which underwent successive corrections. In Brazil, the beginning of the use of a classification system for illnesses is still uncertain; however, the state of São Paulo was already using a classification system in the first decade of the 20th century (Silveira and Laureni, 1973). However, it is necessary to consider that historical studies prove the existence of a similarity in the classification of illnesses prior to 1893. According to Falci (2004, p. 201), based on Brazilian parish registries from 1821 to 1841,

> the comparison of the causes of death in various locations or spacialities and within the same period indicates an identity of nomenclature throughout the world, thus showing the extent of medical knowledge. After all, medical knowledge surpasses regional borders and is absorbed by social mentalities.

Comparing the illnesses identified by Falci (2004) with those registered in Marques de Souza during 1916-1929, we perceived various similarities in their classification, in spite of the abovementioned author working with registries from the second quarter of the 19th century. Therefore, we identified common illnesses such as measles, dysentery, tuberculosis, gastroenteritis, peritonitis, pneumonia, and apoplexy.

With regards to illnesses, we should consider the context of the location of the region that is being researched. According to Falci (2004, p. 201),

> urban regions have always been more subject to epidemics than rural regions. Urban regions involved in secondary and tertiary activities enabled differentiated conditions to those involved in regions where work and exposure to natural conditions were more severe.

However, on analyzing the general framework of the main illnesses that ravaged Rio Grande do Sul over the study period, and comparing them with the registries in Marques de Souza, we identified similarities. According to Wenczenovicz (2007, p. 150), "illnesses that concerned the governments of Rio Grande do Sul as of 1895 were practically the same until 1928, with cases of diphtheria, bubonic plague, typhoid fever, smallpox, syphilis, and tuberculosis almost every year." In the registry of deaths researched, there are incidences of diphtheria (0.92%), typhoid fever (0.23%), and tuberculosis (0.46%) (Table 1). These and other illness, in the cases of declared *causa mortis*, can be perceived by low levels of incidence. The real problem with the researched registries is natural death (70.66%).

In relation to the number of deaths per year, we verified that there are no significant variations. In general, the average is approximately 30 deaths (Graph 1). The year 1916 presented 12 deaths, but these deaths were registered only in July-December. It is necessary to consider 1929, which presented 48 deaths, which were equal among genders (Graph 2).

The highest differences in data percentages referring to mortality are those elaborated on age. Infant mortality in the study period shows elevated percentages. In the classification established for people who died between the ages of 0 and 10, the proportion is 57.20% of the researched registries (Graph 3). In relation to the number of deaths by gender, there are no significant variations, expect for the year 1919, which showed 22 male deaths to 7 female ones.

Final considerations

Researches on registries of deaths reveal aspects of daily life. In this perspective, we observed part of the

elements that comprise the daily lives of common people such as death. By means of the research in the Marques de Souza Notary and Civil Register in the Book of Obituaries C-1, on analyzing the period from July 1916 to December 1929, we identified the causes of death that affected the Marques population and the daily life of the health service, in addition to mortality rates. Other aspects addressed in the Book of Obituaries C-1 were the regulations on civil register and the issue of secularization of cemeteries.

We identified several deaths registered as being due to "natural" *causa mortis* (70.66%). However, it was observed all "natural" deaths occurred without medical assistance. The deaths registered without medical assistance were declared *causa mortis,* besides those that were natural, only deaths that were violent such as suicide (asphyxia by hanging, 0.46%) and drowning (asphyxia by submersion, 1.84%) (Graph 4). Part of the declared deaths refer to infectious/contagious illnesses such as measles (0.23%), dysentery (0.23%), diphtheria (0.92%), typhoid fever (0.23%), typhus (0.23%), and pneumonia (0.69%); neuropathologies such as apoplexy (0.69%), meningitis (0.46%), and lethargic encephalitis (0.23%); and gastrointestinal disorders such as biliary lithiasis (0.23%), peritonitis (0.46%), and gastroenteritis (0.92%).

