

# Analysis of Medical Records Management in Brazilian Basic Healthcare Units: A Qualitative Approach

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# Summary

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# Introduction

- Brazilian health environments in the path of development, especially in technology;
- The Brazilian Federal Constitution obliges the Municipalities to provide health services to the Brazilian citizens;
- The Basic Healthcare Units (BHU) are the places where the Brazilian citizens receive the first clinical care when it is not an emergency. The records of the clinical appointments (diagnoses, medications and treatments) of the patients are recorded in medical records;
- The objective of this study was to understand how the BHU controls access to patients' medical records, to verify the occurrence of the use of the paper medical record and digital format, and to compare the reality practiced with the current legislation.

# Electronic Medical Record (EMR)

## EMR concept to [Slee et al., 2000]

An electronic record that resides in a system specifically designed to support users by providing access to a complete set of correct data, alerts, decision support systems and other resources such as links to medical knowledge bases.

- In Brazil, paper medical records are migrating to health information systems with EMR;
- There are paper and electronic medical records in Brazil. In the BHUs the medical records are on paper.

## Related Work

The results of the related studies corroborate with the results found in this research. Some relevant factors are highlighted below:

- In Miller's work [Miller Jr et al., 2016], it was identified how BHUs see the use of web sites or health portals, with electronic medical records, by low-income people;
- In the work of Shimada [Shimada et al., 2009], a qualitative research with cross-sectional analysis was done to identify the adoption of the web platform with electronic medical records by the patients;
- Lester's work [Lester et al., 2016] carried out a literature review with the analysis of 34 articles on the benefit of personal health records or electronic medical records.

# Qualitative Research

## Qualitative Research Concept to [Marconi, 2006].

It is a scientific research method for collecting data about a group. This method makes it possible to understand and interpret behaviors, opinions and expectations of individuals.

- The results are not quantitative, but qualitative, they generate descriptions of the object of study (researched group);

# Real Environment of Qualitative Research

- The qualitative research was carried out in BHUs of the city of Londrina-PR;
- The city of Londrina has more than 580,000 paper medical records in the 56 BHUs of Londrina and region. The coverage area, to provide the service, of each UBS, corresponds to the average total of 20,000 inhabitants;
- Qualitative research can only be carried out after approval of the research project by the ethics committee of human beings and later by the competent authority of the City Hall;
- In Londrina, the Committee used was the Ethics Committee of the Evangelical Beneficent Association of Londrina);
- The Municipal Authority that authorized the research in the BHUs was the Vila da Saúde;

# Real Environment of Qualitative Research

- Foram entrevistados 29 subjects aged 20 to 58 years were interviewed, the average age being about 38 years;
- The occupation of the interviewees were: interns - 1 (3.44%), administrative technician - 2 (6.89%), oral health technician - 1 (3.44%), nursing auxiliary - 14 (48.27%), physician - 1 (3.44%), community agent - 4 (13.79%), nurse - 5 (17.24%) and physiotherapist - 1 (3.44%);
- Working time in basic health units varied between 1 month and 30 years, the average time spent working in a BHU was 8 years;
- The working time in the specific BHU varying between 1 month and 27 years, the average time spent working at that specific BHU was 5 years.



# General Process of Qualitative Research

- 1 Elaboration and submission of the research project to the Vila da Saúde so they could evaluate and give the temporary authorization;
- 2 With the temporary authorization, the project was submitted to the Ethics Committee of the Evangelical Beneficent Association of Londrina - AEBEL;
- 3 After the approval of the ethics committee, Vila da Saúde issues the final authorization for the execution of the qualitative research;
- 4 Elaboration of the script for the interviews and sending to the judges;
- 5 Draw of an UBS from each region of Londrina / PR - North, South, East, West and Center, and later contact them to schedule the interviews;
- 6 Elaboration of the Free Informed Consent Form;
- 7 Execution of the interviews until the saturation of the answers with health professionals and administrative technicians on a voluntary basis. About 5 to 6 interviews by UBS, with a total of 29 interviews with an average time of 25 minutes;
- 8 Literal transcript of interviews;
- 9 Categorization of interviews and review of categories;
- 10 Observation of the health environment.

# Execution of Qualitative Research - Semi-structured interview

## Concept of semi-structured interview according to [Lankshear, 2008]

The semi-structured interview is a technique of data collection and it is defined as planned interactions, previously combined, between two or more people, where someone is responsible for asking questions about a specific topic or topic of interest and the others respond to these questions. If the interviewer finds it necessary, it may include new questions.



# Execution of Qualitative Research - Content analysis

## Concept of content analysis according to [Bardin, 2009]

A set of techniques of communication analysis aiming to obtain by systematic procedures and objectives of content description of the messages, indicators (quantitative or otherwise) that allow the inference of the knowledges related to the production/reception conditions (inferred variables) of these messages.

### Categories:

- 1 Information of the medical records;
- 2 Advantages of using handwritten medical records;
- 3 Disadvantages of handwritten medical records;
- 4 Sharing and transfer of medical records;
- 5 Use of medical records in home care;
- 6 Release of medical records to the patient;
- 7 Collection of medical records.

# Execution of Qualitative Research - Unstructured observation

## Concept of unstructured observation according to [Bogdan, 1994]

It is a field strategy that combines active participation with the subjects, intensive observation in natural environments, open and informal interviews and a documentary analysis, as the researchers will be immersed in the world of the observed subjects. There is no control and planning.

### Observed Topics:

- 1 Structure;
- 2 Coverage Area;
- 3 Systems;
- 4 Paper medical record;
- 5 Eventual medical record;
- 6 Address change;
- 7 Patient care;
- 8 Medical Record's room;
- 9 Loss of medical records;
- 10 Exposure of medical records;
- 11 Exposure of employees.

## Final remarks

- The BHUs were known according to their type of service and functioning;
- The relationship between the BHUs and between BHUs and other health sectors was understood;
- The information about the environment of the BHUs was known;
- The positions and functions of the employees in the BHUs were understood;
- The interaction between the individuals (employees and patients) was understood;
- The way the access control to the medical record happens is made known and understood;
- The BHUs use paper medical records;
- The BHUs use electronic systems to record the patient's registry in the Unified Health System - SUS, vaccines and exams.

## Final remarks

- The difficulties of understanding the content of medical records on paper were well known.
- The difficulty of handling and storing paper medical records was understood.
- There is a need to acquire and update computers and improvements in the Internet;
- The Brazilian Legislation encourages the use of electronic medical records;
- The Federal Councils of the health area supervise the use of the paper and electronic medical records.