



HIGH-LEVEL MEETING ON INFORMATION SYSTEMS FOR HEALTH

Advancing Public Health in the
Caribbean Region

7-8 November 2016, Kingston, Jamaica

Meeting report

The Caribbean Information System for Health

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Meeting report

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Glossary

CARICOM	Caribbean Community
CARIFORUM	Caribbean Forum
CARPHA	Caribbean Public Health Agency
CSA	Country situation analysis
EU	European Union
HiAP	Health in All Policies
HIS	Health information systems
HLM	High-Level Meeting
ICT	Information and communication technology
IS4H	Information systems for health
MoH	Ministry of Health
NCDs	Non-communicable diseases
OECS	Organization of Eastern Caribbean States
PAHO	Pan American Health Organization
PHC	Primary health care
SDGs	Sustainable Development Goals
SDoH	Social determinants of health
SOPs	Standard operating procedures
TWG	Technical Working Group
UAH-UHC	Universal access to health and universal health coverage
UNAIDS	United Nations Joint Program on HIV/AIDS
WHO	World Health Organization

Country name abbreviations

BHS	The Bahamas
BLZ	Belize
BRB	Barbados
GRD	Grenada
JAM	Jamaica
LCA	Saint Lucia
TTO	Trinidad and Tobago
VCT	St. Vincent and the Grenadines
VGB	British Virgin Islands

Executive Summary

The Pan American Health Organization/World Health Organization (PAHO/WHO) and the Ministry of Health (MoH) Jamaica collaborated to convene a High-Level Meeting (HLM) on Information Systems for Health (IS4H) in Kingston, Jamaica, 7-8 November 2016 (*Annex 1*).

The approximately 70 participants from 16 Caribbean countries, regional and international agencies, and international development partners, included 6 Ministers of Health (Barbados, Belize, Grenada, Jamaica, St. Vincent and the Grenadines, and Suriname); senior CARICOM officials; representatives of CARICOM institutions, UN agencies – including PAHO/WHO – and international financial institutions; and technical personnel from the countries.



Meeting participants from 16 Caribbean countries, CARICOM, PAHO/WHO and other International Organizations

The HLM recognized the need for timely, accurate, quality information on health to inform decision- and policy-making, program interventions, monitoring, and evaluation, in the context of countries' progress to universal access to health and universal health coverage; ongoing national e-governance initiatives; Open Data and Big Data solutions; and the 2030 Sustainable Development Goals, which focus on addressing inequities and a whole-of-government, whole-of-society, health-in-all-policies, multisectoral approach to health development. This approach mandates that IS4H include mechanisms to capture, analyze, report, and use data from both health and non-health sectors, with the participation of government, civil society, and the private sector.

Through presentations, guided group work, plenary discussions, and validation of summaries of agreements reached, the HLM identified immediate, medium-term, and long-term outcomes for IS4H in the Caribbean, strategies to achieve them, and possible roles and responsibilities of various entities. The meeting highlighted ongoing initiatives and interventions in countries, and lessons and experiences to be shared, with the commitment to analyze, consider, and build on them in the production of regional public goods that would contribute to advances in national and regional IS4H.

The discussions were held in the framework of a draft Caribbean IS4H Strategic Plan developed by PAHO/WHO in collaboration with Caribbean countries (*Annex 2*), which identified 4 strategic goals: data management and information technologies, management and governance, knowledge management and sharing, and innovation and performance.

Key agreements and recommendations addressed legislative frameworks and regulations for IS4H, focusing on collection of data from the private sector, privacy, confidentiality, and security; regional standards aligned with international standards; information and communication technology (ICT) infrastructure, with access to both structured and unstructured data; capacity building and change management strategies at all levels; national – rather than health sector – approaches to IS4H, in order to facilitate and enable the participation of all sectors; formal and informal mechanisms for sharing information, lessons learned, and experiences among countries; and the Caribbean IS4H Strategic Plan, with a regional proposal for strengthening IS4H in the Caribbean based on work done at the HLM, to facilitate resource mobilization.

PAHO/WHO committed to work with countries, the CARICOM Secretariat, and development partners in IS4H initiatives at both regional and national levels, facilitating dialogue and encouraging expansion from the current priority area of client management systems to other areas critical to health, involving prevention, rehabilitation, and overall improvement of the health system.

