

LEISHMANIASIS

Epidemiological Report for the Americas

Introduction

The Pan American Health Organization (PAHO) continues to support endemic countries to achieve the goals of controlling and eliminating leishmaniasis as a public health problem in the Region, in accordance with PAHO's *Disease Elimination Initiative* (1), the *WHO Roadmap for Neglected Tropical Diseases* (2) and the *Plan of Action for Leishmaniasis* (3). As described above, PAHO's support to endemic countries has been deployed in the form of various joint initiatives aimed at strengthening prevention, surveillance and control actions. These initiatives focus on the early detection and adequate treatment of human cases, as well as on reducing the contact of leishmaniasis vectors with humans and reservoirs, when required. The COVID-19 pandemic has directly impacted disease surveillance and control actions, and for leishmaniasis, the impact is highlighted on active searches, early case detection and treatment, as well as on other field activities.

Among the challenges, we highlight the need for countries to resume actions and move forward with the diagnosis and treatment, as well as to identify strategies for follow-up and monitoring of cases, such as cutaneous (CL) and mucosal leishmaniasis (ML), in order to reach the objective of treating at least 90% of diagnosed patients (figure 1).

This report presents a detailed analysis of the 2020 leishmaniasis data in the Region, as well as infographics with specific data on CL and ML in endemic countries.



Figure 1. Percentage of patients treated among those diagnosed with cutaneous leishmaniasis, Region of the Americas, 2020

Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

Click on the countries of the map to access the respective infographics.

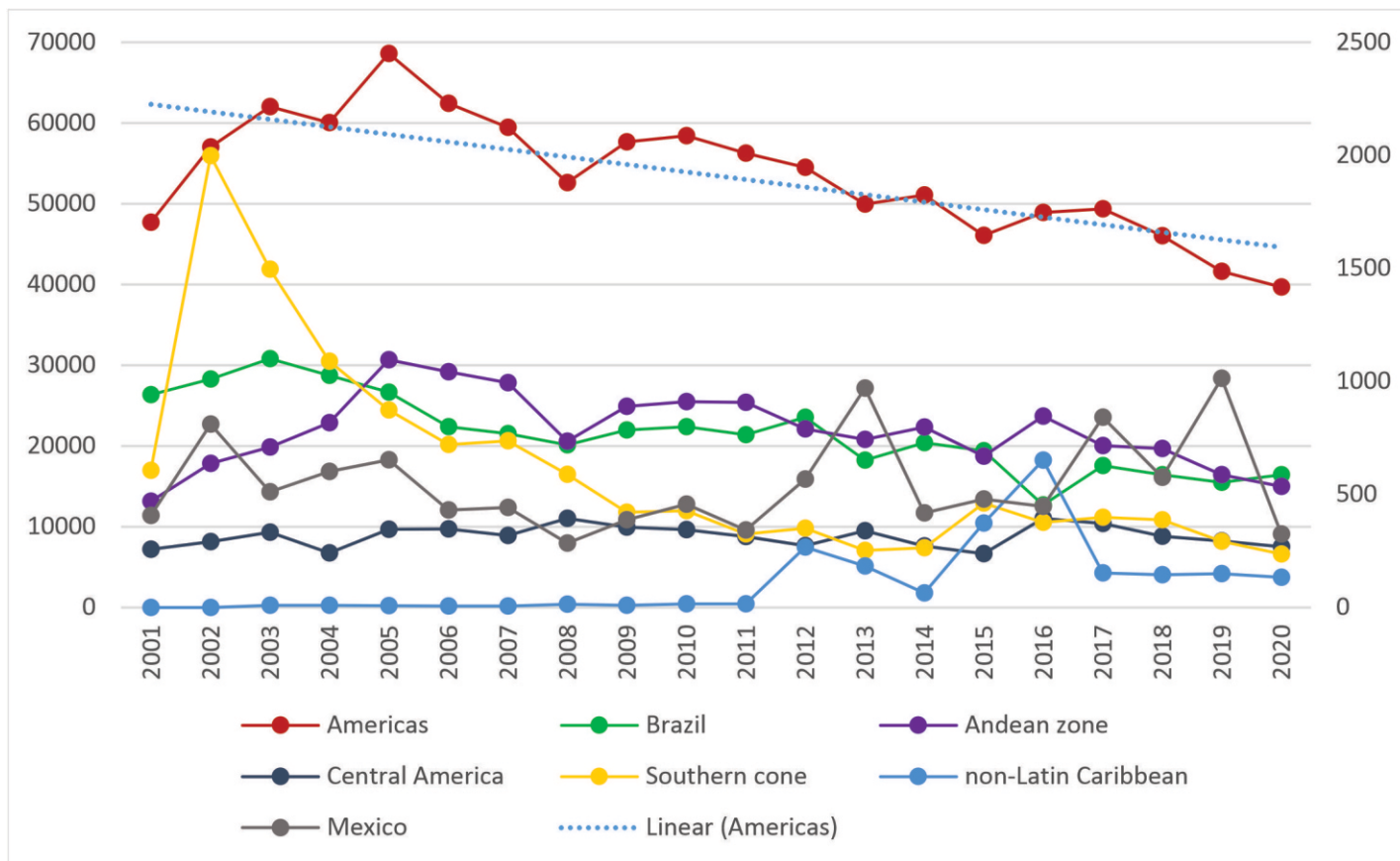
PAHO

Epidemiological situation

Cutaneous and mucosal leishmaniasis

In the last 20 years, 1,067,759 cases of cutaneous (CL) and mucosal leishmaniasis (ML) were reported to the Pan American Health Organization (PAHO), with an average of 53,387 cases per year. In that period, we can observe a decreasing trend in number of cases, with the lowest number in 2020 (39,705). Despite the overall decrease of cases the Region represent little under 5% compared to 2019, some countries presented significant reductions that may be related to total or partial interruption of surveillance and assistance activities, as well as shortage or lack of medicines as consequence of the COVID-19 pandemic, which occurred in El Salvador and Mexico with an 83% and 68% reduction, respectively (figures 2 and 3).

