









Epidemiological profile of leprosy in the municipality of Divinópolis, Minas Gerais, 2011 to 2019

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ABSTRACT

Objective: to analyze the epidemiological profile of leprosy in the municipality of Divinópolis, Minas Gerais, between the years 2011 to 2019. **Method:** this is an ecological, descriptive study, which used secondary data available in open access in the Strategic Management Support Room and the Department of Informatics of the Unified Health System regarding the confirmed and notified cases of leprosy of residents in the municipality of Divinópolis, Minas Gerais, in the period from 2011 to 2019. **Results:** during the study period, 57 cases of leprosy were reported, all in people over 20 years old, mostly in men (50.9%), of brown race/color (49.1%) and with incomplete elementary school education (26.3%). The predominant clinical form was dimorphic (38.4%) followed by tuberculoid (29.8%), multibacillary operational classification (56.2%), and most cases (93%) were entered in the Sistema de Informação de Agravos de Notificação (SINAN) as new cases. As for the evaluation of the degree of physical disability at diagnosis, 7% (n=4) of cases were reported as grade 2. Regarding the type of output, 87.9% of cases were discharged for cure. **Conclusion:** the epidemiological data indicate that the diagnosis of leprosy in Divinópolis is being made late, which contributes to the maintenance of a hidden prevalence.

Keywords: Leprosy, Primary health care, Public health surveillance, Epidemiology, Descriptive.

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INTRODUCTION

Leprosy is a neglected tropical disease¹ which still persists as a public health problem in 23 underdeveloped and developing countries². It is directly related to unfavorable socioeconomic conditions and social vulnerability^{1,3}. A cohort of 100 million Brazilians showed that there is an association between the lack of sewage system, housing, education and even employment, with the risk of developing leprosy³.

Brazil continues to be the second country in the world in absolute number of new cases diagnosed² even with the reduction in diagnoses and notifications that occurred due to operational problems caused by the pandemic of COVID-19⁴. Together with India and Indonesia, these three countries accounted for 74% of the new cases reported in 2020². Specifically, in the year 2020, Brazil notified 17,979 new cases of leprosy, 80.1% being multibacillary and 8.4% with grade 2 physical disability already installed at diagnosis².

A study that geo-referenced the cases reported from 2001 to 2015 showed that Brazil has a heterogeneous distribution of leprosy cases presenting 26 clusters that affect only the Midwest, North and Northeast regions. The state of Minas Gerais is located outside the area of clusters⁵ and has 73.5% (n= 627) silent municipalities, that is, that did not register any new cases in 2020⁶. In Brazil, a recent study showed that the increase in the coverage of the Family Health Strategy (FHS) resulted in an increase in the proportion of cases diagnosed in primary health care (PHC), but the authors concluded that the satisfactory availability of the FHS is still insufficient to control the disease⁷.

The heterogeneity of the leprosy endemic in the territories⁸ points out the need for action planning according to the epidemiological and operational diagnosis¹, and that both in the National Plan⁹ and in the state plan¹⁰ of leprosy there are recommendations for surveillance of the disease regardless of the level of endemicity. Even though there is a political commitment towards the construction of a horizontal, hierarchical, integral and integrated network for the health care of people with leprosy and their families⁹⁻¹⁰, who have PHC services as their preferred entry point, research shows that there are difficulties in integrating leprosy control actions (LCA) at this point of care^{7-8,11}.

Epidemiological research conducted in Divinópolis showed that the organization of

health services in the municipality contributes to late diagnosis, pointing to the need for effective integration of LCA in PHC¹². Knowledge of the local epidemiology of the disease allows monitoring and evaluation of leprosy surveillance procedures¹³, with the aim of reducing the burden of disease⁹⁻¹⁰.

It is noteworthy that PHC services in the city of Divinópolis are training grounds for health students from two public and two private universities, as well as three Multi-professional and Health Area Residencies. In this sense, this scenario used for training students and health workers should be guided by the principles and guidelines of the Unified Health System (UHS), with knowledge of the priorities and needs of the system.

Given the above, this study brings as a problem the following question: how was the epidemiological behavior of leprosy in the municipality of Divinópolis between the years 2011 to 2019? The objective of the study is to analyze the epidemiological profile of leprosy in the municipality of Divinópolis, Minas Gerais, between the years 2011 to 2019.

