

Article

Challenges and possibilities of jurimetry in health judicialization: an investigation in Minas Gerais state from 2014 2020

Desafios e possibilidades da jurimetria na judicialização em saúde: uma investigação em Minas Gerais do período 2014 a 2020

Desafíos y posibilidades de la jurimetría en la judicialización de la salud: una investigación en Minas Gerais de 2014 a 2020

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Abstract

Objective: to analyze the health, drug, and antineoplastic drug lawsuits in Minas Gerais, in 2014 to 2020, from the comparison of different databases. **Methodology:** database pairing techniques were used to link lawsuits from the Minas Gerais State Court of Justice with the processes received by the Minas Gerais Health State Department, the difficulties encountered in identifying and quantifying these processes were described, and the results found were compared with information from other sources. **Results:** in the Minas Gerais State Court of Justice databases, 564,763 health lawsuits were identified in the studied period. There was a significant increase in the number of processes until 2017 and a stabilization, at high levels, from 2017 onwards. In comparison with the results obtained by the Institute of Higher Education and Research and the Laboratory of Innovation, Intelligence and Sustainable Development Goals there was a great divergence in the number of processes found. **Conclusion:** taking the health judicialization against Minas Gerais state as an example, it was not possible to directly find all the processes received by Minas Gerais Health State Department in the various databases provided by the Minas Gerais State Court of Justice, requiring integration between the different databases and an additional search to identify all processes.

Keywords

Judicialization of health. Right to health. Information Systems. Databases.

Resumo

Objetivo: analisar os processos de saúde, de medicamentos e de medicamentos antineoplásicos em Minas Gerais, em 2014 a 2020, a partir da comparação de diferentes bases de dados. **Metodologia:** foram utilizadas técnicas de pareamento de bases de dados entre os processos existentes no Tribunal de Justiça do Estado de Minas Gerais e os processos recebidos pela Secretaria Estadual de Saúde de Minas Gerais, descreveram-se as dificuldades encontradas na identificação e quantificação desses processos, e os resultados encontrados foram comparados com informações provenientes de outras fontes. **Resultados:** nas bases do Tribunal de Justiça de Minas Gerais foram identificados 564.763 processos de saúde. Houve um aumento significativo do número de processos até 2017 e uma estabilização, em patamares altos, a partir de 2017. Ao comparar com os resultados obtidos pelo Instituto Superior de Ensino e Pesquisa e pelo Laboratório de Inovação, Inteligência e Objetivos de Desenvolvimento Sustentável, houve uma importante divergência nos números de processos. Tomando como exemplo a judicialização de saúde contra o estado de Minas Gerais, não foi possível encontrar de forma direta todos os processos recebidos pela Secretaria Estadual de Saúde de Minas Gerais nas diversas bases fornecidas pelo Tribunal de Justiça de Minas Gerais, tendo sido necessária uma integração entre as diferentes bases de dados e uma busca adicional para identificar todos os processos. **Conclusão:** recomendam-se a padronização e organização dos dados dos processos judiciais em saúde, já na entrada de dados, para facilitar a realização de estudos quantitativos sobre a judicialização da saúde.

Palavras-chave

Judicialização da saúde. Direito à Saúde. Sistemas de Informação. Bases de Dados.

Resumen

Objetivo: analizar los juicios de salud, drogas y medicamentos antineoplásicos en Minas Gerais, en 2014 a 2020, a partir de la comparación de diferentes bases de datos. **Metodología:** técnicas de emparejamiento de bases de datos fueron utilizadas para vincular los juicios existentes en el Tribunal de Justicia del Estado de Minas Gerais con los procesos recibidos por la Secretaría de Estado de Salud de Minas Gerais, las dificultades encontradas en la identificación y cuantificación de esos procesos fueron descritas, y los resultados encontrados fueron comparados con informaciones de otras fuentes. **Resultados:** en las bases del Tribunal de Justicia del Estado de Minas Gerais se identificaron 564.763 procesos de salud. Hubo un aumento significativo en el número de procesos hasta 2017 y una

estabilización, en niveles altos, a partir de 2017. Sin embargo, al comparar con los resultados obtenidos por el Instituto Superior de Educación e Investigación y por el Laboratorio de Innovación, Inteligencia y Objetivos de Desarrollo Sostenible hubo una divergencia importante en el número de procesos. **Conclusión:** tomando como ejemplo la judicialización de la salud contra el estado de Minas Gerais, no era posible encontrar directamente todos los procesos recibidos por la Secretaría de Estado de Salud de Minas Gerais en las diversas bases de datos proporcionadas por el Tribunal de Justicia del Estado de Minas Gerais, lo que requería una integración entre las diferentes bases de datos y una búsqueda adicional a identificar todos los procesos.

Palabras clave

Judicialización de la salud. Derecho a la salud. Sistemas de Información. Bases de Datos.

Introduction

The judicialization of health is the frequent use of the Judiciary to arbitrate conflicts involving health care claims (1). In Brazil, this phenomenon began with lawsuits requesting medication for HIV/AIDS sufferers in the 1990s, and the number of lawsuits in the first instance increased by approximately 130% between 2008 and 2017 (2,3).

The phenomenon of judicialization in Brazil is multifaceted and complex, involving the public and private health sectors, various plaintiffs, the branches of government at different levels and the bodies and institutions involved with the issue (4). As it acts to guarantee rights, invoking the universality of the public system, judicialization is faced with a shortage of budgetary resources previously allocated to public health policies (5-7).

Despite the increase in lawsuits involving health, the real numbers are largely unknown in the country. The creation of the National Council of Justice in 2005 regularized the publication of statistics, the availability of aggregated data and accessibility. However, even though Brazil occupies a leading position in terms of publicizing judicial statistics, this is still a major challenge. Researchers have therefore used a variety of strategies to quantify the real total of cases (8), making jurimetry (9) the primary strategy for studies on the judicialization of health (10).