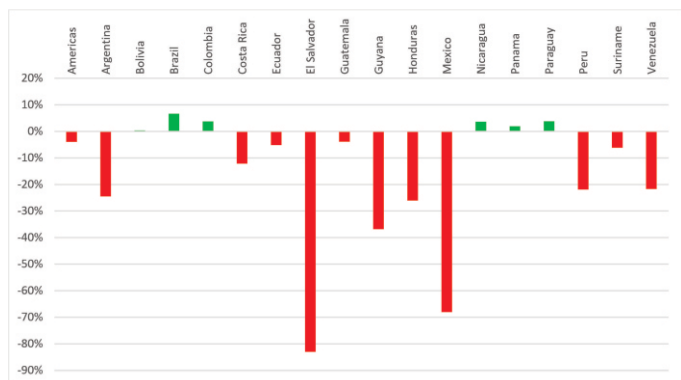
Figure 2. Number of cases of cutaneous and mucosal leishmaniasis in the Region of the Americas and subregions, 2001-2020



Note: Region of the Americas, Central America, Brazil and Andean zone on the left axis; Southern cone, non-Latin Caribbean and Mexico on the right axis.

Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

Figure 3. Difference between the percentage of 2020 cutaneous and mucosal leishmaniasis cases compared to 2019, endemic countries of the Region of the Americas.



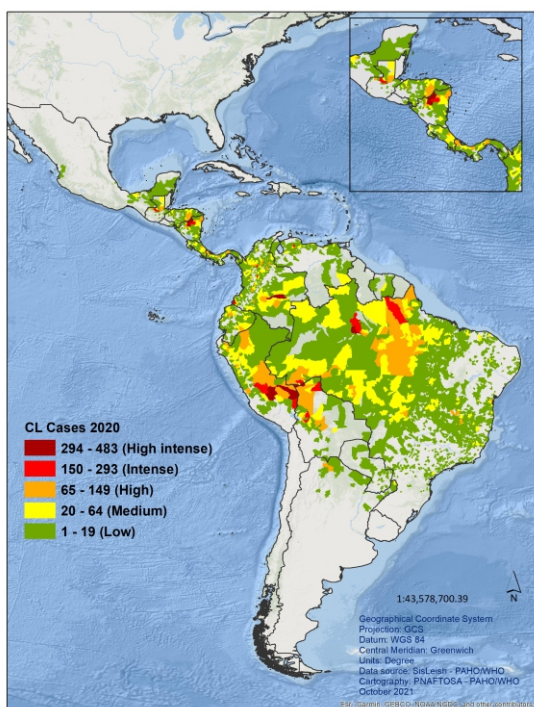
Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

In 2020, the countries that reported the highest number of cases were Brazil (16,432), Colombia (6,161), Peru (4,178), Nicaragua (3,443) and Bolivia (Plurinational State of) (2,059), which together represent 81% of cases in the Region. The regional incidence rate was of 18.37 cases per 100,000 population. Some countries presented a reduction in the number of cases per 100,000 population, such as El Salvador (8.21), Colombia (23.34), Guyana (2.09) and Mexico (5.81), representing, a decrease in incidence of 83%, 75%, 63% and 56%, respectively. On the other hand, a greater increase in the incidence rate per 100,000 population, compared to 2019 data, was observed in Guatemala (47.65), Peru (31), Costa Rica (16.77) and Paraguay (3.8), representing, an increase in the incidence of 55%, 49%, 48% and 45%, respectively.

Furthermore, a decrease in the number of units of the first subnational political administrative level (departments, states, regions or provinces, according to the division of each country) and of the second administrative level (municipalities, cantons, provinces, districts, etc.) was also observed, as well as a slight reduction in the proportion of cases at international borders compared to the previous year.

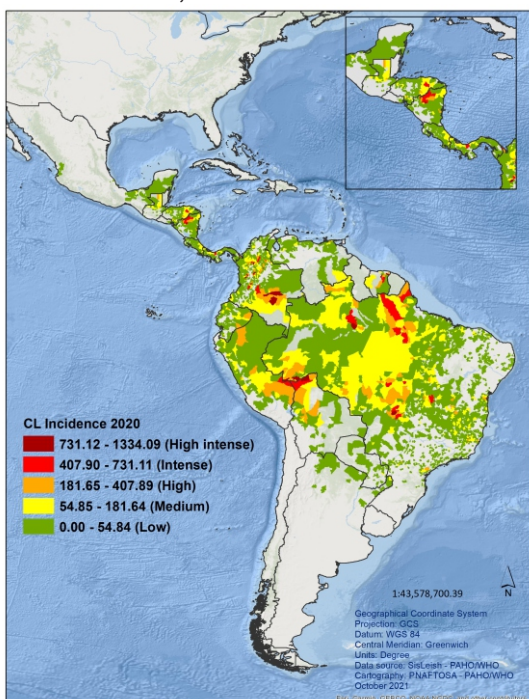
Figures 4 and 5 present the regional analysis of the CL/ML data, disaggregated at the second subnational administrative level according to the 2020 cases and incidence. Figure 6 shows the risk stratification map according to the triennial composite indicator.

Figure 4. Cases of cutaneous and mucosal leishmaniasis, second subnational administrative level, Region of the Americas, 2020



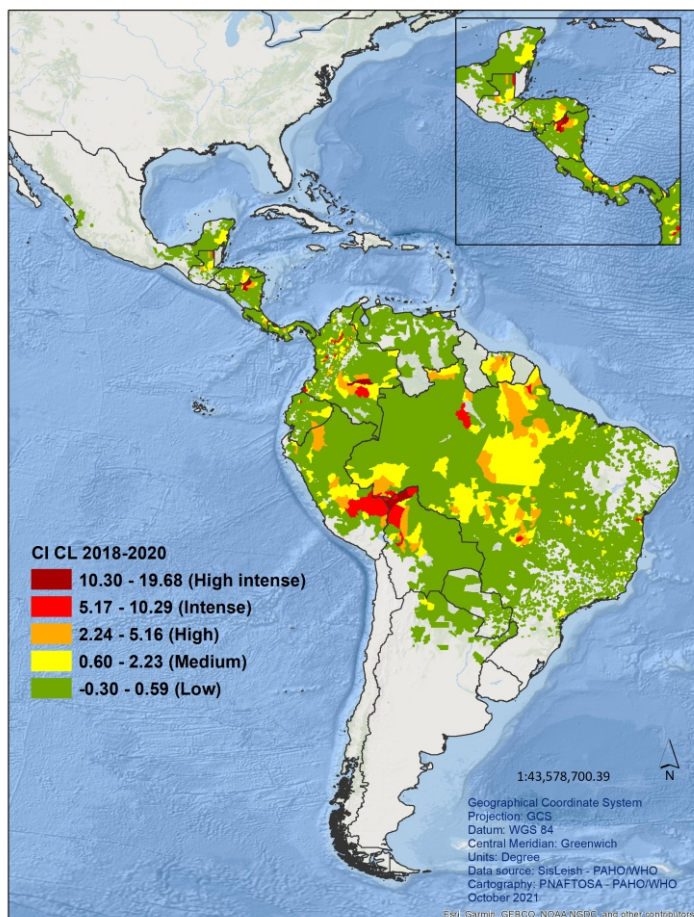
Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access..

