Digital Transformation of the Health Sector in Latin America and the Caribbean

Electronic Health Records

#IDBDigitalHealth
@BIDgente

Inter-American Development Bank
Apps & Websites & Stations

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Instructions to download the IDB Events app
From the App Store (Apple Store or Google Play), search “IDB Events”. Open the App and Log-in using the credentials you used to sign-up for the event. Search for “Digital Transformation” and select the Health Regional Policy Dialogue. Favorite the event by touching the heart. Use the app to learn about logistics, speakers, and find resources in each event session to use during and after the event!

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Cardboard Camera
From the App Store (Apple Store or Google Play), search “Cardboard Camera”. In the event you will be provided with an IDB cardboard viewer. This viewer will help you virtually visit many of the places we will hear about during the event. To download the views from each country go to the corresponding session of the agenda in the IDB app and click on the VR link. This will download the image directly to the app for viewing.

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Help Wanted / Help Offered & Parking Lot
If your country has a valuable resource or solution that others could benefit from, or has a request for assistance, be sure to place it in the Classifieds board.

If you have a question we didn’t get to during a session, be sure to put it in the parking lot. We will share them with our presenters after the workshop and include answers in our final report.

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To access WiFi during the event, search for the open, hidden network on your device. Select this network and type in the following information:

Network Name: BID-GUEST
No password is required for this network
**Agenda**

**TUESDAY, OCTOBER 9TH**

9:00 - 10:45 am

*Opening of the Regional Health Policy Dialogue 2018*

**Marcelo Cabrol**, Social Sector Manager of the IDB

**Ferdinando Regalia**, Chief of the Social Protection and Health Division, IDB


10:45 - 11:00 am

Coffee

11:00 - 12:30 pm

*Session 1: The Route to Electronic Health Records*

**Peeter Ross**, MD, Ph.D.; Professor of eHealth at the Tallinn University of Technology, Estonia. Estonia’s Path to EHR.

**Jennifer Zelmer**, Ph.D.; President of the Azimuth Health Group. Canada’s Path to EHR.

12:30 - 1:45 pm

Lunch

1:45 - 2:45 pm

*Session 2: Governance, The Foundation for Electronic Health Records*

**Javier Carnicero**, Head of the Contracting of Health Services Unit, Health Service of Navarra (Spain). Governance of health information systems in Latin America and the Caribbean.

**Heimar F. Marin**, Ph.D.; Professor of Health Informatics, Federal University of Sao Paulo, Brazil. Governance and the use of health information systems: the experience of Brazil.

2:45 - 3:00 pm

Coffee

3:00 - 4:15 pm

*Session 3: Interoperability: Speaking the Same Language*

**William Hammond**, Ph.D.; Director, Duke Center for Health Informatics. The importance of international standards and their worldwide implementation.


4:15 - 4:30 pm

Coffee

4:30 - 5:40 pm

*Session 4: Leveraging Technology: The Use of Artificial Intelligence in Clinical Decision Support Systems*

**Rafael Figueroa**, CEO, Telemedicine Portal Sao Paulo. Telemedicine and mHealth have the potential to connect the most disconnected.

**John Yu**, CEO, Meridian Medical Network Corp. In China, the county of Jingde is implementing a technological solution using artificial intelligence to support primary care physicians in remote areas. Image and voice recognition technology are used to facilitate data entry and a clinical decision support system.

5:40 - 6:00 pm

Closing Remarks
**WEDNESDAY, OCTOBER 10TH**

9:00 - 10:10 am  
**Session 5: Access and Information: How to Overcome Connectivity and Hardware Barriers**  
**Diego Molano,** Former Minister of Information Technology and Communication of Colombia. The ecosystem required for digital transformation.  
**Greg Wyler,** Founder and Executive Director, OneWeb. How to close the connectivity gap.  
**Anayda Frisneda,** Public Sector General Manager for Latin America, Microsoft.

10:10 - 10:25 am  
**Coffee**

10:25 - 12:30 pm  
**Session 6: Leading Change for Digital Transformation**  
**Gloria Ortega,** General Manager, Bancard S.A. Best practices to design a successful behavior change strategy.  
**Hee Hwang, MD, Ph.D.;** Information Director and Associate Professor of Pediatric Neurology, Bundang Hospital of the National University of Seoul, Korea.  
**Analia Baum,** Chief of Quality and Training in Health Information Systems, Hospital Italiano de Buenos Aires.  
**Alan Dowling,** Ph.D.; Expert in adoption of health information technology.

12:30 - 1:30 pm  
**Lunch**

1:30 - 2:30 pm  
**Session 7: Diagnostics: How Ready is My Country for Digital Transformation?**  
**Manish Kumar,** Technical Specialist for the Strengthening of Health Systems, University of North Carolina. Tools to evaluate the state of a health information system at a global level.  
**Marcelo D’Agostino,** Senior Advisor, Information Systems, Knowledge Management, Big Data at Pan American Health Organization/World Health Organization.