The need to assess the social impact of judicial decisions on health has led to national and international studies on the subject (2,11-13). However, the architecture of the courts' IT systems, the difficulty in classifying claims by subject, the way in which information is made available, the lack of standardization and the limitations in the provision of information by the courts make it difficult to obtain cases (1,2,8). Furthermore, in most courts, it is not compulsory to fill in fundamental information in the initial petition, one of the most important missing pieces of information being the International Classification of Diseases (ICD) code related to the claim (14). Finally, there is a lack of knowledge on the part of judicial agents on the subject, which leads to inconsistency when filling in subjects, the use of generic subjects, and a lack of specific information on the subject of the claim, among other things (15).

The aim of this article is to analyze health, drug and antineoplastic drug lawsuits in Minas Gerais between 2014 and 2020, by comparing different databases from the Minas Gerais State Court of Justice (TJMG) and the Minas Gerais State Health Department (SES-MG), describing the difficulties encountered in identifying and quantifying lawsuits, and comparing the results found with information from other sources.

Methodology

In order to identify and quantify the total number of health lawsuits, medicines in general and antineoplastic medicines in Minas Gerais, according to the year in which the lawsuit was filed, we used data from the information systems of the Minas Gerais State Health Department (SES-MG), the Minas Gerais Court of Justice (TJMG) and the National Council of Justice (CNJ). The data from the Judiciary was made available after the signing of Technical-Scientific Cooperation Agreement N°. 111/2020 (N°. Fiocruz 67/2020), between the Instituto René Rachou/Fundação Oswaldo Cruz (Fiocruz Minas) and the TJMG.

Information systems

The databases used in this work were extracted from seven different information systems. These are: the Judicial Process Management System (SIGAFJUD), the First Instance Computerized System (SISCOM), the Procedural Monitoring System (SIAP), the Digital Judicial Process (PROJUDI), the Electronic Judicial Process (PJe), the RADAR platform and the Unified Electronic Execution System (SEEU).

SIGAFJUD is an information system created by the SES-MG with the aim of managing information on health lawsuits and helping with the measures to be taken in relation to court decisions (16). It was developed from the Integrated System for the Management of Pharmaceutical Assistance (SIGAF), created in 2009 to record the dispensing of medications that the state of Minas Gerais was obliged to supply as a result of legal demands. SIGAFJUD and SIGAF have contributed to the greater efficiency of the Health Judicialization Service Center (NAJS), a sector created in 2013 by the SES-MG to help with demands arising from health lawsuits to which the state of Minas Gerais is a party (17,18).

The judiciary has also developed technological solutions to document and monitor the processing of legal cases. The SISCOM and SIAP systems were created to store information on the processing of physical first instance cases (19) and physical second instance cases (20) respectively. Both systems are still in use at the TJMG, due to the fact that proceedings still exist in paper form.

PROJUDI, also known as the CNJ System, is a system created to reproduce the history of court cases and their documents in electronic form, so that paper records are no longer needed, allowing the courts to modernize and reduce costs and time. The TJMG began implementing PROJUDI in 2017, with the pilot project in the Special Telephone Court. Since 2008, the project has been expanded to other areas of the TJMG.

Through Resolution N°. 185 of December 18, 2013, the CNJ instituted the adoption of the PJe, a new electronic procedural system developed by the CNJ itself in partnership with the state courts, as the official tool for monitoring electronic proceedings (21). In addition, the CNJ limited the possibility of courts hiring another system for this purpose. Thus, PROJUDI and other information systems for processing electronic cases, created or purchased by the courts, would have to be discontinued.

The exclusivity of the PJe was revoked with Resolution No. 335 of September 29, 2020, which created the Digital Platform of the Brazilian Judiciary, an environment whose purpose is to serve as an interface to integrate all of Brazil's courts (22). As a result, any electronic procedural system can now be used by the judiciary, as long as it meets the requirements established by the CNJ. With the

platform, which encompasses various electronic services, the CNJ hopes that the number of active systems used by the 91 Brazilian courts will be reduced from 55 to 14 over time (23).

The TJMG began implementing the PJe in 2012, in some courts in Belo Horizonte, and later in other courts in the capital and in cities in the interior. At the same time, physical cases were partially digitized. In 2019, implementation of the system was completed in the courts with civil jurisdiction and in the Special Courts of the other courts in Minas Gerais (24).

In 2018, in an effort to speed up searches for magistrates and their teams, the TJMG's IT team created RADAR, a platform for searching keywords within procedural documents that are processed electronically in the first and second instance. In this way, RADAR allows magistrates and their teams to search for repetitive cases and judge them in a similar way (25).

Through Resolution N^o. 280 of April 9, 2019, the CNJ made it mandatory for courts to adopt SEEU, a system developed by the CNJ in partnership with the Paraná Court of Justice (TJPR), which allows for the control of prison benefits, regime progression, conditional release, commutations and pardons granted to prisoners, bringing more efficiency to the Courts of Justice (26). In Minas Gerais, the system began to be implemented by the Court of Justice in 2016, even before the obligation imposed by the CNJ (27).

Databases

The Minas Gerais State Department of Health (SES-MG) has provided a database containing all the health cases that are registered in the SIGAFJUD system (SIGAFJUD Database) (SES-MG, 2018). When it comes to cases in which the state of Minas Gerais is a party, SIGAFJUD can be considered the gold standard for cases in which the state has an obligation to do something, since it is through SIGAFJUD that judicial orders, especially those for the supply of medicines, are complied with.

The TJMG's Business Intelligence (BI) team generated three databases for this research, covering the period from before 2008 to 2020/2021. A different extraction approach was used for each database (Figure 1).

The TJMG's first database (Database of Oncological and Immunosuppressant Medication Cases) was obtained through the RADAR system. The search in RADAR was carried out by the name of the drug, from a list defined by the research team, which selected Group L (antineoplastics and immunomodulators) from ANVISA's List of Medicines (28).

