PAHO Pan American Health Organization | World Health Organization Americas | BIREME Latin American and Caribbean Center on Health Sciences Information

Fifth Session of the Scientific Committee of the Latin American and Caribbean Center on Health Sciences Information (BIREME)

BIREME/PAHO/WHO
Evidence and Intelligence for Action in Health (EIH)

The Fifth Session of the Scientific Committee of the Latin American and Caribbean Center on Health Sciences Information (BIREME/PAHO/WHO) was held at BIREME, in São Paulo, Brazil, on November 28th and 29th, 2019, in compliance with Resolution 5 of the 49th Directing Council of PAHO/WHO (CD49.R5) in which the BIREME Statute was approved, in effect since the year 2010, which defines its new institutional framework.

The current members of the Scientific Committee (SC) were nominated during the Sixth Session of the Advisory Committee of BIREME on February 2, 2017 for a three-year mandate (2017-2019) and had already participated at the Third Session of the SC carried out on December 7 and 8, 2017 and at the Fourth Session of the SC, on December 3rd, 2018. They are experts from 6 (six) PAHO/WHO Member States: Brazil, Colombia, Costa Rica, Cuba, Jamaica and Mexico.

FINAL REPORT

São Paulo (SP), November 29th, 2019

FINAL REPORT

OPENING OF THE SESSION

1) On November 28th and 29th, 2019, at BIREME in the city of São Paulo, Brazil, the Fifth Session of the Scientific Committee (SC) of the Center was held, complying with the consultative functions before the Advisory Committee and the Director of PAHO/WHO. Diego González Machín, Director of BIREME and *ex officio* Secretary of the Scientific Committee received the members of the SC, acknowledge the support of the members of BIREME's Governance Committees, that represent the Member States of the Organization, and informed that the afternoon of November 28th was dedicated to the analysis of BIREME's executive report and preparation of the recommendations from each member of the SC. In addition, he informed that the representative of Jamaica was not able to come, nevertheless have sent her recommendations and comments.

2) The presence and the participation of the specialists of the Scientific Committee were recognized and the importance of holding the meeting within the framework of the development of the Center was highlighted. The Committee members presented themselves and the session began.

3) The following experts were elected to set up the Board of the BIREME Scientific Committee in its fifth session:

Chair:	Roberto Carlos Pacheco (Brasil)
Rapporteur:	Jaider Ochoa Gutierrez (Colombia)

4) The 29th of November begins with welcome words, presented in video, by Jarbas Barbosa da Silva Júnior, Deputy Director (AD) of PAHO/WHO and Interim Director of the Department of Evidence and Intelligence for the Action in Health (EIH).

PRESENTATIONS

5) Presentation 1 "*Progress in the implementation of the Recommendations of the IV Session of the Scientific Committee of BIREME 2018*". By Diego González Machín (Director BIREME)

   - Historical positioning of BIREME worldwide, with its mission to democratize information, knowledge and evidence for health, as a contribution to the health systems of the region.

- The quality and willingness of the work team is highlighted, without it the multiple results would not have been achieved.
- Working with networks has also been essential.
- Based on the recommendations made by the Advisory and Scientific Committees, the progress and challenges faced by BIREME are presented, considering maintaining the position of the institution. The Committees members have provided increasingly specific and robust recommendations.
- The BIREME Advisory Committee met on November 7 and 8, reviewing the recommendations they made in 2018, such as BIREME visibility, development of priority products, presence in social networks, alliances and strengthening of PAHO's work, among others. The advances and challenges were analyzed in this meeting.
- IV Session of the Scientific Committee coincided with CRICS X and the suggestions began with the issues of health professionals and concluded with the components of open science, financial resources and approaching the private sector.
- In 2018-2019 there were 101 missions in Latin America and the Caribbean, with a majority in Brazil, due to geographical positioning, but countries also include Portugal, Switzerland, Mozambique and the United States.
- Most of the missions were for institutional alignment, promotion of products and services, development and support of counterparts, among other actions.
- BIREME pays more attention to key countries, in these there were 11 missions. Among them Paraguay, Nicaragua, Honduras, Bolivia, Guatemala, Suriname and Guyana (in these two virtually and in regional projects).
- There were training in other Portuguese-speaking countries, Mozambique was one of them. There was also the visit of a representative from Angola.
- Participation in multiple national and international events. As the V ICES Medical Education in Lima/Peru, with training workshops on scientific information. Moreover, in the Congress of Telemedicine and Digital Health. Virtual participation with training course in Conference in the Caribbean and presence in large Brazilian events, such as CONSEM - National Congress of Municipal Health Secretariats, with short courses, etc.
- It is necessary to emphasize the work in network for the collective development of the objectives, products and services.
- The main relationship is with the ministries of health, the collaboration with the Ministry of Health of Brazil is highlighted, where there are currently two Cooperation Terms.
- Joint work with the PAHO and WHO collaborating centers.
- The collaboration with the NLM has been very strong. It was possible to coordinate a visit of the three managers to share and feedback the experience of the institutions.
- Youth-oriented work, approaching the faculties and academic units of the health area.
- There is a commitment to the ASSA 2030 Agenda and SDG, BIREME supports monitoring and documentation of good practices for compliance with SDGs.

