Electronic Health Records (EHR) and Interoperability: Understanding two key concepts for a better Public Health response

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PAHO

Pan American Health Organization

World Health Organization
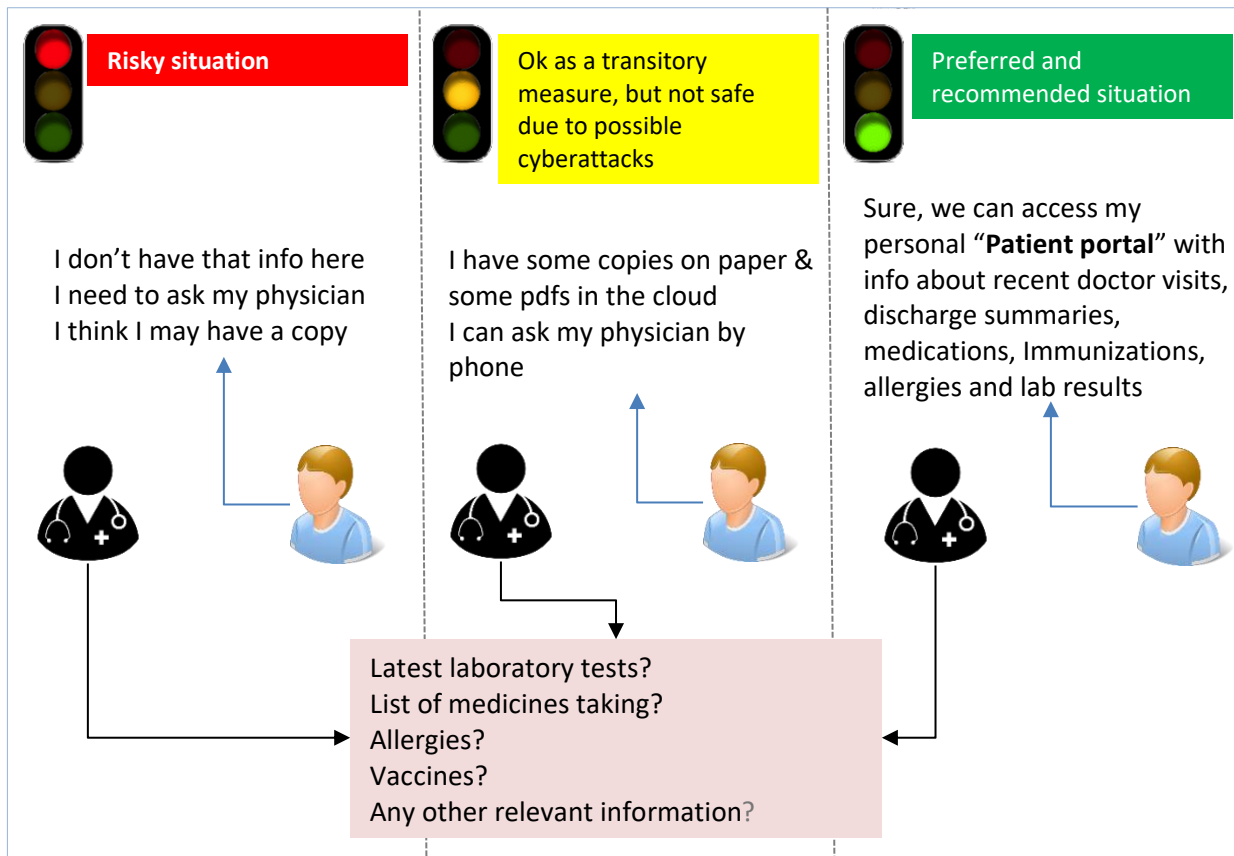
REGIONAL OFFICE FOR THE **Americas**

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Electronic Health Records (EHR) and Interoperability: *Understanding two key concepts for a better Public Health response*

IMPORTANT NOTE: *Stay informed of the latest information on the Coronavirus Disease (COVID-19), available on the PAHO and WHO websites and through your national and local public health authorities.*

Why are Electronic Health Records key during a pandemic?

It is critical to have immediate access to patient data in one place, at the right time and in the right format for quick responses and coordinated actions and decisions, especially for those who are in the most vulnerable conditions. But also, an adequate and interoperable EHR facilitates the access and sharing of data within the public health system, thus allowing better monitoring and reporting of suspected and confirmed cases, treatment regimens and abnormal conditions, among many others, in an agile and more faithful way than through a paper-based or "non-interoperable" system. This allows to understand more quickly the behavior of the pandemic in a given population; so that adequate and timely containment and/or mitigation interventions can be made.

> EHRs facilitate the use of telemedicine, to monitor positive cases from their homes, and also allow for care continuity for patients without COVID-19 but can be treated remotely.

Risky situation

I don't have that info here
I need to ask my physician
I think I may have a copy

Ok as a transitory measure, but not safe due to possible cyberattacks

I have some copies on paper & some pdfs in the cloud
I can ask my physician by phone

Preferred and recommended situation

Sure, we can access my personal "**Patient portal**" with info about recent doctor visits, discharge summaries, medications, Immunizations, allergies and lab results

Latest laboratory tests?
List of medicines taking?
Allergies?
Vaccines?
Any other relevant information?

What are Electronic Health Records?

An EHR is a health record residing in an electronic system specifically designed for data collection, storage, and manipulation, and to provide safe access to complete data about patients. They are also clinical decision support tools, offering important clinical information for the care of patients. EHR offer many benefits compared to paper records: accessibility, support for multiple views, improved communication between providers, communication with patients, data aggregation, access to knowledge bases, and integration with decision support tools.

What is Interoperability and why is a critical factor for success?

Interoperability is the ability of different information technology systems and networks to communicate, to exchange data accurately, effectively and consistently and to use the information that has been exchanged. But in "simple words" it is simply the possibility of accessing or exchanging a patient's clinical information regardless of where it may be stored or in what format. Interoperability in electronic health records allows health workers to have a holistic view of a patient and therefore a much better understanding of their symptoms. It also allows the development of a more appropriate diagnosis according to the patient's specific health situation, especially those in vulnerable situations.

Are countries prepared to use Electronic Health Records during a pandemic?

All the countries of the Americas have endorsed a Plan of Action for the Strengthening of Information Systems for Health in October 2019. The plan is based on collaborative effort between PAHO and IDB and promotes the adoption of international standards for allow information, knowledge and data exchange. And although many systems are not yet ready for it, all countries are taking important measures to improve this situation and move towards inter-operability in health.

Considerations of confidentiality and security of Electronic Health Records

Confidentiality, security and privacy concerns should consider the misused of unauthorized access to patient information, data integrity and compliance with protection norms and regulations. A holistic approach is needed with the participation of health experts, legal authorities and information technologies specialists.

Where can I find technical information about Electronic Health Records?

- PAHO/WHO eHealth Conversations (page 310)
- IDB - Electronic Health Record Systems: Definitions, Evidence, and Practical Recommendations for Latin America and the Caribbean
- What are Electronic Heath Records?
- Security Techniques for the Electronic Health Records
- Confidentiality and Privacy of Personal Data

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