METHOD

This is a descriptive ecological study that used secondary data on leprosy cases reported in residents of the municipality of Divinópolis, Minas Gerais. Divinópolis is the twelfth most populated municipality in the state of Minas Gerais, with an estimated population of 238,230 inhabitants and 42 PHC units, of which 10 are conventional basic health units and 32 FHS units, the latter responsible for a coverage of 46.3% of the population¹⁴.

Regarding leprosy, the Divinópolis health service follows the recommendations of the Ministry of Health (MH)⁹ and the Minas Gerais Secretary of Health¹⁰ for the organization of the attention network, including the publication of a municipal ordinance that provides for the decentralization of leprosy in the municipality¹⁵. PHC units are the gateway both for the early identification of cases and for the follow-up of already diagnosed cases until the patient is discharged¹⁵, except in cases that require monitoring in medium and/or high complexity, as recommended by the MH. The epidemiological surveillance also has, within this context, an important role in feeding information into the information system¹⁵.

The study population was the leprosy cases of residents of the municipality of Divinópolis notified in

the period from 2011 to 2019. The long time series is justified since the operational changes that occurred will be diluted throughout the period, which provides a better approximation of the epidemiological reality of the disease¹².

The data was collected through information available in open access at the Department of Informatics of the Unified Health System (DATASUS), in the month of February 2021, through the electronic address <https://datasus.saude.gov.br/acesso-a-informacao/casos-de-hanseniose-desde-2001-sinan/> that presents aggregate data related to the disease of the Information System for Notifiable Diseases (SINAN) database. SINAN is fed by the notification and investigation of cases of diseases and illnesses that are on the national list of compulsorily notifiable diseases. The Leprosy Notification/Investigation Form and the Leprosy Monitoring Bulletin are essential for the composition and updating of epidemiological and operational indicators, which subsidize the evaluation of interventions and underpin the planning of new actions¹⁶.

The variables analyzed were: age, sex, race/color, education, clinical form, operational classification, mode of entry, and evaluation of the degree of physical disability assessed at diagnosis and at discharge, type of output.

The Strategic Management Support Room (SAGE) was also used at <https://sage.saude.gov.br/>, which provides open access to information to support decision making, management and knowledge generation. Regarding leprosy, the following indicators were collected in SAGE: (i) Annual detection rate of new leprosy cases per 100 thousand inhabitants; (ii) Proportion of examined contacts of new leprosy cases diagnosed in the years of the cohorts and (iii) Cure rate of new leprosy cases diagnosed in the years of the cohorts.

The data extracted from DATASUS and SAGE was treated in Microsoft Office Excel 2016 software. According to the guidelines for surveillance, care and elimination of leprosy¹⁶, the calculation of (i) Proportion of leprosy cases with grade 2 physical disabilities at diagnosis among new cases detected and evaluated in the year and (ii) Proportion of new leprosy cases with grade 2 physical disabilities evaluated at diagnosis.

The study respected the ethical precepts of Resolution 466/12 of the National Health Council and as the data were obtained in aggregate form and from free access databases, the absence of the opinion of an Ethics Committee on Research Involving Human Beings is justified.

RESULTS

During the study period, 57 cases of leprosy were reported in residents of the city of Divinópolis, and 100% of these cases were in people over 20 years of age (data not shown in the table). Table 1 shows the socio-demographic characteristics of the cases. It is noteworthy that 50.9% of the cases were in males.

Table 1. Sociodemographic characteristics of leprosy cases residing in the municipality of Divinópolis, Minas Gerais, notified in the period from 2011 to 2019.

Variables	N	%
Sex		
Female	28	49.1
Male	29	50.9
Education		
Illiterate	2	3.5
Incomplete elementary school	15	26.3
Complete elementary school	2	3.5
Incomplete highschool	3	5.3
Complete highschool	1	1.8
Ignored/Blank	34	59.6
Race/Color		
White	21	36.9
Black	4	7.0
Brown	28	49.1
Ignored/Blank	4	7.0

Source: Prepared by the authors with data from SINAN/DATASUS.