6) Presentation 2 - Axis: Financial Sustainability *"Management, Institutionality, Work Plan 2018-2019 and 2020-2021"*. By Silvia de Valentin (GA - BIREME)

- Key questions: How can BIREME be strengthened institutionally and through innovative products and services? How to adopt an intersectoral approach of new partners as the 2030 Agenda for Sustainable Development underlines this need for the health sector?
- Do people regardless of financial conditions have to have the mobility to go to public parks, education and information on how to nourish and to exercise? How to keep safe? And all these actions requires the participation of different actors that are not from the health sector, but cooperate with them.
- Fabricio Lima, who used to work in BIREME is the Administrator of PAHO in Suriname, using BIREME instruments to strengthen PAHO.
- We must have a proactive action to involve multiple actors, including different from the health sector.
- Diego: as of this year Guyana ceases to be a key country and BELIZE becomes one.
- Visibility should be given to the actions of the communities that impact the SDGs. This is one of BIREME's commitment.
- Strategic plan and technical cooperation work plan of PAHO/WHO.
    - The signing of the headquarters agreement with the Government of Brazil is pending.
    - All BIREME products must be under the PAHO strategic planning framework.
- Statute of BIREME is in force since 2010.
    - About the challenges:
        - To expand BIREME membership. A framework to mobilize resources from countries and public international organizations in information.
        - To connect with the private and academic sector for resource mobilization.
    - Finances:
        - It is important to highlight that the headquarters agreement has not yet been signed and this would allow to secure resources every year. Therefore, it is a key challenge for the maintenance of BIREME.
        - There are two cooperation agreements:
            - TA1 with Brazil for US$ 1 million.
            - TA6 for more than US$ 1,5 million.
        - Relations with the Brazilian government have been consolidated
    - Work Plan:
        - All recommendations of the governance committees have been considered for the development of products and services.
        - 7 years ago, the same budget has been maintained, i.e., US$ 7 million.
        - Above 80% of all initiatives 80% have been executed.
        - Information and knowledge management cost almost US$ 3 million.

        - Information services cost almost US$ 1 million
        - Intelligence cost almost US$ 400 000
        - Leadership and management cost US$ 2 million
    - Financing
        - PAHO Headquarters: US$190 9000 or 39%
        - Ministry of Health of Brazil: US$ 913 775 or 19%
        - Projects through PAHO Brazil US$ 193 0907 or 39%
        - Projects with WHO funds: US$ 138 000 or 3%
        - There is a high dependence on the resources from the Government of Brazil. Different sources of financing must be sought.
        - The quotas of the PAHO member countries are delayed, Brazil recently made the transfer but with a two years delay.
- Biennial Work Plans
    - New products and services for BWP 20-21
        - Impact analysis on the use of products and services
        - Open data of referential information sources
        - LILACS promoting open science
        - Project management to support the development of agreements with a mobilization and fund monitoring approach
        - Report on the experiences of SDG and ASSA.
- Financial management by the ERP system
    - Cash flow monitoring
    - Project management in coordination with donors
    - Very effective internal controls for compliance with rules and procedures.
    - There is a control panel for the monitoring of human financial resources and the work plan.
- It must be ensured that the operations have institutional alignment and PAHO policies.
- General operating expenses are US$ 1 million and must be shared with PAHO and the national counterpart.
- The percentage of operating and personnel costs reached 90% of the BWP of the biennium. 65% is for staff payment including consulting.
- There is a system for project management, evidencing their development.
- Biweekly meetings for project monitoring.
- 101 cooperation missions were carried out in 21 countries. The majority for institutional alignment. It is necessary to increase the mobilization to obtain resources.
- BIREME staff is 40 people.
- All BIREME products are associated with three results:
    - Integrated systems
    - Data, information and knowledge
    - Research, ethics

- With the Government of Brazil, there are between 10 to 12 cooperation programs with projects that are operated in coordination with PAHO Brazil.
- The Brazilian Ministry of Health has a set of official trips where BIREME will participate.
- As for the infrastructure there are 60 servers, these are distributed in a datacenter in Tamboré, with all the necessary security and preservation conditions.
- BIREME does not pay for these servers; the Government of Sao Paulo assumes their cost.
- The main alliances have been made with the Government of Brazil, in addition to other Ministries such as of Peru, Paraguay among others and also organizations such as Epistemonikos.
- Actions in progress to reduce gaps and continue strengthening:
    - Defining resource mobilization strategy.
    - Adopting intersectoral approach.
    - Encouraging participation in regional and intersectoral projects.
    - Formalizing terms of cooperation.
    - Cooperating with PAHO/WHO Brazil Terms of Cooperation.
    - Continuing with projects in the region.
- Diego: An effort is being made to be in the country's cooperation strategies. An example of this is what was done with Paraguay.