Figure 5. Incidence of cutaneous and mucosal leishmaniasis per 100,000 population, second subnational administrative level, Region of the Americas, 2020



Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

Figure 6. Composite indicator of cutaneous leishmaniasis at the second subnational administrative level*, stratified by risk of transmission, Region of the Americas, 2018-2020**



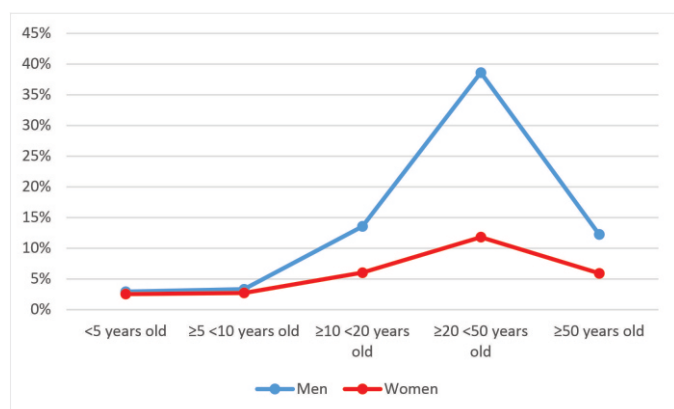
Note:
 *Guyana was not represented in the map because the political-administrative division is only at the first subnational administrative level (regions).
 **LCI: Triennium composite indicator for cutaneous leishmaniasis, represented by average of cases and incidence/100,000 population, 2018-2020.

Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

Of the total cases reported to Regional Leishmaniasis Information System (SisLeish), the age group variable was available for 99.6% of the reported cases (39,553), and 99.9% for the sex variable (39,700 cases). The most affected group remains males aged 20 to 50 years. In the children under 10 years old age group, which requires strict monitoring, the proportion of cases in 2020 was of 11.5% (4,560), representing a 15% decrease compared to 2019, and no difference between sex was registered (Figure 7). In Bolivia (Plurinational State of), Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Paraguay, Peru, Suriname and Venezuela (Bolivarian Republic of) there was a

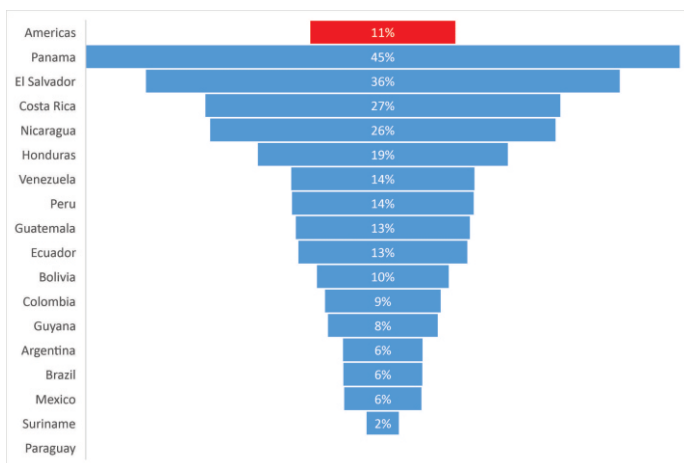
decrease in the proportion of cases in this age group; however, numerous countries continue to present proportions higher than 10% (10% to 20% in Bolivia [Plurinational State of], Ecuador, Guatemala, Honduras, Peru and Venezuela [Bolivarian Republic of]; 20% to 30% in Costa Rica and Nicaragua; and over 30% in El Salvador and Panama) (figure 8). Regarding sex, 71% of the cases occurred in males; nevertheless, five countries registered more than 35% of cases in women (Costa Rica, El Salvador, Nicaragua, Panama and Venezuela [Bolivarian Republic of]), indicating the need for an entomological survey to verify a possible domiciliary transmission.

Figure 7. Proportion of cutaneous and mucosal leishmaniasis cases by age group and sex, Region of the Americas, 2020



Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

Figure 8. Proportion of cutaneous and mucosal leishmaniasis cases in children under 10 years of age, Region of the Americas, 2020

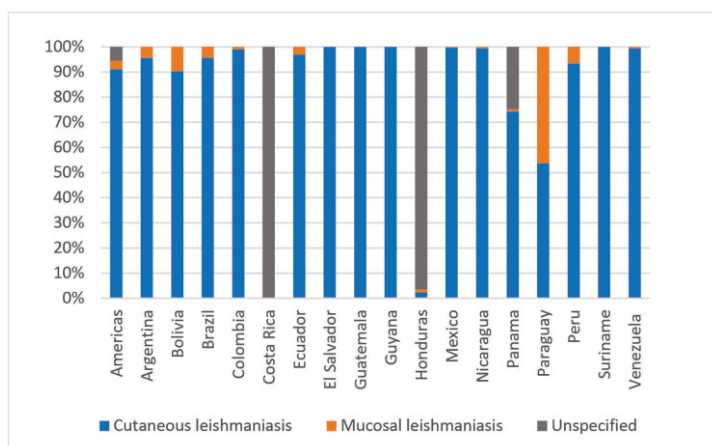


Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

In regard to the clinical form, 94.5% (37,519) of the cases reported in the Region included this variable; however, a decrease was verified when compared to 2019 (98.5%). Of the total cases, 3.4% (1,345) were reported as ML and MCL, representing a small decrease in the proportion of cases of this clinical form compared to the previous year (4.32%). In the Region, Brazil (692), Peru (274) and Bolivia

(Plurinational State of) (198) continue with 86.5% of the cases of this clinical form, and despite Paraguay having registered the highest proportion of cases of ML (46.3%), a trend of decrease in this clinical form is observed, followed by Bolivia (Plurinational State of) with 9.6%, which represents a decrease of 32%. Fifty-eight cases of the atypical cutaneous form were reported, being 19 from Nicaragua and 39 from El Salvador, which represents a significant reduction compared to 2019, reflected in large part by the decrease of cases in El Salvador, where 100% of cases were of this clinical form. This information was not available for Costa Rica and Honduras, that have reported this clinical form previously (figure 9).

