

Short communication

The Judicialization of Health in the Age of Big Data

A Judicialização da Saúde na era do Big Data

La Judicialización de la Salud en la era del Big Data

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Abstract

The judicialization of health in Brazil, through legal actions to guarantee access to medicines and health services, complicates health policies and serves different interests. Accurately accounting for these actions is challenging, highlighting divergences between data sources. Analysis of data from Minas Gerais reveals significant numbers, but highlights challenges in classifying and standardizing information. Research showed that, with data mining techniques and standardization of the definition of health processes, it is possible to move in this direction. Tools like JUDJe promise to improve understanding of the judicialization of health, facing technological, privacy and security challenges. It is concluded that there is a need to widely incorporate these tools and standardize matters, to benefit the management of the health sector throughout Brazil.

Keywords: Judicialization of health; Data base; Big data.

Resumo

No Brasil, a judicialização da saúde, que é o uso de ações judiciais para garantir acesso a medicamentos e serviços de saúde, atende a interesses diversos e torna mais complexa a gestão das políticas públicas de saúde. A produção de estatísticas sobre essas ações é desafiadora, pois existem grandes divergências entre fontes de dados. Em Minas Gerais há um número significativo de ações, com grandes desafios na classificação e na padronização das informações. A pesquisa realizada mostrou que, com técnicas de mineração de dados e padronização da definição de processos de saúde, é possível avançar nessa direção. Ferramentas como o JUDJe objetivam facilitar a compreensão da judicialização da saúde, utilizando tecnologia de ponta e respeitando as regras de privacidade e segurança. Conclui-se pela necessidade de incorporar amplamente essas ferramentas e padronizar os assuntos, para beneficiar a gestão do setor de saúde em todo o Brasil.

Palavras-chave: Judicialização da saúde; Bases de dados; Big data.

Resumen

La judicialización de la salud en Brasil, a través de acciones legales para garantizar el acceso a medicamentos y servicios de salud, complica las políticas de salud y atiende intereses diferentes. Contabilizar con precisión estas acciones es un desafío, lo que pone de relieve las divergencias entre las fuentes de datos. El análisis de datos de Minas Gerais revela cifras significativas, pero destaca los desafíos en la clasificación y estandarización de la información. Investigaciones muestran que, con técnicas de minería de datos y estandarización de la definición de procesos de salud, es posible avanzar en esa dirección. Herramientas como JUDJe prometen mejorar la comprensión de la judicialización de la salud, enfrentando desafíos tecnológicos, de privacidad y de seguridad. Se concluye que es necesario incorporar ampliamente estas herramientas y estandarizar las materias, para beneficiar la gestión del sector salud en todo Brasil.

Palabras clave: Judicialización de la salud; Base de datos; Grandes datos.

Health is the subject of lawsuits that demand services and products in volumes and costs that are sometimes much higher than those foreseen by managers. In the public sector, citizens take legal action to guarantee their constitutional rights. In the supplementary health sector, consumers litigate under the Health Plans Law N°. 9.656/98, the resolutions of the National Supplementary Health Agency - ANS, and the Civil and Consumer Codes, as well as the Federal Constitution - 1988^(1,2).

Even today, quantifying the number of health processes in Brazil is not a simple task. The criteria for defining what a health case is can be established according to the class, subject or documents included in the case and can vary between the different data sources available.

The classification of the subject of the case depends on the discretion of the lawyer at the time of the initial filing, who may not be aware of the importance of correct classification and may not select all the subjects in the case or leave health as a secondary subject. Only since 2019 has the classification of health become a “main subject” in the tables of court cases.

Based on a study carried out in partnership with the Minas Gerais State Court of Justice, the Health and Social Protection Policy Research Group found very discrepant figures between the data collected from the TJMG and the figures made available by the National Council of Justice ⁽³⁻⁵⁾. A more recent update of this comparison can be seen in Table 1 below.

The latest update of the 'Statistics of the Judiciary' panel organized by the National Council of Justice is dated December 31, 2023. In this database, which we call National Council of Justice Panel 23, two ways of obtaining data on health-related cases in Brazil and MG were identified. The first way to search (“Search 1”) is by using the Right to Health’ filter, which takes you to the Right to Health procedural statistics' tab. In this tab there is no filter by UF. To obtain cases from Minas Gerais, it is necessary to select the acronym of the court, and it is possible to select cases by the acronym Minas Gerais State Court of Justice and Federal Regional Court 1st Region. For Federal Regional Court 1st Region it is not possible to filter only MG cases and there was no data for Regional Federal Court 6th Region, so the search was restricted to Minas Gerais State Court of Justice.

The second way (“Search 2”) is by selecting the subject “Health Law” in the panel, followed by selection by year and selection by federation unit (UF). For MG, cases from the Minas Gerais State Court of and the Federal Court (Federal Regional Court 1st Region and Regional Federal Court 6th Region) were found. In 2023, 2022 and 2020, the Minas Gerais State Court of Justice was the third court with the most cases and in 2021 it was the fourth. In 2020 and 2021 the Federal Justice data for MG comes from Federal Regional Court 1st Region, and 2022 and 2023 are from Regional Federal Court 6th Region, created in 2021.

