REVISTA ONLINE DE PESQUISA

CUIDADO É FUNDAMENTAL

Universidade Federal do Estado do Rio de Janeiro • Escola de Enfermagem Alfredo Pinto

RESEARCH

DOI: 10.9789/2175-5361.rpcfo.v13.10259

ANALYSIS OF COMPLETING THE SYPHILIS INVESTIGATION FORM ACQUIRED FROM A REGIONAL HEALTH SUPERINTENDENCE

Análise do preenchimento das fichas de investigação da sífilis adquirida de uma superintendência regional de saúde

Análisis de completar el formulario de investigación de sífilis adquirido de una superintendencia regional de salud

Grazielle Miranda Freitas[1], Murilo César do Nascimento[2], Edilaine Assunção Caetano de Loyola[3], Denismar Alves Nogueira[4], Fábio de Souza Terra[5]

How to cite this article:

Freitas GM, Nascimento MC, Loyola EAC, Nogueira DA, Terra FS. Analysis of completing the syphilis investigation form acquired from a regional health superintendence. 2021 jan/dez; 13:1512-1518. DOI: http://dx.doi.org/0.9789/2175-5361.rpcfo.v13.10259.

RESUMO

Objetivo: analisar o preenchimento das fichas de investigação de sífilis adquirida em uma Superintendência Regional de Saúde do Sul de Minas Gerais. **Método:** estudo descritivo-analítico, transversal, quantitativo, dos casos sífilis adquirida notificados no período de janeiro de 2010 a junho de 2017. Utilizou-se um instrumento para coletar os dados, mediante os critérios: campos não preenchidos, preenchimento do campo ignorado e incoerências de informações. Estes foram analisados no Statistical Package for the Social Science, mediante estatística descritiva, com apresentação de valores percentuais. **Resultados:** constatou-se 62,2% com variável sem preenchimento, sendo a função do profissional responsável pelo preenchimento a mais predominante (100,0%). 31,3% assinalaram o preenchimento do campo ignorado, sendo os antecedentes de sífilis o mais frequente (37,0%). 66,3% apresentaram alguma incoerência de informações, destacando-se o resultado do teste treponêmico/classificação final do caso (54,9%). **Conclusão:** a confiabilidade desta notificação depende da capacidade dos profissionais em diagnosticar e notificar corretamente esses agravos.

DESCRITORES: Sistemas de informação em saúde; Notificação de doenças; Sífilis; Monitoramento epidemiológico.

1 Nurse. Master in Nursing from the School of Nursing / Federal University of Alfenas. Professor of the Medicine and Nursing Course of the José do Rosário Vellano University. Alfenas-MG-Brazil. ORCID: https://orcid.org/0000-0001-6206-7452.

2 Nurse. PhD in Nursing, Faculty of Medicine of Ribeirão Preto/University of São Paulo. Professor, School of Nursing, Universidade Federal de Alfenas. Alfenas-MG-Brazil. ORCID: https://orcid.org/0000-0002-3436-2654.

3 Nurse. PhD in Sciences by the School of Nursing of Ribeirão Preto/University of São Paulo. Professor of the Medicine and Nursing Course from the Universidade José do Rosário Vellano. Alfenas-MG-Brazil. ORCID: https://orcid.org/0000-0002-4441-1229.

4 Statistician. PhD in Statistics and Agricultural Experimentation from the Universidade Federal de Lavras. Professor of the Institute of Exact Sciences of the Federal University of Alfenas. Alfenas-MG-Brazil. ORCID: https://orcid.org/0000-0003-2285-8764

5 Nurse. PhD in Nursing, Ribeirão Preto School of Nursing, University of São Paulo. Professor of the School of Nursing, Universidade Federal de Alfenas. Alfenas-MG-Brazil. ORCID: https://orcid.org/0000-0001-8322-3039.

ABSTRACT

Objective: analyze the filling in of the syphilis investigation forms acquired in a Regional Health Superintendence in the South of Minas Gerais. **Method:** descriptive-analytical, cross-sectional, quantitative study of acquired syphilis cases reported from January 2010 to June 2017. An instrument was used to collect the data, using the criteria: unfilled fields, filling in the ignored field and information inconsistencies. These were analyzed in the Statistical Package for the Social Science, using descriptive statistics, with presentation of percentage values. **Results:** it was found that 62.2% had a variable without filling in, with the role of the professional responsible for filling in being the most predominant (100.0%). 31.3% indicated filling in the ignored field, with a history of syphilis being the most frequent (37.0%). 66.3% presented some information inconsistency, highlighting the result of the treponemic test / final classification of the case (54.9%). **Conclusion:** the reliability of this notification depends on the professionals' ability to correctly diagnose and report these injuries.

