

**PAHO**



Pan American  
Health  
Organization



World Health  
Organization  
REGIONAL OFFICE FOR THE  
Americas

**BIREME**

Latin American and Caribbean Center  
on Health Sciences Information

**Report:** BIR-IT-04/19

## **Executive Report**

# **V Session of the Scientific Committee of BIREME**

**November 28<sup>th</sup> and 29<sup>th</sup>, 2019**

São Paulo – November 2019

# Index

<b>1</b>	<b>Institutionality</b> .....	<b>6</b>
1.1	Status of the Center .....	6
1.2	Governance .....	6
<b>2</b>	<b>Biennial Work Plan (BWP)</b> .....	<b>10</b>
2.1	Summary of BIREME Initiatives and Projects.....	11
	Initiative BIR.01 – Knowledge management .....	13
	Initiative BIR.02 – Information Services .....	15
	Initiative BIR.03 - Intelligence in Health Sciences Information .....	16
	Initiative BIR.04 – Leadership and Management of BIREME .....	17
2.2	BIREME financial structure .....	19
<b>3</b>	<b>Main advances in BIREME technical cooperation related to the recommendations of the BIREME Governance Committees</b> .....	<b>22</b>
3.1	Recommendations of the VII Session of the Advisory Committee (2018).....	22
3.2	Recommendations of the IV Session of the Scientific Committee (2018) .....	25
<b>4</b>	<b>Regional Program &amp; Products</b> .....	<b>30</b>
	VHL – Virtual Health Library .....	30
	LILACS – Latin American and Caribbean Literature in Health Sciences .....	31
	DeCS – Health Science Descriptors .....	32
	CRICS - Regional Congress on Health Sciences Information .....	33
<b>5</b>	<b>Institutional relationship</b> .....	<b>35</b>
<b>6</b>	<b>Human Resources and Cooperative Network</b> .....	<b>37</b>
<b>7</b>	<b>BIREME and its products and services applied on successful initiatives</b> .....	<b>38</b>

7.1	One-stop-shop portals to fit specific information needs and target .....	38
	<i>CARPHA EviDeNCe Portal</i> .....	38
	Telehealth Brazil Networks Program .....	38
	Global Index Medicus .....	39
7.2	Customized web solutions to improve health information management.....	40
	REBEC – Brazilian Registry of Clinical Trials .....	40
	MedList – Annotated Medicines Hyper Lists.....	40
	ProEthos Plataform .....	41
	BRISA – Regional Database of Health Technology Assessment Reports of the Americas .....	41
	Repository of Legislation on Risk Factors in Non-Communicable Diseases.....	42
7.3	Fostering information and knowledge management on health organizations .....	43
	Ministry of Health of Brazil.....	43
	SES-SP – Secretary of Health of the State of São Paulo .....	43
	SMS-SP - Secretary of Health of the Municipality of São Paulo .....	43
7.4	Promoting capacity building and continuous learning in health .....	44
	Scientific Communication courses .....	44
	Participation in Scientific Communication Events .....	44
	Distance learning courses .....	44
7.5	Selective dissemination of information to empower users and promote equitable access to information.....	45
	Specialized Search Service.....	45
	Infometrics and data visualization for knowledge discovery.....	45
	MyVHL – Personalized Information Services .....	45
	VHL Infobutton .....	48
	Evidence Maps .....	48
<b>8</b>	<b>Final considerations .....</b>	<b>49</b>

The Latin American and Caribbean Center on Health Sciences Information

(BIREME/PAHO/WHO) was established in São Paulo, Brazil in 1967 as the Regional Library of Medicine by means of an Agreement between the Government of Brazil and the Pan American Health Organization and with a technical cooperation model based on the essential functions of a medical library. Since 1982 the denomination changed to reflect the expansion of the technical cooperation model, including the outstanding role of providing regional and international visibility to scientific and technical production in health in Latin America and the Caribbean (LA&C).

BIREME is one of the three specialized centers of PAHO/WHO, in addition to PANAFTOSA (Pan American Foot-and-Mouth Disease Center) and CLAP (Latin American Center for Perinatology, Women's and Reproductive Health). Its nature is regional and the work it carries out is at the service of LA&C.

On March 3, 2019, BIREME celebrated 52 years of uninterrupted work with the mission of contributing to strengthen health systems and services in the countries of LA&C by means of the democratization of access, publication and use of the information, knowledge and scientific evidence in convergence with national and regional strategies of the 2030 Agenda and Universal Health Coverage.

BIREME guides its initiatives, projects, products and services by means of lines of actions involving more than one thousand academic and governmental libraries and over two thousand institutions in the health area.

**Increasing the visibility of the scientific production** in health from LA&C countries by promoting the registry and indexing of their scientific and technical literature in regional, national and international databases, adopting Open Access strategies, producing data survey for

assessing scholarly communication in health, and developing web technologies and interfaces for information search and retrieval.

**Developing capacity to make evidence-informed decisions in health**, such as training activities on the access and use of evidence to guide policy and decision making in health and implementing instructional design for distance learning courses integrated to the Virtual Campus of Public Health (CVSP from the acronym in Spanish).

**Developing and implementing actions on knowledge management** to strengthen health national policies and strategies by improving the capacity of institutions on knowledge management; developing information products and services designed to facilitate the information access and knowledge application in order to meet the strategic priorities and health objectives.

**Applying knowledge discovery process** to extract potentially useful information and generate indicators on health scientific and technical literature from data available in the Virtual Health Library (VHL) information sources.

Moreover, **developing Knowledge Translation products and services** to bridge the research-to-practice-gaps by means of special services on search, analysis, synthesis and application of scientific knowledge to support health decision-making processes and helping to reduce the so-called "know-do-gap". And equally important, **implementing Knowledge Platforms to integrate and manage research data** ease measurement and analysis of research activity and facilitate the access to comparative information on the countries' priority health issues.

Following is a summary of the aspects related to the institutionality, governance, financial sustainability and main products and services of the Center's technical cooperation.

# 1 Institutionalality

## 1.1 Status of the Center

In the 57<sup>th</sup> Directing Council of PAHO/WHO, held in Washington, DC, USA, from 09/27/19 to 10/04/19 there was no presentation of the usual document with the situation of the Pan American Centers, however, BIREME was cited in two documents: (1) Annual Report of the Director of the Pan American Sanitary Bureau (CD57/3.Rev.1) and in the (2) Action Plan for the strengthening of health information systems 2019-2023 (CD57/9.Rev1). The available contents emphasize the importance of the projects, products and services of the BIREME technical cooperation program in technical and scientific health information for the Region.

At the 56<sup>th</sup> Meeting of the PAHO Directing Council, held in Washington, DC, USA, from 23 to 27 September 2018 the document (CD56/INF/22) with the status of the Pan American Centers was presented. A new update will be carried out every two years, that is, in 2020 during the 58<sup>th</sup> Directing Council of PAHO.

## 1.2 Governance

The resolution of the Directing Council of PAHO (CD49.R5) established the structure of the new legal framework constituted by the Statute of BIREME which is under implementation pending the Headquarters Agreement of BIREME in Brazil, to be established between PAHO and the Brazilian Government.

The Statute of BIREME also determines the new structure of governance of BIREME, with the following composition:

**A) BIREME Members** defined in the categories: a) Member States: all Member States, Participating States, and PAHO Associated Members; b) Participating States: the WHO Member States besides those that are PAHO Members; and c) Participating Organizations: public international organizations with specific qualification related to information and scientific and technical communication. The participation of new members shall be defined by PAHO;

**B) Advisory Committee:** permanent body of BIREME formed by PAHO and the Government of Brazil as permanent members and by five of BIREME Members as non-permanent members. The non-permanent members were elected as following:

- At the 56<sup>th</sup> Directing Council (CD56.R4): Guyana, México and Uruguay for a three-year mandate (2019-2021);
- At the 29<sup>th</sup> Pan American Sanitary Conference (CSP29R9): Barbados and El Salvador for a three-year mandate (2018-2020);
- At the 54<sup>th</sup> PAHO Directing Council (CD54.R5): Argentina, Jamaica and Peru for a three-year mandate (2016-2018);
- At the 53<sup>rd</sup> PAHO Directing Council (CD53.R5): Panama and Trinidad and Tobago for a three-year mandate (2015-2017);
- At the 28<sup>th</sup> PAHO Pan American Sanitary Conference (CSP28.R5): Cuba, Ecuador, and Puerto Rico for a three-year mandate (2013-2015);
- At the 51<sup>st</sup> PAHO Directing Council (CD51.R2): Bolivia and Suriname for a three year mandate (2012-2014);
- At the 49<sup>th</sup> PAHO Directing Council (CD49.R6): Argentina, Chile, and the Dominican Republic for a three-year mandate (2010-2012) and Jamaica and Mexico for a two year mandate (2010-2011).

The role of this Committee is to make recommendations to the Director of PAHO on the programming functions, the working plan and the financing of BIREME.

Seven sessions of the Advisory Committee (AC) occurred in compliance with the implementation of the new institutional framework of BIREME, following Resolution 5 of the 49th PAHO/WHO Directing Council (CD49.R5). The VIII Session occurred on October 24<sup>th</sup>-25<sup>th</sup>, 2019. The following table shows information on dates and participants of previous meetings:

Session	Date	Location	Participants
VIII AC	October 24 <sup>th</sup> -25 <sup>th</sup> 2019	BIREME	PAHO Countries ( <b>Brazil</b> , Barbados, El Salvador, Guyana, México, Uruguay). Note: Mexico did not participate in this session
VII AC	November 7 <sup>th</sup> -8 <sup>th</sup> 2018	BIREME	PAHO (EIH a.i., PWR Brazil, BIR) Countries (Brazil, <b>Argentina</b> , Barbados, El Salvador, Jamaica, Peru)

VI AC	February 2 <sup>nd</sup> 2017	BIREME	PAHO (AD, KBR, BIR) Countries (Argentina, Jamaica, Panama, <b>Peru</b> , Trinidad and Tobago)
V AC	December 3 <sup>rd</sup> 2014	BIREME	PAHO (AD, KBR, BIR) Countries ( <b>Cuba</b> , Ecuador)
IV AC	November 26 <sup>th</sup> 2013	BIREME	PAHO (KMC, BIR) Countries ( <b>Brazil</b> , Bolivia, Cuba, Ecuador, Puerto Rico)
III AC	December 5 <sup>th</sup> 2012	BIREME	PAHO (KMC, BIR) Countries (Argentina, <b>Brazil</b> , Bolivia, Chile, Dominican Republic, Suriname)
II AC	October 25 <sup>th</sup> 2011	BIREME	PAHO (KMC, PWR/BRA, BIR) Countries (Argentina, <b>Brazil</b> , Chile, Dominican Republic)
I AC	August 31 <sup>st</sup> 2010	PAHO/HQ	PAHO (D, AD, DD, AM, KMC, LEG, PWR/BRA, BIR) Countries (Argentina, <b>Brazil</b> , Chile, Dominican Republic, Jamaica, México)

*Note: Country in bold indicates the Chair of the Session*

**C) Scientific Committee:** permanent body of BIREME formed by at least five scientific information specialists appointed by the Advisory Committee of BIREME. Its function is helping to maintain and improve BIREME's capacity to follow the development of methodologies, technologies, products, services, and events that characterize the national and international systems of information and scientific communication and the challenges for their contextualization in the LA&C. The process of indication of its members by the national authorities, appraisal, and nomination of members of the Scientific Committee was concluded in December 5<sup>th</sup> 2012, in the III Session of the Advisory Committee. The four members named were indicated by Canada, Honduras, Trinidad and Tobago and Brazil and, a fifth member from the National Library of Medicine of United States. In the VI Session of the Advisory Committee, new members of the Scientific Committee were selected for their professional characteristics related to Scientific Communication, Research, Information Management, Education and Knowledge Management and Information Technology, for a term of 3 years (2017-2018-2019), being able to be renewed for another 3 years.

