v. 4, n. 81, 2024

International Journal of Health Science

UNDERREPORTING AS A REFLECTION OF THE HEALTH SURVEILLANCE MANAGEMENT PROCESS

Márcia Gisele Peixoto Kades
Enfermeira. Especialista em Didática do Ensino Superior pela Faculdade de Ciências Biomédicas de Cacoal – FACIMED (2019)
Especialista em Gestão de Instituições Públicas pelo Instituto Federal de Rondônia (2020)
Especialista em Epidemiologia e Vigilância em Saúde pela Faculdade Unyleya (2022)
Especialista em Enfermagem Oncológica pela Faculdade Venda Nova do Imigrante – FAVENI (2023)
Especialista em Gestão da Vigilância em Saúde pela Faculdade Venda Nova do Imigrante – FAVENI (2023)
Especialista em Vigilância e Cuidado em Saúde pela FIOCRUZ (2023)
Bacharel em Enfermagem pela Faculdade de Ciências Biomédicas de Cacoal – FACIMED (2018)

Abstract: Health Surveillance is responsible for monitoring the health status of the population and taking action to control diseases and conditions that pose a risk to public health. To achieve this, the primary source of information used is notifications, which originate from healthcare units. Surveillance actions are often compromised by the underreporting of diseases and conditions. This study aims to describe underreporting as a reflection of the health surveillance management process, analyzing how organizational aspects influence the occurrence of underreporting and proposing measures to improve notification systems. This is a bibliographic, exploratory, and descriptive study, using the following descriptors: epidemiology, public health surveillance, and underreporting. A total of 43 publications were analyzed, 24 of which were used for this study, addressing the structure and competencies of health surveillance, and the underreporting of diseases and conditions. It was concluded that underreporting is multifactorial; however, actions to address the problem, particularly the ongoing awareness-raising of care professionals, are not being carried out by health surveillance professionals. It is necessary to integrate the surveillance service with care services to minimize the fragmentation of actions. However, this requires active engagement from surveillance technicians, including technical support, ongoing training, and supervision of notification processes.
Keywords: Epidemiology; Public Health Surveillance; Underreporting.

INTRODUCTION

According to the Ministry of Health (2018), Health Surveillance is understood as a continuous and systematic process of collecting, consolidating, analyzing data, and disseminating information on health-related events, with a view to planning and implementing public health measures, including regulation, intervention, and action on health conditions and determinants, for the protection and promotion of the population's health, as well as the prevention and control of risks, injuries, and diseases.

Surveillance actions are compromised as a result of underreporting or late notification (Melo *et al.*, 2018a). The Epidemiological Surveillance Guide (2009) describes that underreporting is when a case is diagnosed with a disease or health problem, but it is not recorded in the Notifiable Diseases Information System - SINAN or, when recorded, it is confirmed as inconclusive after investigation (Luz *et al.,* 2020).

According to Chagas (2017), care professionals need to be made aware of the importance of notifications so that they are not omitted in this regard and report the occurrence of notifiable diseases and illnesses to the Epidemiological Surveillance sector regardless of diagnostic confirmation.

This study aims to describe underreporting as a reflection of the health surveillance management process, analyzing how organizational aspects directly or indirectly influence the occurrence of underreporting, and proposing measures to improve notification systems.

This study is justified by the need to visualize underreporting as a management problem within the service, since most of the studies published on the subject of underreporting are restricted to the analysis of direct causes, or impacts on information systems.

This is a bibliographic, exploratory and descriptive study. After defining the topic, a search was made for studies and online publications in the Ministry of Health, VHL and Scielo databases, using the descriptors: underreporting, health surveillance, epidemiological surveillance. A total of 43 publications were analyzed and 24 were selected which met the objectives of this study and contained concepts and definitions of the proposed themes. The results were then analyzed, selected, categorized and interpreted. As this was a study based on data available in public databases, there was no need to submit it to the Research Ethics Committee, based on the provisions of Resolution 466 of December 12, 2012 of the National Health Council.

DEVELOPMENT

CONTEXTUALIZING HEALTH SURVEILLANCE IN BRAZIL

Historically, surveillance can be considered the area of public/collective health that acts directly on the socio-environmental determinants of health and the development model (Porto, 2017).

