

THE PROBLEM OF UNDERREPORTING OF ACUTE DIARRHEAL DISEASE IN CHILDREN IN THE CITY OF PELOTAS-RS

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ABSTRACT

INTRODUCTION: In an attempt to increasingly reduce the number of cases and allow early detection, in Brazil, notification in the Epidemiological Surveillance Information System for Acute Diarrheal Diseases (ADD) is mandatory. From this, through notifications, it is possible to analyze the most prevalent regions and in which greater conducts are needed to reverse this scenario. Underreporting is a recurrent obstacle in Brazil and the municipality of Pelotas corroborates the national perspective, since the theme of acute diarrheal diseases reflects a major problem of underreporting of cases, whether municipal or national. Furthermore, learning and producing material on this problem during medical education becomes a potential strategy for the training of future conscious and informed physicians. **OBJECTIVE:** The objective of this study is to report the experience of developing an education flowchart to raise awareness about the importance of reporting ADD cases to health professionals in the city of Pelotas, in addition to providing learning about compulsory notifications during medical education. **METHODS:** An experience report based on the experience of fourth-year medical students at the Catholic University of Pelotas, in the city of Pelotas, Brazil, on the creation of a flowchart to raise awareness of the compulsory notification of acute diarrheal disease during mandatory academic activity. **RESULTS:** After collecting information, a flowchart outline was elaborated, which was improved until the final version was obtained. In this article, we emphasize the importance of notifying and detail how this notification should be carried out, in an attempt to make professionals aware of the importance of the theme. The difficulty in the process of reporting diseases that are not always compulsory, as is the case of ADD, was noticeable, since the objection in clinical practice to notify all cases of diseases that are mandatory was perceived. **CONCLUSION:** The elaboration of this study allowed the learning of both the theme of underreporting in the municipality of Pelotas and also in relation to the correct completion of this document. Although it was not the objective of this report to conduct a research, we identified in some statements the difficulty of health professionals in carrying out the notification, a fact that we suggest be seen in other studies. In addition, it can be concluded that the purpose of understanding the importance and the way to notify Acute Diarrheal Disease in the municipality of Pelotas were achieved, as well as providing material for future awareness of academics and health professionals.

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INTRODUCTION

In concept, Acute Diarrheal Disease (ADD) corresponds to a set of infectious diseases, of water and food transmission, of the gastrointestinal tract, being characterized as three or more bowel movements with changes in the consistency of the stool during the last 24 hours for a period of less than 14 days¹.

In times past, ADD conditions were fatal for the majority of the population due to the lack of support and management. There was a progressive drop in registered cases, with five million deaths from the disease reported in 1982², while in 2022 this number reduced to 525 thousand childhood deaths, in children under five years of age³. Such improvement is due to advances in modern medicine, however, acute diarrhea persists as a current problem, and is still, unfortunately, one of the major causes of morbidity and mortality in children under one year of age in Brazil³.

In an attempt to increasingly reduce the number of cases and allow early detection, in Brazil, notification in the Epidemiological Surveillance Information System of the ADI (Ordinance No. 205)⁹ is mandatory. From this, through notifications, it is possible to analyze the most prevalent regions and where greater conduct is needed to reverse this scenario. In addition, according to the Ministry of Health, the southeast region has the highest prevalence, with a total of 759,242 cases (35.40%) in 2024 until April. In comparison, the southern region had 282,617 cases (13.18%) at the same time recorded⁴.

Acute diarrheal disease can be infectious or not, with the infectious type being the most prevalent, with its main trigger being poor water quality in Brazil, due to the deficit of basic sanitation in the country, since, in 2024, there are still 49 million people without access to drinking water, garbage collection, and public cleaning. Also, the infectious type can occur through food of unknown origin, without proper hygiene or travel to places endemically more prone to ADD. In addition, non-infectious causes include medications, such as antibiotics, chemotherapy and laxatives, ingestion of large amounts of sugar and/or fats⁵.

Although its main symptom is liquid stools, the disease can be accompanied by other gastrointestinal symptoms such as nausea, emesis, fever and abdominal pain. In addition, possible warning signs should be observed, such as increased frequency of diarrheal bowel movements, presence of blood or mucus in the stool, frequent vomiting, refusal to ingest liquids and food, dehydration, decreased activity, and worsening of general condition². Therefore, they should be identified early, as they indicate a worse prognosis of the disease.



In addition, the treatment includes the prevention of the main complication of ADD, dehydration, which refers to the intake of liquids and solutions of oral rehydration salts or intravenous fluids. In addition, depending on the severity of the clinical condition, the treatment can be divided into A, B and C, and comprise the patient without dehydration, with dehydration and severe dehydration consecutively⁶. The notification process includes the communication of episodes of diseases or health problems, which require the intervention of health authorities, in order to promote well-being for the population. Notifications can be made by any health professional, being used as a strategy, which aims to improve the understanding of behavior and knowledge of diseases that affect the community. However, nowadays, underreporting is something that has been present in Brazil, since more and more health professionals fail to report cases of diseases that affect the community, either due to the absence of the need for such a practice, or due to negligence or recklessness⁷.