Timely, accurate, and quality information on health is critical for decision-making, to enable the development, implementation, monitoring, and evaluation of appropriate health policy, programs, and interventions for population and individual health. Disaggregated health data permit identification of vulnerable populations and health inequities, and facilitate the implementation of strategies to address them.

Systems that provide such information have long been a priority for health policy makers and planners, and the Caribbean has a lengthy history of work on health information systems (HIS). Member States of the Caribbean Community (CARICOM) are at varying stages in the development of HIS, moving from predominantly manual to automated systems.

Building on existing actions, taking into consideration a 2015 Country Situation Analysis (CSA) of HIS, and considering the framework of the renewed model on Information Systems for Health developed by the Pan American Health Organization/World Health Organization, PAHO/WHO collaborated with the Ministry of Health, Jamaica, to convene a High-Level Meeting on IS4H in Kingston, Jamaica, in November 2016. The meeting presented a draft strategic plan for a Caribbean Information System for Health, with the vision of strengthening universal access to health and universal health coverage, thus advancing public health in the Caribbean region, strengthening national and regional health development, and addressing the 2030 Sustainable Development Goals.

This report summarizes the discussions, agreements, main conclusions, and recommendations.

Introductory session

Dr. Douglas Slater, Assistant Secretary General, CARICOM, Dr. the Hon. Christopher Tufton, Minister of Health, Jamaica, and Dr. Carissa Etienne, Director of PAHO, made remarks during this session.



Dr. Slater asked for consideration of the difference in this approach from previous efforts and emphasized the importance of information from non-health entities and the private sector. He also highlighted the importance of political will as a success factor.

Dr. Tufton noted that a request made to PAHO/WHO for technical cooperation in this area was made at the September 2016 meeting of the CARICOM Council on Health and Social Development (COHSOD), and congratulated the Organization for its timely response. He noted that the participation of his colleague Ministers of Health was a testament to the priority being given to IS4H at the highest level. The Minister indicated that Jamaica is advancing in addressing e-health and electronic medical records, and welcomed PAHO/WHO's guidance to ensure success and compatibility with regional efforts and standards.



Dr. Etienne stated PAHO's commitment to working with countries in IS4H. She noted that the region has made progress in attaining the Millennium Development Goals (MDGs) and is moving to address the SDGs. Health as a human right is a priority and UAH-UHC is a major contributor to the progressive realization of this right; in turn, IS4H are important for the achievement of UAH-UHC, to ensure that vulnerable and underserved populations are counted and reached. The PAHO Director emphasized the need to build on what exists in countries, involve those working in the system at all levels in its development, and resist the superimposition of externally developed systems on systems that are already in place. She noted that funding for IS4H is a challenge, but given its importance, innovative strategies will have to be found.



The introductory session ended with a presentation of Dr. Marcos Espinal, Director, Department of Communicable Diseases and Health Analysis (CHA). Dr. Espinal, in his keynote presentation on **Strategic vision and key messages on IS4H in the Caribbean** characterized this initiative as a mini-marathon rather than a 100-meter race, in which a common understanding and common vision among countries and partners are critical, notwithstanding the different levels of development and progress in the region. He noted that both structured and unstructured data are of value, the latter being available through search engines and social media, and encouraged a broader vision of IS4H that considered e-health, not just e-medical records. Countries' interventions should build on existing actions and lessons learned, follow good practices, and take into account other countries' experiences.



Presentations and discussions

Meeting objectives, sessions, methodologies, and roadmap to the target



Dr. de Cosio summarized the meeting objectives, sessions, methodologies, and roadmap to the target, this last involving agreements on vision and goals; identification of challenges and opportunities; and decisions regarding priorities. He noted the reasons for having IS4H, including monitoring progress on health indicators; measuring impact of health strategies; supporting decision and policy making processes; and accountability.

Session 1: A renewed vision of information systems for health

The Honourable Patrick Pengel, Minister of Health, Suriname, introduced session 1. He stated the importance of having a renewed vision composed by a very comprehensive framework developed by PAHO supported by a concrete strategic plan of action for the region.