The first public health measures in Brazil took place at the end of the 19th century. From this point in history to the present day, some actions have been emblematic for the creation of health surveillance practices (Guimarães *et al.*, 2017).

According to Neto *et al.* (2017), Brazil, which was predominantly rural until the mid-1960s, has experienced intense urbanization, especially since the new industrialization cycle of the 1970s, leading to the emergence of epidemiological and demographic transitions resulting in the progressive ageing of the population.

From the health point of view, this scenario required the government to abandon its traditional position, which consisted of acting more effectively only when epidemics broke out, in favor of a model of preventive action (Freitas; Nogueira, 2022).

In 1961, the "General Rules for the Defense and Protection of Health" listed 45 diseases, as well as other human viruses and occupational accidents, as compulsorily notifiable. In 1969, as a result of the Smallpox Eradication Campaign (CEV), systematic notification of some communicable diseases began (Brazil, 2022).

According to Melo *et al.* (2018a), with the establishment of the National Epidemiological Surveillance System (SNVE) by Law No. 6,259 of 1975, epidemiological surveillance units were set up within the state health departments, in addition to expanding the list of notifiable diseases.

The most recent update to the National List of Compulsory Notification of diseases, illnesses and public health events in services came from Ordinance GM/MS No. 3,418, of August 31, 2022, to include Monkeypox in the list of constant diseases (Brazil, 2022).

THE NATIONAL HEALTH SURVEILLANCE POLICY (PNVS)

On July 12, 2018, the National Health Surveillance Policy (PNVS) was established by Resolution No. 588/2018 of the National Health Council (CNS). (Brazil, 2018). The document aims to guide the planning of health surveillance actions in the three spheres of management of the Unified Health System (SUS), characterized by the definition of the responsibilities, principles, guidelines and strategies of this surveillance.

The PNVS is defined as a public state policy and an essential function of the SUS, universal, transversal and guiding the healthcare model in the territories. Its implementation depends on its strengthening and articulation with other instances of the health system, while its management is the exclusive responsibility of the public authorities (National Health Council, 2018).

Article 3 of Resolution 588/2018 states:

> The PNVS comprises the articulation of knowledge, processes and practices related to epidemiological surveillance, environmental health surveillance, occupational health surveillance and health surveillance and is aligned with the set of health policies within the SUS, considering the transversality of health surveillance actions on the determination of the health-disease process (National Health Council, 2018).

According to Seta (2014), the components of health surveillance have some similarities and some specificities in terms of their work process, with planning, management, communication, production and use of information being fundamental to all of them.

According to Guimaraes *et al.* (2017), the health surveillance model includes aspects of organizing services, establishing networks, dealing with a diversity of profiles and working to manage the health system, moving between the technical and political dimensions.

Also according to Guimaraes *et al.* (2017), the debate around the term and meaning of surveillance in Brazil revolves around three distinct strands, which are expressed using terminological variations such as Health Surveillance, Health Surveillance and Health Surveillance, with epidemiology as the common axis.

EPIDEMIOLOGICAL SURVEILLANCE AND ITS ROLE

The National Epidemiological Surveillance System (SNVE), established by Federal Law No. 6.259/1975 and regulated by Decree No. 78.231/1976, initially covered only state services and the federal component, but today covers the three spheres of government: municipal, state and federal, and is made up of all public and private services that provide health care to the population (Seta, 2014).

According to the Brazilian Association of Field Epidemiology Professionals (2020), health services must be prepared to identify in the population the occurrence of symptoms and signs that may suggest a disease or illness of unknown cause, or the unusual behavior of a defined disease, as well as in cases of emerging diseases. Early detection of these phenomena is fundamental to triggering actions aimed at resolving them.

Corroborating these studies, Melo *et al. (*2018a) cites that the purpose of epidemiological surveillance is to study the occurrence of diseases and other priority conditions, their risk factors and their trends in the population of a given territory at a given time, in addition to planning, implementing and evaluating prevention and control measures, and its proper functioning is directly related to the quality of the information produced by the SNVE and reliable data sources make it possible to monitor trends in diseases and conditions.