7) Presentations 3 - Axis: Scholarly Communication "*Advances in Scholarly Communication*". By: Lilian Calò (COM/DIR BIREME)

- According to the recommendations of the SC, such as encouraging the use of virtual environments, the launch of the Introduction to Scholarly Communication course, which is in Spanish and will be translated into Portuguese.
- In this course there were participants from more than 25 countries with 1500 registered and 307 already approved until today. Main participations are from Mexico, Colombia and Ecuador.
- The course was mainly attended by health professionals, nurses, doctors and specialists. The participation of nursing professionals is predominant.
- An effort is being made so that universities adopt the virtual course as part of their academic programs.
- The newsletter BIREME Bulletin is published monthly and sent by email to PAHO HQ, Offices and Centers, beside institutional partners.
- BIREME has a channel on PAHO's Intranet.
- BIREME's information is actively shared through social media.
- Information on BIREME's activities and by its staff is shared in the PSI (PSI means For Your Information) BIREME Internal Bulletin: news of the week on PLASMA TV.

- Through the website, available in three languages (Spanish, English and Portuguese), BIREME's main information and news are shared.
- Orientations and meetings have been held with different journal editors in the health area.
- There have been face-to-face courses on scholarly communication. They constantly promote their demand; it only implies the instructor's financing.
- Courses have been conducted in Peru, Paraguay and Colombia.
- She has participated in multiple academic events on scholarly communication

Reply:

- CARLOS: thank you very much. As in the previous one, I congratulate you. The scientific communication course has 1600 subscribers. Is there a distribution per countries? Where there is a higher incidence for this course?

Reply: Mainly participants from México, Colombia, Ecuador, Argentina, Peru, and Paraguay.

- CARLOS: I can help disseminate it on the institutional page of my institute and health portal in Mexico.
- DIEGO: Self-learning courses is one thing that we are promoting in medical schools aiming to give academic credit to those who attend this type of courses.
- ILEANA - Why not charge for the courses? There is a possibility of direct courses with direct transfers.

8) Presentation 4 - Axis: Technical Cooperation *"Information services and products*". By: Carmen Verônica Abdala (PFI/SCI BIREME)

- There is a Second Formative Opinion, which is related to the recommendation of the SC on disseminating questions from medical personnel.
- There are 1446 primary health care guidelines. This is the most consulted source of those available in the VHL.
- Development of commented summaries of scientific evidence. In 2019, 100 documents have been created.
- Regarding the strengthening of bibliographic control and development of local capacities and networking, virtual training sessions have been carried out and an agenda is planned for 2020.
- We have also collaborated with the instructional design of online courses and Open Educational Resources (OER).
- Work has been done to expand thematic Virtual Health Libraries (VHL), promoting the development of regional capacities. An example of this is the MTCI VHL, the Nursing VHL and Indigenous Health VHL.

- The Knowledge Showcases at the regional level from the BIREME website have been promoted, but countries have also been working on their developments.
- A system for the evaluation and selection of LILACS journals has been offered to scientific editors.
- Evidence maps have been implemented using the International Initiative for Impact Evaluation methodology. Within this framework, maps for cooperators and public interest problems are being developed. For example: what is the clinical efficacy of Complementary Practices? It was a strategic question from the Brazilian Ministry of Health.
- A new search interface for multiple filters, similar to PubMed's, has been developed.
- Development of recommended documents to complement the information search.
- BIREME will support the reactivation of EVIPNet Americas.
- Entry of the international BIGG database (Grade Guidelines).
- Work is being done on the development of PIE Bulletin (Policies Reported by Evidence in its acronym in Portuguese).
- We are working on a search interface oriented to the way the user needs the information.
- LILACS completed 34 years as an updated collaborative source of information, with many countries. This is not trivial and should stand out.
- Only 10% of what is in LILACS is in PubMed (where only 1% are LA & Caribbean).
- ILEANA highlights the year 2019 as a qualitative and quantitative leap in the development of information products and services. She suggests involving teachers for the use of the Second Formative Opinion. DIEGO: when we had a meeting with the Ministry of Health of Guatemala to adapt these services, it was clear that it is one of the most interesting databases in the countries because they are real questions.
- MARIO: thanks for the presentation. The clinical practice repository is very difficult to find. How did you create this system and where do you look for information especially in this part of alternative medicine? Do you have any document about the methodology?
- A: We have developed the method in the health network from the definition of the question, as the answer should be and it is documented on the site of the reference center. It is easier to take to other spaces. In physiotherapy, for instance, there is a database called PEDRO. There are many unknown and open databases to search. But the difference is that the systematic review is evidence to support the policy and there can be no study that does not have confidence in the information. It has not been published for a long time and this group is looking for unpublished reviews, even if they meet all the criteria. Sometimes it is not public because it is not favorable to the industry or against the subject in which it refers.