PAHO's renewed framework on ISH: Regional Project and Plan of Action on IS4H

Mr. D'Agostino, Senior Advisor, Knowledge Management, Department of Communicable Diseases and Health Analysis, summarized PAHO's renewed framework on ISH: Regional Project and Plan of Action and advised on the context, including e-governance, big data, open source, and current technologies and platforms in the information society; the rules of the game, which emphasized agreement on the foundation and rules (mandates, outcomes, processes, and procedures), rather the players (technology); PAHO's renewed model, which involves a network of information sources, and interconnected and interoperable health-related systems; the draft regional project, with strategic goals and expected results; and the way forward, with prioritization (what); implementation strategies (how); networking and partnerships (who); and now and forever (when).



Health information in the context of health systems

Dr. Del Riego, Amalia del Riego, Unit Chief, Health Services and Access, Department of Health Systems and Services, presented Health information in the context of health systems, highlighting the importance of information in advancing towards UAH-UHC, and noting challenges and opportunities for improving IS4H. Challenges include diversity in understanding of the information needed, where IS4H may be seen only as medical records, though they also involve risk factor surveys, demographics, and "learning to connect the dots"; limited analysis of existing data; weak monitoring and evaluation; and limited health system research. Opportunities include commitment to UAH-UHC and SDGs; current efforts of Member States; and frameworks prepared by PAHO/WHO and other stakeholders, such as Health in the Americas, Health Equity Analysis, and the IS4H Framework.

Discussion

- In introducing new systems, supporting resources have to be identified, especially in resource-constrained environments. There is need for a self-assessment tool and an economic model to help those asking for assistance to present their case.
- IS4H may not be an attractive model for investment, if they are simply presented as information systems. However, if they are put in the framework of Open Data or Big Data, banks and other entities that are supporting those initiatives may provide resources.
- Cost-efficiency considerations are important in health, and data can contribute to improving efficiency, making the best investments possible to be able to provide better access to the population, not linked to providing services at lower cost.
- Data to show the value of health care is needed; while there is a limit to cost-efficiency in health care, adding value has no limit. Thus, there should be greater emphasis on return on investment than on cost-efficiency.
- IS4H should be approached from a national, rather than a health, perspective; the incorporation of other sectors into the IS4H strategy will improve its chances of success.

Session 2: IS4H in the Caribbean: Current situation, challenges, and opportunities

IS4H in the Caribbean: Challenges and opportunities

Ms. Sheralin Monrose, Co-Chair of the Technical Working Group (TWG) on IS4H in the Caribbean and Mr. Daniel Doane, PAHO Consultant, summarized the history and work of the TWG, which was formed in 2015 at a Subregional IS4H Technical Meeting and endorsed by the COHSOD in that year. She noted the 10 priority areas defined by the TWG: HIS strategic plans; advocacy for country ownership; data documentation; knowledge-sharing platform; change management; human resources; legislation, policies, and standard operating procedures (SOPs); regional architecture/strategy; private-public partnership for financing; and HIS performance system.



Country situation analysis

Mr. Doane presented the draft findings of a country situation analysis involving 16 countries in the Caribbean region, looking at 6 key areas: strategy, leadership and coordination; legislation and policy; human resources; information management; information products, dissemination, and use; and information technology. Highlights included the following:



a) Most countries have completed some type of formal assessment of their IS4H and have national health system strategic plans in place to guide alignment with IS4H priorities.

b) The majority of countries also have some type of e-governance strategy or initiative in place. While most countries have identified IS4H within the national or MoH budget, only 20% have specifically identified operational budgets to ensure sustainability.

c) The dissemination and use of information products is also a challenge. It is important for the information to be used not only at policy level, but also at an operational level by the persons who generate the data, to improve quality.

In summary, investments and interventions in countries are ongoing, but there is need to consider interoperability, policy and legislative frameworks, information use, and increased investment.

Four working groups subsequently considered the four strategic goals of the draft Caribbean Regional Project and Plan of Action, using the outcome mapping method to identify immediate (“expect to see”), medium-term (“like-to-see”), and long-term (“love-to-see”) outcomes.

The results of the four working groups are summarized in Annex 3.