The studies by Oliveira and Cruz (2015) also show that the complexity of the current epidemiological scenario, characterized by the triple burden of diseases in the population (permanence of acute diseases, increase in the relative weight of chronic conditions and external causes), is also due to this form of management of health practices, which needs greater organicity to trigger timely actions that help reduce or eliminate health risks and expand the system's response capacity.

Epidemiological Surveillance uses compulsory disease notifications to carry out disease control and prevention actions. Many preventive and disease control actions are based on notifications. Failure to notify can have major consequences, ranging from outbreaks and epidemics, as well as jeopardizing the work of Epidemiological Surveillance (Chagas, 2017).

UNDERREPORTING IN THE DAILY LIFE OF HEALTH SURVEILLANCE

According to the Regional Nursing Council of Goiás (2014), notifying is not "simply filling out another piece of paper, increasing bureaucracy or making work more difficult with something unimportant", as some consider. Understanding its importance is key to controlling, reducing, preventing and eradicating many diseases and illnesses.

With regard to the notification of diseases, Federal Law No. 6.259/1975 states:

> It is the duty of every citizen to notify the local health authority of the occurrence, proven or presumed, of a case of communicable disease, and it is mandatory for doctors and other health professionals in the exercise of their profession, as well as those responsible for public and private health and educational organizations and establishments, to notify suspected or confirmed cases of the diseases listed (Brazil, 1975).

However, studies by Chagas (2017) show that despite the obligation for all health professionals to report diseases or illnesses, whether in the public, contracted or private network, Epidemiological Surveillance still faces a lack of cooperation from these professionals, especially in the hospital sector.

The lack of complete data records and the occurrence of unreported cases prevent Epidemiological Surveillance from performing its duties more efficiently (Chagas, 2017).

Underreporting is not linked to the degree of importance or severity of the disease, but possibly to other factors, given the variation in these rates between studies on the same disease or condition, in somewhat compatible evaluation periods (Melo *et al.,* 2018a).

There are a number of associated factors, ranging from insufficient data observed in electronic medical records, to the accumulation of tasks carried out by the team, since the priority is care (Bianchini, 2016).

Among the aspects listed by Silva *et al.* (2020) are doubts on the part of professionals when it comes to identifying diseases, staff shortages, weaknesses in the teams and the devaluation of notification by some professionals, linked to a lack of knowledge of the purpose of this data.

Melo *et al.* (2018b), in a study carried out in 17 municipalities in the state of Goiás, with workers and service managers from Health Surveillance units, about the perceptions of the factors associated with the underreporting of diseases and health problems, obtained as a result, among the hindering factors: the conduct of the doctor or nurse (23.3%), difficulties in the notification process (13.2%), problems related to the patient and/or family members (12.9%) problems related to the diagnosis of the disease or condition (8.8%).

There are also aspects of the training of health professionals in the private sector that influence the relevance of public health issues (Silva *et al*., 2020).

COMPETENCES OF THE SURVEILLANCE SERVICE VS. UNDERREPORTING

Decree No. 78.231, of August 12, 1976, which regulates Law No. 6.259, of October 30, 1975, which provides for the organization of Epidemiological Surveillance actions, lists the bodies that make up the SNVE and mentions the functions of each body. On the functions of epidemiological surveillance units (Art. 11):

> I - Receive notifications;
>
> II - Comply with the rules communicated by the Micro-Regional Body;
>
> III - Record and transmit information on the occurrence of diseases to the Micro-Regional Body;
>
> IV - Carry out epidemiological investigations and the prophylaxis actions resulting from them;

> V - Supervising the work of the Local Notification Posts and establishing the necessary links with the other notification agents, informing them of the results of their notifications;
>
> VI - Seek support for their actions from the Micro-Regional Body (Brazil, 1976).

Still on the powers of the municipal EV, Normative Instruction No. 2 of November 22, 2005 states that:

> Art. 5 Municipalities are responsible for:
>
> I. provide technical support to the notifying units;
>
> II. collect and consolidate data from units notifiers;
>
> III. establish flows and deadlines for the submission of data by the notifying units; respecting the flows and deadlines established by the SVS/MS;
>
> IV. send the data to the state level, observing the flows and deadlines established by the states and the SVS/MS;
>
> (...) (Brazil, 1976).

According to Felisberto (2013), the process of decentralization of the Brazilian health system has led to the transfer of services, responsibilities and federal resources to state and municipal management bodies, which requires a progressive process of qualification of managers and professionals from various services, sectors and institutions.