As for the education of individuals affected by leprosy in the city of Divinópolis, it is noteworthy that the notification form of most cases (59.6%) presented this information either ignored or blank. Among those with reported schooling, most had incomplete elementary school education (26.3%). Regarding race/color, approximately half of the cases (49.1%) were brown. Regarding this characteristic, there were four (7%) notification forms without the proper completion of the information.

Regarding clinical characteristics (Table 2), the predominant clinical form was dimorphic (38.4%), followed by tuberculoid (29.8%). In assessing the operational classification, we highlight the multibacillary operational classification (56.2%), and most cases (93%) were entered in SINAN as new cases.

Table 2 also shows that, regarding the evaluation of the degree of physical disability at diagnosis, 7% (n=4) of the cases were reported as grade 2. With regard to the type of output, it is important to mention that there was an abandonment (1.7%) and 87.9% of cases were discharged for cure.

Table 2. Clinical characteristics of leprosy cases residing in the municipality of Divinópolis, Minas Gerais, notified in the period from 2011 to 2019.

Variables	N	%
Clinical form		
Undetermined	6	10.6%
Tuberculoid	17	29.8%
Dimorphic	22	38.4%
Virchowian	9	15.9%
Not classified (blank)	3	5.3%
Operational Classification in Diagnosis		
Paucibacillary	25	43.8%
Multibacillary	32	56.2%
Assessment of the degree of disability at diagnosis		
Degree 0	43	75.4%
Degree 1	7	12.3%
Degree 2	4	7.0%
Not rated (blank)	3	5.3%
Assessment of the degree of disability in healing		
Degree 0	25	43.8%
Degree 1	3	5.3%
Degree 2	3	5.3%
Not rated (blank)	26	45.6%
Input mode		
New case	53	93.0%
Other input	4	7.0%
Output Type		
Cure	50	87.9%
Transfer to another municipality	3	5.3%
Death	1	1.7%
Abandonment	1	1.7%
Not filled in (blank)	2	3.4%

Source: Prepared by the authors with data from SINAN/DATASUS.

Again, the absence of information in the SINAN form related to the clinical form (5.3%), evaluation of the degree of disability at diagnosis (5.3%) and at discharge (45.6%), and the type of output (3.4%) is noteworthy.

Regarding the indicators for monitoring the progress of leprosy elimination as a public health problem, graph 1 shows the annual detection rate of new leprosy cases per 100,000 inhabitants. With the exception of the years 2011 and 2016, the municipality presents medium endemicity, with higher rates in the years 2013 and 2014, respectively.

When calculating the indicator proportion of leprosy cases with grade 2 physical disability

at diagnosis among the new cases detected and evaluated in the year, this indicator in the year 2012 was 30% and in 2013, 10%, both high parameters. In the other years, the parameter was 0% (data not shown in graph).

Regarding the indicators to evaluate the quality of leprosy services, graph 2 shows the proportion of leprosy cured among new cases diagnosed in the years of the cohorts, which had a regular performance in 2012 (75%) and in 2016 (77.8%). In the other years it performed well, with 100% cured.