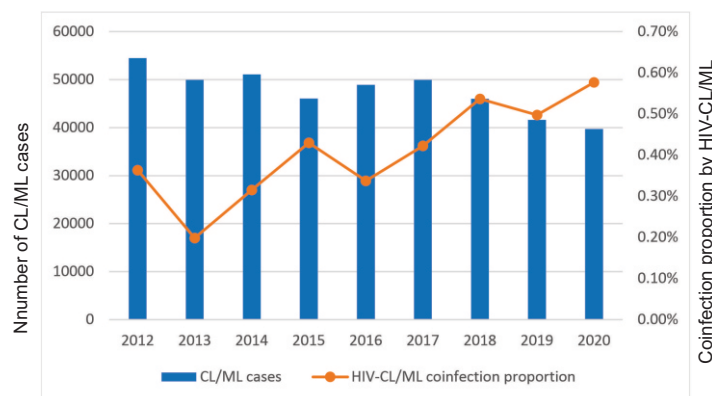
Figure 9. Proportion of cutaneous and mucosal leishmaniasis cases by clinical form, endemic countries of the Region of the Americas, 2020



Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

In recent years there has been an increasing trend in cases of CL/ML and HIV co-infection, with a decrease in 2016 and 2019. Nevertheless, in 2020 the highest proportion of co-infection was reported (229) since 2012, year in which this variable has been available in the SisLeish. Four countries reported cases of CL/ML and HIV co-infection in 2020: Argentina (1), Brazil (131), Colombia (63) and Peru (34) (figure 10).

Figure 10. Number of cutaneous and mucosal leishmaniasis cases and proportion of HIV co-infection, Region of the Americas, 2012-2020

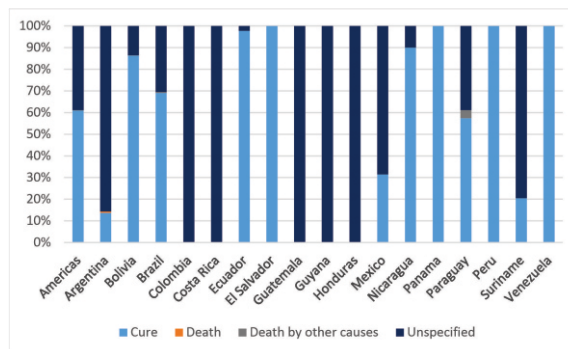


Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

Of the total cases, 79.8% (31,697) were diagnosed by laboratory, a percentage that was maintained compared to 2019; 12.2% (4,832) were diagnosed by clinical and epidemiological criteria and in 8% (3,176) this information was not available. Costa Rica, Guatemala and Honduras remain not reporting 100% of this information. In Argentina, the information was not available in 40% of cases, which represents an improvement in the information compared to the previous year. In Panama and Suriname, the confirmation by clinical and epidemiological criteria represented 80% and 54% of the cases, respectively.

The Region continues with about 40% of cases without data on disease progression. In five countries (Colombia, Costa Rica, Guatemala, Guyana and Honduras), this information was not available in 100% of cases, and in three countries (Argentina, Mexico and Suriname) the information was available in between 50% and 85% of cases. Of the total cases, 60.2% (24,188) progressed to cure, representing a worsening of about 2% of the patients' cure. There were 74 deaths, of which 10 were associated with CL/ML, and 100% of the deaths in people over 50 years of age (figure 11).

Figure 11. Proportion of cutaneous and mucosal leishmaniasis cases by disease progression, endemic countries of the Region of the Americas, 2020



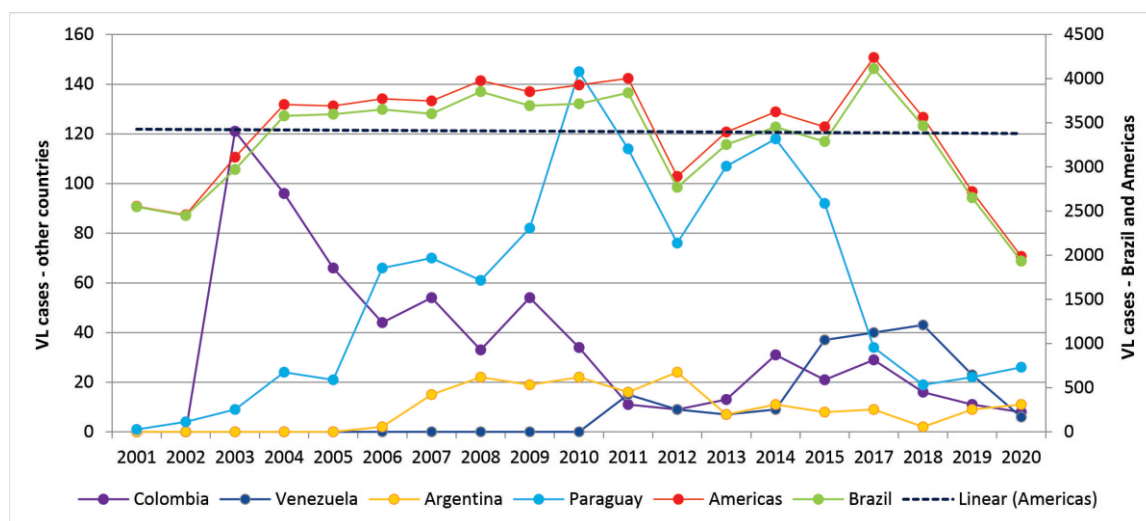
Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

Visceral leishmaniasis

Visceral leishmaniasis (VL) is the most severe form of the disease, which when untreated can see 90% of cases lead to death due to systemic involvement caused by the presence of parasites in organs such as bone marrow, spleen and liver. It mainly affects the most vulnerable people, such as children under 5 years old, the elderly, patients with comorbidities and other conditions, immunosuppression such as HIV/AIDS, and malnutrition, among others. It is endemic in 13 countries of the Americas, where 67,922 new cases have been recorded from 2001 to 2020, with an average of 3,400 cases per year (figure 12). In 2020, of the total cases, 97% (1,933) were reported by Brazil, and the remainder by Argentina, Bolivia (Plurinational State of), Colombia, Paraguay, Venezuela (Bolivarian Republic of) and Uruguay.

In 2020, the lowest number of VL cases of this period was recorded, due to a 25% reduction (670) of cases in Brazil, as well as in Colombia and Venezuela (Bolivarian Republic of). It is not known if this reduction is due to the consequences of COVID-19 pandemic on surveillance and assistance actions, or if is due to the cyclical trend of the disease, seeing that an increase in the number of CL cases was observed. On the other hand, Argentina and Paraguay reported an increase in cases, and Bolivia (Plurinational State of) and Uruguay, countries that have recently confirmed autochthonous transmission to PAHO, have reported cases of VL for the second and third consecutive time, respectively.