One of these decentralized tasks is Health Surveillance, for which municipalities receive federal funding. Small municipalities find it difficult to respond to this task due to a lack of training and a shortage of financial and human resources, resulting in overlapping functions (Recktenwaldt; Junges, 2017).

Also according to Recktenwaldt and Junges (2017), the overlapping of the attributions of the professionals assigned to the surveillance services is due to the managers' argument that there are insufficient resources to pay for specific professionals, which means that the municipalities need to allocate resources to maintain the surveillance teams, and consequently argue that these professionals cannot be exclusive to the surveillance services. This overlap mainly limits preventive and planning actions, leaving surveillance in the background.

According to Seta (2014), although epidemiological surveillance has a higher degree of implementation compared to other surveillance systems, it still has a certain degree of precariousness, especially at the municipal level, in addition to weaknesses in intersectoral coordination, for example, vector control actions are rarely developed in conjunction with the environmental sector.

The author also shows that the activities of processing and analyzing data and disseminating information are still not part of the routine of the services (Seta, 2014). Educational activities do take place, but only occasionally and usually as a response to some problem (Recktenwaldt; Junges, 2017).

IMPACTS ON THE HEALTH SYSTEM X RESOLUTION MEASURES

Health Surveillance is responsible for providing information for action and intervention to reduce risks and promote health in the territories, integrated into Health Care Networks (Franco Neto *et al.*, 2017).

These characteristics of the nature of Health Surveillance action must be guaranteed by the adequacy of structures, human resources and budgets (Franco Neto *et al.*, 2017).

Underreporting is a daily reality in health units, causing unnecessary costs, incomplete information and deterioration in disease control surveillance (Miranda, 2017).

To face this challenge, surveillance teams need to be articulated with each other and with

primary care and overcome fragmentation and organizational sectorization to be able to handle these actions (Recktenwaldt; Junges, 2017).

It is necessary to raise awareness among professionals so that they realize that notification is an important tool to help in health planning, setting priorities and evaluating the impact of interventions (Bianchini, 2016).

According to Miranda (2017) there is a need to identify the flaws that result in underreporting, as well as monitoring data and training professionals on the need for notification.

Also according to Recktenwaldt and Junges (2017), it is necessary to include health secretaries and even mayors in training and education activities in the field of surveillance. If this continuous and ongoing training is extended to the management level, the improvement of surveillance actions will have greater potential, since what is perceived is that surveillance is not a focus of priorities, with repercussions on the way actions are organized and on the practices of professionals.

CONCLUSION

From the above, it can be concluded that underreporting is multifactorial. However, the actions to tackle this problem, especially the ongoing awareness-raising among care professionals, are not carried out by the professionals assigned to surveillance.

As some studies have shown, the overload of surveillance professionals means that they are unable to carry out their duties actively, and are restricted to responding to events and health problems (passively).

Surveillance teams need to be strengthened, with the consequent integration of the surveillance service with care services, minimizing the fragmentation of actions to prevent and control diseases and illnesses, since this requires the passive action of surveillance technicians, from technical support, ongoing training and supervision of notification processes.

REFERENCES

BIANCHINI, A. M. *Subnotificações de doenças e agravos relacionados ao trabalho: proposta de ação junto a uma equipe de estratégia saúde da família em um município do vale do Taquari /RS.* 2016. Trabalho de Conclusão de Curso – (Especialização em saúde do trabalhador). Universidade de Santa Cruz do Sul, Santa Cruz do Sul, 2016.

BRASIL. *Lei nº 6.259, de 30 de outubro de 1975.* Dispõe sobre a organização das ações de Vigilância Epidemiológica, sobre o Programa Nacional de Imunizações. Brasília, DF: Presidência da República, 1975. Disponível em: https://www.planalto.gov.br/ccivil_03/leis/l6259.htm. Acesso em: 17 jul. 2023.

BRASIL. *Decreto nº 78.231, de 12 de agosto de 1976.* Regulamenta a Lei nº 6.259, de 30 de outubro de 1975, que dispõe sobre a organização das ações de Vigilância Epidemiológica (...) Brasília, DF: Presidência da República, 1976. Disponível em: https://legis.senado.leg.br/norma/500871 Acesso em: 17 jul. 2023.