The second TJMG database (General Medicines Case Database), made available to Fiocruz, was obtained from the PJe, SISCO and SIAP systems. The database is made up of data on all cases that mention medicines whose names were defined using two approaches. In the first approach, drug names were searched for on the World Wide Web. In the second approach, the names of the medicines were defined through a five-step process:

1. the competencies of the processes in the health area were identified.
2. Based on these competencies, the subjects in the health area were selected.
3. Based on these issues, all cases were selected, regardless of jurisdiction, which had at least one health issue.
4. In this group of selected cases, a search was carried out for the names of possible medicines, following a textual rule defined by the TJMG. The rule consists of searching for the words: medicine, remedy, treatment, medical input and disease, succeeded by another word, or succeeded by

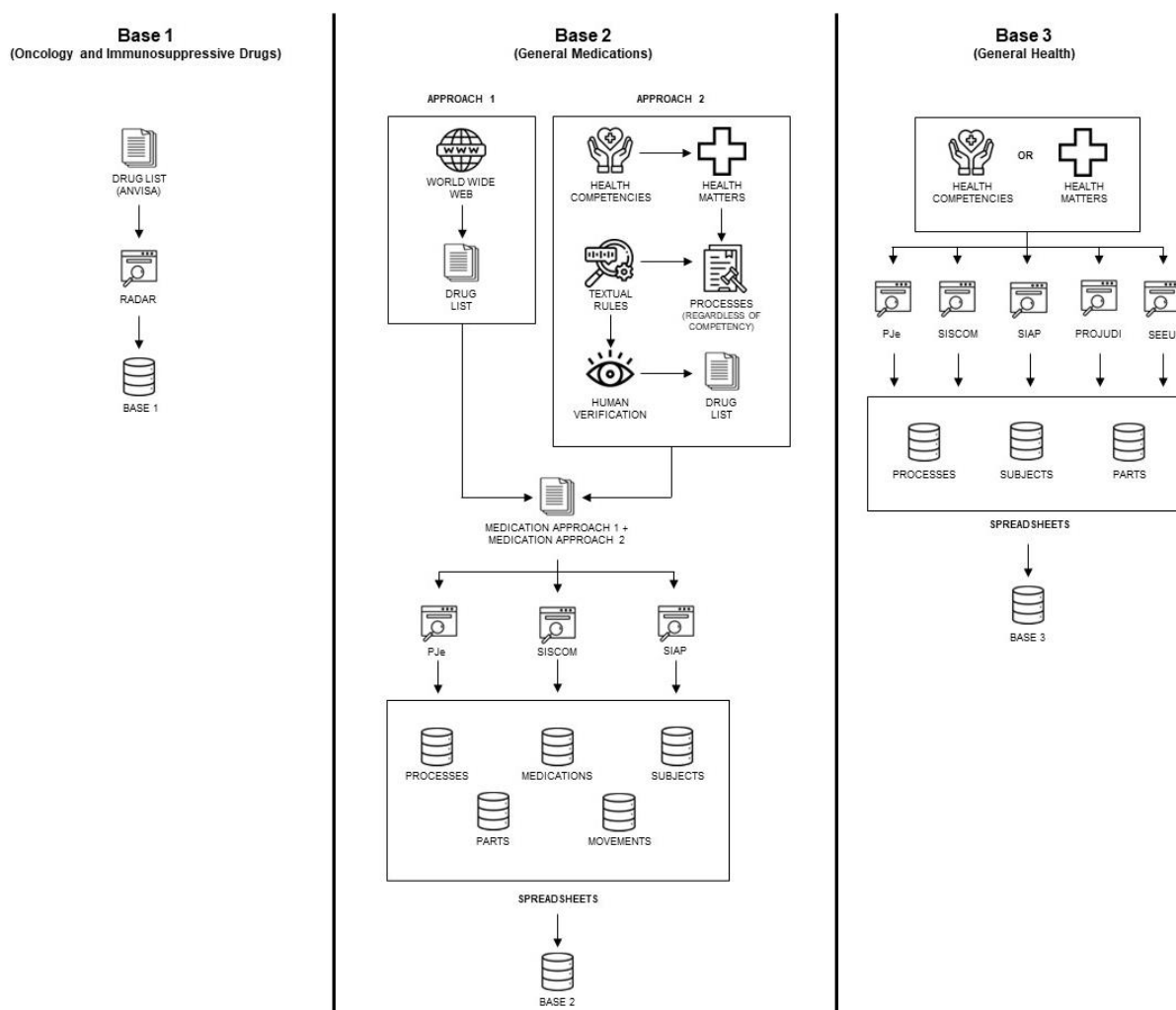
the words granted, pleaded, intended, indicated, which, shall, and, by means of, prescribed and their variations.

5. A human check was carried out on the terms returned by the search described above, in order to judge which terms would be kept or removed. The terms retained were added to the list of medicines generated from the first approach.

The information from the court cases was organized in spreadsheets containing data on the drugs, the cases, the parties involved in the case, the subjects and the movements of the cases.

A new search process made it possible to extract a third database (General Health Cases Database), also made available to Fiocruz. This search returned all of the TJMG's physical and electronic cases, regardless of the court where they were or are being processed, which had one of the health competencies or at least one of the health issues. The General Health Case Database was obtained from the PJe, SISCOM, SIAP, PROJUDI and SEEU systems. The information from the court cases was organized into spreadsheets containing information on the case, the parties involved in the case and the subjects of the cases.

Figure 1 – Diagram of the extraction processes for the databases of oncology drugs and immunosuppressants, drugs in general and health in general



Source: own elaboration

For the cases in the three databases made available by the TJMG, the CNJ's unique numbering and the TJMG's numbering for procedural movements in the second instance were informed. For the General Health Case Database, the "Source Document Number" was also provided, which is the number of the case, document or normative act that gave rise to the case in the 2nd instance. The main characteristics of the databases were identified by the project team, excluding cases that potentially dealt with other topics, such as social security law, criminal law, traffic codes and others. After processing, the databases were compared as described below.