Figure 12. Countries with the highest number of visceral leishmaniasis cases, Region of the Americas, 2001-2020



Note: Region of the Americas and Brazil on the right axis; Argentina, Colombia, Paraguay and Venezuela (Bolivarian Republic of) on the left axis.

Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

Of the 13 countries with VL transmission, 7 reported cases to SisLeish in 2020, distributed in 44 units of the first subnational administrative level and 720 units of the second level, representing a geographical reduction of case numbers. The VL incidence when considering the population of the transmission zones in the Region was three cases per 100,000 population, which shows that, despite having a decrease in number of cases and geographical distribution, the incidence has increased. The rise is due to the increase in Brazil and Paraguay, whereas other countries showed a reduction in incidence (table 1).

Table 1. Number of cases and incidence of visceral leishmaniasis, endemic countries of the Region of the Americas, 2018-2020

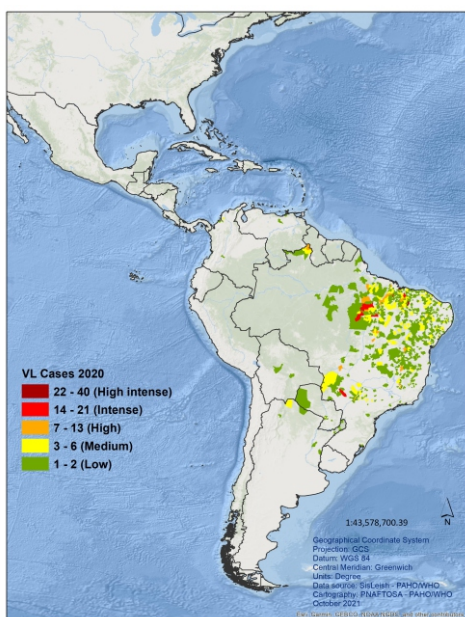
Countries	2018				2019				2020			
	N°	%	Risk Pop Incid. ¹	General Incid. ²	N°	%	Risk Pop Incid. ¹	General Incid. ²	N°	%	Risk Pop Incid. ¹	General Incid. ²
Argentina	2	0.06	0.49	0	9	0.35	0.94	0.02	11	0.55	0.86	0.02
Bolivia	0	0.00	0	0	1	0.04	1.54	0.01	2	0.10	0.11	0.02
Brazil	3466	97.30	5.05	1.66	2529	97.16	3.08	1.2	1933	97.23	3.23	0.91
Colombia	16	0.45	2.65	0.03	11	0.42	6.99	0.09	8	0.40	0.87	0.02
El Salvador	3	0.08	1.16	0.05	0	0.00	0	0	0	0.00	0.00	0
Guatemala	4	0.11	2.64	0.02	1	0.04	2	0.01	0	0.00	0.00	0
Honduras	8	0.22	8.35	0.09	3	0.12	11.16	0.03	0	0.00	0.00	0
Mexico	0	0.00	0	0	1	0.04	0.16	0	0	0.00	0.00	0
Paraguay	19	0.53	1.47	0.29	22	0.85	1.35	0.33	26	1.31	1.47	0.45
Uruguay	1	0.03	0.75	0.03	3	0.12	2.25	0.09	2	0.10	1.77	0.07
Venezuela	43	1.21	1.64	0.14	23	0.88	1.08	0.07	6	0.30	1.03	0.02
Total	3562	100	4.8	0.62	2603	100	2.96	0.47	1988	100	3	0.34

Note:
 Incidence rate: number of cases per 100,000 population per area of transmission.
¹ Population of transmission areas.
² Total population of the country.

Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

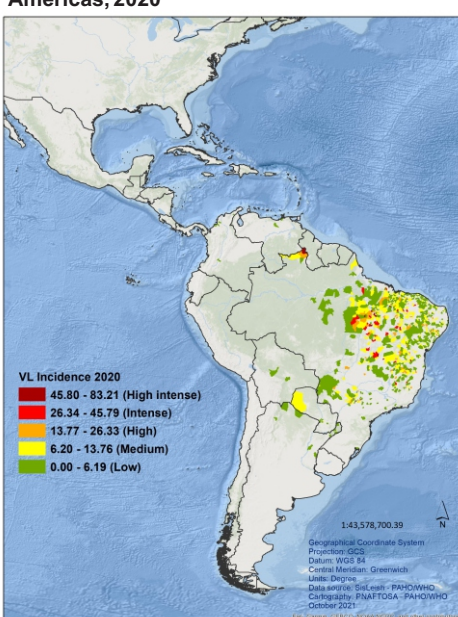
Figures 13 to 15 show the distribution of VL cases, incidence per 100,000 population and estimation of case density (radius of 50 km). The highest number and case density continue to be reported by the same municipalities of Brazil in 2019: Fortaleza (department of Ceará), São Luís (Maranhão), Belo Horizonte (Minas Gerais), Teresina (Piauí), Paraupébas (Pará), Campo Grande (Mato Grosso do Sul), Araguaína and Marabá (Tocantins). The highest incidence rates were also from Brazil, according to the following: Sapucaia (Pará), Mariópolis (São Paulo), Maetinga (Bahia), Uiramutã (Roraima), Darcinópolis and Lajeado (Tocantins), and Buritinópolis (Goiás).

Figure 13. Visceral leishmaniasis cases at the second subnational administrative level, Region of the Americas, 2020



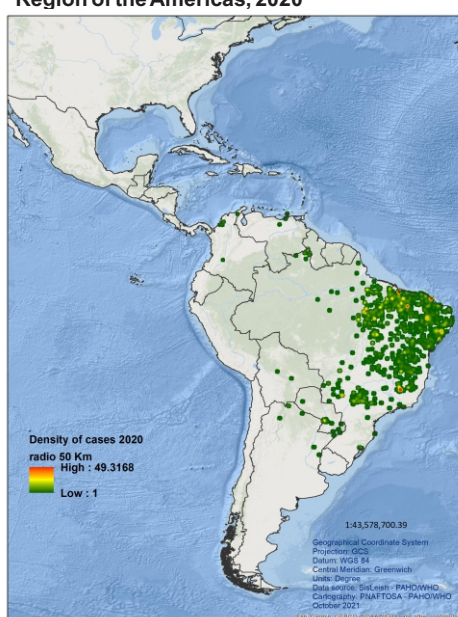
Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

Figure 14. Incidence of visceral leishmaniasis at the second subnational administrative level, per 100,000 population, Region of the Americas, 2020



Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

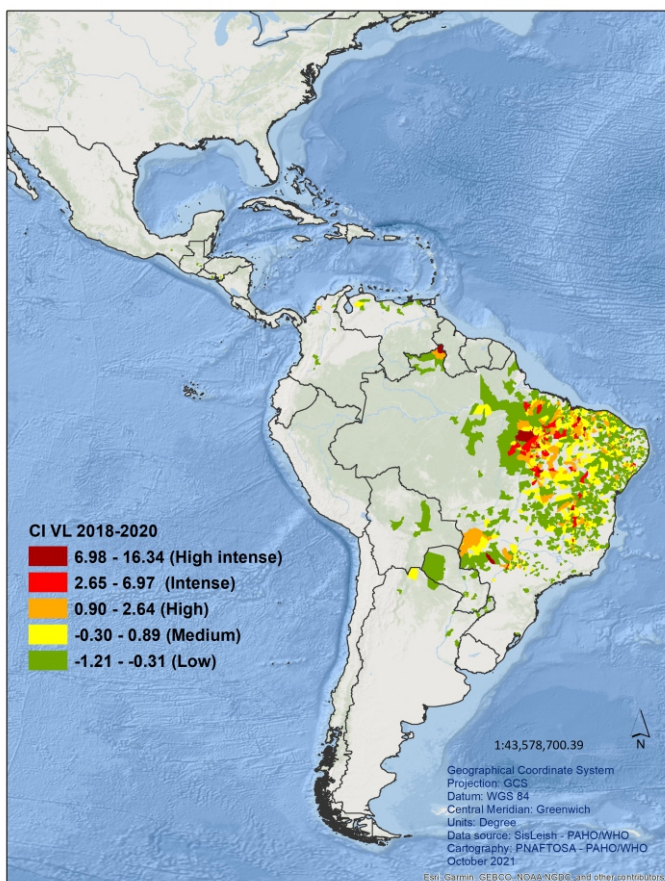
Figure 15. Estimation of case density of visceral leishmaniasis at the second subnational administrative level (radius of 50 km), Region of the Americas, 2020



Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

Figure 16 presents the risk stratification for VL in the Americas at the second subnational administrative levels according to the triennium composite indicator 2018-2020. In this period, VL was reported in 1,479 municipalities, and a total of 16 units of the second level were classified as very intense transmission (all from Brazil), 63 as intense transmission (also all from Brazil), 135 as high transmission (1 in Paraguay, 2 in Colombia and the others in Brazil), 403 as moderate transmission (1 in Argentina and Colombia, 2 in Paraguay and Venezuela [Bolivarian Republic of], 3 Honduras and the others in Brazil) and 862 as low transmission distributed in 9 countries (Argentina, Bolivia [Plurinational State of], Brazil, Colombia, El Salvador, Guatemala, Honduras, Paraguay and Venezuela [Bolivarian Republic of]). Uruguay was not included in the triennium composite indicator since the calculation takes into account units of the second administrative level, and the country in question does not have that administrative level.

Figure 16. Risk stratification for visceral leishmaniasis at the second subnational administrative level according to the composite indicator*, Region of the Americas, 2018-2020



Note:

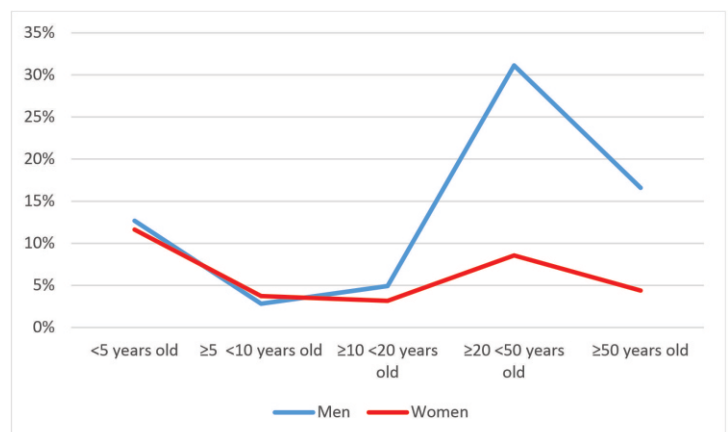
* LCI: Composite indicator of visceral leishmaniasis, represented by average of cases and incidence of cases/100,000 population of the triennium 2018-2020.

Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

In addition to the analyses at the regional level, risk stratification is available for all countries considering national or department data in SisLeish, which allows measurement of areas of highest transmission through a more disaggregated analysis. This supports managers in the planning and prioritization of actions, from training of personnel, organization of health services for clinical and laboratory diagnosis to treatment, as well as for the implementation of prevention, surveillance and control actions.

The sex variable was present in the database of 100% of the reported cases, where 68.4% were male; 99.6% of the information was available for age group, with the most affected group being those between 20 and 50 years (39.7%) with a risk of occurrence of 3 to 4 times higher in males, followed by those under 5 years old (24.3%), where there were no differences between sex, and those over 50 years old (21%) with a risk of occurrence of 3 to 4 times higher in males (figure 17). The proportion of age groups in Brazil remained similar to the previous year; however, an increase of 41% of cases in children under 5 years old was observed in Paraguay, a decrease of 53% in Argentina; and in Colombia and Venezuela (Bolivarian Republic of) the proportion remained above 65% in this age group.

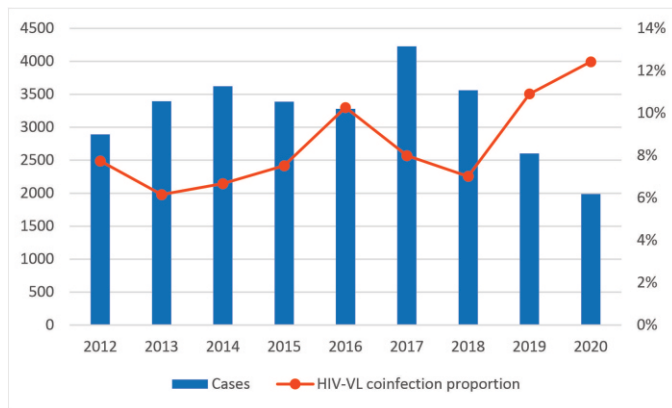
Figure 17. Proportion of visceral leishmaniasis cases by age group and sex, Region of the Americas, 2020



Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

Since 2012, there has been a growing trend of VL and HIV co-infection in the Region; the highest proportion corresponds to 2020 (12.4%) with 247 cases (figure 18). Of these cases, 242 (98%) were reported by Brazil; 4 (1.61%) by Paraguay; and 1 (0.4%), by Uruguay. On the other hand, the highest proportion of VL and HIV co-infection was registered in Uruguay (50%), followed by Paraguay (15.4%) and Brazil (12.5%). This increase may be since the HIV rapid test is indicated for VL patients and is available in these countries.