2:30 - 2:45 pm  
**Coffee**

2:45 - 5:15 pm  
**Session 8: Opportunities and Efforts toward Inter-Regional Collaboration**  
**Alvin Marcelo, MD;** Director, Asia eHealth Information Network (AeHIN). The experience of AeHIN in Asia.  
**Boonchai Kihsanayotin, MD;** Manager and health informatician at the Thai Health Information Standards Development Center (THIS).  
**Fernando Portilla,** AGESIC Consultant in Uruguay for the American Network of Cooperation on Electronic Health. The experience of the region in collaborative networks for EHR implementation.

5:15 - 5:30 pm  
**Final Remarks**
### Key Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tr>
<td><strong>Electronic Medical Records</strong></td>
<td>Electronic medical records (EMRs) are digital versions of the paper charts in clinician offices, clinics, and hospitals. EMRs contain notes and information collected by and for the clinicians in that office, clinic, or hospital and are mostly used by providers for diagnosis and treatment. (HealthIT.gov)</td>
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<td><strong>Electronic Health Records</strong></td>
<td>Electronic health records (EHRs) are built to go beyond standard clinical data collected in a provider's office and are inclusive of a broader view of a patient’s care. EHRs contain information from all the clinicians involved in a patient’s care and all authorized clinicians involved in a patient’s care can access the information to provide care to that patient. EHRs also share information with other health care providers, such as laboratories and specialists. (IBID)</td>
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<td><strong>Personal Health Records</strong></td>
<td>Personal health records (PHRs) contain the same types of information as EHRs—diagnoses, medications, immunizations, family medical histories, and provider contact information—but are designed to be set up, accessed, and managed by patients. (IBID)</td>
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<td><strong>EHR vs EHR System</strong></td>
<td>Strictly speaking, an EHR is the database that collects information. An EHR system is the EHR and all its applications - for example, labs, pharmacy, radiology, computerized physician order entry, patient portal, etc. Most off the shelf products are EHR Systems, not EHRs. This is important to remember when comparing products.</td>
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<td><strong>Interoperability</strong></td>
<td>The ability of different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged. Interoperability means the ability of health information systems to work together within and across organizational boundaries in order to advance the effective delivery of healthcare for individuals and communities (HIMSS, 2013)</td>
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<td><strong>Foundational Interoperability</strong></td>
<td>Data exchange from one information technology system to another; does not require the ability for the receiving information technology system to interpret the data. (National Committee on Vital and Health Statistics, 2000)</td>
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<td><strong>Structural Interoperability</strong></td>
<td>Uniform movement of healthcare data from one system to another such that the clinical or operational purpose and meaning of the data is preserved and unaltered. Structural interoperability defines the syntax of the data exchange. It ensures that data exchanges between information technology systems can be interpreted at the data field level. (IBID)</td>
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<td><strong>Semantic Interoperability</strong></td>
<td>The ability of two or more systems or elements to exchange information and to use the information that has been exchanged (IEEE, 1990). Supports the electronic exchange of patient summary information among caregivers and other authorized parties via potentially disparate electronic health record (EHR) systems and other systems to improve quality, safety, efficiency, and efficacy of healthcare delivery (HIMSS, 2013)</td>
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<td><strong>Health Level Seven (HL7)</strong></td>
<td>A not-for-profit, ANSI-accredited standards developing organization dedicated to providing a comprehensive framework and related standards for the exchange, integration, sharing, and retrieval of electronic health information that supports clinical practice and the management, delivery and evaluation of health services (HL7.org)</td>
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<td><strong>Clinical Decision Support System (CDSS)</strong></td>
<td>Provides clinicians, staff, patients or other individuals with knowledge and person-specific information, intelligently filtered or presented at appropriate times, to enhance health and health care. CDS encompasses a variety of tools to enhance decision-making in the clinical workflow including computerized alerts and reminders; clinical guidelines; condition-specific order sets; focused patient data reports and summaries; documentation templates; diagnostic support, and contextually relevant reference information, among other tools. (Healthit.Gov)</td>
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<td><strong>Learning Healthcare System</strong></td>
<td>A system in which science, informatics, incentives, and culture are aligned for continuous improvement and innovation, with best practices seamlessly embedded in the delivery process and new knowledge captured as an integral by-product of the delivery experience (Institute of Medicine, 2015)</td>
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<td><strong>Open Source Software</strong></td>
<td>Open Source Software (OSS) is software distributed under a license that meets certain criteria: 1. It is available in source code form (without charge or at cost); 2. Open Source may be modified and redistributed without additional permission; 3. Finally, other criteria may apply to its use and redistribution. (Linux Foundation)</td>
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<td><strong>Health Informatics</strong></td>
<td>The interdisciplinary study of the design, development, adoption, and application of IT-based innovations in healthcare services delivery, management, and planning (US National Library of Medicine)</td>
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<td><strong>Health Information Exchange</strong></td>
<td>Allows doctors, nurses, pharmacists, other health care providers and patients to appropriately access and securely share a patient’s vital medical information electronically—improving the speed, quality, safety and cost of patient care. (Healthit.Gov)</td>
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<td><strong>Digital Transformation</strong></td>
<td>Digital transformation is the profound transformation of business and organizational activities, processes, competencies and models to fully leverage the changes and opportunities of a mix of digital technologies and their accelerating impact across society in a strategic and prioritized way, with present and future shifts in mind (ISCOOP)</td>
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<td><strong>Computerized Physician Order Entry (CPOE)</strong></td>
<td>Computerized provider order entry (CPOE) is a health information technology (health IT) system that is commonly used by hospitals and other health care providers to prevent medication-related errors and increase efficiency in medication administration. (Agency for Healthcare Research and Quality)</td>
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Reflection