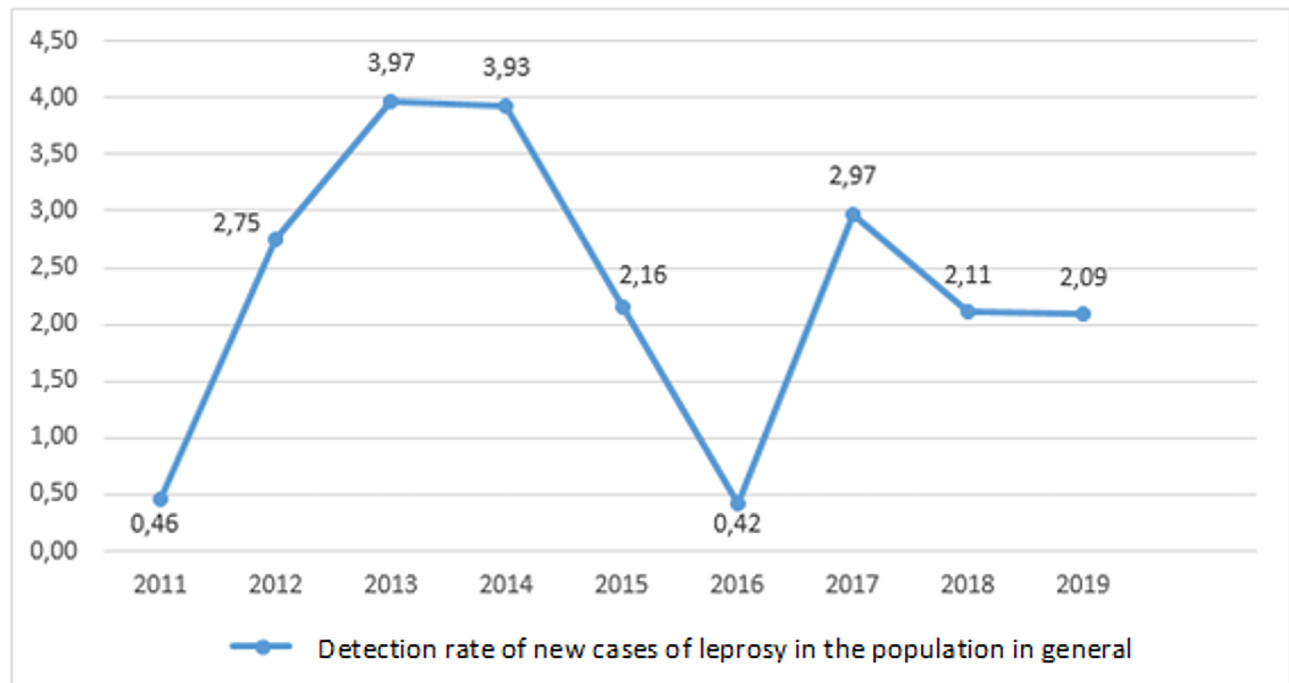
Regarding the proportion of examined contacts of new leprosy cases diagnosed in the years of the cohorts, which measures the ability of services to perform surveillance of contacts of cases of the disease, increasing the timely detection of cases, the performance was regular in the years 2012 (85.7%) and 2013 (77.8%). In the other years, performance was good, with more than 90% of contacts evaluated (data shown in graph 2).

The proportion of new leprosy cases with an assessed degree of physical disability at diagnosis was less than 100% in the years 2015 (83.3%), 2017 (85.7%), and 2019 (80%), maintaining as regular performance. In the other years of the historical series, this indicator was good, i.e. $\geq 90\%$ (data not shown in graph).

DISCUSSION

During the study period, 57 cases of leprosy were reported in residents of the municipality of Divinópolis, all in people over 20 years of age. The detection rate, with the exception of the years 2011 and 2016, maintained an average endemicity in the municipality of Divinópolis. Brazil, in 2019, had its overall detection rate of new cases in the parameter of high endemicity (13.23 cases per 100,000 inhabitants), with only the South and Southeast regions with medium parameter⁴.

In the National Plan⁹ and State Plan¹⁰ of leprosy there are recommendations for dealing with the disease in municipalities of medium endemicity. Among the recommendations are i) continuing education activities for professionals; ii) surveillance of dermatoneurological symptoms; iii) decentralization of prevention and control activities and iv) active search for cases, seeking to confirm the absence of new cases⁹⁻¹⁰.



Graph 1. Detection rate of new leprosy cases in the general population in the municipality of Divinópolis, Minas Gerais, SAGE/MH, 2011 to 2019.



Graph 2. Proportion of healing of new leprosy cases and proportion of contacts examined in the years of the cohorts in the municipality of Divinópolis, Minas Gerais, SAGE/MH, 2011 to 2019.

In both high-incidence leprosy and low-incidence settings, the World Health Organization (WHO) recommends implementing the four pillars of the Global Leprosy Strategy 2021-2030 namely: (i) implement in all endemic countries a country's own zero leprosy roadmap; (ii) scale up leprosy prevention activities integrated with active case detection; (iii) control leprosy and its complications and prevent further disabilities; and (iv) combat stigma and ensure that human rights are respected¹.

Transmission interruption is the goal stipulated by this strategy¹. However, the historical series for the municipality of Divinópolis presented in this study and in a previous one¹², shows that there is a predominance of cases diagnosed with the multibacillary clinical form, which are responsible for maintaining the chain of transmission of the disease¹⁶ and reinforces the need for timely diagnosis⁸. In Brazil, there was a 32.6% increase in the proportion of new multibacillary cases, from 59.1% in 2010 to 78.4% in 2019⁴. Active case-finding in the community is an important strategy for discovering hidden cases¹.