Four sessions of the Scientific Committee (SC) were held. The V Session will take place on November 28<sup>th</sup>-29<sup>th</sup>, 2019 when, from the selection and appointment by the members of the CA, the members who will act in the next term in the years 2020-2021-2022 will be notified. The following table shows information on dates and participants of previous meetings:



Session	Date	Location	Participants
V CC	Planned to occur on November 28 <sup>th</sup> -29 <sup>th</sup> 2019	BIREME	PAHO (BIR) Countries (Brazil, México, Jamaica, Colombia, Cuba and Costa Rica) Note: the specialist from Jamaica informed that will not be able to participate in this session.
IV CC	December 3 <sup>rd</sup> , 2018	BIREME	PAHO (EIH a.i., BIR) Countries (Brazil, <b>México</b> , Jamaica, Colombia, Cuba and Costa Rica)
III CC	December 8 <sup>th</sup> , 2017	BIREME	PAHO (AD, KBR, BIR) Mexico, Jamaica, <b>Cuba</b> , Colombia, Costa Rica and Brazil
II CC	August 14 <sup>th</sup> 2014	BIREME	PAHO (AD, KBR, BIR) Countries (Brazil, <b>Honduras</b> , Trinidad and Tobago, National Library of Medicine (USA))
I CC	July 25 <sup>th</sup> 2013	BIREME	PAHO (AM, KMC, BIR) Countries ( <b>Brazil</b> , Canada, Honduras, Trinidad and Tobago, National Library of Medicine (USA))

*Note: Country in bold indicates the Chair of the Session*

**D) Secretariat:** permanent organ of BIREME, formed by the Director and the technical and administrative teams of the Center, with 39 collaborators. It is responsible for the management and execution of the programming functions of BIREME's biennial work plan 2018-2019 that was developed in coordination with the PAHO/WHO Department of Evidence and Intelligence for Action in Health (EIH).

## 2 Biennial Work Plan (BWP)

The BIREME Biannual Work Plan for the biennium 2020-2021 (BWP 20-21) was approved by the Director and Executive Management of PAHO/WHO in the last November 8th, 2019. Its structure is still characterized by 4 (four) main initiatives and 36 (thirty-six) Projects or Products and Services (PRJ and P/S) associated with three Immediate and Intermediate Results (20.1; 21.2 and 22.3) of the PAHO/WHO Strategic Plan for the period 2020- 2025, the Sustainable Health Agenda for the Americas (ASSA 2030) and the Sustainable Development Goals (SDGs) of the 2030 Agenda.

<b>Initiatives and projects</b>
<b>BIR01 - Information and knowledge management</b>
Strengthening of the Collaborative Network for Information Management
Thesaurus DeCS compatible with MeSH, interoperable with UMLS and extended with other terminology categories
VHL model of management of scientific and technical information on health applied in AL&C
LILACS updated and available as the main index of scientific and technical output of LA&C
Referential sources of information updated and available in the VHL
Experts and Institutions Directory published in the VHL
SciELO Public Health Collection developed, expanded and strengthened
Ethics Research Committee Management Platform - ProEthos available to the countries
Global Index Medicus (GIM) operating in coordination with the Regional Offices and WHO Headquarters in Geneva
Bibliographic control and visibility of the scientific and technical output in health of LA&C broadened
<b>BIR02 - Information Services</b>
Services that contribute to reduce the gap between scientific knowledge and health practice developed
VHL reference and user services strengthened
Personalized information services expanded and improved - MyVHL
VHL search and retrieval interface
e-BlueInfo app implemented and with information for health teams
Capacity building in scientific communication in the Region
Distance Learning (EAD) and Open Educational Resources (OER) developed and available in the VHL
Promotion of access and use of health information in the Region
<b>BIR03 - Intelligence in Health Sciences Information</b>
Infometrics of the scientific and technical output of LA&C published in LILACS
VHL Infobutton service operating in health information systems
Impact analysis on the use of information products and services developed by BIREME
Open data of the VHL referential sources of information
LILACS promoting Open Science in LA&C
<b>BIR04 - Leadership and Management of BIREME</b>
BIREME Institutional Framework strengthened with the recommendations of its Governance Committees and PAHO Regional Strategy (ASSA 2030)
Management System implemented in accordance with PAHO's institutional structure, recommendations and rules
Risk management and mitigation response plans approved and executed
BIREME's communication strategy implemented and effective
Effective HR Management
PAHO procedures and recommendations related to the administrative management of the Center implemented
IT infrastructure available and up-to-date according to PAHO-driven standards and management methods
BWP developed and monitored
Planning and financing of general operating expenses
Learning plan implemented
CRICS XI and VHL VIII implemented
Project Management to support the development of agreements with focus on the mobilization and monitoring of funds
Report and Visibility of successful experiences related to SDG3 / Agenda2030

*Table: BWP2020-2021; new P/S highlighted in yellow*

About the BWP 18-19 that contemplates 4 initiatives and 34 projects following is highlighted the average evolution percentage until the end of October of 2019:

Initiatives	Average of the Projects (P/S)
Information and Knowledge Management	84.00%
Information Services	77.00%
Intelligence in Health Science Information	77.00%
Leadership and Management of BIREME	89.00%
Average of the Initiatives of BIREME during 2018-2019	84.00%

Until the end of November, the management and technical cooperation teams will carry out effective monitoring and development actions for the PRJ and P/S that BIREME set out to achieve in the 2018-2019 biennium.

## 2.1 Summary of BIREME Initiatives and Projects

The following table presents the Initiatives and Projects of the BWP 2018-2019 in a structured form.

<b>Initiatives and Projects</b>
<b>BIR 01 - Information and knowledge management</b>
Strengthening of the Collaborative Network for Information Management
Thesaurus DeCS compatible with MeSH, interoperable with UMLS and extended with other terminology categories
VHL as strategy to access scientific and technical health information for LA&C
LILACS as the main index of scientific and technical output of LA&C
Management of reference information sources of the VHL
Experts and Institutions Directory
SciELO Public Health Collection developed, expanded and strengthened
Ethics Research Committee Management Platform - ProEthos
Global Index Medicus (GIM) operating in coordination with the Regional Offices and WHO Headquarters in Geneva
Support for priority Portuguese speaking countries (key countries)
Target audience trained in scientific communication topics
Distance Learning (EAD) and Open Educational Resources
Promotion of access and use of health information
Bibliographic control and visibility of the scientific and technical output in health of LA&C
<b>BIR 02 - BIR 02 - Information Services</b>
Knowledge translation service to reduce the gap between scientific knowledge and practice in health
VHL reference and user service
Customized information services - MyVHL
Full-text document access service
VHL search and retrieval interface
Information for Primary Care Teams - Blue Memory
Information for Primary Care Teams - SOF
<b>BIR 03 - Intelligence in Health Sciences Information</b>
Terminologies in health sciences to support the organization and exchange of scientific and technical knowledge
Infometrics of the scientific and technical output of LA&C published in LILACS
Search tool for scientific and technical information contextualized in health information systems
Publication of national, thematic and regional profiles of the scientific output of LA&C integrated into the VHL
Knowledge showcases in priority health topics
<b>BIR 04 - Leadership and Management of BIREME</b>
BIREME institutional framework implemented and in full operation
Implement CRICS10
Management System implemented according to PAHO institutional structure, recommendations and rules
Risk assessment and mitigation plans clearly defined and executed
BIREME's communication plan developed and implemented
Effective HR Management
Compliance with PAHO procedures and recommendations related to the administrative management of the Center
IT infrastructure available and up-to-date according to PAHO-driven standards and management methods
Development and monitoring of BWP
Planning and financing of general operating expenses
Learning plan implemented

*Table: BWP2018-2019*

A summary of some of the progresses in each initiative of the work plan is provided as follows.

## Initiative BIR.01 – Knowledge management

- The VHL model of health information and knowledge management continues to be developed and adapted to the new needs of the Network. The model is applied to over 80 national, thematic and institutional VHL initiatives in countries in the Region. The new VHL Network Portal (<http://red.bvsalud.org>) was launched in 2018 with the function of support the application of the VHL Model and to present the VHL Collaboration Network. The Portal has been constantly updated during 2019.
- The Regional Initiative of Traditional, Complementary and Integrative Medicines VHL of the Americas (MTCI Americas VHL), launched in 2018, counts with the participation of 16 countries (<http://mtci.bvsalud.org>) and the Nursing VHL was renewed also involving several Latin American countries and Portugal. (<http://bvsenfermeria.bvsalud.org>)
- LILACS is updated weekly with contributions from its Collaboration Network, reaching 886 thousand records indexing articles from over 850 journals and other types of documents, an increase of 6% since the VII Session of the AC. The management of LILACS updating, maintenance and publication processes is fully integrated into the system "Integrated Service of Management of Referential Sources of Information (FI-Admin)" developed by BIREME. The LILACS Journal Evaluation and Selection Electronic System was launched in August 2019, making it possible to systematize work processes between scientific editors, selection committee and evaluators through a web platform. Within the framework of the celebration of the 34 years of the LILACS database, it was launched in October 2019, the new LILACS portal (<https://lilacs.bvsalud.org/>).
- The DeCS is updated annually, according to the MeSH update maintained by the NLM, in the English, Portuguese and Spanish languages. The Spanish version of LA&C has the collaboration of the Faculty of Medicine of the University of Chile and the Spain version, of the Instituto de Salud Carlos III. In 2016 the MeSH translated into French was added to the VHL, in addition to the translation of the exclusive DeCS categories (Public Health, Homeopathy, Health Surveillance and Science and Health) in collaboration with Rouen Hospital in France with yearly updates. DeCS has been extended with new descriptors related to cross-cutting priority themes (gender, ethnicity, human rights and equity), and to the themes of Environmental Health, Public Health Engineering, Digital Health and Access and Universal Health Coverage. The new thesaurus management system, integrated into the FI-Admin system, was developed and is in operation, with the ability to manage multiple vocabularies in multiple languages. At the moment, DeCS/MeSH 2019 is already using this new system and it works in 4 languages (Portuguese, Spanish from Latin America and Spain, English and French), replacing the legacy system which was in use for

more than two decades. In the same system the vocabulary of Environmental Health and Public Health Engineering is also maintained, under the responsibility of the National Health Foundation (FUNASA). The new web portal of DeCS/MeSH, completely reformulated and modern, is in beta test.