DESCRIPTORS: Health information systems; Disease notification; Syphilis; Epidemiological monitoring.

RESUMEN

Objetivo: analice el llenado de los formularios de investigación de sífilis adquiridos en una Superintendencia Regional de Salud en el sur de Minas Gerais. **Método:** estudio descriptivo-analítico, transversal y cuantitativo de casos de sífilis adquirida notificados desde enero de 2010 hasta junio de 2017. Se utilizó un instrumento para recopilar los datos, utilizando los criterios: campos no rellenados, rellenando el campo ignorado y inconsistencias de información. Estos fueron analizados en el Paquete Estadístico para las Ciencias Sociales, utilizando estadísticas descriptivas, con presentación de valores porcentuales. **Resultados:** se encontró que el 62.2% tenía una variable sin rellenar, siendo el rol del profesional responsable de rellenar el más predominante (100.0%). El 31,3% indicó completar el campo ignorado, siendo los antecedentes de sífilis los más frecuentes (37,0%). El 66.3% presentó alguna inconsistencia de información, destacando el resultado de la prueba treponémica / clasificación final del caso (54.9%). **Conclusión:** la confiabilidad de esta notificación depende de la capacidad de los profesionales para diagnosticar y reportar correctamente estas lesiones.

DESCRIPTORES: Sistemas de información en salud; Notificación de enfermedad; Sífilis; Monitoreo epidemiológico.

INTRODUCTION

Syphilis has a broad clinical spectrum, which mainly includes lesions. Diagnosis is difficult to conclude, and it happens only through clinical findings. This disease may simulate several diagnostic hypotheses such as inflammatory and neoplastic infections.[1] It should be considered that, even with all the advances in treatment, an increase in the incidence rate of the disease has been noted in several countries, associated with a change in the sexual risk behaviors of the population.[2]

However, global estimates on the frequency of Sexually Transmitted Infections (STIs), such as acquired syphilis, are influenced by the quantity and quality of data produced in different regions and by the limitations of many professionals in understanding the dynamics of these diseases.[3]

It is important to emphasize that the culture of some health professionals, including nurses, does not value the recording of information. Often, the notification may be seen as a simple act of "bureaucracy" and that makes them "waste time", a fact that can hinder access to reliable data in Health Information Systems (HIS).[4]

Thus, for the generation of indicators, it is necessary to have quality in the HIS data. This quality corresponds to its accessibility, coverage, completeness, reliability, consistency, timeliness, and validity. The duplicity, coverage, completeness, and reliability are related to the absence of errors in the information mentioned in the notifications and investigations.[5]

The notification or investigation forms have a large number of blank fields, inconclusive cases, and inconsistencies in the information that can be found in the Sistema de Informações de Agravos de Notificação (SINAN), characterizing poor quality data. These problems indicate a need for systematic evaluation of the information before entering the data into the system and transcribing this information to the state and federal spheres.[6]

Thus, health professionals, especially nurses, should be qualified and society educated, because they can contribute to the correct and quality notifications, being a fundamental part for the prevention and control of diseases.[7]

Thus, due to the incipient investigations on the notification of acquired syphilis and the recent insertion of this grievance as a disease of compulsory notification in 2010, the knowledge of the situation of the notification of this disease is important for the population, for health professionals and for public policies in order to reduce the progression of the disease and promote the breaking of the chain of transmission. As well as, to contribute to the construction of information that favors the development of actions aimed at the notification of this grievance.

This study aimed to analyze the completion of investigation forms of acquired syphilis recorded in a Regional Health Superintendence (SRS) in southern Minas Gerais.

METHOD

This is a descriptive-analytical, cross-sectional and quantitative study, conducted in a SRS of southern Minas Gerais, which comprises 26 municipalities.

The authors of the study adopted as inclusion criteria all cases of acquired syphilis reported in that SRS, in the period from January 2010 to June 2017, accompanied by the investigation form, which accounted for 294 forms. It should be noted that this period was chosen because the notification of acquired syphilis began in 2010 and the data for the second half of 2017 would only be available from 2018. Because data collection occurred between the months of August and December 2017, the subsequent years were not included in this study.