9) Presentation 5 "*Axis: Technical cooperation - Information technologies for technical cooperation*". By: Renato Murasaki (AFI/MTI BIREME)

- With the version update of the Second Formative Opinion (SOF, acronym in Portuguese) website, there was an important increase in the platform's access and visibility.
- We multiplied by 4.5 the number of users and by 4.7 the number of pageviews.
- We continue to collaborate with the Virtual Campus of Public Health, keeping in BIREME all the repositories of Open Educational Resources. Besides that, we are curating the information and updating what has allowed a significant increase of consultations.
- We have been indexing these repositories on Google and this led to an increase of the number of users of 40% in 2019, and 36% increase on the number of visits after indexing.
- A survey was made to listen to MyVHL users. This allowed changing the way to explain to users how to use the platform to short and illustrative videos.
- In 2019, a cooperative work began with the Government of Spain, involving robust infrastructure, for the availability of metadata and automatic indexing of documents. Using robust networks and supercomputing for semantic recovery from artificial intelligence.
- With Infomed, we have been working on linked data technologies to improve the results of the platforms.
- The SC recommendation on implementing an open data platform and reproducible research is an important input on the 2020-2021 Work Plan.
- Work is being done to make metadata available in interoperable standards or formats.
- We will take advantage of what is already in the environment to empower LILACS as open science.
- It is important to work with journal editors and authors to link research reference data, connection with their repositories and technical articles and content in LILACS. For this it is necessary:
    - To create open database references
    - To articulate stakeholders in the value chain of scientific communication
    - To adopt international standards
    - To have a management system
- The institutional policy of the FUNASA repository will be published in December, which was developed jointly with BIREME.
- For institutions that do not have the capacity to have their own repository, the possibility of using FI-ADMIN for loading documents is offered.
- Collaboration with the Sao Paulo State Health Secretariat for the development of digital repositories.
- Work on thematic initiatives such as BRISA with health technology information. Also work with the producers of this technical information and promote Health Technology

Evaluation Networks and health innovation centers to help the production of these nuclei with objects loaded in BIREME.

- For the next Biennial Work plan, the impact analysis on the use of information products and services developed by BIREME was included. For this, the possibility of activating a user feedback module is contemplated.
- It is pressing to measure the impact of the information management area. One case is tracking of information use through analytics. An example of this is the connection with technological production as patents.
- The cooperation with different levels and information systems goes on. For example: Global Index Medicus, and Epistemonikos, among others.
- Global Index Medicus is an interoperability work with five different information systems, which generate panels with scientific and technical production indicators in 5 different protocols.
- The data exchange between Epistemonikos and the Virtual Health Library allows to identify the primary studies of the systematic reviews and the systematic reviews themselves available in Medline and LILACS.
- There have been more than 850,000 documents indexed in LILACS and MedLine. 400,000 systematic reviews have arrived.
- The integration of ORCID into MyVHL has been carried out.
- The VHL-Infobutton development concept test was passed. Work is being done on the integration of the tool in several institutions.
- Recently eBlueInfo was launched in Guatemala and has been working with Brazil and Peru.

Comments and Recommendations

10) Considerations and recommendations by Carlos Oropeza

- It is highlighted in the report presented the actions in the field of scientific communication, regarding:
    - SciELO Public Health Collection developed, expanded and strengthened. It is indicated that there are some lags regarding some journals that it is important to review. In both the electronic and physical version.
    - LILIAN: I don't think it's about whether it's printed or electronic. Some journals are opting for continuous publication and with only one number per year to avoid problems. I don't know if it's the case of Salud Publica de Mexico. This action is carried out by the coordination of SciELO in Brazil and I will have to consult with them.
    - It is highlighted that the impact analysis of products and services within the BWP is contemplated.