- The technical cooperation of BIREME has been maintained in the development of regional and international projects such as:
  - ProEthos, for the systematization of the activities of the research ethics committees, providing support for teams in Argentina, Honduras, Guatemala and Peru in the platform implantation, as well as to PAHO/HQ, in coordination with Regional Bioethics team, for the use of ProEthos in PAHOERC – PAHO/WHO Ethics Research Committee;
  - CARPHA, for access to evidence in health by the countries of the English Caribbean and
  - the Global Index Medicus (GIM), for organizing and accessing scientific production in low- and middle-income countries. In November 1<sup>st</sup>, 2019 was launched the new GIM Portal in seven languages (Portuguese, Spanish, English, French, Arabic, Chinese and Russian) and it was implemented the new governance framework with the advisory and technical committees. The launch had an integrated global action between the WHO headquarters in Geneva, all WHO Regional Offices and BIREME/PAHO, disseminating the new GIM portal through social networks and institutional websites. In the first week of the launch (November 1 to 7), 28 tweets were published with more than 500 likes and 350 retweets, including the participation of PAHO/WHO Country Offices, the World Bank and the Global Public Health Observatory. Also 17 posts on Facebook with more than 130 likes and 60 shares. The visibility of the dissemination actions resulted in an increase of more than 600% in the number of users and visits to the new portal, originated from 125 countries, and more than 350% in the number of pages visited.
- The technological platform for managing the VHL and its sources of information is being constantly updated using modern technologies and open source platforms.
- Interfaces for visualizing the data of authors and institutions, according to the specific thematic area publications available in LILACS, promoting a directory of experts and institutions based on the DeCS/MeSH descriptors chosen in the document indexing process.
- Open Education Resource management and publication service, integrated to the CVSP and the VHL, as well as the health legislation management service.

- In 2019, around 300 researchers, scientific publishers, health professionals and postgraduate students were trained in Scientific Communication through face-to-face courses in Brazil, Paraguay and Peru.
- In 2019, a new source of information was developed, the International GRADE Guide Base (BIGG), which is available for access on the VHL regional portal and has more than 600 registered guides.

## Initiative BIR.02 – Information Services

- The self-study course on [Acceso y Uso de la Información Científica en Salud](#) [Access and Use of Scientific Information in Health] in the CVSP, in Spanish and Portuguese, from January 2017 to October 2019 was attended by more than 18 thousand students.
- In 2019, various face-to-face activities of access to the VHL were conducted, oriented to decision-making in health informed by evidence, for students, librarians and health professionals. The Regional Portal of the VHL in operation and regular update, registered in 2019 (until September) more than 7.8 million sessions (accesses, searches) that resulted in approximately 32 million page views.
- The “Windows of Knowledge” methodology was developed, a resource of the VHL that aims to give visibility and access to the main documents and other information resources on a priority health issue, as is the case with Hepatitis, Hanseniasis and Measles. Until October 2019, 7 windows of knowledge linked to the VHL Regional Portal were developed. The methodology is being adopted by countries such as Colombia, Paraguay, Panama and Brazil.
- The User Attention Service regularly responded to the demands and developed dozens of search strategies to subsidize systematic reviews and other types of research and needs.
- The development of instructional projects for distance courses on the diagnosis, prevention and treatment of neglected diseases in the Americas, such as Hanseniasis, Rabies, Trachoma, Visceral Leishmaniosis, Tegumentary Leishmaniosis and Helminthiasis, Schistosomiasis, was maintained. These courses are available on the Virtual Campus of Public Health.
- With the VHL Personalized Services (MyVHL) launched in August 2011, users identify themselves to use selective information dissemination services. These services allow to know the interest profile of the VHL public, making it possible to offer specific information by user segment. MyVHL already has more than 34 thousand active users, an increase of 70% since the VII Session of the AC, with an average of 1,700 users using the services monthly. During the CRICS 10, the MyVHL application for mobile devices (APP) was

launched on Android and iOS operating systems. From December 2018 to date there are more than 1,500 installations of the APP. The new version of the personalized services will be launched in November 2019, based on the results of the user satisfaction survey conducted in April 2019 with 592 AL&C participants.

- During the CRICS 10, the e-BlueInfo APP was launched - Information Platform for Health Practice: Health information in the palm of the hand, with documents for primary health care professionals initially from Brazil and Peru. We are working on the implementation in other countries of the Region such as Guatemala, Nicaragua, Mexico, among others. Since December 2018 there are more than 1,800 installations of the APP.
- New information search and retrieval interface in the VHL, available since September 2019, according to its target audience: health professionals, students, researchers and managers.
- Two new information retrieval interfaces in the VHL are under development: using the PICO (Population, Intervention, Comparison and Outcome) method and applying specific evidence filters for decision making.

### **Initiative BIR.03 - Intelligence in Health Sciences Information**

- Tools specialized in data management, quality and visualization have been adopted, allowing to improve the metadata stored in LILACS and to generate and to visualize infometric indicators of the scientific and technical production in health of LA&C.
- A new conceptual model and a new systems architecture are under development to promote a framework for the governance of the data available in the VHL information sources.
- Data extraction, transformation, aggregation, analysis and visualization techniques were applied to generate indicators of the scientific and technical production stored in LILACS and Medline related to the Research Institutes of the State Secretary of Health of São Paulo, to the areas of Human Resources in Health, Health Services and Systems, and Basic Water Sanitation in the 2030 Agenda and the contribution indicators of the LILACS Cooperating Centers. Indicators of the scientific and technical production available in the Index Medicus of the other WHO regions that constitute the GIM were also generated.
- The Infobutton VHL service has been developed, which follows international standards for the exchange of data with Health Electronic Record Systems, promoted by the HL7 (Health Level Seven International), which allows recovering the scientific evidence available in the VHL in accordance with the context of the patient's medical history. A proof of concept is



under development with the PAHO/WHO Collaborating Center *Hospital Italiano de Buenos Aires*.

- The service of suggestion of DeCS/MeSH terms, based on title and summary of documents that facilitates the process of indexing documents and contributes for the future development of automatic indexing system is under test.
- The methodology of processing and visualization of data for the generation of evidence maps was developed. The first use was for the ozone therapy map in September 2019. (<https://public.tableau.com/profile/bireme#!/vizhome/ozonioterapia-pt/evidence-map>). Another seven evidence maps are in development on the clinical effectiveness of integrative health practices, such as meditation, yoga and acupuncture.

### **Initiative BIR.04 – Leadership and Management of BIREME**

- In meetings with the participation of the Director, Managers and Teams of BIREME, in October 2019 the BWP 20-21 proposal was finalized, aligned with the procedures and policies of PAHO/WHO and the link of its PRJ, P/S, activities and tasks to the Organization Strategic Plan for 2020-2025. It has 4 initiatives, 36 P/S and 201 activities/tasks. The plan was discussed and approved by the Director of PAHO/WHO on November 8<sup>th</sup>, 2019;
- BWP 18-19 in October 2019 was 84% implemented and is monitored with the support of biweekly meetings to monitor the products, services and projects and the respective use of regular and non-regular (grants) financial resources and the corresponding operation of the PAHO/WHO ERP system, the WD/PMIS;
- VIII and VII Sessions of the BIREME Advisory Committee (AC) and, V and IV Sessions of the BIREME Scientific Committee (SC) occur in the biennium 18-19, characterizing an effective operation of the Governance Committees of BIREME (AC and SC) with the participation of professionals from government institutions and specialists from the countries of the Region and in coordination with the recommendations of the Directing Councils of PAHO/WHO;
- Close communication with the Ministry of Health of Brazil (MoH) in coordination with PAHO/WHO Brazil for the formalization of Cooperation Agreement Terms for the development of projects, products and services for the improvement of BIREME and for national and regional technical cooperation. The respective financial contributions that are formalized via Cooperation Agreement Terms are made annually. The routing negotiations of TA6 to TC95 and TA2 of TC93 are emphasized; the latter is in the final process of formalization.

- The management of BIREME remains effective and in line with the policies and procedures of PAHO/WHO within the framework of its new institutionality in the process of implementation. The CNPJ (*Cadastro Nacional de Pessoa Jurídica*) of BIREME is updated in the national bodies, mainly in the *Receita Federal* which strengthens the institutionality of the Center in Brazil;
- Operation of BIREME strengthened in the country, which demands, through the Ministry of Foreign Affairs and in coordination with the Ministry of Health, the rescue and formalization of the Headquarters Agreement of BIREME in Brazil to make possible in good time the annual contributions of the Government of Brazil for the improvement of BIREME;
- Focus on activities and participation in events and dissemination actions about successful initiatives to promote the health of local communities, aligned with the implementation of the Sustainable Health Agenda for the Americas (SHAA 2030) and the Sustainable Development Goals (SDGs) of the 2030 Agenda (e.x. community of the municipality of Santo Amaro);
- Regular actions for the development of competencies and strengthening of the organizational climate such as training programs with the support of HHRR from PAHO/WHO Headquarters and External Consultancy, labor gymnastics twice a week (with the support of a local university, UNIP - *Universidade Paulista*) and Cafes with Ideas monthly that include information and knowledge exchange activities for learning and celebrating birthdays collectively;
- BIREME IT infrastructure is updated with ten (10) desktops, five (5) notebooks and one (1) projector for the DIR BIR office and the connectivity is effective. The facilities for technical cooperation and ADM are aligned with the rules of PAHO/WHO. The backup and monitoring of the products and services of the technical cooperation keep in continuous improvement. Actions that seek to improve the security of the VHL instances hosted in the BIREME infrastructure continue to be implemented;
- In addition to the access system to the building where BIREME is located, a specific access system to the 12<sup>th</sup> floor was implemented, guaranteeing greater security of the facilities;
- Formal communication channels of BIREME dynamic and in operation (institutional page (in the Spanish, English and Portuguese languages), Intranet, Facebook, Twitter and newsletter) with emphasis for the 6 (six) texts published in 3 (three) languages (Spanish, English and Portuguese) monthly in the BIREME Newsletter (<http://boletin.bireme.org/>). It is being disseminated to the institutions that are part of the VHL and LILACS Networks, government entities and throughout PAHO/WHO.

## 2.2 BIREME financial structure

The establishment of a stable and balanced structure for financing BIREME was one of the main motivations for the BIREME's institutional reform. The Statute of BIREME foresees that this structure of financing is analyzed and recommended by the Advisory Committee of BIREME, also recommending the financial contributions from Brazil and from PAHO, and from the participating members of BIREME.

The following table shows the distribution of financial contributions received in 2018-2019.

Types of Funds	U\$	%
1. PAHO/WHO - 2018-2019	\$ 1,909,000	39%
2. Ministry of Health of Brazil (TC93) in 2018	\$ 913,775	19%
3. Projects via PAHO Brazil	\$ 1,930,907	39%
4. Projects with WHO Funds	\$ 138,000	3%
<b>TOTAL 2018-2019</b>	<b>\$ 4,891,683</b>	<b>100%</b>
5. Balance of the Biennium 2016-2017	\$ 568,547	
<b>TOTAL</b>	<b>\$ 5,460,230</b>	

### Observations:

1. PAHO/WHO HQ 2018-2019 including resources for projects with PAHO/WHO HQ: CDE (U\$42K) and EIH for CRICS10 (U\$5K)
2. Ministry of Health of Brazil (MoH) - TA1/TC93 of 2017-2018. The contribution of 2019 was not transferred until the production of this report
3. Projects via PAHO/WHO Brazil in the context of Technical Cooperation Terms 44 (SMS-SP), 52 (SES-SP), 57 (HR in Health), 60 (CONASS), 76 (Bioethics), 80 (MM), 87 (FUNASA), 94 (SES-TO), 95 (CGDI-SE) and 98 (MTCI/PICS)
4. Projects financed by WHO that include Global Index Medicus (GIM) and Hanseniasis
5. Balance of the Biennium 2016-2017, considering the Technical Cooperation Terms 44 (SMS-SP), 57 (HR in Health), 80 (MM) and TA1/TC93 (Enhancement of BIREME)

### Contribution in pipeline:

- (i) TA2/TC93, that is being formalized with MoH including its regular contributions for 2019 and 2020 (approx. U\$ 2 Million)

About the Cooperation Agreement Terms with the Ministry of Health of Brazil (MoH) by means PAHO/WHO Brazil:

### **TC93/TA2**

The [Cooperation Agreement Term 93](#), aims toward the “Development and Improvement of the Latin American and Caribbean Center on Health Sciences Information within the context of Information and Knowledge Management of the 2030 Agenda and Universal Health” and particularly for the strengthening, improvement and implementation of its technical cooperation program and institutional sustainability as a PAHO/WHO Specialized Center on scientific and technical health information.