BRASIL. Ministério da Saúde. *Instrução normativa nº 2, de 22 de novembro de 2005.* Regulamenta as atividades da vigilância epidemiológica com relação à coleta, fluxo e a periodicidade de envio de dados da notificação compulsória de doenças por meio do Sistema de Informação de Agravos de Notificação - SINAN. Brasília, DF: Ministério da Saúde, 2005. Disponível em: https://portalsinan.saude.gov.br/images/documentos/Legislacoes/IN_2_2005.pdf Acesso em: 27 jul. 2023.

BRASIL. Ministério da Saúde. *Guia de vigilância epidemiológica* – 7ª ed. – Brasília, DF: Ministério da Saúde, 2009.

BRASIL. *Resolução nº 466, de 12 de dezembro de 2012.* Aprova as diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. Brasília, DF, Conselho Nacional de Saúde. Disponível em: http://bvsms.saude.gov.br/bvs/saudelegis/cns/2013/res0466_12_12_2012.html Acesso em: 17 jul. 2023.

BRASIL. *Resolução MS/CNS nº 588, de 12 de julho de 2018.* Instituí a Política Nacional de Vigilância em Saúde (PNVS). Brasília, DF, Conselho Nacional de Saúde, 2018. Disponível em: https://conselho.saude.gov.br/resolucoes/2018/Reso588.pdf Acesso em: 19 jul. 2023.

BRASIL. *Portaria GM/MS Nº 3.418, de 31 de agosto de 2022.* Altera o Anexo 1 do Anexo V à Portaria de Consolidação GM/MS nº 4, de 28 de setembro de 2017 (...) Brasília, DF. 2022. Disponível em: https://bvsms.saude.gov.br/bvs/saudelegis/gm/2022/prt3418_01_09_2022.html Acesso em: 17 jul. 2023.

CHAGAS, A. B. *Proposta para melhoria nas notificações compulsórias de doenças e agravos no município de Carmo da Cachoeira/MG***.** Trabalho de Conclusão de Curso (Especialização em gestão pública de organização de saúde) - Programa Nacional de formação em Administração Pública da Universidade Federal de Juiz de Fora, 2017.

CONSELHO REGIONAL DE ENFERMAGEM DE GOIÁS (COREN/GO). *Notificação eficaz gera novas ferramentas de trabalho na saúde preventiva.* 2014 - Disponível em: http://www.corengo.org.br/notificacao-eficaz-gera-novas-ferramentas-de-trabalho-na-saudepreventiva. Acesso em: 17 jul 2023

FELISBERTO, Eronildo. Vigilância em Saúde: eixo orientador necessário a um adequado planejamento da descentralização e regionalização do sistema. *Ciência & Saúde Coletiva*, v. 18, n. 5, p. 1198, 2013. Disponível em: https://www.scielo.br/j/csc/a/Z9HwBY5P5pZNy5f4DYCp9Jv/?format=pdf&lang=pt Acesso em 17 set. 2023.

FRANCO NETO, G. *et al.* Vigilância em Saúde brasileira: reflexões e contribuição ao debate da 1ª Conferência Nacional de Vigilância em Saúde. *Ciência & Saúde Coletiva*, v. 22, n. 10, p. 3137-3148, 2017. Disponível em: https://www.scielo.br/j/csc/a/gkJPYXnymhVD4TG5MSdN9MG/abstract/?lang=pt Acesso em 15 set. 2023

FREITAS, Ricardo Cabral; NOGUEIRA, André. A saúde como campo de batalha: doenças e artes de curar no Brasil, 1750-1822. *Ciência & Saúde Coletiva,* v. 27, n. 9, p 3379-3387, 2022. DOI: 10.1590/1413-81232022279.02672022 Disponível em: https://www.scielo.br/j/csc/a/rypZqzVXFD7sBmL737CkLtb/ Acesso em 22 jul. 2023.

GUIMARÃES, R. M., *et al*. Os desafios para a formulação, implantação e implementação da Política Nacional de Vigilância em Saúde. *Ciência & Saúde Coletiva***,** v. 22, n. 5, p. 1407-1416, 2017. DOI: 10.1590/1413-81232017225.33202016. Disponível em: https://www.scielo.br/j/csc/a/Nk7DzDXghCHQJHzSjVcHMPz/abstract/?lang=pt Acesso em 22 jul. 2023.