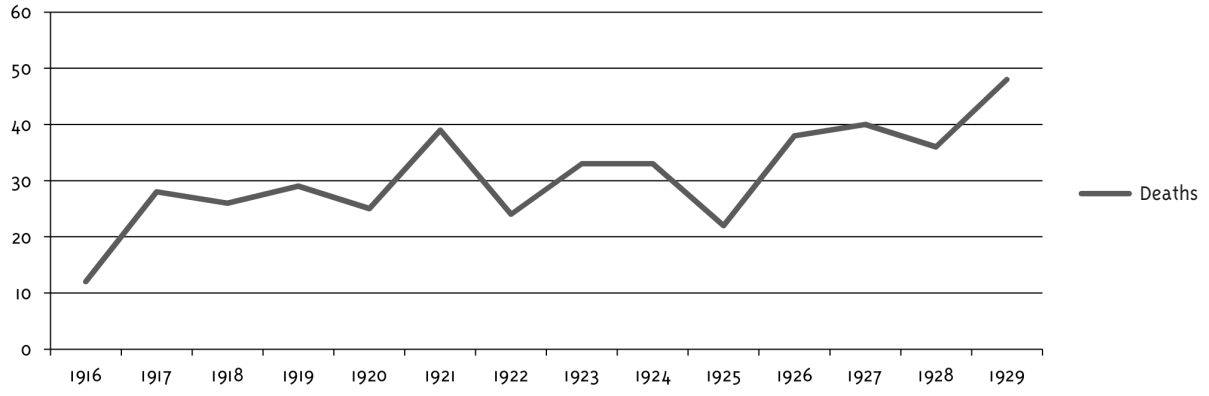
The number of registered deaths per year does not show large variations. In the last four years of the study period, from 1926 to 1929, we perceived an increase in the number of deaths in comparison to the two previous years. Due to the inaccuracy of classification of *causa mortis* during this period, we cannot affirm that this was due to some illness. According to Paes (2007), this inaccuracy in registry of causes of death is part of the national context.

In accordance to the researches, 84.98% of the registered deaths occurred at home (Graph 5). Despite the existence of health clinics, only 5.77% of the registered deaths occurred in these locations. If we compare the registered deaths with medical assistance (10.62%) and the registered deaths in health clinics (5.77%), it is possible to affirm that approximately 5% of the health services occurred at home.

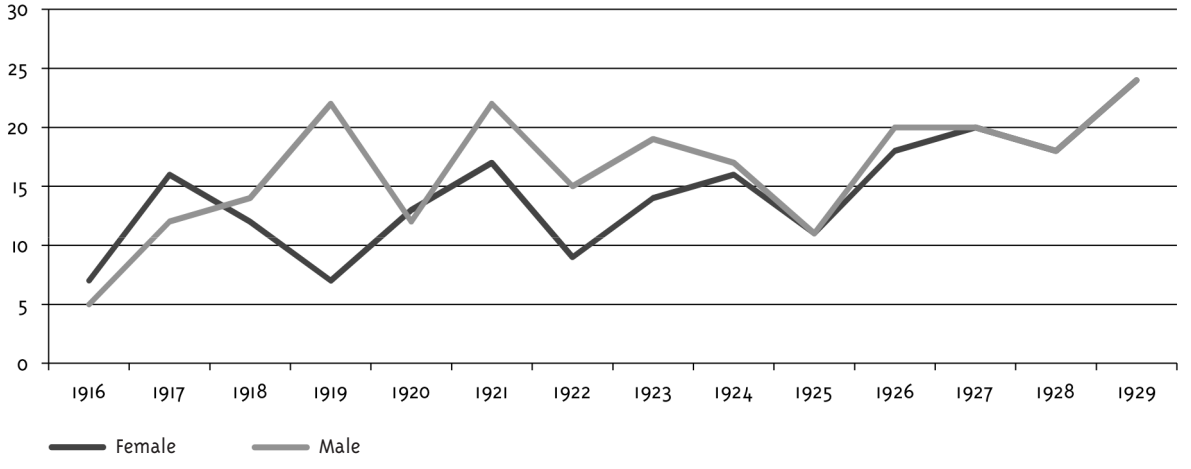
Table 1 - Proportion of deaths according to causa mortis

Causa mortis	%
Natural Death	70.66
Stillbirth	3.92
Asphyxiation by submersion	1.84
Asphyxiation by hanging	0.46
Apoplexy	0.69
Meningitis	0.46
Encephalitis lethargic	0.23
Diphtheria	0.92
Typhoid	0.23
Measles	0.23
Typhoid fever	0.23
Gastroenteritis	0.92
Biliary Lithiasis	0.23
Peritonitis	0.46
Nephritis	0.23
Double Pneumonia	0.69
Pulmonary Edema	0.46
Tuberculosis	0.46
Pneumonia	0.69
Bronchopneumonia	0.46
Pleural Empyema	0.23
Phlegmon Being	0.23
Arteriosclerosis	0.46
Puerperal Fever	0.23
Acute Appendicitis	0.23
Dysentery	0.23
Puerperal Septicaemia	0.23
Sepsis	0.69
Myocarditis	0.46
Enteritis	0.23
Cancer	0.23
Progressive Spinal Muscular Atrophy 0.23	0,23
Pneumonia and Peritonitis	0.23
Septic Peritonitis and Bronchopneumonia	0.23
Infection in the Spine	0.23
General Infection	0.23
Burn	0.23
Without defined cause	6.45
Not specified	3.92