### **TC95/TA6**

The [VI Additive Term to the 95th Technical Cooperation Term \(TA6/TC95\)](#) between the Ministry of Health and the Pan American Health Organization/World Health Organization in Brazil (PAHO/WHO Brazil) is aimed at the Improvement of the Management of the Executive Secretariat of the Ministry of Health of Brazil. This TC relies on the participation of PAHO's technical areas in Brazil and BIREME/PAHO/WHO, which cooperates specifically with a result related to information management of scientific and technical information and communication in health, more specifically in the context of Information sources of the VHL and the national network of libraries that contributes to Brazil VHL, libraries of BiblioSUS network, thematic libraries such as the Primary Health Care VHL and institutional libraries, such as the Ministry of Health VHL. Moreover, it includes components that aim at expanding the bibliographic control and improve the quality of the description of scientific and technical output in Brazil and expanding access and use of scientific knowledge within the Unified Health System through knowledge translation products. In summary, it is about bringing clinical practice close to knowledge and scientific evidence generated through academic research for the continuous improvement of health services.

The financing of the 2018-2019 Biannual Work Plan (BWP) for BIREME had contributions of its main institutional partners and the non-regular contributions from regional technical cooperation projects within the framework of the PAHO Brazil Technical Cooperation Agreements in the country. These projects also result in products and services for use by the countries in the Region. The PAHO/WHO and the Ministry of Health of Brazil continued to contribute to the enhancement and technical cooperation of BIREME. From the affiliation of new members, as established in the BIREME Statute, the sources of financing should diversify. At the same time, BIREME is providing

efforts to mobilize additional resources by means of projects, agreements and services as foreseen in its proposed Resource Mobilization Plan to ensure the financial sustainability of the Center.

# 3 Main advances in BIREME technical cooperation related to the recommendations of the BIREME Governance Committees

## 3.1 Recommendations of the VII Session of the Advisory Committee (2018)

- I. **It has been proposed to make visible and socialize all BIREME's products and collaboration with the countries, as it is often unknown**
  - a. The main means of dissemination are the BIREME Bulletin (<http://boletin.bireme.org>), published monthly, and the Center's institutional Web site (<http://paho.org/bireme>), both in three languages, highlighting BIREME's new information products and services and technical cooperation activities in the countries.
  - b. Actions to communicate with the focal points of PAHO Country Offices for the dissemination of BIREME information products and services, supporting their implementation at the local level and promoting actions with national authorities.
  - c. Constant communication with the various networks with which BIREME works, such as the VHL Network, LILACS Network, RedDes, among others.
  - d. The e-BlueInfo project was used to test the development and implementation of a Strategic Communication and Dissemination Plan, as well as the application of a Communication Toolkit to be adopted by participating countries.
  - e. The presence in the different forums and strategic events in which BIREME advertises its products and services in booths shared with PAHO and the Ministry of Health. Some examples in 2019 were: *XXXV Congresso Nacional das Secretarias Municipais de Saúde* (XXXV National Congress of Municipal Health Secretariats), *16ª Conferência Nacional de Saúde* (16<sup>th</sup> National Health Conference), *24º Congresso Multidisciplinar Brasileiro de Diabetes* (24<sup>th</sup> Brazilian Multidisciplinary Diabetes Congress), *XXVIII Congresso Brasileiro de Biblioteconomia e Documentação*, CBBDD 2019 (XXVIII Brazilian Library and Documentation Congress).

**II. That the countries of the region take actions integrated with BIREME, transmit synergies to make visible knowledge production**

- a. In the context of networking with dissemination and capacity building actions, the countries of the Region were able to implement methodologies for the development of BIREME products and services on national platforms, such as the Knowledge Showcases, that have been replicated in countries such as Colombia, Paraguay, and Brazil, among others.
- b. In the framework of the e-BlueInfo project, Brazil and Peru have completed actions to develop document collections dedicated to Primary Health Care professionals. Other countries such as Colombia, Cuba, Guatemala, Guyana, Mexico, Nicaragua, and Paraguay have already expressed interest to participate in the initiative.
- c. The Ministry of Health and Social Development of the Nation, Argentina, requested the migration of its bibliographic base of scientific and technical output to BIREME's new integrated reference database management platform, as well as its incorporation in the VHL Regional search interface.
- d. Development of infometric assessment for analysis and visualization of data from scientific and technical output stored in LILACS and MEDLINE related to the Research Institutes of the Secretary of Health of the State of São Paulo and on Index Medicus of other WHO regions that compose the GIM.

**III. To promote priority projects to implement a risk mitigation plan if resource mobilization does not arrive in a timely manner**

- a. BIREME/PAHO's leadership in the development and operation of the Global Index Medicus (GIM) platform, with active participation in the WHO Global Library Group and the newly created governance bodies for GIM, both the Advisory and the Technical Committees. Besides mobilizing resources for the 18/19 biennium, through WHO Headquarters and its regional offices, the Advisory Committee members were committed to transfer resources to BIREME in the 20/21 biennium.
- b. Projects were promoted under the PAHO Terms of Cooperation with the Brazilian Ministry of Health at the federal, state, and municipal levels.
- c. Projects are being developed with different PAHO/WHO departments at the regional level and work is underway to find opportunities for collaboration with Latin American and Caribbean countries.

We have a resource mobilization plan developed together with the PAHO/WHO Department of External Relations, Resource Mobilization and Partnerships (ERP).

**IV. To use social networks to publish numbers and infographics that improve scientific knowledge social communication**

Institutional social networks such as Facebook and Twitter, besides disseminating the Center's news, events and services, are also used to regularly publish updated infographics of BIREME's main products: VHL, LILACS and DeCS.

**V. Ask about alliances with scientific communication professionals**

- a. BIREME maintains alliances with associations of scientific editors and research institutions from both Brazil and other countries in the Region by providing courses and participating in events in the area and to offer updates on the state of the art of scholarly communication in AL&C and in the world. During 2019, we worked face-to-face with Brazil, Paraguay, Peru and Argentina, among others.
- b. Analyses of the journals in the area of health are carried out and recommendations are given to the editors regarding the criteria of editorial quality and standards compatible with current international practices. In this sense, BIREME is part of the Editorial Committee of PAHO/WHO Brazil and guides scientific editors in the countries of the Region in good scientific communication practices and how to strengthen the editorial management of journals.
- c. Online training sessions of scientific editors in the management of health journals indexed in LILACS are periodically held.
- d. Health journals are reviewed, and recommendations are then made to editors on editorial quality criteria and standards consistent with current international practices. Moreover, BIREME is part of the PAHO Brazil Editorial Committee and guides scientific editors in the countries of the Region on best scientific communication practices and on how to strengthen the editorial management of their journals.
- e. We work with research institutions in countries to consider LILACS as a database that ranks researchers. Countries like Brazil and Colombia have already made this effort and in 2019 we have reached with Peru and worked with Argentina and Paraguay.

**VI. To increase the participation of countries, through a joint work plan, in cooperation projects already developed by the countries, it would require a diagnosis**



This is a recommendation that remains a challenge for BIREME and will be a priority in 2020-2021.

**VII. To identify networks that can strengthen BIREME and seek in countries possible contribution projects to and from BIREME**

- a. BIREME has been integrated into technical cooperation activities with regional networks, such as the Scientific Electronic Library Online (SciELO), Epistemonikos, Latin American and Caribbean Health Systems Strengthening Network (RELAC SIS), Biomedical Indexing and Question Answering (BioAsq), Evidence Informed Policy Network (EVIPNet) and the Virtual Campus on Public Health (CVSP). In 2019 BIREME contributed with the revamp of the EVIPNet and ePORTUGUÊSe Networks.
- b. BIREME coordinates the SciELO Public Health collection, which is made up of 18 journals from the countries of the region, including the Pan American Journal of Public Health, official publication of PAHO/WHO.
- c. The main networks that BIREME coordinates, promotes and interacts with are: VHL Cooperating Centers for information sources and services and users of information systems and methodologies developed by BIREME - there are more than one thousand libraries of institutions in AL&C countries; VHL thematic and national instances, such as the BiblioSUS network (libraries operating in the Unified Health System), EnfAmericas, RENICS (National Health Sciences Information Network, Argentina), TCIM (Traditional, Complementary and Integrative Medicine) Network, RedDes (VHL Developers Network), Search Strategy Developers Network and Open Educational Resources Network (OER), among others.
- d. As part of its work with PAHO/WHO Collaborating Centers, BIREME develops and receives contributions from several, such as: INFOMED in Cuba, the Buenos Aires Italian Hospital, Argentina, and the Lauro de Souza Lima Institute (ILSL) in Brazil, among others.

## **3.2 Recommendations of the IV Session of the Scientific Committee (2018)**

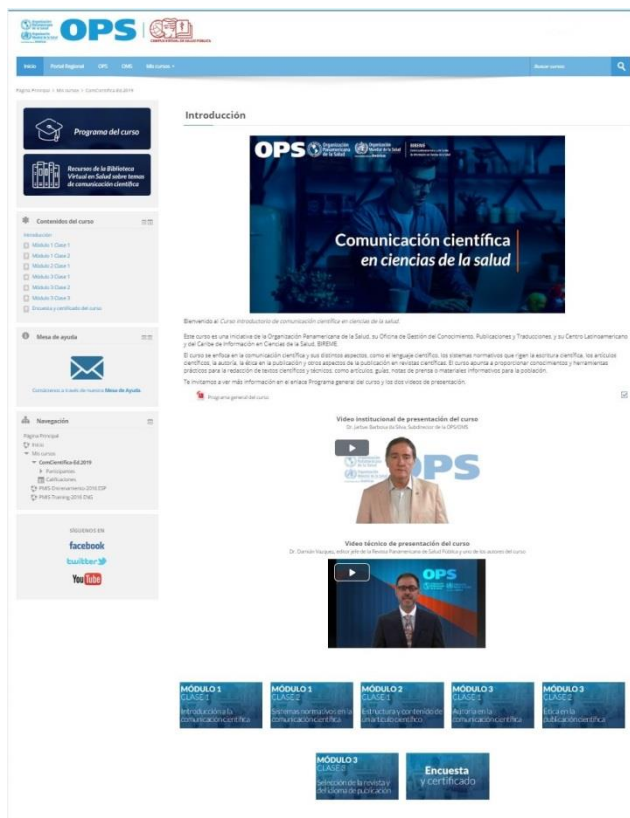
**I. To disseminate questions from health professionals and their answers**

- a. The output and publication of Second Formative Opinions continues in regular operation at Brazil's [Primary Health Care VHLhttp://aps.bvs.br/](http://aps.bvs.br/), with over 1,400 questions and answers. From July to September 2019, there was a 388% increase in visits and page views as compared to the same period in 2018. The first half of 2019 already indicated a 34% increase in visits and page views compared to the same period in 2018. One of the reasons for the high increase the APS VHL access in the second half of 2019 was the upgrade of its interface, responding to mobile devices (73% of accesses come from mobile phones) and optimization of web server infrastructure.
- b. The production of contextualized evidence syntheses for primary care services has been resumed, starting with Brazil, but the methodology will be disseminated to other Network countries in the next biennium.