- The model of the course of publication of scientific articles developed by the Institute of Public Health of Mexico can be reviewed. We may contemplate the possibility of innovating in this regard with dynamic proposals for users.
- Reiterate and strengthen open access and precise understanding of the subject, as well as continue working on the understanding of open science.
- Regarding the evaluation of scientific output, there are movements against the use of the Impact Factor, but an alternative way has not yet been found on how to evaluate and measure and assess curricular aspects.
- How could BIREME help? ELSEVIER is conducting a study in which Mexico purchases the evaluation of scientific production in the country. I do not have here the cost of the contract between CONACYT and ELSEVIER, but with the division by quartiles and with this to evaluate the researcher, there is a serious problem of measuring productivity. BIREME could make a study in this debate and perhaps generate indicator proposal or be in wider discussion.
- LILIAN: In Brazil we are very influenced by the index of evaluation of the scientific production that is used to evaluate the courses called Qualis CAPES. One of the components that assesses the level of professors in the thesis production, laboratories and libraries and one of the most important is the publications. This year the way of evaluating the journals was drastically modified. We rely heavily on this evaluation of CAPES which uses CLARIVATE (IF), SCOPUS (CiteScore), and Google Scholar (H5) and indexes in other databases are not considered and what made it cruel. Of the 13,000 journals in WoS only over 100 are published in Brazil. BIREME must take part in the discussion.
- A priority issue that BIREME should review is food labeling and continuing with primary health care.
- It is important to keep in mind that the industry is taking a step forward and it is necessary to get involved in this problem and help with proposals.
- RENATO: the basis of health legislation that focuses on risk factors contains the set of food labeling issues. In Brazil, he is in public consultation with ANVISA to know what society and industry know about the new rule of etiquette. The base is regional.

Reply:

- Sueli: We have been working with those involved with the LILACS editing processes so that the data is available in open data repositories.
- Work is also being done so that some journals accept the publication of preprints.

11) Considerations and recommendations by Ileana Alfonso Sánchez

- The objectives of BIREME relate to the objectives of ASSA 2030.
- The articulation with the proposals of the International Federation of Library Associations and Institutions (IFLA) should be considered.

- It is important to continue the literacy and digital skills programs.
- Maintain learning opportunities, open education and network education.
- Continue strengthening strategic alliances.
- Maintain relations with libraries.
- Developing a computer observatory as a collaborative network with specialists for information analysis.
- Design system for evaluation and monitoring of service behavior.
    - Develop instruments and performance indicators.
    - Impact evaluation regarding the quality of the information.
    - Evaluation of new services. Design instruments since it starts.
- Project management in collaboration with the university. In the absence of human capital and low budget, students can be involved to solve certain needs.

Reply:

- Attempts have been made to work with the technology department of the University of Sao Paulo regarding the design of indicators. Two factors affected the progress and development of results: 1. the times were not aligned. 2. There were different visions of the products, the professor in charge mainly focused on scientific articles.
- Two interesting points: the relationship with universities. It is important to return to the relationship with more robust projects. The other is to highlight the importance of the relationship with IFLA.
- Work with young people is essential and therefore resume relations with universities.
- SILVIA: Some colleagues like Veronica, Lilian and many of them work with initiatives together with universities. BIREME was born with its mission of working in education with universities. Today we have specific agreements with products and services, but what you say is a scenario to work closer so that students from the beginning are linked.
- DIEGO: really when we were at UNIFESP we had a lot of interns and terms of partnerships with universities. Today we already have this organization that comes once a year to take the courses, as in the last 3 years for training in scientific communication.
- VERÓNICA: A workshop has been held at the Center for Telehealth with the School of Dentistry that receives the questions and seeks information and helping to increase the core of the responses to the demands. They answered about 200 questions a month.

12) Considerations and recommendations by Jaider Ochoa

- The context changes very fast. We are talking about the transformation that has been taking place from 4 basic elements:
    - Digitality: the information is dynamic and multiformative, it is interactive and immediate. The importance of the informational, digital and / or data culture is denoted.
    - Science and open education: data as a focus for reproducibility and transparency. Community science or citizen science (where society is involved) as an horizon

for the development of research and the need to generate Open Educational Resources.

- Linking with the environment: for universities, the link with the environment is a latent trend. It is necessary to analyze the impact and visibility of institutions, obtain quality information to support decision-making based on monitoring and intelligence practices. At the University of Antioquia, we have been working under this trend because what we have seen is that the processes of self-evaluation and accreditation are turning towards the need to demonstrate the impact of educational and research processes in society.
- Data governance: the importance of systems integration and greater orientation towards their development for decision making. The impulse of the CRIS Systems (Current Research Information System) regarding research. Finally, guide and optimize the operation of the systems under elements of recoverability and semantic analysis.

- In the same way, we can talk about trends that connect with the above. These may be related to the following:
  - Open science: data as a pillar of scientific research, the integration of platforms and information resources. The need for development of linked data technologies and semantic web. Responsible measurement and open evaluation.
  - Data analysis: take a step towards predictive and prescriptive analyzes and overcome descriptive indicators. the need to use Social Network Analysis and invisible schools. Here BIREME has a lot of potential from the data it has. We could think of collaborating from the University with this type of analysis, we have several experts for it. There is also a need for reusable and interoperable resources and data.
  - Linking: how is knowledge transferred to society, how do knowledge production dynamics develop with society? One of the things we have been doing at the University of Antioquia is to verify the citation of scientific production in patents to analyze the use that is being given to this type of knowledge. For this we have used a database like Lens.org. Here the construction of responsible metrics and the analysis of trends such as transformative innovation are vital to understand this trend.
  - Open innovation: articulation between university and society to co-create knowledge and seek relationship mechanisms outside the academic context.
  - Open education: OER and MOOCs as the basis for understanding this trend. One could also talk about flexible education and autonomy in learning. Nowadays many people use social networks or platforms like YouTube to self-form.