For data collection, an instrument developed by the researchers was used, with theoretical basis in the investigation form recommended by the State Health Secretariat (SES) of Minas Gerais. This instrument was used to analyze the filling out of the investigation forms for acquired syphilis, by means of the following criteria: fields not filled out, filling out of the "ignored" field, and data inconsistencies. The researchers used the SINAN Manual, the SINAN Manual

DOI: 10.9789/2175-5361.rpcfo.v13.10259

for the investigation form of acquired syphilis, the Clinical Protocol and Therapeutic Guidelines for Integral Care of Persons with STIs, and the Technical Manual for Diagnosis of Syphilis as references for the analysis of these criteria.[8,9,10,11]

The SRS requested each municipality belonging to this health microregion to send, via e-mail, scanned investigation forms with the personal data of each patient concealed. In possession of these forms, the information was extracted and, later, registered in the instrument.

The collected data were grouped in a database using an electronic spreadsheet. The Statistical Package for the Social Science, version 20.0 software was used for descriptive statistical analysis and presentation of percentage values.

According to the National Health Council Resolution 466/2012, which deals with research involving human beings, this study was approved by the Research Ethics Committee under opinion number 2,197,263 (CAAE: 69049017.0.0000.5142).

RESULTS

In that period, 294 notifications with investigation forms of acquired syphilis were sent to the SRS under study, referring to the 26 municipalities belonging to this service.

It was found that 183 (62.2%) of the investigation forms analyzed had some variable not filled out. Among these, 152 (83.1%) had up to three variables not filled out properly. The variable function of the professional responsible for filling out the form was the most predominant in 183 (100.0%) of the forms (Table 1).

Table 1 - Distribution of investigation forms from the Regional Superintendence of Health according to the variable "unfilled fields". Alfenas, MG, Brazil, 2010-2017

Variables	n	%
Chips with unfilled variables		
No	111	37,8
Yes	183	62,2
Number of unfilled variables per form†		
Up to 3	152	83,1
From 4 to 6	23	12,6
From 7 to 9	8	4,3
Unfilled variable ‡		
Role of the professional responsible for filling out the form	183	100,0
Final case ranking	51	27,9
Occupation	45	24,6
Clinical Classification	43	23,5
Result of the treponemal test	36	19,7
Treatment scheme performed	27	14,8
Education	26	14,2
Titration	21	11,5
Sexual behavior	18	9,8
Non-treponemal test result	18	9,8
Year of diagnosis	11	6,0
History of syphilis	11	6,0
Gender	9	4,9
Race/color	9	4,9
Municipality of residence	8	4,4
Age Group	5	2,7
Housing zone	3	1,6
Reporting year	2	1,1

† Only sheets that had unfilled variables (n=183).
‡ Only forms that had unfilled variables. There was more than one unfilled variable per form (n=183).
Source: Authors' data.

It was found that 92 (31.3%) of the forms had the field filled in ignored, and 67 (72.8%) of them had up to two variables with this field filled in. Among these, the history of syphilis stood out, with 34 (37.0%), followed by the education variable, 32 (34.8%) (Table 2).

Table 2 - Distribution of investigation forms from the Regional Superintendence of Health according to the variable "filling the field ignored". Alfenas, MG, Brazil, 2010-2017

Variables	n	%
Cards with the field filled in ignored		
No	202	68,7
Yes	92	31,3
Number of variables with ignored field filling †		
Up to 2	67	72,8
From 3 to 4	17	18,5
From 5 to 8	8	8,7
Variable with field completion ignored ‡		
History of syphilis	34	37,0
Education	32	34,8
Sexual behavior	30	32,6
Clinical Classification	28	30,4
Result of the treponemal test	19	20,7
Treatment scheme performed	16	17,4
Race/color	5	5,4
Treatment performed for a history of syphilis	2	2,2
Non-treponemal test result	1	1,1

† Only the forms that had the field filled in ignored (n=92).
‡ Only the forms that had the ignored field filled in. There was more than one variable filled in with the ignored field per form (n=92).
Source: Authors' data.