**II. To encourage and empower the use of virtual environments**

- a. With the objective of expanding and strengthening bibliographic control of Latin American and Caribbean literature, developing local capacities and improving networking, BIREME promotes virtual meetings dedicated to coordination of the LILACS Network, indexing of documents according to the LILACS methodology and best practice sessions in the process of journal publishing. By the end of 2019, 27 training sessions will have been held.
- b. As a result of the collaboration between BIREME and the Department of Knowledge

Management, Publications and Translations (KMP), a self-learning Health Sciences Scientific Communication course is available in Spanish at the Virtual Campus on Public Health (VCPH/PAHO) since November 8<sup>th</sup>, 2019, for researchers, scientific editors, health professionals, graduate students, and other stakeholders. Since its launch, the course has 650 registrations and 45 people still concluded the training.



**III. To encourage thematic libraries, including specialties for which they have not been developed**

- a. BIREME continues to work with the Nursing thematic VHL; Traditional, Complementary and Integrative Medicine and many others.
- b. The Knowledge Showcase Methodology was developed with the main objective of highlighting the selected information on the priority topics, as well as health dates.

**IV. Mapping knowledge, not just metadata**

The use of DeCS/MeSH was promoted as a terminology used in the classification of contents available in the VHL, to map the knowledge available in LILACS and MEDLINE and to promote the analysis of existing gaps.

**V. To provide platforms and tools for assessing document quality, broadening alliances with organizations working on the subject**

An electronic LILACS Journal Evaluation and Selection System based on quality criteria has been offered to scientific editors in the Region.

**VI. To think of an open data platform and reproducible research**

- a. Two projects aligned with this recommendation are planned for the 2020-2021 Work Plan:
  - i. Open data from VHL reference information sources, allowing the reuse of metadata resulting from the process of cataloging and indexing documents, expanding the opportunities for the development of infometric studies and scientific research.
  - ii. LILACS promoting Open Science in LA&C, proposing the development and operation of a reference database of open research published in LILACS.

**VII. To create alliances to explore new metrics with different approaches (scientometrics, altmetrics, social visibility) and technologies**

- a. The experience of the International Impact Assessment Initiative (3ie) has been adopted as benchmarking to explore the development of evidence maps that enable the mapping, selection, evaluation and categorization of scientific evidence in each

practice. BIREME has developed its own application using the Tableau tool. The first pilot is now available, the Ozone Therapy Medical Map, developed with the Brazilian Society of Medical Ozone Therapy (SOBOM)

- b. It remains a challenge to expand these alliances that will be projected in the next biennium.

**VIII. Continue to work on the different components of open science, strengthening and deepening much more. BIREME should take a leading role in this topic**

As already mentioned, the LILACS open science promotion project in LA&C is designed in the 2020-2021 Work Plan, proposing the development and operation of a reference database of open data from research published in LILACS and available in open data research repositories.

**IX. Work on digital preservation mechanisms and tools**

- a. For institutions that do not have their own digital repository, BIREME offered the Integrated Referential Information Source Management System (FI-Admin) for the upload of digital files of scientific and technical output, as well as cataloging and indexing.
- b. BIREME cooperated in the development and implementation of Institutional Repositories, using the open source DSpace platform, in coordination with the Knowledge Management and Publications (KMP) Department, responsible for the PAHO/WHO Institutional Repository (PAHO-IRIS). In 2018-2019, BIREME developed the policy, taxonomy and platform of the Institutional Repository of the Brazil's National Health Foundation (FUNASA), using DSpace adapted for PAHO-IRIS, integrated to the specific thesaurus developed for Environmental Engineering and Public Health.

**X. To document the impact being generated with processes and projects developed in partnership with other institutions**

Planned for the 2020-2021 Work Plan, the Impact Analysis project on the use of information products and services developed by BIREME, developing impact measurement methodology and systematized platform for quantitative assessment based on user perception.

**XI. Cooperation with various sources, commitment to interoperability and technology platforms, e.g. collaborating with ORCID**

Conversations were initiated with ORCID, yet unsuccessful for more effective interoperability of research data and researchers. However, VHL Custom Services (MyVHL) automatically retrieves the technical and scientific output of users who enter their ORCID iD, allowing them to store documents on the platform to identify, for example, similar documents in the VHL information sources.

**XII. Consider the policy actions being worked on; for example, the National Transformation Plan. There are milestones for collaboration and work, especially at the strategic level**

The Universal Access and Coverage policy was considered, with a focus on strengthening Primary Health Care, as a context for the dissemination of the e-BlueInfo initiative in countries, considering that the collections of documents being developed by Local Content Committees are related to primary care.

**XIII. Continue working on BIREME's repositioning**

- a. BIREME continues its repositioning plan in Latin America and the Caribbean, both through the participation of countries in the virtual training sessions offered by the Center and the presence of BIREME's professionals in strategic capacity building and capacity building efforts at the national level.
- b. In 2018-2019, 124 missions were carried out to 19 countries. Special attention was given to those considered key countries to the Organization, such as Haiti, Paraguay, Guatemala, Honduras, and Nicaragua.

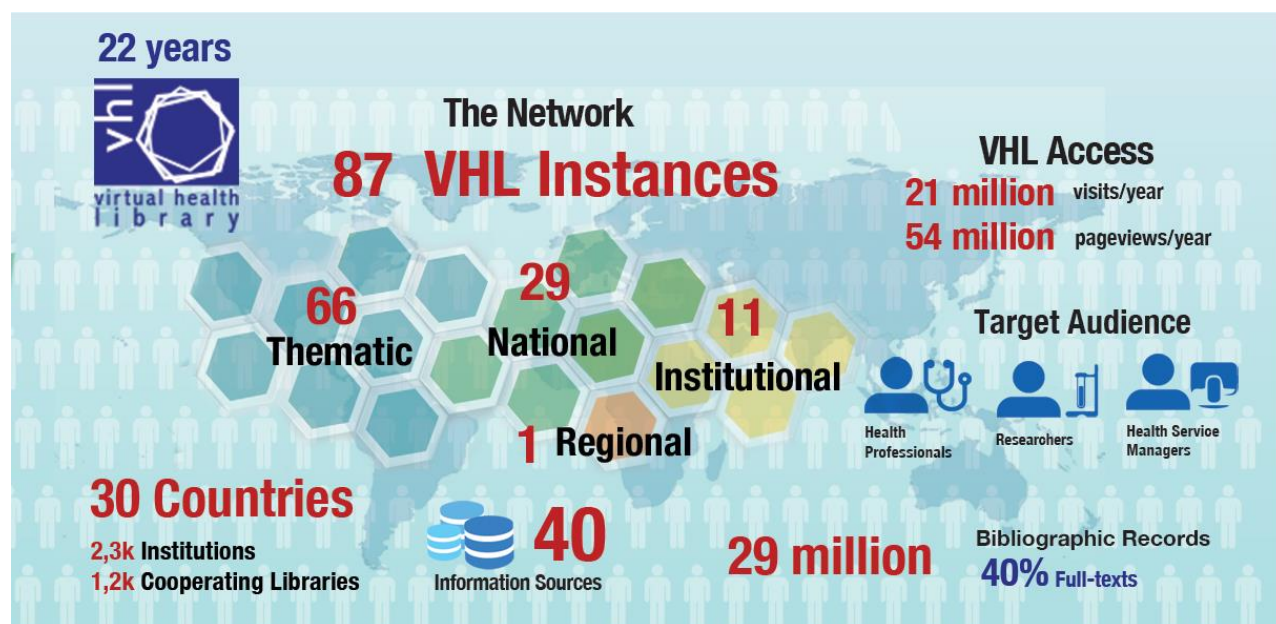
**XIV. Financial resources must be protected for BIREME's operation, even with a private and commercial sector approach towards sustainability.**

BIREME relies on a financial resource mobilization plan that is being implemented and, although priority has been given to resource mobilization from government entities, work with the private sector is in perspective.

# 4 Regional Program & Products

## VHL - Virtual Health Library

The VHL (<http://bvshalud.org>) is the main program for health scientific and technical information management in LA&C promoted and coordinated by BIREME since 1998. It is a regional public good built and operated collectively between institutions and professionals from 30 countries in the production, intermediation and use of scientific and technical information in health.



The VHL is a wide network of open access sources of health information with over 1 million visitors per month (aimed mainly at students, researchers and decision makers) from all regions in the world, especially from the LA&C. Some characteristics that define the VHL are:

- VHL Regional Portal - integrated and free access to the collection with over 40 information sources, products and services in health of the VHL Network;
- National VHL Instances – countries’ portals aiming at national health priorities;
- Thematic VHL Instances - portals aimed at priority areas such as Public Health, Social Determinants of Health, Cancer Prevention and Control, Dentistry, Nursing and many others
- Institutional VHL Instances – portals aiming at the organization and dissemination of scientific and technical information produced by health or educational institutions as Ministry of Health, Secretary of Health, Institute of Health and Health Sciences Colleges

- Interoperation with networks and information systems: CVSP, SciELO (Scientific Electronic Library Online), EVIPNet (Evidence-informed Policy Network) and the National Library of Medicine of the United States (NLM).

## LILACS - Latin American and Caribbean Literature in Health Sciences

LILACS (<http://lilacs.bvsalud.org>) is the most relevant and comprehensive index of scientific and



technical literature in health of LA&C countries. For over 30 years LILACS has been contributing to increase the visibility, access and quality of health scientific output in the Region:

It is available in open access, aimed mainly at students, researchers and health professionals;

- It gathers over 886 thousand documents published in LA&C region,

including articles of 884 journal titles, theses, monographs and gray literature;

- LILACS complements MEDLINE/PubMed and increases the visibility and impact of the scientific production of LA&C;
- LILACS is cited in thousands of systematic reviews as research source for Latin-American primary studies.



# DeCS - Health Science Descriptors

DeCS (<http://decs.bvsalud.org>) is a controlled vocabulary that maintains and regularly updates the terminology in health sciences in Spanish, Portuguese and English.

## DeCS/MeSH Health Sciences Descriptors

4 specific categories				16 MeSH categories			
terms in English		9,7 K	238,8 K	terms in English			
descriptors	synonyms			descriptors	synonyms		
4,6 k	5,1 k			29,4 k	209,4 k		
terms in Spanish		9,1 K	82,6 K	terms in Spanish			
descriptors	synonyms			descriptors	synonyms		
4,6 k	4,5 k			29,4 k	53,2 k		
terms in Portuguese		9,7 K	87,5 K	terms in Portuguese			
descriptors	synonyms			descriptors	synonyms		
4,6 k	5,1 k			29,4 k	58,1 k		
terms in French		4,6 K	122,9 K	terms in French			
descriptors	synonyms			descriptors	synonyms		
4,6 k	0,02 k			29,4 k	93,5 k		

2019 version



- Available online in open access, aimed mainly at students, researchers and health professionals, and by means of a no charge license of use upon request
- It receives circa 300 thousand visits per month
- It is the only yearly updated standard vocabulary for indexing scientific and technical health literature in Spanish and Portuguese in the world
- It includes the translation of the Medical Subject Headings (MeSH/NLM) into Portuguese and Spanish
- DeCS is an extended and enriched thesaurus with additional categories maintained by BIREME, such as Public Health, Health Surveillance, Homeopathy, and Science and Health, also translated into French
- The translations of MeSH/NLM into Portuguese and Spanish are integrated into the Unified Medical Language System (UMLS/NLM) of the USA
- DeCS provides Web services that facilitate the use of the MeSH/DeCS terms for indexing contents in health information systems



- It is a tool that allows searching MEDLINE and other VHL information sources by subject headings in Spanish, Portuguese, French, and English
- DeCS is an ever-growing vocabulary through annual updates and by suggestions received
- The translations into Spanish and French rely on the collaboration of the Central Library of the Medical School of the University of Chile; *Biblioteca Nacional de Ciencias de la Salud* (BCNS) of *Instituto de Salud Carlos III* (ISCIII) of Spain's *Ministerio de Economía y Competitividad*; and *CHU Hôpitaux de Rouen*, France. The French MeSH terms are translated by *Institut National de la Santé et Recherche Médicale* (INSERM), France.