- In essence, the main recommendations are:
  - Continue to develop capacities for the development of **REA Repositories** and

MOOCS Platforms aimed at different audiences

- **Agreements with universities** for the development of research, thesis and degree projects that support BIREME's work fronts.
- Continue and enhance the development of **informational capabilities**. Define a clear strategy, with the support of digital tools, for training on the different fronts of BIREME (including citizen science). You should also address trend issues such as open science and especially data.
- Expand the service provided by the **Open Education Resource** to health **policy makers** in Latin America and the Caribbean.
- **Knowledge maps** as a tool for the identification and visibility of experts and articulation with **CRIS** systems.
- Information systems for institutional decision making.
- Continue strengthening the **visibility strategy** in social media and networks.
- Strengthen relationships with **networks, funders, institutions and ministries** in the field of education, science and technology and innovation.

- There are some basic questions that can be analyzed, and it is not necessary to answer at this time:
  - What is BIREME's vision of the research and communication ecosystem of science? Mainly, in the face of changes.
  - How do you participate in the current discussions regarding the management of scientific information such as Plan S, Amelica, transformative innovation, among others?
  - How does BIREME see open innovation and the link between university, company, state and society?
  - Is there a systematic monitoring strategy for sources of funding and collaboration?
  - How does BIREME project the relationship with universities and research institutions?
  - Is there any strategy of prospective and organizational intelligence that allows preparing for future challenges?
- Some additional elements:
  - Think about the use of free software and licenses. At the university we are analyzing software such as Elasticsearch and Kibana to replace Tableau, which has limitations as it is a licensed software.
  - To have a data portal and viewing analytics is critical to BIREME.
  - In the case of the University, all this we have been analyzing from a collaborative strategy made up of several academic and administrative units, called CoLaV (Collaborative Linking for Computational Social Sciences). Here we could look at how to work together.

Reply:

- DIEGO: very good recommendations and very good questions. We must reflect.
- VERONICA: this is a map of what should be done.
- SILVIA: this is a work route that we must consider.
- DIEGO: we can work on the cooperation agreement with you.
- SILVIA: in the questions, it indicates that there are already methodologies and tools for the systematic monitoring of funding resources, can you give more information?
- SILVIA: the last question (prospective and organizational intelligence) is very important because it is totally related to the sustainability and maintenance of BIREME. People and professionals usually do not consider the timing of actions, and this is a problem. Time escapes our hands and this question is problematic regarding the preparation for the future. This question is totally related to sustainability.
- DIEGO: IAMPI is currently working on research source tools for different topics. It is important to find sources of funding to generate alerts and mobilize resources with the donor. There is an internal PAHO database for this.
- RENATO: this is the guideline for cooperation with the university. The last topic has a key point for the technology area because it can allow us to move forward or stop. We are working with Tableau because it is easy to use and adapted to our needs, but other tools must be mapped in addition to preparing internally to advance at the speed required.

13) Considerations and recommendations by Mario Tristán

- The progress made by the EBM-FHIR (Evidence based medicine on Fast Healthcare Interoperability Resources) group (Project website https://confluence.hl7.org/display/CDS/EBMonFHIR or https://osf.io/gmxks/) for the interoperability of systems in relation to the terms and operations used in the management and administration of evidence in the digital era.
- Recently, the severe problems presented by scientific publications have been described in terms of the quality of the methods and therefore of the results. John Loannidis highlighted in J. P. A. (2005). "Why Most Published Research Findings Are False". PLoS Medicine. 2 (8): e124. doi: 10.1371 / journal.pmed.0020124. PMC 1182327. PMID 16060722. The problem has continued, scientific journals continue to publish articles and research reports with false content. Three recent publications prove it.
- This generally affects the production of evidence synthesis and therefore decision making. BIREME should consider collaborating in improving the quality of publications.
- The Real World Evidence Solutions (RWE). It is a very successful technique for the verification of the effects of research findings. The most important consideration is that populations and groups that are not generally included in traditional clinical trials can be studied. BIREME is the institution in the Americas that can help promote this type of study and disseminate this type of results. Patients, Advertising, Social Networks are sources that the methodology allows to analyze. It is a very positive tool to analyze what is happening with the impact of the interventions

- Therefore you should take advantage of what is being done in these fields and join the work of the groups that on the one hand develop the platform for the interoperability of different platforms with the use of key concepts of research and evidence and their statistical references including GRADE terminology to assess the Certainty of the Evidence generated by the investigation. And on the other hand, the groups that work in FDA and other organizations on the evaluation of the real impact of the results of the Clinical Trials and the synthesis carried out by the Systematic Reviews.