Session 3: Plan of action for IS4H in the Caribbean

Three countries – Barbados, Belize, and Jamaica – shared their experiences with IS4H, highlighting achievements, challenges and critical factors for success, and Mr. Marcelo D’Agostino presented the main findings and next steps of a rapid situation analysis of HIS conducted in Jamaica.



The countries’ presentations highlighted the importance of phased implementation, legislative framework, SOPs, data dictionary, human resources, capacity building, and the participation of the private sector, the last to provide a more complete picture of the health situation. A legislative framework that would expand required private sector reporting to include health data other than notifiable communicable diseases – as currently obtains – would be highly desirable. In addition, determination of national requirements and standards for recording patient visits, whether in the

public or private sector, would facilitate reporting and analysis. Barbados identified funding as a priority and Belize requested an external evaluation of its system, while Jamaica highlighted electronic medical records, reduction in Accident & Emergency and surgical waiting times, and telemedicine as priorities to be addressed through IS4H.

Main highlights of the presentations are summarized in *Annex 4*.

Session 4: Partnerships in IS4H

Moderated by Dr. Jessie Schutt-Aine, Coordinator, PAHO's Caribbean Sub regional Program, representatives of selected agencies gave their perspectives on IS4H in the Caribbean: Ms. Tonia Frame, Project Officer, Health, Delegation of the European Union (EU) to Barbados, the Eastern Caribbean States, the OECS, and CARICOM/CARIFORUM; Mr. Eduard Jan Beck, Senior Advisor, Strategic Information and Policy, Joint United Nations Program on HIV/AIDS (UNAIDS); and Ms. Angela Hinds, Head, Health Information and Data Analysis, CARPHA.



European Union (EU)



Ms. Frame noted the EU's work with selected countries in the Caribbean and with CARPHA, as well as the absence of a subregional approach, to date, given the EU's bilateral engagement with the entities. However, efforts are ongoing to correct this at both Caribbean regional and subregional (OECS) levels. The EU also wishes to collaborate with PAHO/WHO in exploring how countries' IS4H platforms can speak to each other to support UAH-UHC and the movement of people in the region, including the establishment of centres of excellence. She commended the broadening of perspectives on IS4H from the relatively narrow "health sector-only" view, to embrace a cross-sectoral approach. Though the 11th European Development Fund (EDF) program 2014-2020 does not specifically address health, there is scope for work around IS4H under the area of regional integration – this is being explored with the OECS and would be a useful discussion at the CARICOM level also.

UNAIDS



Mr. Beck highlighted UNAIDS' work in the area of guidelines to protect the security and confidentiality of HIV information and efforts to apply that work to other areas, looking at the health system as a whole. In order to properly follow-up people with HIV, efforts beyond the HIV care continuum or HIV treatment cascade are necessary. UNAIDS is discussing issues related to unique national health identifiers with WHO, and has had workshops in other WHO regions in an effort to develop a roadmap that countries can adapt to their situation. Work is also being done with other partners, such as the US President's Emergency Plan for AIDS Relief (PEPFAR), regarding national guidelines to protect personal health information.

CARPHA

Ms. Hinds drew on CARPHA's work with countries on surveillance to identify lessons learned, which include: a) Variance in thinking between decision-makers and technical advisors regarding the purchase of HIS, often resulting in systems that cannot be used or made fully operational; b) Realization that HIS implementation is not just an IT project, but a health project involving many stakeholders that need to be consulted, with establishment of a cross-functional team; c) Importance of behavioural change issues, from persons on the ground to upper management; d) Need for intergovernmental, interministerial agreements and collaboration, with identification of

data sources outside of the health sector; e) Feedback of information to the level of data collection to promote “buy-in” at that level, and support and improve day-to-day operations; f) Need for realistic, not overly-long time frames for project initiation, given the relatively rapid pace of changes in ICT and related issues; and g) Benefits of analyzing lessons learned and solutions in other countries.

Session 5: Executive summary of previous day

General introduction



The Honourable Robert Browne, Minister of Health, St. Vincent and the Grenadines introduced Mr. Peter Ricketts, Information Technology Specialist, Dominica, and noted that HIS in VCT had made progress; the same software used in BLZ and BRB is operational in approximately 70% of public health facilities in that country.