Brazilian researchers developed a leprosy suspicion questionnaire with 14 questions that addressed family history and the main signs and symptoms of the disease. This questionnaire was applied by Community Health Agents (CHA) to 3241 individuals in the municipality of Jardinópolis (São Paulo), where 479 people were submitted to clinical and laboratory examination, and 64 new cases of leprosy were confirmed¹⁷.

The research conducted by Bernardes Filho and collaborators¹⁷ showed that all confirmed cases presented hypochromic macules with loss or absence of sensation¹⁷, which reinforces that the diagnosis of leprosy is essentially clinical¹⁶. Since 60% of the cases notified through this campaign already presented some degree of physical disability (DPD) at diagnosis, eight of them with DPD2, the authors reaffirm the need for PHC professionals to pay attention to the first signs and symptoms of leprosy, especially those related to nerve dysfunction¹⁷.

The presence of cases diagnosed with DPD2, i.e., those with visible deformities, indicates that there is a late diagnosis², probably due to operational problems of the health service in recognizing leprosy cases early^{8,18}, in addition to people's lack of knowledge about the signs and symptoms of leprosy and the difficulty in seeking timely attention^{2,18}.

Regarding the place of choice for first contact after the identification of dermatoneurological signs and symptoms, a study conducted in the city of Juiz de Fora (Minas Gerais) showed that most patients sought PHC services, followed by private practices, hospital and reference outpatient clinic.¹⁹

Even if the municipality under study is classified as medium endemic, "the surveillance system must be active and with professionals trained to recognize the signs and symptoms"^{13:7} since "areas with a history of endemicity may have a hidden prevalence that contributes to the chain of transmission of the disease"^{13:8}. In this perspective, from 2006 to 2010, the hidden prevalence of leprosy in Divinópolis was 12 cases¹².

The empowerment of CHAs to conduct health education activities on the signs and symptoms of leprosy in order to identify suspected cases and the training of PHC doctors and nurses to perform the dermatoneurological examination¹⁷ are essential for the supply, with quality, of the actions of prevention and control of the disease^{7,20}.

Theoretical and practical training held in Divinópolis with 90 PHC doctors and nurses provided reflections on leprosy epidemiology; diagnosis and treatment; evaluation and monitoring of neural function; prevention of disabilities; epidemiological surveillance and organization of leprosy care in the municipality. This training strengthened the performance of LCAs in PHC and, after the training; two cases of leprosy were notified in 2019 and eight cases in the year 2020²¹.

In Divinópolis, in the period between 2011 and 2019, four cases with DPD2 were reported at diagnosis, which corresponds to 7% of the total cases. Compared to the previous study conducted in the municipality, there was an increase in this proportion, and in the period from 2001 to 2010, 4.8% of cases were diagnosed with DPD2¹¹. In Brazil, the percentage of DPD2 at diagnosis increased from 5.5% in 2006 to 6.8% in 2017⁸. It is important to note that the WHO has a vision of zero disability in the long term, and a 90% reduction in the rate per million of new cases with DPD2 by 2030¹ since stigma is the most common individual and community factor associated with late diagnosis¹⁸.

A study that analyzed the factors that contribute to the late diagnosis of leprosy in Brazil suggests the need for community interventions

to disseminate the signs and symptoms of the disease and eliminate false concepts regarding leprosy to encourage patients to seek care for this health problem²², as well as to eliminate stigma and discrimination related to leprosy¹, including by health professionals themselves¹⁹. It is recommended that cases be detected in a timely manner so that treatment can be initiated as soon as possible, thus helping to reduce the complications of the disease and minimize changes in quality of life¹⁶, especially in the most vulnerable areas and in the most affected population subgroups⁸.

The active search campaign in a Brazilian female prison unit, in which the leprosy suspicion questionnaire was used, allowed the diagnosis of 14 new leprosy cases, 13 of which were classified as multibacillary.²³ Research has shown that many Brazilian physicians cannot readily determine a conclusive diagnosis of leprosy²², with, in the southeast region, 57.5% of leprosy cases were detected by referral in the period from 2015 to 2019⁴.