It was found that 195 (66.3%) of the investigation forms have some data inconsistency. Among them, 56 (28.7%) present at least one inconsistency, with the treponemal test result/final case classification being the most predominant, 107 (54.9%) forms (Table 3).

DOI: 10.9789/2175-5361.rpcfo.v13.10259

Table 3 - Distribution of investigation forms from the Regional Superintendence of Health according to the variable "data inconsistency". Alfenas, MG, Brazil, 2010-2017

Variables	n	%
Sheets with inconsistent data		
Yes	195	66,3
No	99	33,7
Amount of data inconsistency †		
At least 1	56	28,7
From 2 to 3	83	42,5
From 4 to 5	56	28,7
Type of data inconsistencies ‡		
Result of the treponemal test/Final classification of the case	107	54,9
Clinical Classification/Treatment regimen performed	98	50,3
History of syphilis/Treatment has been performed for a history of syphilis	84	43,1
Non-treponemal test result/ Titration/ Treponemal test result/ Final case classification	84	43,1
Treatment Scheme/Final Case Classification	54	27,7
Clinical Classification/Final Case Classification	50	25,6
Non-treponemal test result/ titration	36	18,5

† Only sheets that had variables with data inconsistency (n=195).
‡ Only sheets that had variables with data inconsistency. There was more than one variable with data inconsistency per form (n=195).
Source: Authors' data.

We found a higher frequency of nurses, as the professionals responsible for filling out the forms, which represented 71 (24.1%), followed by nursing technicians and assistants and physicians, respectively, 12 (4.1%), eight (2.7%), and eight (2.7%) (Table 4).

Table 4 - Distribution of investigation forms of the Regional Superintendence of Health according to the variable "function of the professional responsible for filling out the investigation form". Alfenas, MG, Brazil, 2010-2017

Role of the professional responsible for filling out the investigation form	n	%
Not filled in	183	62,2
Nurse	71	24,1
Nursing technician	12	4,1
Nursing Assistant	8	2,7
Doctor	8	2,7
STD/AIDS Program Coordination	5	1,7
Epidemiology Service Coordination	3	1,0
Administrative Agent	2	0,7
Health Surveillance Coordination	2	0,7

Source: Authors' data.

DISCUSSION

In this study, it was observed that most of the investigation forms that composed the sample had some variable not filled out, being the variables "function of the professional responsible for filling out the form" and "final classification of the case" with the highest frequency. It is noteworthy that, due to the incipiency of studies that evaluated the completion of notifications of acquired syphilis, the results of this study were compared with investigations conducted with other diseases, such as congenital syphilis, hepatitis, among others.

In a survey conducted in Natal-RN, regarding syphilis in pregnant women and congenital syphilis, a significant amount of blank data was found in the information on residence data, epidemiological background of the pregnant woman, clinical classification, laboratory data, and treatment.[12]

Since SINAN states that all data must be filled out, the literature shows a significant lack of information on clinical data, diagnosis, and treatment. This fact contributes to the existence of weaknesses in the process of investigation and notification of the disease and may make it impossible to know the true epidemiological status.[12]

The low completeness of the data in the variables is an assumption of failure in the epidemiological investigation and confirms the need for awareness work of the professionals involved in filling out these documents. Thus, it brings the importance of investigating 100% of reported cases and the relevance of filling all fields of the form, including the final classification of the case, so that the timely closure occurs with fidelity.[13]

The results of this study, as well as others presented in the literature, highlight that the variables of patient identification, such as sex, race, age group, and area of residence are the ones with the most good or even excellent completeness. It is important to emphasize that the high completeness of these fields and of those in which the notifying source and the place of residence of the notified person are identified, probably happens due to the fact that if they are not filled out, it becomes impossible to include the notification in this system. Thus, it is observed that there are insufficient records in different systems, due to deficiencies in filling out the fields of the form, considering only those essential for insertion in them, which leads to a compromise in the quality of information available.[14]

It was also evidenced that a portion of the research forms evaluated presented an ignored field in some variables. Among these, "previous history of syphilis" and "education" were the most frequent.

In an investigation developed in Vitória da Conquista-BA, it was evidenced that the data on education had 16.7% of the forms with the field filled in ignored, and the variable type of occupation, a total of 22.2%. The authors pointed out that this fact may be linked to negligence on the part of health professionals responsible for filling out the forms.[15]

It is necessary to understand that the field "ignored" should be filled in when the appropriate answers are in fact unknown.