Executive summary of day 1



Mr. Ricketts presented an executive summary of the previous day’s work and reiterated the participants’ agreement on the importance of IS4H that integrate multisectoral information and facilitate appropriate action. He stated the main conclusions and agreements reached and highlighted the usefulness of partnerships with other countries and with specialized entities such as the Caribbean Telecommunications Union (CTU)¹ and the Regional Federation of Health Informatics for Latin America and the Caribbean (IMIA LAC)². He emphasized that public-private partnerships and partnering with other sectors are important strategies, since other sectors may use the same ICT structure, thus facilitating shared services.

Discussion

- Director of PAHO: The Organization is committed to working with countries in this priority area, given its importance for the achievement of UAH-UHC and attention to underserved and vulnerable populations.
- Minister VCT: An assessment in VCT showed that the functioning of HIS provides a strong indicator of the overall health system’s functioning. This is not an isolated issue – it is being done to advance UAH-UHC and speaks to systemic issues.
- UNAIDS: Access to codes and private-public partnerships will be a challenge. Countries need outside expertise, but relevant private sector companies may be transient, and national strategies for these partnerships are critical, as exemplified by LCA, which is acquiring a commercial system; JAM, which has commercial plus open source systems; and BLZ, which wants to address its commercial system with its Canadian partners.

¹ <http://www.ctu.int/>

² <http://imia-medinfo.org/wp/imia-lac-regional-federation-of-health-informatics-for-latin-america-and-the-caribbean/> N.B. IMIA = International Medical Informatics Association

- British Virgin Islands: Internet availability and sufficient and stable bandwidth are needed to facilitate the IS4H being discussed, and relevant technological information is critical. There are several issues that can be solved through common standards and protocols, given that IT providers in the region are private, and the same companies serve most Caribbean countries. There can be collaboration among countries to address these issues, particularly for the establishment of repositories and centres. There are also cultural issues to be dealt with; some older persons are not comfortable with modern ICT and a proportion of the population fears storing data in “the cloud”. However, these advances have the potential to reduce costs, and should be dealt with through change management.
- Trinidad and Tobago: Without embracing “the cloud” as a technology that can enhance health care, the region will be left struggling. TTO is exploring linkages between private providers and hospitals through this means, since the country’s ICT infrastructure is quite strong. Other important factors for “future-proofing” the Caribbean regarding the viability and sustainability of IS4H and the provision of patient-centered health services include:
 - Leadership skills for transforming the system
 - Capacity building
 - Change management, especially since many clinicians do not appreciate the health-transforming aspects of IS4H, which are often seen as IT only
 - Exchange and partnerships with countries that have progressed in certain areas; and
 - Sharing knowledge, successes, and challenges.
- CARICOM Assistant Secretary General: Tertiary institutions in the Caribbean should be involved in this effort. Although older health care professionals tend to prefer paper records, almost all those under 40 years of age are willing to embrace IT; change management strategies are needed for the former group. There is a Human Resources Development (HRD) Commission in CARICOM that will be conducting an assessment of the region’s HR needs, and collaboration with this Commission will be important.
- LCA: LCA has a similar IS4H solution to BRB and BLZ, though the country does not have access to the source code and is carrying out the development in-house, having severed ties with the vendor. Thus, there are 4 countries with the same solutions that have taken different paths, but have not shared their experiences. LCA has also acquired a proprietary system for the hospital, so it has two experiences to share. Sharing is of great value, especially since most countries report to the same agencies and are working towards similar health outcomes. It is important to know what is to be accomplished, what the desired outcomes are, what information should be obtained from the system, what the regional standards are, and how proprietary or other software can help, rather than simply focusing on technology.
- The Bahamas: All information systems in BHS are proprietary. However, in implementing a surgical IS, the country held an extensive requirements gathering session, with subsequent editing and validation by stakeholders, development of a request for proposals, detailed evaluation of the proposals, and site visits to shortlisted providers before the final selection. As a result, the surgical IS was delivered on time and on budget, with stakeholder ownership due to the participatory process.
- IDB: The meeting has identified problems, and solutions exist; the IDB has supported the work in BHS. Financing strategies are important, and should be priorities. However, from the IDB’s

perspective, if health is not in the country strategy, the Bank cannot support it. Therefore, health has to be prioritized in the national budget as a determinant of growth. Ministers of Health should lobby Cabinet to put health high on the agenda, given its positive effect on productivity, and advocate for additional funding.