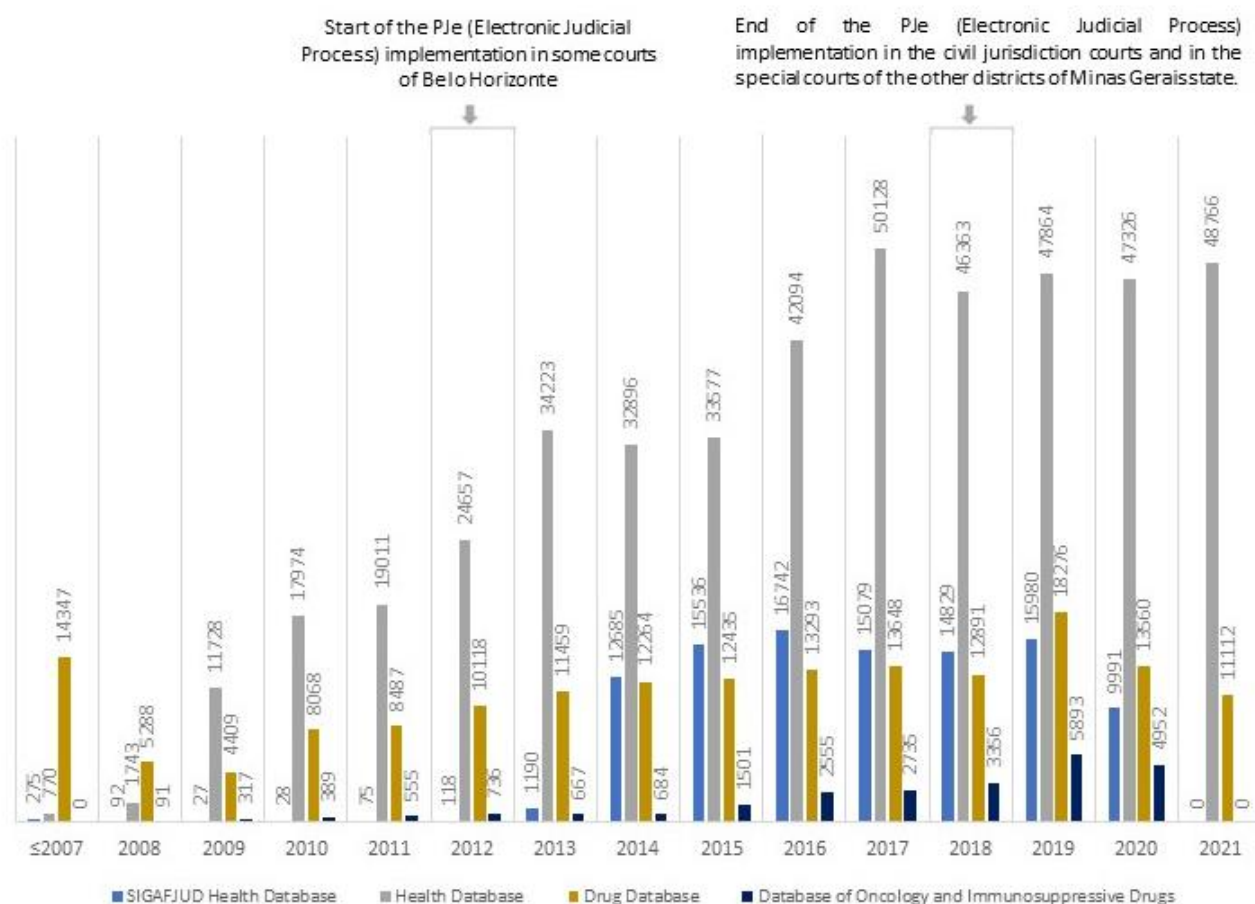
The databases of the SES-MG and the Judiciary were compared in order to identify health cases in SIGAFJUD that were not located in the databases provided by the TJMG. The temporal evolution of the number of cases was also evaluated. The results found were compared to the information provided by INSPER (2) and the CNJ (23) on the number of health judicialization cases in Minas Gerais.

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Results

The SIGAFJUD database identified 103,452 cases with an entry date up to January 15, 2021. There has been a significant increase in the number of cases since 2014 and a drop in 2020, possibly due to the COVID-19 pandemic. The years with the highest number of cases are 2016 and 2019. The General Health Case Base contained 459,120 cases, with the most recent case distributed on December 31, 2021. It can be seen that the year with the highest number of cases was 2017, and there was no reduction in the number of cases in 2020. The General Medicines Case Base had 169,757 cases, with the most recent case distributed on July 14, 2021. It can be seen that the year with the highest number of cases was 2019, with a reduction in 2020. The Oncological and Immunosuppressive Medicines Case Base has 24,465 cases. It can be seen that 2019 was the year with the highest number of cases, followed by a reduction in 2020. Figure 2 also shows the start (2012) and end (2019) of the implementation of the PJe in Minas Gerais.