Thus, it would not represent a failure or negligence on the part of the professionals involved in this process. Thus, the selection of the "ignored" field would not be interpreted as indicative of poor quality of information.[16]

In the present study, as well as in the literature, deficiencies are pointed out in the filling out of some fields of the research form that could be easily investigated. For example, the completion of the education variable was indicated as bad for different notifiable diseases, corroborating the findings of this research, a fact that compromises the development of epidemiological studies, since this variable is imperative for the knowledge of the socioeconomic conditions of the individual.[14]

A high percentage of forms with inconsistent data was found in this research, and the result of the treponemal test/final classification of the case was the most frequent, followed by the clinical classification/treatment regimen performed.

In a survey conducted in SINAN in Belo Horizonte, evidence was found on inconsistencies of information in the items and with inadequate completion.[17] These data are in line with the present study, by showing a possible lack of attention from professionals when filling out the information on the forms.

To better understand the inconsistency of data regarding the result of the treponemal test/final case classification, it is important to highlight that the notification/investigation of acquired syphilis was only created in 2010 and, in 2017, through the Informative Note n. 2-SEI/2017-DIAHV/SVS/MS, there were changes in the definitions of cases of acquired syphilis.[18]

Thus, individuals presenting with hard canker, clinically evidencing primary syphilis, or lesions compatible with secondary syphilis and with reagent non-treponemal test and reagent treponemal test results, were included as confirmed cases of the disease.[19] As of 2017, asymptomatic individuals with reagent non-treponemal test and reagent treponemal test are now included as confirmed cases of syphilis.[20] The technical note18 includes that symptomatic individuals may be included in syphilis cases based on at least one reagent test, i.e., ruling out the need for confirmation with a treponemal test in individuals who present signs and symptoms of the disease to confirm the case.[20]

In cases where there is knowledge of previous treatment, the Clinical Protocol and Therapeutic Guidelines for Comprehensive Care of People with STIs[21] states that in case of a reactive non-treponemal test and a reactive treponemal test, the case is considered a diagnosis of syphilis or serological scar. For non-treponemal test results that are reagent and treponemal test results that are non-reactive, there may be a false-reagent result in the non-treponemal test, and in cases where the titration is less than or equal to 1:4. When the titration is higher than 1:4, another treponemal test with a different methodology is recommended to define the final classification of the case.[21]

If the result is reagent, it is defined as a diagnosis of syphilis or serological scar; if it is not reagent, the diagnosis can be excluded. In the presence of non-treponemal and nonreactive treponemal tests, it is indicated not to perform the complementary test if the first test is already nonreactive and there is no clinical suspicion of primary syphilis, because it may be indicating the absence of infection or incubation period of recent syphilis.[21]

It can be inferred then that, until the final date of data collection in this study, the case definition criteria recommended in the year 2010 were obeyed. Inconsistencies between the results of the treponemal test and the final classification of the case were found in the data sheets analyzed, because the confirmation or rejection of the diagnosis of syphilis only occurred after the test was performed and interpreted. A large number of forms with blank, ignored and/or marked with a non-reactive result did not match the final confirmation of the case in syphilis.

Regarding the inconsistency clinical classification/treatment regimen, it is worth noting that the treatment of individuals with a reactive rapid test may lead to over-treatment. This is because rapid testing detects only specific antibodies, and it is not possible to distinguish the treated infection from the presence of false positive results. However, because of the consequences of non-treatment, high prevalence populations may benefit and outweigh the cost of overtreatment.[22]

Regarding clinical classification, the Epidemiological Syphilis Bulletin provides information on the disease in pregnant women, with no data regarding acquired syphilis. Most of the forms may have been filled out erroneously, since most of them were classified as primary syphilis, which cannot be justified by the pathophysiology of the disease.[20]

It is worth inferring that in the present study such a situation may have occurred, since most cases were classified as tertiary syphilis. As for the treatment regimen, the numbers found in this research are even more exorbitant, since most of the classified cases were treated with penicillin 7,200,000 IU. But, based on the references prepared by the Ministry of Health (MH), they could be treated with lower dosages of the medication, since this treatment scheme is intended for patients with late latent syphilis, lasting more than one year, or latent with ignored duration, and tertiary syphilis.[10]

For each stage of syphilis, there is a specific treatment with the correct amount of benzathine penicillin. Thus, the inadequate treatment for the clinical stage of the disease is part of the classification of incorrectly performed treatments.[11,19]

Another result found in this study refers to the highest frequency of the professionals responsible for filling out the forms being nurses, followed by nursing technicians and assistants, and physicians.