## CRICS - Regional Congress on Health Sciences Information

CRICS, since its first edition in 1992, is one of the most important and consolidated international congress on scientific information and periodically addresses the state of art in the areas of information, knowledge and scientific evidence management. It includes scientific communication, library science, information science, methodologies and



information technology and its applications for national research systems, education and health.

The VHL Regional Coordination Meeting which is the most important exchange forum of the VHL cooperative network is held as a preliminary event to each CRICS and analyzes the VHL status of development at regional, national, thematic and institutional levels.

Both events are coordinated by BIREME in cooperation with the national and local institutions of the host countries.



The 10th edition of the CRICS was held in Sao Paulo, Brazil, from December 4 to 6, 2018, with the theme “Advancing towards the 2030 Agenda: contributions of evidence and knowledge”. The



opening ceremony of the event was attended by Dr. Carissa Etienne, Director of PAHO/WHO and national institutions in health, education and environment sectors. It was attended by more than 550 participants representing 32 countries and 26 speakers and panelists from 12 countries.

The Congress was developed on seven thematic axes that provided discussion forums on knowledge management; open science; information management; innovation and digital health; intersectorality; informed policies, strategies and decisions; research and scientific communication and its applications to advance research, education and health systems. Prior to CRICS10, the 7th Regional Coordination Meeting of the VHL (VHL7) was held. It is the main face-to-face forum for discussion, evaluation and exchange of experiences on the VHL as a model, strategy and scope of cooperative work in information and scientific communication in health, in addition to several satellite events, poster presentations, new product and service launches and interviews with speakers.



CRICS10 included, in addition to its scientific program and the VHL7, six satellite events: Meeting of Scientific Editors; IV RedDes Meeting; Primary Health Care; Meeting of the Executive Committee of the Brazil VHL; PAHO/WHO Knowledge Management Focal Points Meeting; and Workshop of the REA CVSP-BIREME Network. For more information access the website: <http://www.crics10.org>.



# 5 Institutional relationship

BIREME develops technical cooperation initiatives with institutions and organizations at local, national, regional and international levels. Some of them are listed below:

- Government institutions related to health, science and technology, environment and other areas – Ministries, Science and Technology National Councils, Secretaries and State and Municipality Departments
- Research Foundations
- Academic institutions in the health sciences area, scientific editors of LA&C journals, researchers, authors, and Health Sciences graduate students
- Organizations, Scientific Associations and Societies on Public Health and related areas.

Here are some examples:

**Ministry of Health of Brazil** - BIREME maintains a historical relationship with the Ministry of Health (MoH) of Brazil since its founding 52 years ago. The institutional relationship with the MoH is operated by means of Agreements and Cooperation Terms (TC) also with PAHO/WHO Brazil. Currently, TC93 and TC95 are oriented respectively to the strengthening and improvement and implementation of their technical cooperation program as the PAHO/WHO Specialized Center for scientific and technical information on health.

Other instances with which BIREME maintains a close relationship and with which specific projects are maintained are the State Secretariat of Health of São Paulo, the Municipal Secretariat of Health of São Paulo, the Oswaldo Cruz Foundation (FIOCRUZ), the National Commission of Secretaries of Health (CONASS), the National Commission of Municipal Health Secretaries (CONASEM), the National Health Foundation (FUNASA), among many others.

**National Library of Medicine (NLM) of the United States** - The National Library of Medicine (NLM) of the United States and BIREME maintain a cooperative institutional relationship of more than 50 years sustained in favor of access and dissemination of scientific information in Health in Latin America and the Caribbean.

The cooperation is based on lines of action for the treatment, dissemination and communication of scientific information on health generated in the countries of the Region, through document access services; of the availability of the MEDLINE database in the VHL collection; of indexing Latin American journals for MEDLINE; of development of the DeCS (Descriptors in Health Sciences),

vocabulary in Portuguese and Spanish by means of the translation and extension of the MeSH (Medical Subject Headings); and support in the realization of scientific information congresses. The Spanish and French translations are supported by the Central Library of the Faculty of Medicine of the University of Chile, the National Library of Health Sciences (BCNS) of the Carlos III Health Institute (ISCIII) of the Ministry of Economy and Competitiveness of Spain, and CHU Hôpitaux de Rouen, France. The MeSH terms in French are translated by the Institut National de la Santé et Recherche Médicale (INSERM), France.

**EPISTEMONIKOS** - A technical cooperation agreement between the Epistemonikos Association and the Pan American Health Organization (PAHO/WHO) allowed the integration of the Epistemonikos database (a highly efficient search resource, which groups a large number of systematic reviews and allows access to body of evidence for a specific issue in a simple and intuitive way. In addition, it offers tools that allow the choice between different systematic reviews and keeps easily updated the evidence about a certain issue to the BIREME Virtual Health Library (VHL).

**FELSOCEM** - A non-profit scientific organization dedicated to promoting the development of scientific research in the undergraduate courses of the Faculties of Medicine of Latin America by improving the quality and scientific level of research developed, among other activities. BIREME contributes to the training of young multipliers in access and use of information, as well as in scientific communication.

**CLAP** - To improve the health of pregnant women, newborns and children, 3,000 kits of perinatal technologies were manufactured and distributed in the Brazilian states of Mato Grosso do Sul, Piauí, Maranhão, Pernambuco, Espírito Santo, Ceará and Pará. The perinatal technologies developed by the Latin American Center for Perinatology, Women's Health and Reproductive Health (CLAP) of the Pan American Health Organization (PAHO), in Uruguay, are tools that allow to accompany the care of pregnant women, in the work of childbirth and childbirth, and the control of newborns. They are low-cost instruments with high impact on primary health care, but they are also instruments for specialists who attend at the most complex levels. They are easy to use, interpret, transfer, and facilitate the timely care of pregnant women and newborns. The kit consists of a bag with a neonatal tape for Zika, an obstetric tape, the medical criteria eligibility disc for contraceptive use, the pocket gesture and an instruction booklet. The initiative was carried out within the framework of the Technical Cooperation project between CLAP, PAHO Brazil and the administrative and logistical support of BIREME.

# 6 Human Resources and Cooperative Network

BIREME's intellectual capital is composed by professionals with expertise in information management, development of methodologies and technologies for the management of scientific and technical information, and an administrative infrastructure which includes information technology and building infrastructures.

The Center follows the strategic planning of the PAHO/WHO, also considering policies, procedures and internal controls to assure institutional alignment with transparency and the compromise of all personnel.

Moreover, BIREME stands out for the cooperative work through networks of individuals and institutions for the management and exchange of information and knowledge present in 30 countries with more than 2000 institutions. This network work offers flexibility in the expansion and inclusion of new members, as well as the exchange of ideas, experiences and knowledge of self-organization.



# 7 BIREME and its products and services applied on successful initiatives

## 7.1 One-stop-shop portals to fit specific information needs and target

### *CARPHA EvIDeNCe Portal*

In a coordinated initiative led by the Caribbean Public Health Agency (CARPHA), the CARPHA EvIDeNCe Portal was developed using the VHL search interface and data entry tool. This portal



is continuously updated and aims to provide a one-stop-shop solution where a single query through this interface will produce consolidated and easy-

to-use results. It is a way of providing journal articles and gray literature for technical health professional, policy and health authorities planning staff, health system professionals and universities. The Portal includes clinical research, population health research and health systems, but excludes basic/biomedical research. The documents relevant to the policy originate from CARPHA, its member states and WHO. The EvIDeNCe portal also includes an overview of Caribbean data sources, evidence of pre-evaluated research and other types of information, tools, resources and training material to support evidence-based decision making.

### **Telehealth Brazil Networks Program**

Development and management of information resources such as "Questions and Answers" as a result of Teleconsulting service offered to the Health Primary Care Network of Brazil. It is a



concrete example of knowledge translation, since

the answer is straightforward, with an appropriate language aimed at professionals who referred the question and based on the best evidence available. There are more than 1,400 questions and answers available at Primary Health Care VHL (<http://aps.bvs.br>), mainly accessed by family health teams. A new portal was launched in 2019.

## Global Index Medicus

The Global Index Medicus (GIM) provides worldwide access to biomedical and public health literature produced by and within low- and middle- income countries. The main objective is to increase the visibility and use of this important set of resources that are available at <https://www.globalindexmedicus.net/>



The material is collected and added by the libraries of the WHO regional offices in a central search platform that allows the retrieval of bibliographic and full-text information. Through the GIM

portal, users can search 1,998,561 bibliographic records produced by these countries, an increase of 4.4% of records since the VII Session of the CA. Of these records, 55% offer free access to the full text.

BIREME contributes with the VHL model to publish and integrate the entire Index Medicus in the GIM portal, by means of collection, extraction, transformation, aggregation, analysis and visualization procedures of the metadata of each regional index:

### Regional Indexes Medici



African Index Medicus (AIM)

More than 17,000 bibliographic references from 258 scientific journals



Index Medicus for the Eastern Mediterranean Region (IMEMR)

More than 199,000 bibliographic references from 714 scientific journals



Index Medicus for the South-East Asia Region (IMSEAR)

More than 179,000 bibliographic references from 49 scientific journals



Latin America and the Caribbean Literature on Health Sciences (LILACS)

More than 877,000 bibliographic references from more than 800 scientific journals



Western Pacific Region Index Medicus (WPRO)

More than 697,000 bibliographic references from 678 scientific journals

- African Index Medicus (AIM) - (AFRO/OMS)
- Latin America and the Caribbean Literature on Health Sciences (LILACS) - (AMRO-OPS/OMS, by means of its specialized center BIREME)
- Index Medicus for the Eastern Mediterranean Region (IMEMR) - (EMRO/OMS)
- Index Medicus for the South-East Asia Region (IMSEAR) - (SEARO/OMS)
- Western Pacific Region Index Medicus (WPRO) - (WPRO/OMS)

The governance of the GIM is composed of the Advisory Committee and the Technical Committee, within the framework of the WHO Global Library Group, where BIREME participates, in coordination with the KMP area, representing PAHO.

## 7.2 Customized web solutions to improve health information management

### REBEC – Brazilian Registry of Clinical Trials

REBEC (<http://www.ensaiosclinicos.gov.br/>), coordinated by ICICT/Fiocruz, is the first clinical trials registry database in Portuguese language in accordance with ICTRP/WHO criteria. BIREME is responsible for the technological platform development – OpenTrials – used by REBEC, which is free and open source software available for download, use and customization by any country or region.