Reply

- LILIAN: The same John Loannidis who says that more than 50% of all research results are not reproducible.
- VERONICA: In integrative medicine there are practices that may be of interest to help the problem of the quality of the reviews, the hierarchy of evidence can be a good example. Solid evidence and how to reproduce this type of evidence in qualitative practice and not in quantitative practice. There are extensive discussions on the subject and how to reproduce and generate evidence in traditional medicine that has spent its entire life working with medicinal plants with wisdom and knowledge beyond what an investigation can replicate. BIREME can enter this discussion and help create hierarchy of evidence. The rigor for other practices that do not have this type of evidence as cardiology, is necessary when for these there are publications and methods that are developed by the industry; any practice other than the pharmaceutical industry has greater rigor.

14) Considerations and recommendations by Georgiana Gordon Strachan

- Georgiana excused herself for her absence at the meeting and sent a document with her analysis and recommendations for BIREME.

15) Considerations and recommendations by Roberto Carlos Pacheco

- The results achieved by BIREME on the different work fronts are highlighted
- Digitality is changing the practices of science, allowing articulation with other audiences that are not commonly considered.
- Consider the vision of open science and open research.
- Digital platforms must be enhanced.
- Give continuity to the recommendations made by the Committee.
- Seek to collaborate with strategic initiatives and projects of allies, for the development of unified products and services.
- Measure the visibility of products and services.
- Design a reference plan for institutional relations.
- Support with strategies to attack misinformation and information problems on issues subject to BIREME. An example of the importance of the issue is what recently happened with the decrease of vaccination rates produced by fake news.
- Think about offering services under the payment method.

- The FinTech model can be interesting to think about proposing HealthTech and articulate work with different audiences.

Reply

- The skills of the work team must be redirected to respond to several of the recommendations.
- It is possible to think of a strategy to service monetization.
- It might be considered to work on a portfolio of products, have a website where you can access the full information of BIREME products.

16) Final discussion and consensus of recommendations to the director of PAHO / WHO

- Appreciation was showed for each member of the SC. Unanimously, the work that BIREME has done was highlighted and it is expected that what we have so far will continue to be strengthened, in addition to strengthening a culture of continuous innovation.
- Finally, the SC indicates the importance of giving continuity to the developed process, this avoids starting from scratch and enhancing the growth of BIREME. For this, one possibility is to invite a member of the current committee to participate in the start of activities of the new process to make the link. As for this, it is not necessarily necessary for face-to-face participation, but it can also be virtual.
- It was reported that, for the formation of the new SC, the respective consultations with the Advisory Committee are being made.

17) The members of the Committee and the participants came to a consensus on the recommendations which are summarized below and will be sent for consideration to the PAHO/WHO Director.

a) Continue working on innovative products and services that support the development of the scientific ecosystem and the informational capacities of the actors involved in the Health sector.

b) Reiterate the importance of open science as an axis of work and guidance for BIREME. It is necessary to continue working on the understanding of open science, especially in proposals related to management of research data and citizens, reproducible research, preprints and citizen science.

c) Take an active role in the discussion of the development of the ecosystem of publication and scientific policy. Here it is important that BIREME think of a strong line of work that develops responsible metrics for scientific and technological production. Therefore, monitoring and relationship with actors such as CWTS (University of Leiden), EC3 Metrics (University of Granada), Amelica (Latin America), DORA Declaration, CSIC Cybermetry Laboratory, COLAV (University of Antioquia), among others.

d) Design quality and impact indicators for BIREME products. This will allow them to better monitor the impact they may have, identify strengths and weaknesses.

e) Develop capacities for articulation with players from the ecosystem of scientific information and the health sector that can support BIREME's innovation and growth. Such is the case of IFLA (International Federation of Library Associations and Institutions), Plan S, Liber, Leru, SPARC, Foster, COAR. Also, think about the articulation with Schools of Health and Information Sciences to support the development of skills from internships, research and end of degree projects.

f) Continue to promote Open Educational Resources (OER) and MOOC as a possibility for learning, information skills development, open education and network education.

g) Think about the development of a data governance model to guide and optimize the operation of the systems under elements of recoverability, preservation, semantic analysis and data exploitation. Here it is important to review current trends such as CRIS (Current Research Information System).

h) Develop systematic, prospective and strategic intelligence monitoring capabilities to support decision-making regarding strategic planning, trends, technological innovations, new metrics and products, sources of funding and identification of potential allies.

18) The members of the scientific committee were thanked for their presence, highlighting the discussions held and the results attained during the meeting. The BIREME team was also acknowledged for their efforts at the Center in the field of scientific information in Health, and especially for holding the Fifth Session of the Scientific Committee.