In a survey conducted in Valparaíso-GO to analyze and evaluate the completeness of investigation forms, it was found that the fields referring to information about the investigator were intended only to inform the identification of this professional. It is noteworthy that this field is not typed in the information system, and exists only in the physical form; for this reason, it was not analyzed in that survey.[23]

A greater involvement of all professionals responsible for filling out these documents is necessary, from managers to health workers, including nurses, aiming to provide better quality information entered into the SIS. These health

professionals need constant training on the importance of filling out these documents, so that everyone can see this action as a form of health surveillance, and not just a bureaucratic act.[3]

Ensuring the consistency of the information in SINAN is the responsibility of the professional who completed the investigation. This accountability may affect the three spheres of government, especially in relation to the closure of cases, because if there are flaws in the information, the magnitude of the grievance may be masked in the country.[13]

To ensure that this information is accurate, it is necessary that the professional seeks the return of laboratory test results, reviews medical records, and conducts home visits. The main thing is to keep the information in SINAN updated, so that the country does not lack the necessary information to plan new strategies to control a particular disease.[13]

In order to improve the quality of epidemiological surveillance of notifiable diseases, especially syphilis, it is essential to invest in the training of the professionals involved. It is worth mentioning that obtaining good-quality data is an essential condition for the health system to characterize the failures and generate new proposals for intervention in the control of the grievance. It becomes possible to create new tools to ensure that managers have access to quality information in order to create new public policies.[24]

For this, the filling of the data in their real completeness in the forms needs to be treated as a working and management tool. It can be said that the true commitment of the professionals responsible for filling out these documents, in making the correct use of systems in feeding data in a coherent, legitimate, and updated way, would allow access to consistent reports, capable of demonstrating the epidemiological picture of a particular municipality or even the country, facilitating the monitoring activities of diseases.[25]

CONCLUDING REMARKS

With this research we found a significant number of investigation forms of acquired syphilis reported with some variable not filled out or with an ignored field, as well as data inconsistencies.

This study had some limitations, including the fact that only the investigation forms of acquired syphilis sent in full to the SRS were evaluated, since it was not possible to capture them through SINAN. Another limitation refers to the fact that the discussion of the variable "data inconsistency" was difficult due to the difficulty of finding studies in the literature that analyzed this information in the grievance of acquired syphilis.

It is suggested that further investigations be carried out to evaluate the filling out and quality of the syphilis notification records, as well as the inconsistency of data presented in the investigation forms. Longitudinal research is also needed, with experimental and quasi-experimental designs, in order to show the causal link and the cause-effect of the notifications and investigations of the cases of this grievance.

The results presented in this study, as well as new investigations on this theme, can advance knowledge in the area by collaborating in the implementation of interventions that enable the improvement of filling out these forms, with emphasis on the role of nurses, who are the health professionals who most perform this task.

THANKS

This work was carried out with the support of the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brazil (CAPES).