LUZ, A. H. M., *et al*. Incidência e subregistro da meningite em um município do interior paulista: um projeto de intervenção. *Journal Health NPEPS*. vol. 5, núm. 2, p. 240-257. 2020. dx.doi.org/10.30681/252610104674. Disponível em: https://periodicos.unemat.br/index.php/jhnpeps/article/view/4674 Acesso em 22 jul. 2023.

MELO, M. A.S., *et al* (a) Subnotificação no SINAN e fatores gerenciais e operacionais associados: revisão sistemática da literatura. *Revista de Administração da UEG*, v.9, n.1 jan./abr. P. 25-43. 2018 (a). Disponível em: https://www.revista.ueg.br/index.php/revista_administracao/article/view/7445 Acesso em 17 jul. 2023

MELO, M. A.S., et al (b) Percepção dos profissionais de saúde sobre os fatores associados à subnotificação no Sistema Nacional de Agravos de Notificação. *Rev. Adm. Saúde* – v. 18, n.71, abr. – jun. 2018 (b). dx.doi.org/10.23973/ras.71.104. Disponível em: https://cqh.org.br/ojs-2.4.8/index.php/ras/article/view/104/0 Acesso em 17 jul. 2023.

MIRANDA, U. M. P. *Como a subnotificação interfere no coditiano do SUS: uma revisão de literatura.* Trabalho de Conclusão de Curso (Graduação em Fonoaudiologia) Universidade Federal da Bahia. Instituto de Ciências da Saúde, Salvador, 2017.

OLIVEIRA, Cátia Martins; CRUZ, Marly Marques. Sistema de Vigilância em Saúde no Brasil: avanços e desafios. *Saúde Debate* | Rio de Janeiro, v. 39, n. 104, p. 255-267, 2015. DOI: 10.1590/0103-110420151040385. Disponível em: https://www.scielo.br/j/sdeb/a/nYmJZ63cRJWnts4SDG7wN5C/ Acesso em 03 ago. 2023.

PORTO, Marcelo Firpo de Souza. Pode a Vigilância em Saúde ser emancipatória? Um pensamento alternativo de alternativas em tempos de crise. *Ciência & Saúde Coletiva,* v. 22, n. 10, p. 3149-3159, 2017. DOI: 10.1590/1413-812320172210.16612017. Disponível em: https://www.scielo.br/j/csc/a/NpQpgwkDVQjmNzwkchSZWMz/abstract/?lang=pt Acesso em: 27 jul. 2023.

PROEPI - ASSOCIAÇÃO BRASILEIRA DE PROFISSIONAIS DE EPIDEMIOLOGIA DE CAMPO - Conceitos básicos e objetivos da Vigilância em Saúde. 2ª edição. Janeiro de 2020. P.13. Disponível em: https://proepi.org.br/vigilancia-em-saude-publica/ Acesso em: 17 jul. 2023.

RECKTENWALDT, Micheli; JUNGES, José Roque. A organização e a prática da Vigilância em Saúde em municípios de pequeno porte. *Saúde Soc.* v.26, n.2, p.367-381, 2017. DOI 10.1590/S0104-12902017171916. Disponível em: https://www.scielo.br/j/sausoc/a/cpLsQ6RrbSxK54XLN3rtjyy/ Acesso em: 03 ago. 2023.

SETA, M. H. *Gestão da vigilância à saúde* / Marismary Horsth De Seta, Lenice Gnocchi da Costa Reis, Elizabete Vianna Delamarque. – Florianópolis: Departamento de Ciências da Administração da Universidade Federal de Santa Catarina: CAPES: UAB, 2014. 146p.

SILVA, A. N. B., et al. Notificação compulsória de agravos em saúde do trabalhador: avaliando a subnotificação. *Cad. Edu Saúde e Fis*. v. 7, n.13, p.2-9. 2020. DOI: 10.18310/2358-8306.v7n14.a2: e071402. Disponível em: http://revista.redeunida.org.br/ojs/index.php/cadernos-educacao-saude-fisioter/article/view/3337 Acesso em: 27 jul. 2023.