Figure 18. Proportion of visceral leishmaniasis and HIV co-infection and number of visceral leishmaniasis cases, Region of the Americas, 2012-2020.

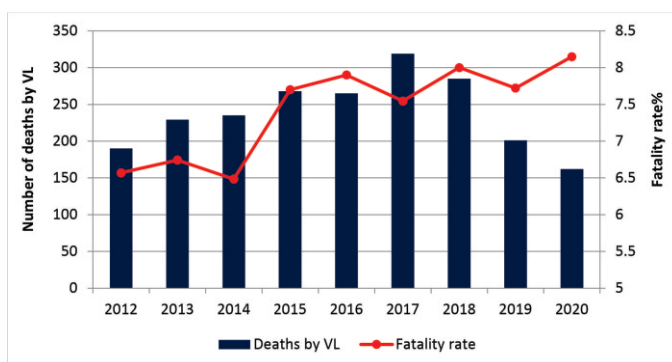


Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

Of the total VL cases, 100% reported the variable confirmation criteria, where 88% (1,751) were diagnosed by laboratory testing and 12% (237) by clinical and epidemiological criteria.

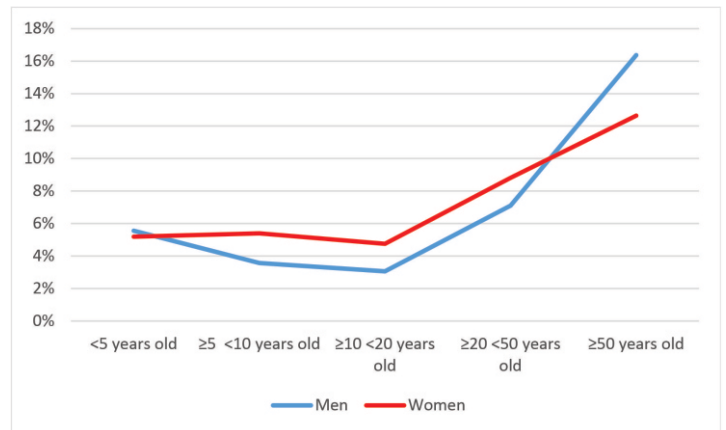
Regarding the disease progression in patients, 64.3% recovered, 8.15% died from the disease and 3.5% from other causes. This draws the attention to the fact that in 24% of cases this information was not available, which reflects the absence of data in Argentina (90.91%), Brazil (23.23%) and Paraguay (73.08%). The case fatality rate continues to show an increasing trend and in 2020 the highest rate since 2012 was reported, being three times higher than the VL global case fatality rate of 2.7% (4) (figure 19). In total, 162 deaths were reported, and the most affected group were males (72%) and patients over 50 years old (40%), followed by those aged between 20 and 50 years (36.4%) and children under 5 years old (16%) (Figure 20).

Figure 19. Number of deaths and fatality rate of visceral leishmaniasis, Region of the Americas, 2012-2020



Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

Figure 20. Visceral leishmaniasis fatality rate by sex and age group, Region of the Americas, 2020



Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

Completeness and data quality analysis in SisLeish

A need for monitoring leishmaniasis targets and indicators in the Americas

PAHO, through the Regional Programme for Leishmaniasis, continues to support and establish technical cooperation with endemic countries to strengthen surveillance and control actions, and achieve the objective of controlling and eliminating leishmaniasis as a public health problem. Thus, in September 2021, the Fifth Regional Meeting for Leishmaniasis in the Americas (5) was held, which had as one of its objectives to present to the countries the progress of the targets of the *Plan of Action to Strengthen The Surveillance and Control of Leishmaniasis in the Americas 2017-2022*, the new targets of the PAHO's *Disease Elimination Initiative (1)*, WHO's *Roadmap for Neglected Tropical Diseases 2021-2030 (2)*, as well as discuss the need to align the targets of the new Plan of Action 2023 to 2030, with the targets already approved by Member States.

The data and information generated by an information system are important for the monitoring of a disease, as well as for its targets and indicators, whether for the development of surveillance, control or elimination actions or for the monitoring of a plan. Regional analyses were carried out, and presented individually for each country, on the completeness and evolution of the quality of the database of the regional leishmaniasis information system (Sisleish) for 2016 and 2020, where the most important variables used to monitor the targets and indicators were selected. It was verified that, for CL, the data completeness between the years in question for

verified that, for CL, the data completeness between the years in question for the variables "place of infection", "age group", "sex", "confirmation criteria", and "clinical form" remained above or equal to 90% and despite "evolution" presenting a completeness below 90%, the data showed a significant improvement between the years indicated (from 40% to 61%), while "presence of HIV" showed a decrease in completeness, since in 2016 it was not possible to report this information effectively in SisLeish (figure 21). For VL, "place of infection", "age group", "sex", "confirmation criteria", remained above or equal to 90%; notification of "evolution" and "presence of HIV" remained close to 80% in those years indicated (figure 22).

Figure 21. Average of the completeness of the variables selected for cutaneous/mucosal leishmaniasis, Region of the Americas, 2016 and 2020