REFERENCES

1. Bittencourt MJS, Nascimento BAM, Drago MG. Nodular tertiary syphilis in an immunocompetent patient. An. Bras. Dermatol. [Internet]. 2016 [cited em 2020 dec 10]; 91(4). Available from: http://dx.doi.org/10.1590/abd1806-4841.20163837.
2. Noriega L, Di Chiacchio NG, Rezende FC, Di Chiacchio N. Periungual Lesion due to Secondary Syphilis. Skin Appendage Disord. [Internet]. 2016 [cited em 2020 dec 08]; 2(3-4). Available from: https://doi.org/10.1159/000449418.
3. Luz TCB, Pedrosa ML. A subnotificação de casos de Doenças Sexualmente Transmissíveis: a situação do estado do Rio de Janeiro. DST – J. Bras. Doenças Sex. Transm. [Internet]. 2005 [acesso em 10 dezembro 2020]; 17(2). Disponível em: http://www.dst.uff.br/revista17-2-2005/4-a%20subnotificacao.pdf.
4. Segurado AC, Cassenote AJ, Luna EA. Saúde nas metrópoles - Doenças infecciosas. Estud. Av. [Internet]. 2016 [acesso em 08 de dezembro 2020]; 30(86). Disponível em: http://dx.doi.org/10.1590/S0103-40142016.00100003.
5. Silva Júnior SHA, Mota JC, Silva RS, Campos MR, Schramm JMA. Descrição dos registros repetidos no Sistema de Informação de Agravos de Notificação, Brasil, 2008-2009. Epidemiol. Serv. Saúde. [Internet]. 2016 [acesso em 11 de dezembro 2020]; 25(3). Disponível em: http://www.scielo.br/pdf/ress/v25n3/2237-9622-ress-25-03-00487.pdf.
6. Marques CA, Siqueira MM, Portugal FB. Avaliação da não completude das notificações compulsórias de dengue registradas por município de pequeno porte no Brasil. Ciênc. Saúde Coletiva. [Internet]. 2020 [acesso em 12 de dezembro 2020]; 25(3). Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1413-81232020000300891&lng=en.
7. Silva GA, Oliveira CMG. O registro das doenças de notificação compulsória: a participação dos profissionais da saúde e da comunidade. Rev. Epidemiol. Control. Infect. [Internet]. 2014 [acesso em 09 de dezembro 2020]; 4(3). Disponível em: http://dx.doi.org/10.17058/reci.v4i3.4578.
8. Brasil. Ministério da Saúde (MS). Sistema de Informação de Agravos de Notificação – SINAN: normas e rotinas. Brasília: MS; [Internet]. 2007 [acesso em 06 de dezembro 2020]. Disponível em: http://bvsms.saude.gov.br/bvs/publicacoes/07_0098_M.pdf.
9. Brasil. Ministério da Saúde (MS). SINAN: Sistema de Informação de Agravos de Notificação – ficha de investigação sífilis adquirida. Alfenas: Vigilância Epidemiológica; [Internet]. 2020 [acesso em 05 de dezembro 2020]. Disponível em: http://epidemiologia.alfenas.mg.gov.br/news/arquivos/sifilis_adquirida.pdf.
10. Brasil. Ministério da Saúde (MS). Protocolo Clínico e Diretrizes Terapêuticas para Atenção Integral às Pessoas com Infecções Sexualmente Transmissíveis. Brasília: MS; [Internet]. 2020 [acesso em 10 de dezembro 2020]. Disponível em: http://www.aids.gov.br/pt-br/pub/2015/protocolo-clinico-e-diretrizes-terapeuticas-para-atencao-integral-pessoas-com-infeccoes.
11. Brasil. Ministério da Saúde (MS). Manual técnico para diagnóstico da sífilis. Brasília: MS; [Internet]. 2016 [acesso em 08 de dezembro 2020]. Disponível em: file:///C:/Users/grazi/Downloads/manual_sifilis_10_2016_pdf_23637.pdf.
12. Oliveira SIM. Notificações de sífilis gestacional e congênita: uma análise epidemiológica. [Mestrado em Enfermagem]. Natal (Brasil): Universidade Federal do Rio Grande do Norte; 2016 [acesso em 07 de dezembro 2020]. Disponível em: https://repositorio.ufrn.br/jspui/bitstream/123456789/22613/1/SamaraIsabelaMaiaDeOliveira_DISSERT.pdf.

13. Oliveira MEP, Soares MRAL, Costa MCN, Mota ELA. Avaliação da completitude dos registros de febre tifóide notificados no SINAN pela Bahia. Epidemiol. Serv. Saúde. [Internet]. 2009 [acesso em 10 de dezembro 2020]; 18(3). Disponível em: http://scielo.iec.gov.br/pdf/ess/v18n3/v18n3a04.pdf.

14. Gomes SCS, Caldas AJM. Qualidade dos dados do sistema de informação sobre acidentes de trabalho com exposição a material biológico no Brasil, 2010 a 2015. Rev. Bras. Med. Trab. [Internet]. 2017 [acesso em 09 de dezembro 2020]; 15(3). Disponível em: https://doi.org/10.5327/Z1679443520170036.

15. Santos ACS, Morais MTM. Perfil epidemiológico e sociodemográfico dos portadores de Hepatite B de um município do sudoeste baiano. Rev. Saúde Com. [Internet]. 2017 [acesso em 09 de dezembro 2020]; 14(1). Disponível em: https://doi.org/10.22481/rsc.v14i1.537.