The therapeutic itinerary of people with leprosy is marked by a long road and challenges in the search for diagnosis^{19,24-25}, both in the public and private health care network²⁵. Based on this evidence, the authors affirmed that universal access to timely leprosy diagnosis must be a priority for leprosy control in Brazil⁸. Therefore, it is worth noting that the leprosy suspicion questionnaire also proved to be a good tool to remind health professionals about the main signs and symptoms of the disease¹⁷, what can contribute to timely diagnosis.

Study conducted in Brazil pointed out that most leprosy cases diagnosed with DPD2 in 2017 were in men (69.6%), with race/color declared as brown (55.4%), in the economically active age group (57.2%) and with up to eight years of education (61.8%)⁸. This data corroborates evidence from a systematic review that pointed out that individual factors related to delayed diagnosis of leprosy are advanced age, multibacillary clinical form, being male, and having low awareness of the signs and symptoms of the disease¹⁸.

Although the vast majority of cases in the study (76%) had zero DPD at diagnosis, there was a significant portion of patients with some disability, 12% with DPD1 and 7% with DPD2. It is important to note that there was incomplete information on the assessment of the degree of physical disability at diagnosis (5%) and at discharge (46%). This

situation is routinely found in Brazil, and in 2017, the absence of this information in the SINAN form was 11.3% at diagnosis and 42.8% at discharge⁸.

The lack of information on the assessment of the degree of disability at diagnosis and at discharge suggests the need to refine the quality of leprosy care in Brazil⁸, "as well as the proper completion of the notification form by the FHS professionals involved in patient care"^{20:1813} and the revision of these forms in the epidemiological surveillance services, which are responsible for feeding the health information systems in Brazil^{8,20}.

The proportion of new leprosy cases with an assessed degree of physical disability at diagnosis is an indicator that measures the quality of care in health services¹⁶. This indicator in Brazil, in the period from 2010 to 2019, remained in the regular parameter, in which it had 75 to 89.9% of cases evaluated⁴. In Divinópolis, only in the years 2015, 2017 and 2019 the performance of this indicator was regular. In the other years of the study period, performance was good.

According to the survey results regarding gender, there was a predominance of males (51%). Between the years 2015 and 2019, 55.3% of leprosy cases in Brazil were in males⁴. The WHO mentions that although it is a disease that can affect men and women, worldwide, the majority of the affected population is male², as well as in Brazil^{4,8}. The presence of missing data on this variable in the SINAN form is a Brazilian reality⁸.

Regarding education, 59% of the compulsory notification forms had this field blank or ignored, a percentage much higher than the Brazilian average, which is 17.7% incomplete⁴. In the study period, 4% of the cases reported in Divinópolis were illiterate and 26% had incomplete elementary school education. In Brazil, there is a predominance of cases in people with incomplete primary education (42.2%)⁴.

The education variable may be a risk factor for the disease, since it is an indirect indicator of social conditions and can influence adherence to treatment, care for prevention of disabilities and surveillance of contacts²⁶. Therefore, there is a need for the health professional to know the level of schooling of the patient and his family in order to adapt the language that will be used in health education activities and orientations.

In this perspective, the Brazilian government launched, in 2020, the "Health Handbook for Persons Afflicted by Leprosy" so that the patient can have access

to information about the disease, their rights and health care, besides presenting all the records made by health professionals during the treatment follow-up²⁷.

With regard to the declaration of race/color in the SINAN notification form, 49% identified themselves as brown. In Brazil, 58.7% of leprosy cases notified between the years 2015 to 2019 were in people who declared their race/color as brown, followed by whites, with 24.3%⁴. Regarding the clinical form, the findings of this study are similar to the Brazilian context in which the dimorphic clinical form is predominant, followed by the tuberculoid form⁸. It is noteworthy that there are still notifications that are sent to the MH without information on the clinical form of leprosy⁸.

In Brazil, the predominant mode of entry is new case, with 79.1% of cases in 2019⁴. In view of this scenario, leprosy planning in the leprosy policies should be based on the findings in Divinópolis (93%). Regarding the type of output, 87% of the cases notified in Divinópolis in the period from 2011 to 2019 were discharged by cure, a regular indicator according to the parameters of the MH¹⁶.