### MedList – Annotated Medicines Hyper Lists

MedList is a component of the Regional Platform for Innovation and Access to Health Technologies (PRAIS - <http://www.paho.org/prais>), coordinated by the PAHO/WHO Department of Health Systems and Services (HSS/MT). Its objective is to manage and publish the official lists of medicines, making it possible to access and compare the lists of the WHO, PAHO and the countries, in addition to relating information on the medicines with the scientific evidence available in the VHL, with health technology evaluation reports in BRISA and with the medicine database of the National Institutes for Health (NIH). Beginning in 2020, Medlist will also incorporate medical device lists.

The screenshot shows the 'Annotated Medicine and Device Lists' website. At the top, there is a navigation bar with the title and language options (Português, Español). Below the navigation bar are logos for the Regional Platform on Access and Innovation for Health Technologies (PRAIS), the Pan American Health Organization, and the World Health Organization. The main content area features a search bar with the text 'Enter your search' and a search button. Below the search bar is a banner for 'EXPLORE WHO PREQUALIFIED VACCINES TOOL' with a 'Know More [1]' link. A statistics section displays three metrics: 12,000 Medicines, 60 Evidence Summaries, and 244 Medical Devices. Below the statistics are four interactive cards: 'WHO Model List of Essential Medicines' with a 'Prequalification of Medicines' link; 'PAHO Strategic Fund Medicine List' with a 'Revolving Fund List' link; 'Medications by Countries' with a dropdown arrow; and 'WHO list of priority medical devices for cancer management' with a 'World Health Organization Model List of Essential In Vitro Diagnostics' link.



## ProEthos Plataforma

The ProEthos Platform is coordinated by the Regional Bioethics Program team of the PAHO/WHO Department of Health Systems and Services (HSS) and aims to facilitate the review process of ethics committees and organize them with the help of information and communication



technologies (TIC). It is used by research institutions in Argentina, Guatemala, Honduras and Peru, as well as in PAHO/WHO itself by its Ethics Review Committee - PAHOERC, responsible for reviewing research with human beings receiving technical or financial support from PAHO.

## BRISA – Regional Database of Health Technology Assessment Reports of the Americas

The technological platform and the registry methodology for organization and dissemination of the reports were developed by BIREME, in coordination with the Technical Unit of Medicines and



Inicio >> Resultado de la búsqueda

Ingrese una o más palabras   ?

Total: 1113

Asunto principal

### Evaluación del dispositivo médico para reajuste mecánico externo para tratamiento de la incontinencia urinaria de esfuerzo femenino

Perú. EsSalud. Instituto de Evaluación de Tecnologías en Salud e Investigación.

INTRODUCCIÓN: El informe referido a la evaluación del Dispositivo Médico para Reajuste Mecánico Externo para Tratamiento de la Incontinencia Urinaria de Esfuerzo Femenino, para su incorporación al Catálogo de Bienes de EsSalud, a solicitud del Servicio de Urología de la Red Asistencial Sabogal, AN...

Incontinencia Urinaria de Esfuerzo/rehabilitación. Equipos y Suministros/provisión & distribución. Evaluación de la Tecnología Biomédica, Análisis Costo-Beneficio

[Texto completo](#)

Evaluación de la Tecnología Biomédica	160
Metástasis de la Neoplasia	51
Neoplasias de la Mama	37
Anticuerpos Monoclonales	35
Bevacizumab	33
Calidad de Vida	29
Artritis Reumatoide	21
Reposicionamiento de Medicamentos	21

Technologies in Health of the PAHO/WHO Department of Health Systems and Services (HSS), which acts as the Secretariat of RedETSA - Health Technology Assessment Network of the Americas.

The reports are published by Ministries of Health and other institutions in charge of these evaluations in Argentina, Brazil, Canada, Chile, Colombia, Costa

Rica, Cuba, El Salvador, México, Peru and Uruguay and are available online, through the BRISA website (<http://sites.bvsalud.org/redetsa/>), which allows retrieving them by searching by titles, abstracts, keywords, etc. All the reports are classified by DeCS terms, maintained by BIREME, enhancing the recovery of these contents in the Portuguese, Spanish, English and French languages.

Another BRISA facility is that users can access ETS reports using filters by main topic, publishing institution, country of publication, language and year of publication. They also have the possibility of retrieving related contents available in the databases of the Virtual Health Library, such as Medline and LILACS.

## Repository of Legislation on Risk Factors in Non-Communicable Diseases

The epidemic of Noncommunicable Diseases (NCDs) is directly related to tobacco use, the harmful use of alcohol, unhealthy diet and physical inactivity. The exposure of the population to these four risk factors can be reduced with regulatory measures based on evidence and aimed at protecting the health of the population.

The REGULA Initiative of the Department of Noncommunicable Diseases and Mental Health



(NMH) of PAHO aims to strengthen the institutional capacity of the national health authority in the Member States to regulate the risk factors of NCDs in the Region of the Americas.

With the idea of supporting the Member States in the implementation of these activities, the Department of Noncommunicable Diseases and

Mental Health (NMH) with the collaboration of the Office of the Legal Counsel (LEG) of PAHO, carried out in 2015 a study of systematization and legal analysis of the legislation<sup>1</sup> on NCD risk factors in 19 countries in Latin America (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, Uruguay and Venezuela).

In order to make the legislation compiled by NMH available to Member States, to promote its permanent updating, as well as to promote an efficient mechanism of systematic dissemination and to promote analysis by comparison, the Repository of Legislation on Risk Factors in Non-Communicable Diseases was developed. -Transmissible, in coordination with BIREME, available at <http://sites.bvsalud.org/legislacion/factores-de-riesgo/>

<sup>1</sup> In this document, legislation means all instruments through which governments, their subsidiary and supranational bodies impose requirements on citizens and businesses that have legal value. These instruments include laws, decrees, regulations, regulations, guidelines, requirements for administrative procedures, decisions, penalties, among others, that the competent authority establishes to restrict or promote a certain behavior or action.

## 7.3 Fostering information and knowledge management on health organizations

### Ministry of Health of Brazil

There are many technical cooperation projects between BIREME and the Brazilian Ministry of Health, taking into account several technical cooperation agreements between PAHO and the Brazilian government. In addition to the development of the national VHL (<http://brasil.bvs.br/>),



thematic web portals such as Public Health

(<http://saudepublica.bvs.br/>), Cancer Prevention and Control (<http://controlecancer.bvs.br/>),

Primary Health Care (<http://aps.bvs.br/>) and others (see other VHL web portals), BIREME has

promoted, in the context of technical cooperation, some innovations for the VHL such as mobile interface and web

accessibility in accordance

with the W3C (World Wide

Web Consortium). The first portal of the VHL that reached the highest level of accessibility

standards (W3C Level AAA) was the institutional VHL of the Ministry of Health of Brazil

(<http://bvs.saude.gov.br/>).



### SES-SP – Secretary of Health of the State of São Paulo

SES-SP coordinates the Information and Knowledge Network of the Research Institutes of the State of São Paulo and the Networks of Health Technology Evaluation Centers and Technological



Innovation Centers, operating an institutional VHL with the collaboration of

BIREME. Infometric analyses are applied to monitor the scientific and technical production of the institutions.

### SMS-SP - Secretary of Health of the Municipality of São Paulo

The SMS-SP VHL is an example of the knowledge management strategy applied at the municipal level, with the development of its own sources of information, such as the “Experience Reports” and the database of



the Secretary's bibliographic production. More than ten years ago the collaboration was

established by means of technical cooperation projects between BIREME and the Secretary for the development and renovation of the SMS-SP VHL.

## 7.4 Promoting capacity building and continuous learning in health

### Scientific Communication courses

Courses on Scholarly Communication in Health Sciences aimed at researchers, scientific editors, health professionals, graduate students and other stakeholders. Cover topics such as writing of scientific papers, actors of the editorial chain, business models of health journals, Open Access, journal selection, authorship and coauthorship, ethics in scientific experimentation and writing, peer review, conflicts of interest, assessment of scientific journals, traditional and alternative metrics and novel trends in scholarly publishing. In 2019, courses and presentations were held at conferences and events in Brazil, Peru and Paraguay, training more than 300 professionals.

### Participation in Scientific Communication Events

In the year 2019, the area of Scientific Communication of BIREME participated in the following events:

- *Produção Científica, Divulgação e Impacto*. PUC-SP, São Paulo, 19/NOV
- *Simpósio de Editores Científicos. 36° Reunião da Sociedade Brasileira de Pesquisa Odontológica*, Campinas-SP, 4-7/SET
- *8° Encontro da Rede Fiocruz de Pesquisa Clínica*. Rio de Janeiro-RJ, 27/AUG
- *IX Conferência Internacional sobre Bibliotecas e Repositórios Digitais da América Latina (BIREDIAL-ISTEC)*. São Paulo-SP, 30/JUL to 2/AUG
- *Encontros do Conhecimento da Fiocruz – Bio Manguinhos*. Rio de Janeiro-RJ, 12/JUN
- *V Congreso Internacional de Educación Médica CIEM 2019*. Lima-Perú, 30/MAY to 1/JUN

### Distance learning courses

- Development of instructional design of distance learning courses and integration of scientific evidence as basis for the contents of several courses, such as: *Leishmaniasis visceral en las Américas*, *Geohelminthiasis: prevención, tratamiento y control*, *Profilaxis Post Exposición de la Rabia*, *Políticas informadas por evidencias*. It stands out in the area of Information Sciences the self-study course on [Acceso y Uso de la Información Científica en Salud](#) [Access and Use

of Scientific Information in Health] in Spanish and it is available at the Virtual Public Health Campus (CVSP).

- PAHO, through BIREME and the Office of Knowledge Management, Publications and Translations (KMP) launched in 8<sup>th</sup> November 2019 the [Introduction Course of Scientific Communication in Health Sciences](#) in Spanish and it is also available at the CVSP.

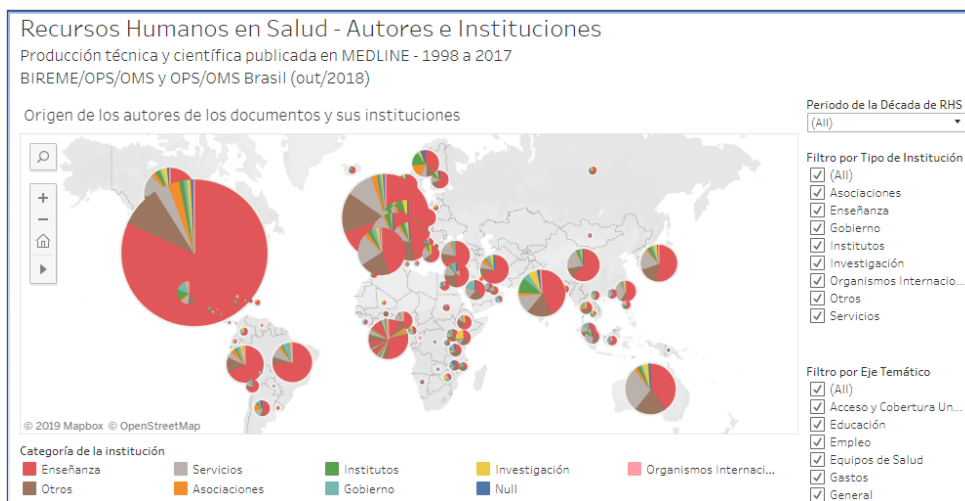
## 7.5 Selective dissemination of information to empower users and promote equitable access to information

### Specialized Search Service

Literature clipping, drawn up in cooperation with experts, aimed at the most diverse needs, as a showcase of the scientific production of the country or area on priority issues such as infection by Zika Virus, Water and Sanitation on the 2030 Agenda for Sustainable Development; build search expression and documentation for systematic reviews; support in the development and localization of documents for policy informed by evidence in cooperation with working groups.