16. Galdino A, Santana VS, Ferrite S. Qualidade do registro de dados sobre acidentes de trabalho fatais no Brasil. Rev. Saúde Publica. [Internet]. 2017 [acesso em 05 de dezembro 2020]; 51(4). Disponível em: https://doi.org/10.11606/S1518-8787.2017051000064.

17. Bovendorp ACC, Oliveira MB, Saleme PS, Lyon S, Bastos M. Qualidade de registros de hanseníase em centro de referência no estado de Minas Gerais, no período de 2006 a 2010. Rev. Med. Minas Gerais. [Internet]. 2014 [acesso em 11 de dezembro 2020]; 24(6). Disponível em: http://www.dx.doi.org/10.5935/2238-3182.20140087.

18. BRASIL. Nota Informativa nº 02-SEI/2017 - DIAHV/SVS/MS. Altera os critérios de definição de casos para notificação de sífilis adquirida, sífilis em gestantes e sífilis congênita. Ministério da Saúde (MS). 2017. Disponível em: http://www.aids.gov.br/pt-br/legislacao/nota-informativa-no-02-sei2017-diahvsvsms.

19. Ministério da Saúde (BR). Secretaria de Vigilância em Saúde. Boletim Epidemiológico Sífilis: 2016 [Internet]. Brasília: Ministério da Saúde [acesso em 09 de dezembro 2020]. Disponível em: http://www.aids.gov.br/pt-br/pub/2016/boletim-epidemiologico-de-sifilis-2016.

20. Ministério da Saúde (BR). Secretaria de Vigilância em Saúde. Boletim Epidemiológico Sífilis: 2017 [Internet]. Brasília: Ministério da Saúde [acesso em 10 de dezembro 2020]. Disponível em: http://www.aids.gov.br/pt-br/pub/2017/boletim-epidemiologico-de-sifilis-2017.

21. Ministério da Saúde (BR). Secretaria de Vigilância em Saúde. Protocolo Clínico e Diretrizes Terapêuticas para Atenção Integral às Pessoas com Infecções Sexualmente Transmissíveis (IST) [Internet]. 1. ed. Brasília: Ministério da Saúde; 2020 [acesso em 06 de dezembro 2020]. Disponível em: http://conitec.gov.br/images/Consultas/2018/Relatorio_PCDT_IST_CP34_2018.pdf.

22. Vaulet LG, Morando N, Casco R, Melgar A, Silva N, Fermepin MR, Pando MA. Evaluation of the utility of a rapid test for syphilis at a sexually transmitted disease clinic in Buenos Aires, Argentina. Scientific Reports. [Internet]. 2018 [cited 2020 dec 08]; 8(5). Available from: https://doi.org/10.1038/s41598-018-25941-4.

23. Silva LS, Mendes DRG. Completude do sistema de informação de agravos de notificação de dengue em Valparaíso de Goiás, 2012-2015. Rev. Cient. Sena Aires. [Internet]. 2016 [acesso em 09 de dezembro 2020]; 5(2). Disponível em: http://revistafacesa.senaaires.com.br/index.php/revisa/article/view/262/135.

24. Pereira CML, Azevedo AP, Marinho SSB, Prince KA, Gonçalves JTT, Costa MR, Santo LRE. Perfil clínico e epidemiológico da doença de chagas aguda no estado de Minas Gerais. Rev. Aten. Saúde. [Internet]. 2017 [acesso em 08 de dezembro 2020]; 15(52). Disponível em: https://seer.uscs.edu.br/index.php/revista_ciencias_saude/article/view/4523/pdf.

25. Santos TO, Pereira LP, Silveira DT. Implantação de sistemas informatizados na saúde: uma revisão sistemática. Rev. Eletron. Comum Inf. Inov. Saúde. [Internet]. 2017 [acesso em 12 de dezembro 2020]; 11(3). Disponível em: http://dx.doi.org/10.29397/reciis.v11i3.1064.

Received in: 20/07/2020
Required revisions: 15/12/2020
Approved in: 15/06/2021
Published in: 00/00/2021

Corresponding author
Grazielle Miranda Freitas
Address: Rua Gabriel Monteiro Da Silva, 700
Alfenas/MG, Brazil
Zip code: 37.130-001
Email address: grazimiranda85@gmail.com

Disclaimer: The authors claim to have no conflict of interest.