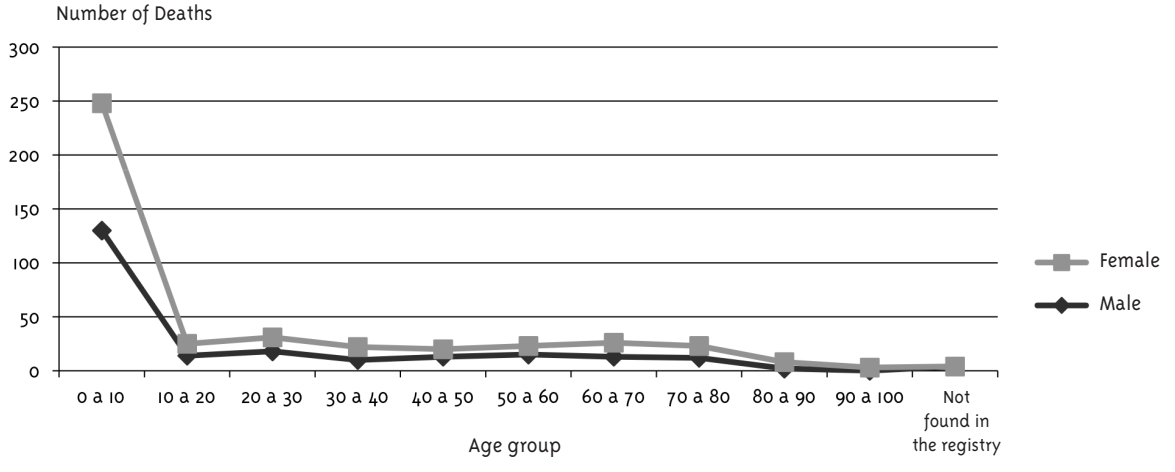
Graph 1 - Number of deaths per year in Marques de Souza, RS, 1916-1929



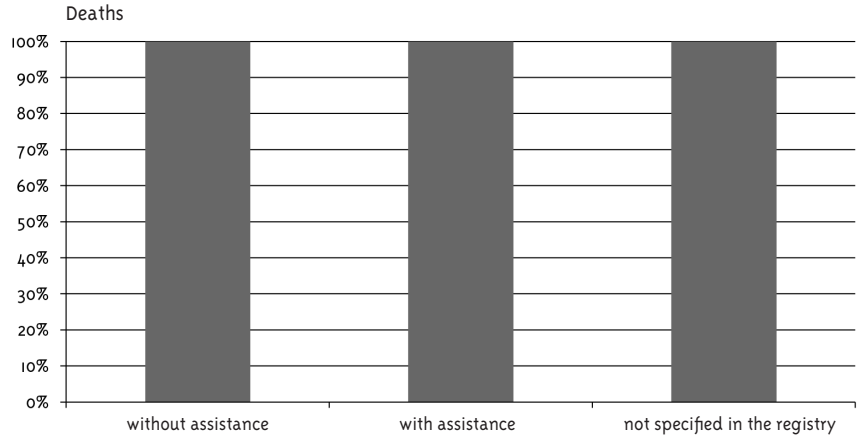
Graph 2 - Number of deaths by gender and year in Marques de Souza, 1916-1929



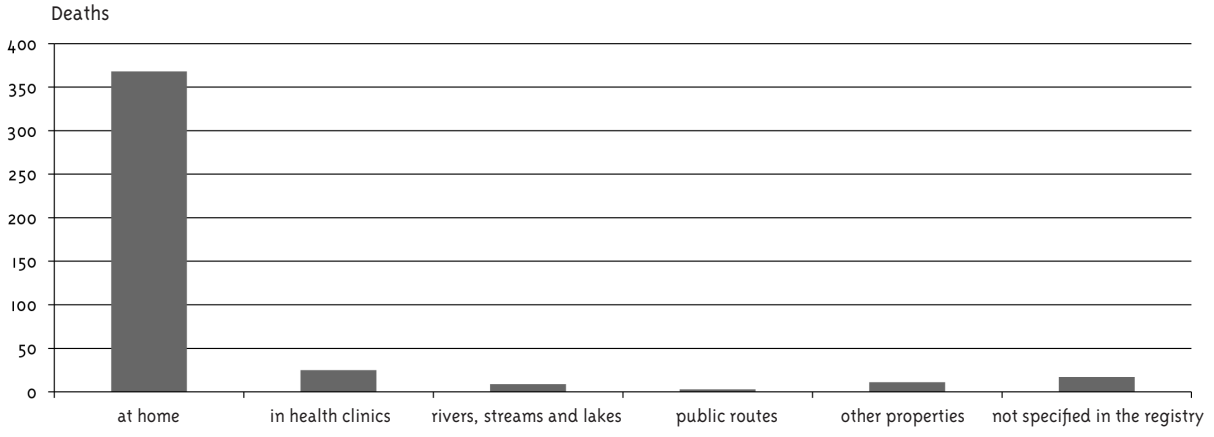
Graph 3 - Proportion (%) of deaths by age in Marques de Souza, RS, 1916-1929



Graph 4 - Proportion (%) of deaths as per medical assistance in Marques de Souza, RS, 1916-1929



Graph 5 - Proportion (%) of deaths as per the place of death in Marques de Souza, RS, 1916-1929



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