Medical Records Digital Perspective Colombian: Safety, Quality, and Management of Data

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Abstract: *The patient's medical record is the only valid document that demonstrates the type of care a patient has received, therefore it must faithfully reflect the quality of care provided by health professionals, as well as basic personal information but vitally important. In Colombia there is a great difficulty that affects the quality of care process, this difficulty lies in the fact that each EPS generates to clinical history to its members, but does not share it with their counterparts when a user decide to migrate to another EPS. This document presents the advantages of creating a national system that contains in digital format to unique medical record per user, the existing regulations that seek to protect the privacy of personal data, as well as the practices that ensure the accuracy of the information provided in each medical and/or legal procedure.*

Key Words: *History clinical digital, data quality, data management data, eHealth, health information system.*

1. Introduction

In Colombia, the medical records contain data of different degrees of confidentiality, obtained from various sources such as: the user, when they (users) makes the affiliation, during the process of rendering health services or other processes; Other sources are added, legal and/or medical procedures, data update, among others. SIVIGILA (Public Health Surveillance System) is responsible for the flow of this information, the aforementioned surveillance system has Primary Data Generating Units (UPGD), responsible for the initial collection of data and its transfer to the Notifying Units, which act at the municipal, departmental or district level, as appropriate; Subsequently, these Notifying Units send this information to the National Notification Unit for consolidation. The Ministry of Health and Social Protection, in compliance with international agreements on public health surveillance, reports surveillance data required by international organizations, such as the World Health Organization (OMS) and the Pan American Health Organization. Health (OPS).
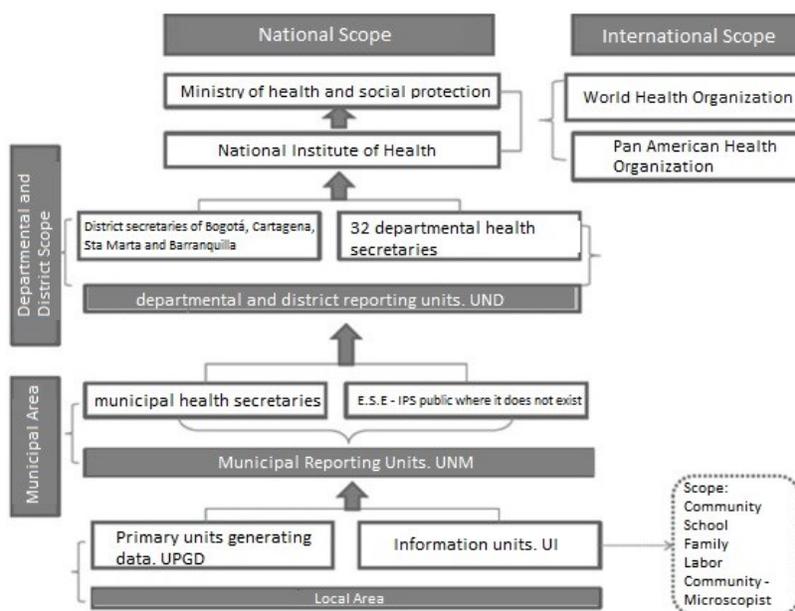
Personal information collected from patients, through various sources may include, but are not limited to: name; sex; religious worship; place and date of birth; gender; physical address; of e-mail; telephone numbers: cellular and landline; employer, your location and contact information; clinical information of the patient including legal background, results of examinations such as pathological and clinical, consultations, formulations, diagnoses, general and special medical and nursing care, consultations among specialists, among others; family contacts or legal representatives; education degree; occupation; information necessary

to facilitate the provision of services, including family or work information, ID number, passport or TIN, nationality and country of residence, insurance or health service provider, use of products and services; RH; personal information provided to representatives of the health services provider entity. Data that are sensitive in and demand a confidential treatment of great importance, because this information can be used by criminals who seek to obtain their own benefit, for example through extortion, kidnapping and sale of data. Another point of view that demands an important challenge for health entities in Colombia, is to determine the flow of information from its obtaining to its processing, in health, the veracity of the data determines the generation of public policies and health, states of emergency and in general decisions that directly affect the communities. This article describes the proposal that is being implemented by the Colombian government regarding the obtaining, management and processing of the data stored in the digital medical records, since currently each healthcare provider manages its own digital medical record system, preventing the centralization of data related to the health of Colombians, which causes inefficiency in the operation and provision of health services and decision making of social impact.

2. Health information systems in Colombia

SIVIGILA is based on five basic principles that guide the actions taken to improve the quality of health services as expressed in the document SIVIGILA Generality (Gobierno Digital de Colombia, 2016): Efficacy: Ability to achieve results; Unit: Functional integration of the different levels of the health sector; Efficiency: Rational use of resources to guarantee obtaining the best results in terms of public health surveillance; Forecast: Ability to identify and characterize in advance, the possible risk conditions for the health of the population; Quality: Reliability guarantee; opportunity and reliability of the information.