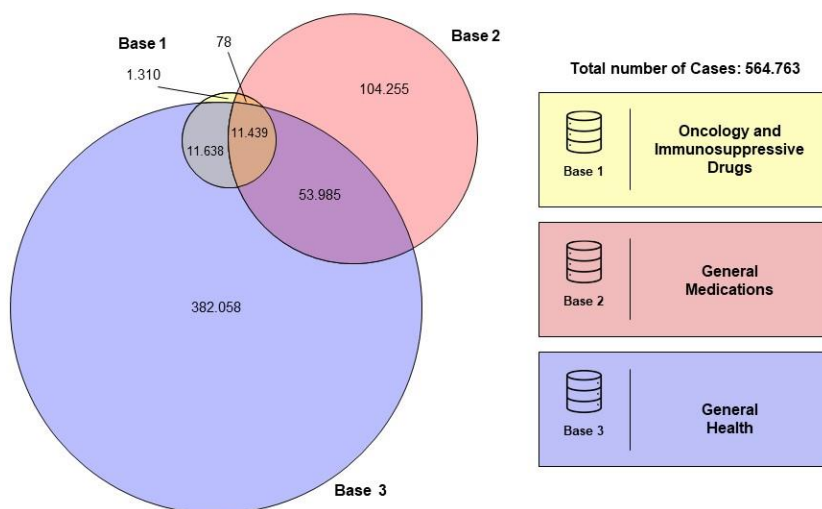
Figure 2 - Cases by year of filing, SIGAFJUD Health Database, Database of General Health Cases, Database of General Medicines, Database of Oncological Medicines and Immunosuppressants, in Minas Gerais, in the period before 2007 to 2020/2021 (for the Medicines Database, the year 2021 has partial data)



Source: own elaboration.

The Oncology and Immunosuppressant Medicines Database should have been included in the General Medicines Database, which should have been included in the General Health Database. In practice, this did not happen, as shown in Figure 3. By linking the three databases, a total of 564,763 health lawsuits were identified, which is considered the best estimate of the number of health lawsuits in Minas Gerais during the period studied. It is interesting to note that the majority of the Immunological and Immunosuppressive Medicines cases (Database 1) are included in the General Health Database (Database 3), but an important part of the General Medicines cases were only identified by Database 2.

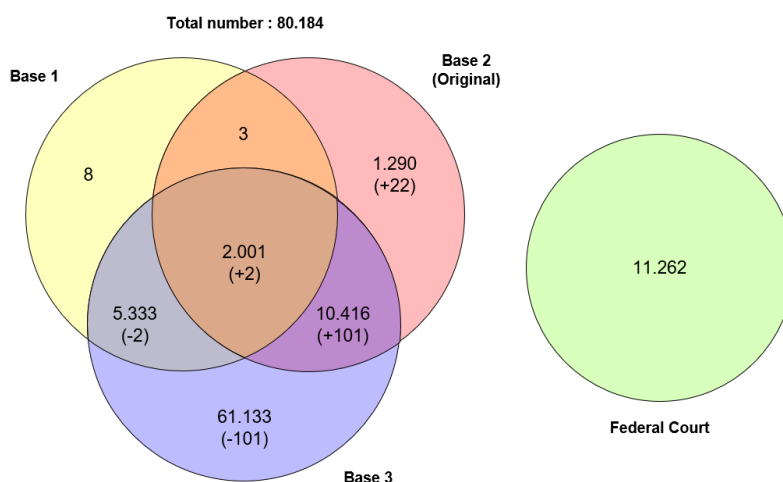
Figure 3 - Total number of unique cases found in the three databases of the Minas Gerais Court of Justice from 2008 to 2021 (the size of the circles reflects the number of cases)



Source: own elaboration.

Figure 4 shows the number of cases common to Base 2, the original TJMG database, and the SIGAFJUD database. A total of 80,184 cases were found in the TJMG. To this figure, 11,262 Federal Court cases were added and 36 duplicate cases were subtracted, resulting in a total of 91,410 cases. Thus, 12,042 cases in SIGAFJUD were not identified in the TJMG database, which corresponds to the difference between the 103,452 cases received in the SIGAFJUD database and the 91,410 cases found in the TJMG database. By using the percentage of 11.6% (12,042/103,452) of SIGAFJUD cases not found in the TJMG to correct the estimated total of health judicialization cases in Minas Gerais, a total of 630,276 (564,763 x 1.116) health judicialization cases were found in the period studied.

Figure 4 - Number of cases found in SIGAFJUD and in the TJMG or identified as Federal Justice, Minas Gerais, from before 2008 to 2021



Source: own elaboration

The data obtained in this study was compared with information from the study carried out by INSPER (2) and with data made available by the CNJ's Laboratory for Innovation, Intelligence and Sustainable Development Goals (LIODS) (13) (Table 1).

Table 1 - Comparison of the number of cases for Minas Gerais found in this study and the information provided by INSPER and LIODS/CNJ, from before 2014 to 2021

year	Inspere (TJ - LAI)		LIODS (DataJud)		Base 1 + Base 2 (Filtered) + Base 3		
	Number of cases	Sum (1st and 2nd Ins.)	Number of cases	% in relation to Inspere	Number of cases	% in relation to Inspere	% in relation to LIODS
< 2014	4,796 (1ST) 28,364 (2ND)	33.160	-	-	151.683	457,42 ↑	-
2014	1.998 (1ST) 7.404 (2ND)	9.402	-	-	39.377	418,81 ↑	-
2015	2.268 (1ST) 8.612 (2ND)	10.880	29.927	275,06 ↑	40.295	370,35 ↑	134,64 ↑
2016	3.625 (1ST) 9.453 (2ND)	13.078	85.011	650,03 ↑	49.385	377,61 ↑	58,09 ↓
2017	5.546 (1ST) 10.397 (2ND)	15.943	42.416	266,04 ↑	58.388	366,22 ↑	137,65 ↑
2018	-	-	36.783	-	54.275	-	147,55 ↑
2019	-	-	46.809	-	60.239	-	128,69 ↑
2020	-	-	203.177	-	55.598	-	27,36 ↓
2021	-	-	-	-	55.416	-	-
Sum		82.463	444.123	-	564.656	-	-

Source: own elaboration

The studies found different numbers of cases in all the years in which the comparison was possible. INSPER's work presents the number of cases in the first and second instance separately and does not identify the number of cases in the first and second instance, as this study does. Therefore, in order to be able to compare the results, the numbers of cases presented were added together, in the knowledge that this could result in some duplication of cases.