### Infometrics and data visualization for knowledge discovery

The use of techniques and tools related to data management, data quality, data and text mining, advanced analytics and data visualization in order to promote quantitative analysis of bibliographic



data available and extract potentially useful information.

The infometrics can be applied for several aspects of health scientific production such as publication year, publication country, main research subjects,

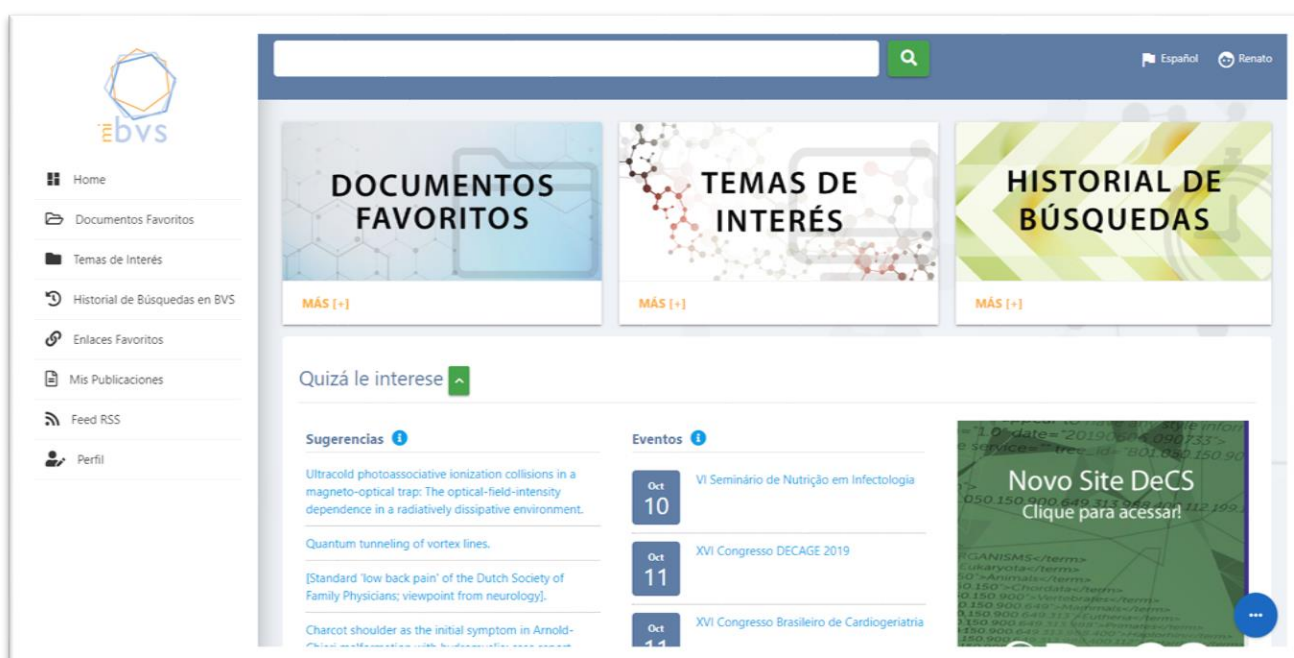
journals, publication language, and authorship (individual, institutional and research groups).

### MyVHL – Personalized Information Services

MyVHL is a free service that stores information and user preferences to offer personalized services such as:

- a) Creation of collections of selected documents of the VHL;
- b) Definition of topics of interest to receive alerts of new documents;
- c) History of searches carried out in the VHL;
- d) Alerts of new content by automated email, according to the interest profiles created by users
- e) List of favorite links;
- f) Users' own publications.

MyVHL is available to any user through their Facebook or Google account or the MyVHL service itself.

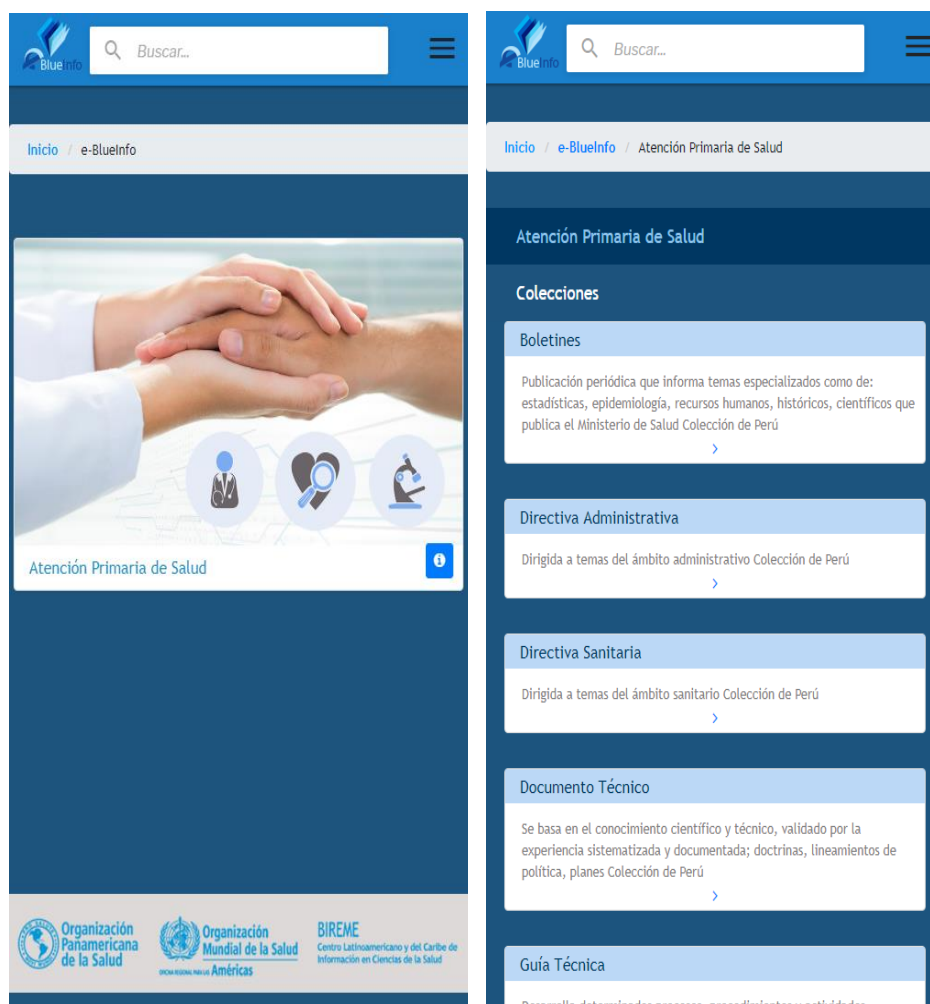


This service intends to personalize the delivery of information according to the needs of the user in a systematic and pro-active way, allowing that among the millions of documents available in the VHL, rescue and keep what he needs according to his priorities.

## e-BlueInfo: Information Platform for Health Practice

With the aim of reducing the inequity of access and use of information and scientific evidence by professionals and health managers, the application for mobile devices (APP) e-Blueinfo aims at:

- Promoting the use of information and scientific evidence in health care services;
- Providing information and scientific evidence relevant to professionals and health managers to support their work processes and decision making;
- Offering app users a solution that facilitates and expedites the access to relevant information in their area of knowledge.



The content accessed through the app are selected by experts and reviewed periodically to facilitate its use by professionals in health care practice. These contents can be easily accessed on any mobile device (smartphone), allowing the user to search and view the documents.

The countries that already offer collections of documents in the e-BlueInfo are Brazil and Peru.

The countries that have shown interest in participating in this initiative are Colombia, Cuba, Guatemala, Guyana, Mexico, Nicaragua and Paraguay.

## VHL Infobutton

Using the international standard Infobutton, established by the Health Level Seven International (HL7), the VHL Infobutton allows Electronic Health Record Systems to interoperate data with the

Usar la mejor evidencia científica disponible como soporte a las decisiones clínicas

Esta Foto de Autor Depositada está licenciada em CC BY-SA 4.0

Historia Clínica	Resultados laboratoriales	Interacción Droga-Droga
Interacción Droga-Enfermedad	Evidencia científica	Información para paciente

Esta Foto de Autor Depositada está licenciada em CC BY-SA 4.0

VHL to search for scientific evidence related to the context of the patient's clinical history, using the data from ICD-10, SNOMED-CT, DeCS/MeSH, gender and age. Concept tests are under development with

health institutions to improve the service and add new functionalities such as natural language processing.

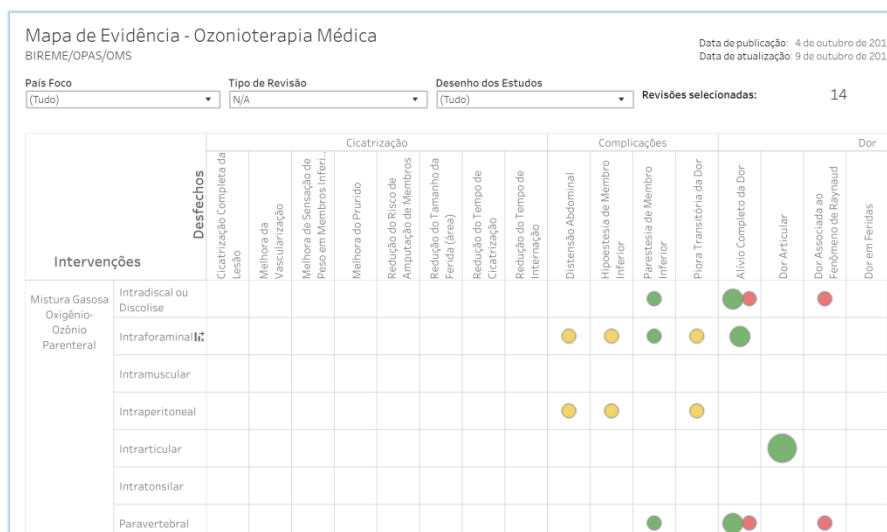
## Evidence Maps

The Evidence Maps are a way of showing the available evidence for a given topic, which is presented in a visualization structure that relates the interventions and the findings.

With the collaboration of researchers and experts in the field, mapping, selection, evaluation and categorization of the scientific evidence on a given practice is carried out, contributing to the elaboration of the Map of Evidence itself and the production of a

synthesis from the evidence mapped and analyzed. The first Map of Evidence with the Methodology applied by BIREME was for medical ozone therapy.

<https://public.tableau.com/profile/bireme#!/vizhome/ozonioterapia-pt/evidence-map>





# 8 Final considerations

The progress of the BIREME operation is evidenced by the elements that distinguish it, such as its ability to:

- Act with networks of institutions and health professionals and their capillarity in AL&C, working with more than 2000 institutions
- Effectively support visibility to the scientific production of LA&C
- Provide, through DeCS, controlled and structured vocabulary using health terms, in 4 languages and following international standards
- Generate code and open access methodologies and technologies
- Develop local capacities for access, production and information management
- Contribute to projects at worldwide, regional, subregional and national levels

BIREME as PAHO/WHO reference center for scientific and technical information and communication, assures the countries of the region continuity of governance, development, operation and innovation of products, services, events, information systems, methodologies and technologies of scientific and technical information in accordance with the international state of art. It contributes in a systematic and efficient way to support, strengthen and improve the capacities and infrastructure of scientific and technical information and communication in the Region.