Table 1. Number of cases in Minas Gerais and in the country according to the Laboratory of Innovation, Intelligence and Sustainable Development Goals/National Database of the Judiciary (LIODS/DATAJUD), National Council of Justice 2023 Panels and Fiocruz survey based on Minas Gerais State Court of Justice data, 2020-2021.

Location	Year	Data Source			
		LIODS (DATAJUD)	Fiocruz Research	National Council of Justice Panel 23 Right to Health - Search 1	National Council of Justice Panel 23 Health Law - Search 2
MG	2020	203.177	55.598	27.170	31.392
	2021	-	55.416	33.750	43.610
	2022			38.650	13.123
	2023			33.040	58.665
Brazil	2020	486.423	-	321.440	254.430
	2021	427.633	-	380.460	374.799
	2022			453.510	122.172
	2023			325.820	589.532

Source: own elaboration

There are major discrepancies in the data on health lawsuits in Brazil and Minas Gerais when the lawsuits are obtained through the two search engines. From a conceptual point of view, the VHL descriptors⁽⁶⁾ define 'Right to Health' as "the right to access health services by the population from the perspective of the fundamental rights provided for in the Federal Constitution", while Health Law is "the set of legal norms that define the means of realizing the right to health". If the National Council of Justice had taken this conceptual difference into account when making these stratifications, unifying the two concepts in the same search would have been a more effective strategy. From an operational point of view, what seems to have occurred is the use of search engines using different classes and subjects from the Unified Procedural Table⁽⁷⁾, which resulted in different final numbers. Alternatively, the most appropriate way to achieve a more effective collection of cases would be to review and unify the two search mechanisms.

The research carried out by GPSPS and the Minas Gerais State Court of Justice made it possible to identify a considerable number of health cases. However, in order to achieve this result, it was necessary to use improved data mining techniques applied to case documents, using algorithms employed by the Minas Gerais State Court of Justice team⁽⁸⁾. Although they have great potential for improving jurimetric statistics, the use of data science tools is not yet a reality in Brazil.

Judicialization in the Electronic Official Gazette⁽⁹⁾ is a free tool, accessible via the internet, which allows data to be collected on court cases available in electronic justice journals by searching for keywords. The database was set up with the help of robots and the prototype is already fed with data from the Rio de Janeiro State Court of Justice.

To locate cases, Judicialization in the Electronic Official Gazette uses machine learning combined with semantic information retrieval, recognizing characteristics of similarity between terms, phrases and paragraphs and, when trained, extracts the factors that influence court decisions through a complete and up-to-date database. The result is the secure grouping of procedural movements around the same theme, the grouping of these processes by new categories, stratified and defined by the user, *online* and *on time*, reducing the difficulty of quantifying court cases.

In the case of the Rio de Janeiro State Court of Justice, 987,170 procedural movements with requests for cancer from 2015 to 2021 were located, retrieving information on the case number, the parties, the lawyers, the descriptors involved, whether there was an injunction in that movement, whether there was no injunction, whether there was a decision, whether there was an order, whether there was an interlocutory appeal or an appeal, among other categories adding up to 24 attributes about the processes⁽⁹⁾. Scalability and adaptability are crucial in this automation, as they allow it to be used in different areas of law, expanding its application possibilities⁽¹⁰⁾.

The use of emerging technologies in the courts is a global trend to improve the efficiency and quality of the services provided. These technologies, which include artificial intelligence, blockchain, machine learning, data mining and big data analysis, have the potential to radically transform the way courts operate and the practice of law. Artificial intelligence and data analysis can also be used to predict court decisions and speed up the processing of cases.

However, the adoption of these new technologies is not without its challenges. Issues of privacy and information security, the need for adequate infrastructure, a lack of technological knowledge among some legal professionals and resistance to change are just some of the obstacles that need to be overcome. These practices need to be incorporated more widely if they are to benefit health management in Brazil.

It is essential that technological progress is accompanied by the improvement of legislation and legal systems, to guarantee the effective and responsible implementation of new technologies. The Brazilian judicial system must move towards modernization and the efficient use of technology, to ensure more agile, accessible and efficient justice for all citizens.

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 of the article, critical revision of its content and approval of the final version of the article. Figueiredo IVO contributed to the conception/design of the article, data analysis and interpretation, writing of the article, critical revision of its content and approval of the final version of the article. Silva GDM da contributed to the conception/design of the article, data analysis and interpretation, writing of the article, critical revision of its content and approval of the final version of the article. Barbosa JG contributed to the critical review of its content and approval of the final version. Santos FP dos contributed to the conception/design of the article, critical revision of its content and approval of the final version. Paes-Sousa P de contributed to the conception/design of the article, critical revision of its content and approval of the final version.

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