It can be seen that INSPER had significantly fewer cases retrieved than the database used by LIODS and the TJMG Health Database, even with the risk of having duplicate cases. The LIODS work had around 2.7 times more cases found than INSPER, and the TJMG Health Database had around 3.7 to 4.2 times more cases found than INSPER. When the figures for LIODS and the TJMG Health Database are compared, it can be seen that of the six years in which the comparison was possible, in four years this work managed to recover more cases, around 1.3 to 1.5 times more. In addition, the TJMG Health Database did not identify the peaks of 2016 and 2020 observed in the LIODS work. These were the only years in which the number of cases retrieved by LIODS was higher than the number reported in this paper.

Information on the 12,042 cases not identified in the databases produced by the TJMG was sent to the agency for a new search. Of these, 11,239 cases were found in the first instance and 489 in the second, representing 97.4% of the total. The main reason for not identifying these cases was the subject used in their classification, the five most frequent of which were: "obligation to do / not to do",

“advance relief / specific relief”, “constitutional guarantees” and “obligations”. Although these subjects exist in the Unified Procedural Table (TPU), proposed by the CNJ, they are non-specific in relation to the subject matter and refer more to procedural procedures, preventing them from being identified as health judicialization processes.

Discussion

The methodology used in this article and the comparative analysis carried out showed that there is great difficulty in obtaining quantitative information on health lawsuits. One of the reasons for this is that there is no standardization in the entry of data on health lawsuits, which leads different research groups to have to use different strategies to generate data for their studies. Figueiredo et. al (14) proposed making it compulsory to fill in 46 variables in the initial protocol for health lawsuits and recommended the use of the standard PJe form by all Brazilian courts to improve the classification and retrievability of information on the judicialization of health.

When using the PJe, the initial formation of the case is the responsibility of the lawyer, defender or attorney, who fills in the procedural information on behalf of the plaintiff, such as the procedural class, the qualification of the parties and the subject of the claim. Thus, the information entered into the judicial system is subject to the discretion of the lawyer, with some open fields being filled in without standardized typing. In addition, in the same lawsuit there can be discussion of various legal issues, which allows for hierarchical ramifications in the subject classification, which can result in the subject “health” appearing among the secondary subjects.

One alternative to improve this process would be to train professionals to correctly classify the “subject” of cases; another would be to review the classification a posteriori, within the courts. Another important measure would be to remove unspecific "subjects" from the Unified Procedural Table (TPU), directing them towards the correct classification of cases.

Law schools and state and national bar associations should consider the need for the correct classification of cases to be a relevant issue not only for health law, but for other areas as well, because it is the correct classification that allows cases to be retrieved for subsequent analysis, whether quantitative or qualitative.

The existence of cases classified with a health “subject” that do not deal with the topic meant that efforts had to be made to remove cases that only mentioned unspecific names, without actually referring to medicines. On the other hand, one must consider the possibility of losing health cases that were not found using this classification, as shown by the comparison with the data provided by SES-MG.

The “competence” variable, present in the initial petition, has the capacity to help identify health lawsuits, as it refers to the specialized courts and chambers that receive all lawsuits on a given subject. In places where there are specialized health courts, the “jurisdiction” variable itself acts as a filter to find the health lawsuits, which are directed to the places with exclusive jurisdiction to judge them. However, specialized courts are usually only set up in large districts. In the case of Minas Gerais, which is the Brazilian state with the most municipalities, most of the courts are small and have few courts or a single court, with jurisdiction to judge the most varied issues.

Due to its relevance to the quality of the information available in digital form on health judicialization processes, it is important to consider the beginning and end of the implementation of

the Electronic Judicial Process (PJe) system as relevant milestones when assessing the completeness of the recovery of health judicial processes carried out in this research.

It must be acknowledged that the existence of the Radar system and the availability of the BI team at the TJMG were fundamental in extracting high quality data, based on the object of interest of the research, which was oncological medication. It is worth mentioning that it is possible to carry out this search in PJe cases and in the second instance, which, because they are electronic or digitized, make it possible to search for keywords. However, there are still cases prior to the PJe that have not been digitized, which is why it is considered that the data has become more complete over time. For this reason, and due to the availability of comparative data, the year 2014 was chosen as the cut-off point for external comparisons, a year in which the implementation of the PJe in Minas Gerais was already well advanced.

An important limitation of this analysis is that the data for the years 2020 and 2021 may have suffered a significant impact from the COVID-19 pandemic, either because the processing of legal cases was suspended for several months (29), or because of the emergence of cases related to the pandemic itself (30), or because of the delay in entering cases into SIGAFJUD by the SES-MG team. The data for the pandemic and post-pandemic years deserves further analysis, in order to understand the impact of the pandemic on the phenomenon of the judicialization of health.

With the coexistence of different systems at the TJMG, duplicate cases were identified as a result of the digitization of physical files. As a result, a few physical cases were closed in SISCO and continued in PJe, with the systems overlapping. The duplicates were identified and eliminated.

This project had three different sources of data on lawsuits in the TJMG and, even when linking to the lawsuits in SIGAF, was unable to identify all the TJMG lawsuits that were in SIGAFJUD. The SIGAFJUD cases are certainly health cases, and around twelve thousand SES/MG health cases were not found in the TJMG databases, nor were they from the Federal Court. These cases were only found when their exact numbering was sent to the TJMG BI team, for the reasons discussed above.

The information in SIGAFJUD is entered manually as the cases arrive at SES-MG, and is subject to delays and typing errors, a lack of standardized information and the failure to fill in some variables. Thus, combining the TJMG and SIGAFJUD databases is an example of a strategy for supplementing information. It is worth noting that some information, especially specific procedural information, only exists in the TJMG databases. In addition, all cases in which the demand was not for the state of Minas Gerais only exist in the TJMG databases.

Compared to the results found by INSPER (2) and LIODS (13), it can be seen that the three studies made methodological efforts to improve the quality of the data available for research into the judicialization of health. The INSPER survey (2) used information from cases indexed as health claims in the courts, information obtained by computerized search on court websites and qualitative research. LIODS (13) used data from the Ministry of Health, the National Database of the Judiciary (DATAJUD), provided by the state courts themselves, and qualitative research carried out with target audiences from the Executive and Judiciary branches.