Therefore, the notification of diseases is of great importance for the knowledge of the pathology itself and its impact on society. However, as previously exposed, numerous health professionals do not perform the appropriate notification procedure, causing the system to remain without the real epidemiological profile of that affected region, causing it not to receive the necessary measures to correct the problem⁷. As a consequence, the persistence of the disease is a problem for the public health system, increasingly overloading services and thus generating greater financial expenses for cases where early notification would avoid such costs⁸.

Thus, about the theme of underreporting, this brings a great challenge and public health problem regarding ADD, as it is still the main cause of mortality in children under one year of age in Brazil⁹ and, unfortunately, continues to be underreported, especially in the city of Pelotas. Corroborating this, underreporting makes it impossible and delays national health strategies that are important for community well-being.

To this end, the objective of the study is to report the experience of elaborating an education flowchart, to raise awareness about the importance of reporting ADD cases to health professionals in the city of Pelotas, in addition to learning about compulsory notifications during medical education.

METHODOLOGY

This experience report was based on the experience of fourth-year medical students at the Catholic University of Pelotas, in the city of Pelotas, who provided a curricular work to create a flowchart on the awareness and sensitization of health professionals regarding



acute diarrheal diseases. This experience took place from March to July of 2024, comprising the first semester of the academic year, in the discipline of Health Administration and Planning (APLAS). During this period, we conducted research on the topic in question, on digital platforms such as the Ministry of Health -gov.br- and materials, such as articles on public access platforms, such as Scielo, PubMed, and UpToDate, which touched on the underreporting of diseases in force in the national territory and, specifically, knowledge about acute diarrheal disease and notifications.

To achieve the objective of this experiment, a flowchart was produced, which included topics such as the proper completion of notification forms and the importance of the content to be included. All of this had as its main objective the sensitization of the professional who will carry out the notification, about the need for such a process. In addition, the target that is intended to be achieved with this flowchart are health professionals, who are responsible for filling out the notification forms in the basic health units, who, in most cases, do not receive instructions on how to perform the notification adequately.

Still, as the focus of this academic work, there was a need to report the lived experience, seeking to broaden the students' reflection on the theme and provide the study of relevant subjects, such as public health management during the undergraduate process.

RESULTS

Initially, we were proposed some relevant themes in the current health context in Pelotas, which need a better understanding of the medical community, suggested by the professionals of the Municipal Health Department. From the choice of the theme Acute Diarrheal Disease, we began a search for the materials and data used by the municipality, in addition to talking to health professionals about the theme. Thus, we concluded that there was no concise and unified knowledge of the information on ADD, and we also noticed that health professionals lacked a real demonstration of the relevance of the appropriate notification process, thus aiming, through a flowchart, to sensitize professionals in the execution of notification.

During the period of our searches, we came across the major obstacle of not finding articles that mostly addressed the national problem of notification of acute diarrheal disease or the epidemiological profile of the disease, since all the articles found addressed aspects of the pathology and clinical aspects of the disease in question. In view of this perspective, we extended our searches to materials that contemplated the notification of diseases and, consequently, the impact on public health, so that in this way, we were provided with the



construction of solid knowledge for the production of the materials proposed by this experience of the APLAS curricular subject.

Regarding the active search for municipal information, in the first place, we faced a significant obstacle in contacting the people responsible for the data pertinent to the topic in the city of Pelotas. Thus, after some failed attempts, with difficulty in communication, it was possible to talk to some professionals from the municipality, who were responsible for elucidating the notification process, clarifying doubts such as: when, how, who and where to notify the ADD. Afterwards, we also talked to some other health professionals who work in the health network of the municipality, and it was possible to observe the technical lack of knowledge of notification of cases of acute diarrheal disease, on the part of some of them. From the information collected, we produced a flowchart sketch, which was perfected until the final product was obtained. During the production process of this material, we were divided into two groups, in which the first was responsible for collecting data from the municipality of Pelotas on the notification of ADD cases, and the second was responsible for the digital research of data and materials that contributed to the report of this experience.

With this, the available theoretical information and the data from applied practice were gathered, so that together we could build a flowchart, in which we detail the notification process so that each health professional can learn this process in a practical and simplified way. This material was produced by our group on a digital platform, which was titled with the provocative question "Did you know that acute diarrheal disease is notifiable?". This material was developed in a way that addressed the design aspects that pleased the personal tastes of the members, in addition to being made in high resolution in order to facilitate its reading. Thus, under the supervision and approval of the teacher of the APLAS subject, we improved the flowchart, which was printed on A4 material for distribution in meetings both to colleagues and to representatives of the Unified Health System (SUS) in the municipality.