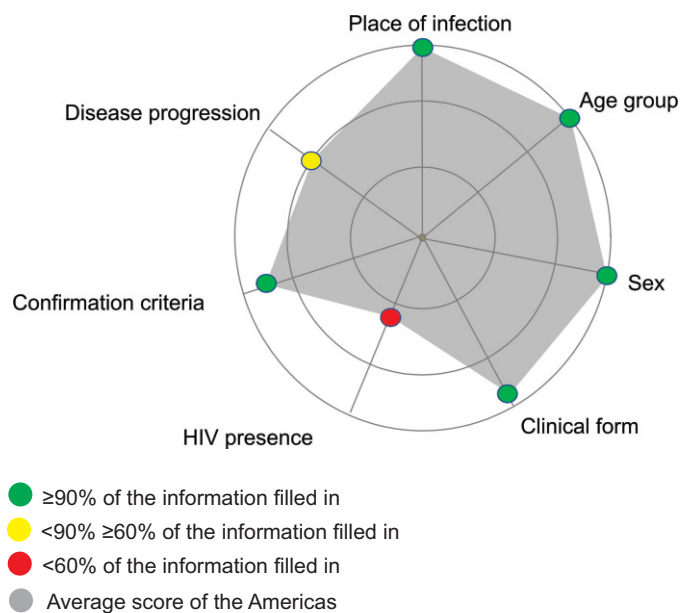
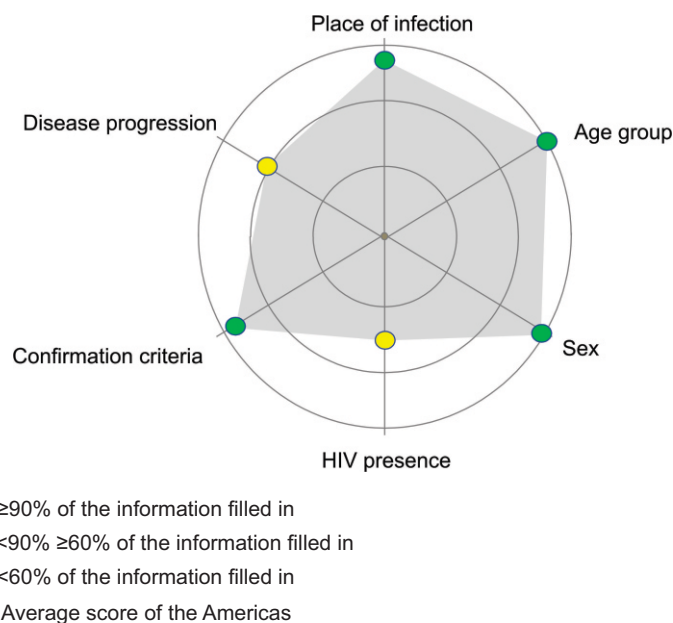


Figure 22. Average of the completeness of variables selected for visceral leishmaniasis, Region of the Americas, 2016 and 2020.



Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

Source: Pan American Health Organization. Regional Leishmaniasis Information System (SisLeish) [Internet]. Washington, D.C.: PAHO; 2021 [accessed October 15, 2021]. Limited access.

Final Considerations

The adequate treatment, follow-up and cure of patients with different clinical forms of leishmaniasis in the Region are the main objectives of PAHO's Regional Leishmaniasis Program in order to advance the control of cutaneous leishmaniasis and eliminate visceral leishmaniasis as a public health problem. Therefore, health managers need to establish sustainable strategies to facilitate patients' access to health services, as well as provide diagnosis and treatment of cases, according to the general conditions of patients and the clinical form of the disease.

In 2021, PAHO coordinated the process for the elaboration of the new guideline for the treatment of leishmaniasis in the Americas according to the GRADE methodology. The recommendations were approved by the Committee of Experts of the Region and recently approved by the Review Committee of Guidelines of the World Health Organization. This guideline is currently under production for subsequent publication in the three languages of endemic countries for leishmaniasis. This guideline provides evidence and recommendations so local treatment of CL can be extended to a greater number of patients, while taking into account certain criteria and indications that should be considered, however, a greater number of people may benefit from a treatment with less toxicity.

In 2020 it was observed that, at the regional level, there was a reduction in the number of cases of the different clinical forms of leishmaniasis; moreover, in some countries this reduction was significant, which may be due to the individual measures adopted by countries as a result of the COVID-19 pandemic.

Overall, the case profile for the different clinical forms remained the same. However, it is highlighted that the proportion of cases of leishmaniasis and HIV co-infection continues to increase, especially in patients with VL. Brazil and Paraguay reported a higher number of co-infected cases and this increase is justified by better integration between the areas of leishmaniasis and HIV/AIDS, as well as better access to HIV rapid tests that are available in those countries and offered to VL patients.

In the Americas, the VL case fatality rate is the highest when compared to other continents, mainly due to the rates recorded in Brazil and Paraguay, which remain high. Reducing VL fatality represents a significant challenge for countries and the Region, since it is one of the targets that must be achieved to eliminate VL as a public health problem by 2030. This indicator must be carefully monitored, since it is necessary to know the causes that lead patients to death, as well as to establish strategies that can favor its reduction. On the other hand, ensuring the necessary production of liposomal amphotericin B and that its availability to all patients with VL in the Americas is of extreme importance, since this drug presents a better safety profile and shorter treatment time compared to other options.

References

1. Pan American Health Organization. PAHO Disease Elimination Initiative: Policy for an Integrated and Sustainable Approach to Communicable Diseases in the Region of the Americas [Internet]. 57th PAHO Directing Council, 71st Session of the WHO Regional Committee for the Americas; from September 30 to October 4, 2019; Washington, D.C. Washington, D.C.: PAHO; 2019 (document CD57/7). Available from: <https://iris.paho.org/handle/10665.2/51612>
2. World Health Organization. Ending neglect to achieve the Sustainable Development Goals: A Roadmap for Neglected Tropical Diseases 2021-2030. Geneva: WHO; 2020. Available from: <https://apps.who.int/iris/handle/10665/332094>
3. Pan American Health Organization. Plan of Action to Strengthen Leishmaniasis Surveillance and Control in the Americas 2017-2022 [Internet]. Washington D.C.: PAHO; 2017. Available from: <https://iris.paho.org/handle/10665.2/34147>
4. World Health Organization. Weekly epidemiological report. 2021 ; No. 35 2021, 96, 401–420. Available from: <https://www.who.int/publications/i/item/who-wer9635-401-419>
5. Pan American Health Organization. Fifth Regional Meeting for Leishmaniasis in the Americas 2017-2022 [Internet]. Washington D.C.: OPS; 2021. Available from: <https://iris.paho.org/handle/10665.2/55302>

Elaboration: Ana Nilce Silveira Maia-Elkhoury¹, Samantha Yuri Oshiro Valadas Rocha¹ and Lia Puppim Buzanovsky²

Correspondence: aelkhoury@paho.org.

¹Department of Communicable Diseases and Environmental Determinants of Health, Neglected, Tropical, and Vector Borne Diseases, Pan American Health Organization.

²Pan American Center for Foot-and-Mouth Disease and Veterinary Public Health Center, Pan American Health Organization.

Acknowledgements: We wish to express our gratitude to the professionals of the national leishmaniasis and epidemiological surveillance programs of the endemic countries who participate directly and indirectly in the strengthening of the surveillance, prevention and control of leishmaniasis in the Americas so that people affected by this disease have access to better care.

Cite this publication: Pan American Health Organization. Leishmaniasis: Epidemiological Report of the Americas [Internet]. No. 10, December 2021. Washington, D.C.: PAHO; 2021. Available in: <https://iris.paho.org/handle/10665.2/51742>

PAHO/CDE/VT/21-0019

© Pan American Health Organization, 2021. Some rights reserved. This work is available under license [CCBY-NC-SA3.0IGO](https://creativecommons.org/licenses/by-nc-sa/3.0/).