Despite the efforts made to search for, statistically analyze and process judicial data, the three surveys found very different results. This reinforces the need to organize and standardize data, as stated by INSPER (2). Poorly filed cases, classified in the wrong categories and launched inappropriately, as mentioned by Oliveira and Cunha (8), and verified in this study, make it difficult for the Brazilian judiciary to manage information and carry out research on the subject of the judicialization of health.

Therefore, platform initiatives that integrate systems and unify processes, such as the Digital Platform of the Judiciary, are welcome, as they allow judicial actors and researchers to access data generated by courts throughout Brazil in a unified and reliable way.

Conclusion

It is clear that it is difficult to obtain real figures on health lawsuits. This is due to the lack of standardization and organization of the information in the existing databases, which generates different answers as to how the phenomenon of the judicialization of health is growing in the country. Given the lack of precise data, the results of scientific research on this subject are also limited, which requires researchers to take a critical and careful look at their conclusions. Thus, in the academic field, this work makes an important contribution in that it confirms and exemplifies the challenges and possibilities of using jurimetry.

Linking databases is an important resource for obtaining complete information on judicial proceedings. For studies and organization of judicialization data, an attractive alternative would be to expand the initiative to cross-reference information with external databases, such as SIGAFJUD and the Unified Health System (SUS) databases. For this purpose, the ideal identification is by means of data from the Individual Taxpayer Identification Number (CPF) or, alternatively, by the plaintiff's National Health Card (CNS). It is therefore suggested that the standardization of data should begin as soon as the lawsuit is filed, with the information in the initial petition being filled out in a structured way, with the standardization of information being maintained in all subsequent phases of the lawsuit, as proposed by Figueiredo et al. (14).

The challenges of obtaining data for research into the judicialization of health are great. However, the use of jurimetrics offers possibilities for better understanding and obtaining the information needed for studies on judicialization. The multidisciplinary relationship between epidemiology, statistics, computer science, law and public health must be strengthened in order to produce knowledge that is indispensable for judicial organization and the planning of public health policies.

Conflict of interest

The authors declare that there is no conflict of interest.

Authors' contribution

Castro MSM de contributed to the conception/design of the article, data analysis and interpretation, writing the article, critically reviewing its content and approving the final version of the article. Fernandes GL contributed to the conception/design of the article, data analysis and interpretation, critical revision of its content and approval of the final version. Figueiredo IVO contributed to the conception/design of the article, data analysis and interpretation, writing of the article, critical review of its content and approval of the final version. Silva GDM da contributed to the conception/design of the article, data analysis and interpretation, critical revision of the article and approval of the final version. Miranda WD de contributed to writing the article, critically reviewing its content and approving the final version. Magalhães Júnior HM contributed to the conception/design of the article, data analysis and interpretation, critical revision of its content and approval of the final version. Santos FP dos contributed to the critical review of the article's content and approval of the final version. Sousa RP de contributed to the conception/design of the article, critical review of its content and approval of the final version.

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References

1. Vieira FS. Direito à saúde no Brasil: seus contornos, judicialização e a necessidade da macrojustiça. Instituto de Pesquisa Econômica Aplicada. 2020; p. 76.
2. Insper. Judicialização da saúde no Brasil: perfil das demandas, causas e propostas de solução. Conselho Nacional de Justiça. 2019; p. 174.
3. Braga BSF, Oliveira Y, Ferreira MA. Gastos com a judicialização de medicamentos: uma revisão integrativa. *Revista de Direito Sanitário*. 2021; 21(3):22.
4. Anjos ECS, Ribeiro DC, Moraes LV. Judicialização da saúde: uma revisão sistemática de literatura das iniciativas de diálogo institucional intersetorial. *Cadernos Ibero-Americanos de Direito Sanitário*. 2021;10(1):113–128.
5. Mapelli Júnior R. Judicialização da saúde: regime jurídico do SUS e intervenção na administração pública. São Paulo: Atheneu; 2017.
6. Cova SC. Judicialização da saúde. Uma revisão sistêmica. *Brazilian Journal of Health Review*. 2020;3(3):6244–6251.
7. Miranda WD, et al. A encruzilhada da judicialização da saúde no Brasil sob a perspectiva do Direito Comparado. *Cadernos Ibero-Americanos de Direito Sanitário*. 2021;10(4):197–223.
8. Oliveira FL, Cunha LG. Os indicadores sobre o Judiciário brasileiro: limitações, desafios e o uso da tecnologia. *Revista Direito GV*. 2020 [cited on jul. 17, 2022];16(1):1948. Available on: https://www.saude.mg.gov.br/images/documentos/resolu%C3%A7%C3%A3o_4429.pdf.
9. Salzano JGF. Virtualização do processo: jurimetria, inteligência artificial e processo eletrônico no ordenamento jurídico. 2020;14(1):15.
10. Nunes D, Duarte FA. Jurimetria e tecnologia: diálogos essenciais com o direito processual. *Revista de Processo*. 2020; 299:407–450.
11. Ferraz OLM. Health as a Human Right: The Politics and Judicialization of Health. New York: Cambridge University Press; 2021.
12. Freiberg A, Espin J. Towards a Taxonomy of Judicialization for Access to Medicines in Latin America. *Global Public Health*. 2021. DOI: 10.1080/17441692.2021.1892794.
13. Conselho Nacional de Justiça. Judicialização e Sociedade: Ações para Acesso à Saúde Pública de Qualidade. Laboratório de Inovação, Inteligência e Objetivos de Desenvolvimento Sustentável – LIODS, 2021; p. 164.
14. Figueiredo IVO, Silva GDM, Miranda WD, Magalhães Júnior HM, Santos FP, Castro MSM et al.. A jurimetria da judicialização da saúde: uma proposta de variáveis obrigatórias para a petição inicial do Processo Judicial Eletrônico (PJe). In: *Judicialização da saúde nos municípios: teses Jurídicas, diagnósticos e experiências de gestão*. Brasília, DF: CONASEMS - Conselho Nacional de Secretarias Municipais de Saúde, 2022.
15. Ronchi RG. Demandas de saúde pública: construindo parâmetros objetivos para a atuação do poder judiciário. *Escola Judicial Des. Edésio Fernandes – TJMG*, 2021; p. 19.
16. Melo LV. A função do processo coletivo na judicialização da saúde: um estudo de caso sobre o Estado de Minas Gerais. Programa de Mestrado em Administração Pública, 2017.
17. Minas Gerais. Lei nº 21.077, de 27 de dezembro de 2013. Altera as Leis Delegadas nº 179, de 1º de janeiro de 2011, que dispõe sobre a organização básica e a estrutura da Administração Pública do Poder Executivo do Estado, e nº 180, de 20 de janeiro de 2011, que dispõe sobre a estrutura orgânica da Administração Pública do Poder Executivo do Estado de Minas Gerais, e dá outras providências. *Diário Oficial Minas Gerais, Belo Horizonte, MG, 27 dez. 2013*.
18. Secretaria de Estado de Saúde de Minas Gerais. Resolução nº 4429, de 01 de agosto de 2014. Regulamenta a competência do Núcleo de Atendimento à Judicialização da Saúde e dá outras providências. [cited on jul. 17, 2022]. Available on: https://www.saude.mg.gov.br/images/documentos/resolu%C3%A7%C3%A3o_4429.pdf.
19. Bilheiro BO, Prata LGC. O direito fundamental de acesso à justiça sob a ótica dos juizados especiais estaduais cíveis: uma análise da tensão entre efetividade e direitos processuais fundamentais na comarca de Juiz de Fora–MG. *Revista Estação Científica*. 2021;(3):20.
20. Lima TLP, Souza ALCB. O processo judicial eletrônico no âmbito das varas cíveis do estado de Rondônia. *JusFARO*. 2021;2(2).
21. Conselho Nacional de Justiça. Resolução nº 185, de 18 de dezembro de 2013. Institui o Sistema Processo Judicial Eletrônico - PJe como sistema de processamento de informações e prática de atos processuais e estabelece os parâmetros para sua implementação e funcionamento. [cited on jul. 17,