Also, in the flowchart, we present the importance of notifying, in an attempt to make professionals aware of the importance of the theme. In addition, we learned that the ADD is mandatory notification in sentinel units, which are currently seven units chosen according to the division of municipal districts and greater population concentration, to monitor the epidemiological profile of cases in our municipality. Thus, the sentinel units provided representative monitoring of each region in a more effective way. However, when dialoguing with the health department seeking to better understand the data and the problem to



produce the flow, it was explained to us that despite the improvement, from this monitoring division, notifications remain far below the number expected by the Health Department.

Regarding the analysis of the data obtained by the Basic Health Units, it was explained to us that it occurs through the compilation of information. Thus, each case must be notified individually, and the data collected in the sentinel health units are placed in a municipal supervision spreadsheet, containing information on the number of cases, origin, type of treatment, age of the patient, among others. On the other hand, the non-sentinel basic health units are monitored weekly through spreadsheets that record the number of general cases, and it is necessary to individually notify only cases of outbreak (three or more cases), which fall under adverse public health events and must be articulated with sanitary and environmental surveillance in the National Medical Care System. In addition, the municipality weekly passes the numerical data to the SIVEP-DDA system, which was developed to facilitate the manipulation and organization of the data produced by the monitoring of DDA in Brazil. In addition, annually, each health unit, sentinel or not, sends a list of cases/year to the municipal health department.

From this perspective, it was possible to perceive the great difficulty of sensitizing professionals about the process of notification of diseases that are not always compulsory, as is the case of ADD, since it is perceived the practical difficulty of notifying all cases of diseases that are mandatory, such as cases of dengue.

DISCUSSION

During our academic journey to date, we have had contact with multiple health services, such as three years in Basic Health Units and in pediatric environments, outpatient clinics and hospitals. However, in all these spaces, at no time were we exposed to the notification of Acute Diarrheal Diseases or instructed on how it should be performed. Therefore, this made us question and reflect on the absence of education on this theme in force in our municipality.

In this way, the design of this study allowed us to learn both about the theme of ADD notification, both in understanding underreporting in the municipality of Pelotas, as well as about the correct completion of this document. Due to this, this experience was extremely important, because in addition to bringing us awareness about this problem, we can help other professionals and students who are unaware of this subject, through measures such as the flowchart prepared by our group.

Furthermore, we noticed that this underreporting does not occur only with ADD, but also with several diseases in force in our country, such as in the cases of AIDS in Rio de



Janeiro⁷, which only started to have adequate notification based on a more rigorous method to ensure reliable data to reality⁷. All this makes it possible to identify the fragmentation of the system and the actions that prevent the achievement of mechanisms that seek to ensure a better health offer to the population. Therefore, it is necessary to take active government measures to effectively solve the major obstacle that is underreporting in our country, as well as to rethink academic curricula, so that they include the theme constantly and effectively.

Diseases of high prevalence and that are mandatory to be notified, such as syphilis and dengue, also face the problem of underreporting in the national territory. Given this, we can assume that diseases of lower prevalence are reported even less, even in cases of outbreaks, as was possible to be observed by our group during the preparation of this experience report.

In addition, we noticed that the criticism regarding the lack of knowledge of professionals about underreporting is often due to the lack of clarity of the system itself and not directly to them. It is known that the Government must promote the training and education of health teams, so that they can carry out the adequate registration of cases of notifiable pathologies, so that the epidemiological profile of the territory becomes a reflection of the Brazilian public health context, bringing a direct impact on the health of the population itself. Universities, likewise, should play the role of understanding the problems of the SUS and seek to train those responsible for triggering solutions or improvements, since they are institutions that train professionals to work in the SUS.

CONCLUSION

At the end of this experience, we affirmed the importance that the report on what was proposed to us contributed to acquiring knowledge, in addition to the elaboration of an educational flowchart for health professionals. Although it was not the object of this report to conduct a research, we identified in some statements the difficulty of health professionals in making the notification, a fact that could be seen in another research study. In addition, it can be concluded that the purpose of understanding the process and the forms of notification in its entirety are aimed at seeking more accurate information from municipal DDA data. Thus, it is essential to raise the awareness of academics and professionals, who are part of the SUS, to have a more precise quantification of the numerical bases about ADD.

This problem ends up leading to several setbacks for the Health System, not only for the municipality in question, but also for the entire health network of the country, since



underreporting makes it impossible to expand the database on diseases and makes it impossible to create public health policies that aim to reduce rates of the most prevalent and potentially preventable diseases.

In addition, the production of this flowchart provided us with knowledge as health professionals in training, because from the knowledge of the system's failures and the search to solve them, we are currently a "spokesperson" within our university and the Basic Health Units, with regard to the notification of ADD. From this experience, during our training and as medical professionals, we want to strive not to neglect the importance of notifying an endemic disease and we will be aware of the impact that this can have on the health of the population.

Finally, we believe it is interesting and necessary to bring schools and private offices closer to the health system to promote accurate quantification, in order to compile all the data of the municipality.



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