In relation to the indicator proportion of cure of new cases diagnosed in the years of the cohorts, which evaluates the quality of care and follow-up of new cases diagnosed until the completion of treatment¹⁶, the municipality of Divinópolis performed well, with the exception of 2012 and 2016, in which it showed regular performance (75% and 77.7%, respectively). In the Brazilian scenario, between 2012 and 2019, there was a reduction in the proportion of cure of new cases diagnosed in the years of the cohorts, going from 85.9% to 79.4% and remaining in the regular parameter. Minas Gerais also showed a decline in this indicator, from 88.8% in 2012 to 80.9% in 2019⁴.

The proportion of examined contacts of new leprosy cases diagnosed in the years of the cohorts in Divinópolis was good ($\geq 90.0\%$ of examined contacts) with the exception of the years 2012 and 2013. In Brazil, in 2019, the result of this indicator was 82.4%, a regular parameter. However, in the state of Minas Gerais, there was a 4.2% decline in the proportion of contacts examined in the period between 2012 and 2019, from 86.1% (in 2012) to 82.5% (in 2019)⁴.

It is necessary to strengthen the active search and follow-up of household, peridomicile, and social contacts²⁸ to timely diagnose leprosy and thus break the chain of leprosy transmission². Systematic review with

meta-analysis showed that illiteracy and living in the household with a leprosy case with high bacillary load are factors associated with leprosy among contacts²⁸.

In 2020, 15.8% of new cases reported worldwide were through contact examination and active search campaigns². Already in Brazil, in the period from 2015 to 2019, there was a 46.6% increase in the mode of detection by contact examination, accounting for 10.7% of reported cases in 2019⁴.

The incompleteness of some fields of the notification form limited the more accurate analysis of the epidemiological and operational situation of leprosy in Divinópolis. "It is necessary to fill out the compulsory notification forms properly, with consistent information, so that this data can provide subsidies for the evaluation of the population's health status and decision-making"^{20:1813}. However, this is a type of limitation that is inherent to studies that use secondary data^{7-8,12}.

Despite these weaknesses, the potential use of epidemiology to support the formulation and strengthening of leprosy control policies is reinforced⁷, even more so after the impact on leprosy control programs of the pandemic of COVID-19^{2,4}. The pandemic has been challenging for health services, especially for PHC services, which are the user's preferential contact with the system²⁹. Disruption of routine services will impact on the increase in the hidden prevalence of leprosy and on the diagnosis of new cases with multibacillary clinical forms and established physical disabilities².

Leprosy planning in health policies should indicate the use of already existing tools for leprosy control such as the systematic active search for cases² with the involvement of the CHAs²⁰ and the use of the leprosy suspicion questionnaire¹⁷, the active search and follow-up of household and social contacts^{2,16}, in addition to health education about the disease^{8,19} for the community in general and the professionals^{16,25}.

The authorities also emphasize the need to systematically follow up on cases after discharge from the hospital, since during this period the individual may be affected by the disease's reaction states, which require timely treatment to avoid nerve damage¹⁶, in addition to the increase in cases of drug resistance to standard multidrug therapy².

It is important to reiterate that there is a political desire in the municipality of Divinópolis to offer an equitably distributed leprosy care network,

with PHC qualified to carry out the disease control actions regulated for this level of care, which coordinates the care of cases that have complications to medium and high complexity services¹⁵.

But to achieve sustainability of LCA in PHC "it is necessary to overcome: the insufficiency of the curricular contents on leprosy; the bio-medical rationality in the work process; the turnover of professionals; the training that often does not result in confident teams to diagnose or start treatment; the centrality of attention to the sick individual and not to the family/collective; and the lack of prioritization of leprosy in health policies"^{7:9-10}. In this sense, the better the quality of health services^{13,20}, the achievement of national targets⁹ and global leprosy¹ foreseen for 2022 and 2030, respectively, will be proportionally more feasible¹³.

CONCLUSION

The epidemiological data indicate that the diagnosis of leprosy in Divinópolis is being made late, which contributes to maintaining a hidden prevalence. It is suggested the strengthening of PHC in the performance of leprosy control actions. In the post-pandemic scenario of COVID-19 it will be necessary to innovate in the work process in the territories, continuously monitor the epidemiological behavior of leprosy, as well as using remote strategies for monitoring and follow-up of cases of the disease.

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