2022]. Available on:

<https://atos.cnj.jus.br/atos/detalhar/1933>.

22. Conselho Nacional de Justiça. Resolução nº 335, de 29 de setembro de 2020. Institui política pública para a governança e a gestão de processo judicial eletrônico. Integra os tribunais do país com a criação da Plataforma Digital do Poder Judiciário Brasileiro – PDPJ-Br. Mantém o sistema PJe como sistema de Processo Eletrônico prioritário do Conselho Nacional de Justiça. [cited on jul. 17, 2022]. Available on: <https://atos.cnj.jus.br/atos/detalhar/3496>.

23. Conselho Nacional de Justiça. Portal vai unificar acesso a serviços eletrônicos da justiça. Conselho Nacional de Justiça. 2022. [cited on jul. 17, 2022]. Available on: <https://www.cnj.jus.br/portal-vai-unificar-acesso-a-servicos-eletronicos-da-justica/>.

24. Tribunal de Justiça de Minas Gerais. TJMG completa implantação do PJe civil. Tribunal de Justiça do Estado de Minas Gerais. 2019. [cited on jul. 17, 2022]. Available on: <https://www.tjmg.jus.br/portal-tjmg/noticias/tjmg-completa-implantacao-do-pje-civil.htm#.Ys2NdnbMJPY>.

25. Tribunal de Justiça de Minas Gerais. Plataforma Radar aprimora a prestação jurisdicional. Tribunal de Justiça do Estado de Minas Gerais. 2018. [cited on jul. 17, 2022]. Available on: <https://www.tjmg.jus.br/portal-tjmg/noticias/plataforma-radar-aprimora-a-prestacao-jurisdicional.htm#.Ys2KlXbMJPY>.

26. Conselho Nacional de Justiça. Resolução nº 280, de 09 de abril de 2019. Estabelece diretrizes e parâmetros

para o processamento da execução penal nos tribunais brasileiros por intermédio do Sistema Eletrônico de Execução Unificado – SEEU e dispõe sobre sua governança. [cited on jul. 17, 2022]. Available on: <https://atos.cnj.jus.br/atos/detalhar/2879>.

27. Tribunal de Justiça de Minas Gerais. TJMG compartilha experiência da implantação do SEEU. Tribunal de Justiça do Estado de Minas Gerais. 2019. [cited on jul. 17, 2022]. Available on: <https://www.tjmg.jus.br/portal-tjmg/institucional/corregedoria/noticias/tjmg-compartilha-experiencia-de-implantacao-do-seeu.htm#.Ys2Jk3bMJPY>.

28. Brasil. Ministério da Saúde. Secretaria de Ciência, Tecnologia, Inovação e Insumos Estratégicos em Saúde. Departamento de Assistência Farmacêutica e Insumos Estratégicos. Relação Nacional de Medicamentos Essenciais: Renome 2020 [recurso eletrônico]. Brasília: Ministério da Saúde; 2020.

29. Gonçalves MC. Atos processuais e prazos no âmbito da pandemia da doença COVID-19. Associação de Estudos de Direito Regional e Local (AEDRL), 22 de jun de 2020. [cited on jul. 17, 2022]. Available on: <https://hdl.handle.net/1822/65830>.

30. Figueiredo IVO, Castro MSM de, Silva GDM da, Miranda WD de, Magalhães Júnior HM, Paes-Sousa R. Judicialization of administrative measures to tackle the COVID-19 pandemic in Brazil. RSP. 28 de agosto de 2020; 71:189–211.

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