What is the biggest challenge with respect to the digital transformation of the health sector in my country?
Reflection
If I had no restrictions, what would the health information system look like in my country ten years from now?
“The best way to predict the future is to create it”

Peter Drucker
Reflection

In my country, are roles and functions for digital transformation clearly defined?
"Technology alone is not enough"

Steve Jobs
Reflection
What standards do I have in place my country? Which ones are missing?
“Without data, you’re just another person with an opinion”

W. Edwards Deming
Reflection

How can artificial intelligence help my providers? Managers? Policy makers?
"The fastest way to succeed, is to double your failure rate"

Thomas Watson
Reflection
Have I brought the right people together to create a digital ecosystem?
"The electric light did not come from the continuous improvement of candles"

Oren Harari
Reflection

Am I ready to lead our digital transformation? What quick-win can I achieve in the next 90 days to show the benefits of digital transformation to my team?
"The secret of change is to focus all your energy, not on fighting the old, but on building the new"

Socrates
Reflection

What tools do I need to assess my country’s readiness for digital transformation?
"We cannot solve our problems with the same thinking we used when we created them"

Albert Einstein
Reflection

What common challenges do we have as a region? How can we work better together to solve them?
"The challenge of improving healthcare has never been primarily due to a lack of innovations, but a failure to implement, evaluate, and disseminate the myriad of promising innovations awaiting our attention"

JA Osheroff
The Principles for Digital Development are nine “living” guidelines designed to help digital development practitioners integrate established best practices into technology-enabled programs. The Inter-American Development Bank is an endorser of the Principles for Digital Development. As an endorser of the Principles for Digital Development, we will seek to embody the concepts of the Digital Principles, represented in our work culture and in the policies and processes guiding our international development activities.

Endorsing the Principles for Digital Development means that an organization, at the highest levels, agrees to put the Digital Principles into practice through its policies, processes and activities. It is a formal and public acknowledgement that an organization is committed to designing technology-enabled tools that can reach more people, achieve greater impact and produce stronger and more sustainable outcomes by actively living out the Digital Principles. IDB’s Social Protection and Health Division is applying the principles in the following way:

- Intentionally work with our regional partners to create joint plans for eHealth components in our investments
- Support knowledge networks, such as RASCEL and Central American DTIC Network
- Include projects in WHO Digital Health Atlas
- Prior to investing in eHealth, ensure country has an up-to-date readiness assessment, systems inventory, and high-level architecture
- Ensure internal coordination to other social sectors & ICS/Ministry of Technology
- Ensure our contracts include international best standards for interoperability
- Continue to support the development of open source software as a regional public good in IDB Code for Development
- Include data in IDB Numbers for Development
- Ensure pilot programs are accompanied by changes in policies, human resources and other foundational factors for institutionalization
- Include funding in project design for evaluating & systematizing eHealth interventions, to assist countries in their decision go to scale
- Ensure our contracts include international best standards for privacy, security and ethical treatment of data
- Support operational research on how to implement eHealth solutions
- Use digital tools to support on-going project monitoring and evaluation
- Support a data culture by prioritizing capacity building and data use efforts across all stakeholder groups
- Launch and manage +Digital Platform
- Document and share IDB investments in eHealth
- Conduct a market and landscape analysis of EHR tools in the region
- SPH will not support “project specific” or “vertical, stand-alone” systems, but will invest in platforms that will allow for expansion and update based on new content areas & use a modular approach
- Calculate Total Cost of Ownership up front & include sustainability plan in investments
- Ensure end users are consulted during the design process
- Explore how to better incorporate agile design into our current project development processes

Use your QR Scanner to visit the Principles for Digital Development webpage to learn more
## Contacts

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