Figure 1. Data Flow Health System Colombia. Reprinted with permission, public information. (Instituto Nacional de Salud, 2014)

Currently, Colombia has an inefficient information system in the health sector that does not allow obtaining updated data in an efficient and easy way, a problem that results from the lack of interoperability between existing EPS systems (health promoting entities). Although there is a legal framework, such as Decree No. 3518 of 2006 "By which the Public Health Surveillance System is created and regulated and other provisions are issued" (MINISTERIO DE LA PROTECCION SOCIAL, 2006), these information systems have not been managed to develop as expected, which has caused the information to remain segmented and there are problems related to the quality of the data, it is understood as "the quality of a set of information collected in a database or an information system which includes among its attributes the accuracy, completeness, integrity, updating, coherence, relevance, accessibility and reliability necessary for the effectiveness of operational processes. " (PowerData, 2017) (Congreso de Colombia, 2011) This is evidenced in a specific way in the management of medical records by the administrators and providers of health services, which face obstacles that hinder the process of quality care, which translates into the reduction of users' well-being, said difficulty is that each EPS creates a clinical history for its members, but does not share it with their counterparts when a user decides to migrate to another EPS, which must generate a new clinical history, which entails to losses of valuable information for people.These losses of information could cause setbacks when making emergency interventions in which patients cannot provide information about existing health conditions, allergies or other conditions, which can lead to improper practices by those responsible for the care. Exposed this scenario, the Colombian government, saw the need for the creation of a unique digital medical record that is shared by all health providers, taking into account parameters such as: accessibility, safety, integrity and confidentiality of the fact.

On January 19, 2011, the Colombian state took an important step to make the creation of digital medical records a reality through Law 1438 (Congreso de Colombia, 2011), "By means of which the General System of Social Security in Health is reformed and other provisions are issued ", Article 112. Articulation of the Information System, proposes that through the Integral Information System of Social Protection (SISPRO), the management and administration of the information of each one of the affiliates will be carried out, the of data containing such information will be articulated with the databases of the National Registry of Civil Status, the Ministry of Finance and Public Credit, the Directorate of Customs and National Taxes, the Identification System of Beneficiaries of Social Programs (SISBEN) and the Health Promoting Entities. The security of each of the user's data will be promoted through verification and consultation in the database of the National Registry of Civil Status. The digital medical records present a great challenge in terms of data security, since a large amount of such data is sensitive and private, that is why Colombian legislation has established laws that promote safety and security. Disclosure of information. The treatment of health data requires considering the availability and confidentiality of information, which are the concepts that define the main criteria of security and data protection: that the information is available when necessary, but is only available to those who are authorized for this, when authorized and for the uses that are authorized. It is also necessary to guarantee that this information has been kept intact and that whoever has accessed it cannot deny it, since this information is also part of the information.

In many countries of the world, the importance of digitizing medical records has gained great strength, and the idea of its implementation has not been limited to the borders of countries that seek to make them a reality. Due to human trafficking among the countries that make up the European Union, the need arose to create a system that allows the sharing of patient data, in order to ensure that those citizens who require medical assistance in a country that is not their own can receive the Appropriate attention, from this idea was born the EPSOS project (Smart Open Services for European Patient) (EPSOS, 2017), whose base is a system of digital medical records that allows access to those authorized regardless of where the care is provided and with independence of the place where the information was generated, thus allowing the interoperability of the health sector of the twelve participating Member States: Spain, Austria, Sweden, Czech Republic, Germany, Denmark, France, Greece, Italy, the Netherlands, Slovakia and the United Kingdom .

3. Conclusion

- In Colombia it is essential to have a unified national system of digital medical records that allows the timely consultation of a user's information, in order to improve the quality of health service provision in both public and private entities.

- Guarantee availability, identification, authentication, integrity and non-repudiation, it is necessary to have a regulatory entity in which all the data gathered from users converge in order to guarantee optimal interoperability.

- The unification of digital medical records that must comply with the guidelines proposed by SIGVILA and SISPRO described in this article, for this the development of the computer system is of vital importance, which guarantees the security of the information and from the source to the delivery of the data processed for its interpretation, that is why the quality of the data (veracity of the source) are critical processes where control includes aspects of good professional behavior and good behavior of patients.

4. Acknowledgement

5. References

Congreso de Colombia, 2011. *LEY 1438 DE 2011 - Por medio de la cual se reforma el Sistema General de Seguridad Social en Salud y se dictan otras disposiciones*. Bogotá - Colombia: Gobierno Nacional de Colombia.

EPSOS, 2017. *Smart Open Services for European Patients,* Stockholm Sweden: EPSOS.

Gobierno Digital de Colombia, 2016. *Datos Abiertos.* [En línea]
Available at: https://www.datos.gov.co/
[Último acceso: 16 February 2018].

Instituto Nacional de Salud, 2014. *PROTOCOLO DE VIGILANCIA EN SALUD PUBLICA,* Bogotá - Colombia: Ministerio de Salud de Colombia.

MINISTERIO DE LA PROTECCION SOCIAL, 2006. *DECRETO NUMERO 3518 DE 2006.* Bogotá - Colombia: Gobierno Nacional de Colombia.

PowerData, 2017. *Calidad de Datos. Cómo impulsar tu negocio con los datos..* [En línea]
Available at: https://www.powerdata.es/calidad-de-datos
[Último acceso: 26 March 2018].