Session 6: Strategic and political analysis

Four working groups were asked to consider the following questions in the frameworks of UAH-UHC, eGovernment, Open and Big Data, and HiAP:

- As you envision where you want your country to be in 10 years on IS4H, which of the IS4H goals do you see your institution achieving?
- In order to achieve IS4H goals, what innovative ideas and strategies did you have to come up with?
- What challenges (external or internal) will you have to defeat along the way to achieve your IS4H goals?
- Imagine it is 5 years from now. What are other countries “envying” the most about your IS4H?



Main highlights of the group discussion:

- The confidentiality and security of IS4H are paramount, especially regarding patient-sensitive data and vetting of persons with access to the information.
- Patients can be empowered to protect themselves and be aware of who may be accessing their data.
- Privacy and security are separate from the format of the data. The public should be sensitized to the fact that records are being digitized, and despite the threat of cyber-attacks, they are still more secure than manual records.
- There are opportunities for countries through sharing of successes and good practices. Collaboration outside of the health sector itself, with other ministries, academia, and international development partners can be advantageous.

- Opportunities must be found and/or created for sharing countries' practices and products.
- The terms of reference of the Caribbean TWG on IS4H include review and promotion of learning experiences in countries. In addition, security concerns require differentiation between sharing of statistical data, which does not have personal identifiers, as opposed to patient records. The latter is seen mainly by physicians, and include security features.
- Consideration should be given to the spheres of influence within an audience. At regional level, there could be a community management framework comprised of multisectoral, high-level, strategic thinkers and public relations practitioners. This could be coupled with, at a lower level, a social media strategy to determine social sentiments around health care. These could be distilled into a set of management concepts to identify successful approaches and challenges.
- Social media cannot be ignored; they may be useful in surveillance, and there are agencies with expertise and free tools that can help.
- Discussions in the meeting have shown consistency in terms of the IS4H vision, especially countries' desired outcomes. Collaboration, communication, and partnerships are important strategies; partnerships with telecommunication entities and the establishment of communities of practice can be facilitated by the IS4H TWG.

Annex 5 summarizes the group reports.

Session 7: Prioritization and the way forward



During this session, moderated by Dr. Irad Potter, Chief Medical Officer (CMO), VGB, four working groups again convened to identify strategic priorities for IS4H in the Caribbean. Dr. Potter, CMO since 1995, gave his perspectives on the history of HIS in the Caribbean, noting that:

- Previous major initiatives did not achieve their desired outcomes because of inadequate analysis of the environment. Some countries had good manual paper-based HIS, but left the foundation and good practices behind in the computerization of the HIS, without considering sustainability issues.
- An enabling environment must be put in place and mechanisms for sharing information among countries need to be more robust.
- Much of what needs to be done is common to all countries, such as legal frameworks, memoranda of understanding, partnership agreements, governance and leadership, data dictionaries, and specific indicators. Countries can coordinate and cooperate to get these done and create regional public goods for IS4H that will be useful at the national level, considering that health situation analysis has moved beyond simply looking at health services; water, sanitation, and other social and environmental determinants of health must be included.

In their strategic prioritization exercise, the working groups were asked to define mechanisms for sharing and creating enabling environments, and to identify opportunities for cooperation and

collaboration, and roles and responsibilities of countries, individually and collectively; regional institutions; and international agencies and development partners such as PAHO/WHO. The tool provided to the groups facilitated the definition on actions to be done now (Do), to be scheduled (Decide), to be done by someone else (Postpone/Delegate) and to be eliminated (Delete).

Main highlights of the group discussion:

- Legislation should be managed at national level, since it usually takes a long time and would be difficult to achieve at regional level. However, some countries already have drafts and some countries can use model legislation, while others can refer to legal briefs. Key content of the legislation should be developed and shared.