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Session Adjournment

After the participants shared comments on their appreciation for and experiences at the meeting, the main objectives reached towards the new institutional positioning of the Center were pointed out and the fifth session was then closed.

In witness whereof, the Fifth Session of the Scientific Committee of the Latin American and Caribbean Center on Health Sciences Information (BIREME), the Chairman of the Meeting and the expert delegate in information technology from Brazil, and the Director of BIREME, ex officio Secretary, adjourned the session and signed this final report in its original Spanish language.

Drafted in São Paulo, Brazil, on the twenty ninth day of the month of November two thousand nineteen.

The original signed document will be filed in the archives of the Pan American Sanitary Bureau.

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Roberto Carlos Pacheco (Brazil)
Chair of the fifth session of the BIREME/PAHO/WHO
Scientific Committee

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Diego González Machín
Director of BIREME/PAHO/WHO
ex officio Secretary of the fifth session of the BIREME/PAHO/WHO
Scientific Committee

Annexes
Annex A

Agenda

Opening of the Session

Presentation by the *ex officio* Secretary who highlighted the technical cooperation program at the Center, its projects, products and services available for the countries of the Region (and outside of it, as well) in the local, national, regional and global spheres.

Debate, questions and answers

Institutional, strategic, normative and policy documents, and the potential role of BIREME:

- Establishment of a New Institutional Framework for the Latin American and Caribbean Center on Health Sciences Information (BIREME), Resolution approved in the 49th Board (CD49.R5), held at the Headquarters of PAHO between September 28th and October 12th, 2009

- Biennial Work Plan (BWP) of BIREME 2018-2019

- Biennial Work Plan (BWP) of BIREME 2020-2021

Annex B

LIST OF DOCUMENTS

Work Documents

1. Meeting Agenda
2. List of Participants
3. Executive Report of BIREME
4. Final Report of the Fourth Session of the Scientific Committee of the Latin American and Caribbean Center on Health Sciences Information (BIREME), held on December 3rd, 2018
5. Statute "Establishment of a New Institutional Framework for the Latin American and Caribbean Center on Health Sciences Information (BIREME), CD49.R5
6. Internal Rules of Procedure of the Scientific Committee
7. Terms of Reference of the Scientific Committee
8. Working Plan of BIREME for the current biennium 2018-2019
9. Working Plan of BIREME for the biennium 2020-2021

Note: Reports of the sessions and the documents were handed out on a pen-drive offered by BIREME/PAHO/WHO at the meeting.

Annex C

LIST OF PARTICIPANTS

MEMBERS OF THE SCIENTIFIC COMMITTEE

Efren Carlos Oropeza Abúndez, Scientific Communication. Mexico

Georgiana Marie Gordon-Strachan, Scientific Research. Jamaica (excused absence)

Ileana Regla Alfonso Sanchez, Information Management. Cuba

Jaider Ochoa Gutierrez, Education and Knowledge Management. Colombia

Mario Guillermo Tristan Lopez, Scientific Research. Costa Rica

Roberto Carlos Pacheco, Information Technology. Brazil

PAHO/WHO, HQ

Jarbas Barbosa da Silva Júnior
Assistant Director and Acting Director of Evidence and Intelligence for Action in Health - EIH

BIREME/PAHO/WHO

Diego González Machín, Director and *ex officio* Secretary
DIR – Director of the Center
Lilian Calò, Scientific Communication Coordinator

Carmen Verônica Abdala, Manager
PFI/SCI - Information Sources Production and Cooperative Information Services
Sueli Suga, Supervisor of Referential Information Sources

Renato Murasaki, Manager
AFI/MTI - Information Sources Administration and Information Methodologies and Technologies
Marcos Mori, Supervisor of Technical Support Network

Silvia Almeida de Valentin, Manager
GA - Administrative Management and Planning
Marcia Ymanaka Barretto, IT Coordinator
Adriano de Sá, Controller

Annex D

ACRONYMS USED IN THIS REPORT

BIREME	Latin American and Caribbean Center on Health Sciences Information
VHL	Virtual Health Library
CD49	49th Session of the PAHO/WHO Directing Council
CD49.R5	Resolution 5 of the 49th PAHO/WHO Directing Council
CD52	52nd PAHO/WHO Directing Council
CD52.R8	Resolution 58 of the 52nd PAHO/WHO Directing Council
CRICS	Regional Congress on Health Sciences Information
CSP29	28th PAHO/WHO Pan American Sanitary Conference by
CSP29.R2	Resolution 2 of the 29th PAHO/WHO Pan American Sanitary Conference
DeCS	Health Sciences Descriptors
LILACS	Latin American and Caribbean Literature in Health Sciences, main regional bibliographic data base of BIREME