- There should also be mechanisms to institutionalize the legislation, for its implementation. National privacy programs should be established and institutionalized in each facility, with relevant metrics.
- The outputs of the Caribbean Knowledge Learning Network (CKLN) project and the OECS eGovernance for Regional Integration Project (E-GRIP) would be useful to the IS4H initiative, and should be revisited.
- There were benefits from both projects, which were based on technology, but lessons learned are that countries run the risk of implementing obsolete technology by the time all project details are settled, and that there must be a domestic budget to continue and sustain the gains from externally-funded projects.
- Best practices from various countries can be captured through government-to-government initiatives, as well as through a knowledge-sharing platform.
- There are many resources available that can be shared, and mechanisms for this to take place must be established. The outputs of the working groups will be organized in a more formal strategic way and presented to the participants for feedback, before their integration into the draft Caribbean IS4H Strategic Plan and associated proposal(s) for resource allocation and mobilization.

- It is very evident that participants wish to continue sharing information and resources in order to advance the initiative, and a coordinated process that takes advantage of technological advances should be put in place.

Final remarks and main conclusions



The PAHO/WHO Representative in Jamaica, Dr. Noreen Jack, presented and executive summary of the major conclusions and recommendations from the meeting. Dr. Jack reiterated and highlighted the participants' commitment on the importance of IS4H that integrate multisectoral information and facilitate appropriate action. She emphasized the importance of the adoption of the Regional Project and Plan of Action on IS4H for advancing public health in the Caribbean through interoperable information systems for health with a holistic and integrated framework and vision.



The Director of PAHO noted that all countries need to be committed to the overall IS4H vision and concept, not only addressing client management systems, but also going beyond, to national HIS, to give information for policies, programs, monitoring, and evaluation, and address preventive and rehabilitative, as well as curative, services. IS4H are meant to contribute to efficiencies but there must not be false expectations of those systems; countries should be aware of other mechanisms that will also contribute to increased efficiencies, and IS4H can identify the areas for attention.

The Organization is committed to working with countries in this priority area, given its importance for the achievement of UAH-UHC and attention to underserved and vulnerable populations.

The Ministers of Health; the Assistant Secretary General of CARICOM; and the Director of PAHO gave their reflections on the HLM.



Main conclusions

- Adoption of a holistic framework for IS4H in Caribbean, with identification of components amenable to joint work by countries.
- Adoption of the draft regional strategic plan for advancing public health through interoperable IS4H.
- Identification of electronic medical records and hospital management systems as short-term IS4H priorities for Caribbean countries.
- In introducing new systems, supporting resources have to be identified, especially in resource-constrained environments. There is need for an economic model to help those asking for assistance to present their case.
- IS4H may not be an attractive model for investment, if they are simply presented as information systems. However, if they are put in the framework of Open Data or Big Data, banks, academia and other entities that are supporting, researching and building capacity in those initiatives may provide resources
- Cost-efficiency considerations are important in health, and data can contribute to improving efficiency, making the best investments possible to be able to provide better access to the population, not linked to providing services at lower cost. However, data to show the value of health care are needed; while there is a limit to cost-efficiency in health care, adding value has no limit. Thus, there should be greater emphasis on return on investment than on cost-efficiency.
- IS4H should be approached from a national, rather than a health, perspective; the incorporation of other sectors into the IS4H strategy will improve its chances of success.

- There is need for an economic/business model to help those asking for assistance to present their case as being feasible in the national and Sub Regional contexts.
- Three countries – Barbados, Belize, and Jamaica – shared their experiences with IS4H, highlighting achievements, challenges and critical factors for success, and Mr. Marcelo D’Agostino presented the main findings and next steps of a rapid situation analysis of HIS conducted in Jamaica.
- The countries’ presentations highlighted the importance of phased implementation, with clear and concrete investments regarding legislative framework, SOPs, data dictionary, human resources, capacity building, and the participation of the private sector, the last to provide a more complete picture of the health situation. A legislative framework that would expand required private sector reporting to include health data other than notifiable communicable diseases – as currently obtains – would be highly desirable. In addition, determination of national requirements and standards for recording patient visits, whether in the public or private sector, would facilitate reporting and analysis. Barbados identified funding as a priority and Belize requested an external evaluation of its system, while Jamaica highlighted electronic medical records, reduction in Accident & Emergency and surgical waiting times, and telemedicine as priorities to be addressed through IS4H. While Jamaica highlighted electronic health records at the Primary Care and Hospital levels, reduction in Accident & Emergency Triage and surgical waiting times, Class I Notifiable Diseases Reporting, and telemedicine among the initial priorities to be addressed through IS4H.

The countries’ presentations highlighted the importance of phased implementation, with clear and concrete investments regarding legislative framework, SOPs

- There is a need for different levels of relationships between paper and electronic records, since it is almost impossible to put everything on an electronic platform, and both systems could cooperate
- IS4H should be seen in context of health system reform, and the role of the MoH should be clarified for the nation – it is regulatory, and reporting on patients should be part of the regulations. There are many conditions, other than communicable diseases, that should be mandated for reporting to the national health authority.
- There is a movement from services to systems, and the systems approach should be implemented in the context of e-governance initiatives; this would be opportune to obtain collaboration from other sectors.
- Digitization of medical records should be done prospectively, rather than retrospectively, and a phased approach to IS4H development should be adopted – by priority areas, geographic areas or institutions, based on priorities and resources – that would identify permit add-ons at a later stage.
- For success, Open Source Solutions may thrive best in the context of a national supporting Policy and depends upon the Business Model developed for its long-term and sustainable implementation. It is important to note that open source and proprietary solutions could interoperate and exchange information if appropriate standards are used.

- A Caribbean regional proposal should be developed and presented to development partners, to build on what has been done and what is available at country level.
- Confidentiality and security of IS4H are paramount, especially regarding patient-sensitive data and vetting of persons with access to the information.
- There are opportunities for countries through sharing of successes and good practices. Collaboration outside of the health sector itself, with other ministries, academia, and international development partners can be advantageous.
- Consideration should be given to the spheres of influence within an audience. At regional level, there could be a community management framework comprised of multisectoral, high-level, strategic thinkers and public relations practitioners. This could be coupled with, at a lower level, a social media strategy to determine social sentiments around health care. These could be distilled into a set of management concepts to identify successful approaches and challenges.
- Social media cannot be ignored; they may be useful in surveillance, and there are agencies with expertise and free tools that can help.
- Discussions in the meeting have shown consistency in terms of the IS4H vision, especially countries' desired outcomes. Collaboration, communication, and partnerships are important strategies; partnerships with telecommunication entities and the establishment of communities of practice can be facilitated by the IS4H TWG.
- Legislation should be managed at national level, since it usually takes a long time and would be difficult to achieve at regional level. However, some countries already have drafts and some countries can use model legislation, while others can refer to legal briefs. Key content of the legislation should be developed and shared.
- The outputs of the Caribbean Knowledge Learning Network (CKLN) project and the OECS eGovernance for Regional Integration Project (E-GRIP) would be useful to the IS4H initiative, and should be revisited.

Prioritization and the way forward

- Adoption of a holistic framework for IS4H in Caribbean, with identification of components amenable to joint work by countries.
- Adoption of the Regional Strategic Plan for advancing public health through interoperable IS4H.
- Identification of electronic medical records and hospital management systems as short-term IS4H priorities for Caribbean countries.
- Develop a regional Plan of Action and proposal that address identified priority actions for presentation to national Cabinets and potential funders, to facilitate, respectively, resource allocation and resource mobilization.

- Negotiate to put health and IS4H on the eGovernment agenda.
- Update legislation for, and associated with, IS4H, using model legislation, legal briefs, and/or examples from countries.
- Develop instruments such as an IS4H self-assessment tool, regional guidelines and standards for interoperability, privacy, confidentiality and security.
- Develop National Health Information architecture.
- Update the country IS4H situation assessment in coordination with the Caribbean IS4H TWG.
- Formalize the TWG and its functions, with review of its terms of reference as appropriate.
- Implement formal collaboration mechanisms for information sharing among countries.

Annexes

Annex 1 - Agenda

Annex 2- Caribbean IS4H Strategic Plan

Annex 3 - Outcome mapping method

Annex 4 - Lessons learned from countries

Annex 5 - Summary of group reports: Political and strategic considerations for advancing IS4H

Annex 6 - Strategic priority actions for IS4H

Annex 7 - Working groups methodological instruments

Annex 8 - Presentations

Annex 9 - Photos