# Revisão de Literatura

Maria C. S. dos Santos, Élida F. D. Souza, Anne C. M. S. Gomes, Anna L. M. de Melo, Merlayne P. O. e Silva, Vinícius A. G. de Sousa, Liliane A. Cardoso, Elenice M. C. Vaz
Processo de implementação do prontuário eletrônico na atenção básica: faces e interfaces no cuidado em saúde da família

# Implementation process of the electronic record in primary care: faces and interfaces in family health care

Processo de implementação do prontuário eletrônico na atenção básica: faces e interfaces no cuidado em saúde da família

Proceso de implementación del registro electrónico en atención primaria: caras e interfaces en la atención a la salud familiar

**RESUMO**

Objetivo: Descrever o processo de implementação do Prontuário Eletrônico na atenção básica à luz da literatura. Método: Revisão integrativa da literatura, realizada nas bases/bibliotecas de dados selecionadas para a pesquisa foram: Literatura Latino-Americana e do Caribe em Ciências da Saúde – LILACS, Medical Literature Analysis and Retrievel System Online – MEDLINE, Google acadêmico e Scientific Electronic Library Online – SciELO, entre os meses de novembro e dezembro do ano de 2022. A pesquisa reuniu 10 artigos sobre o tema, que foram organizados em dois quadros. Resultados: Predominaram-se artigos do ano de 2021, com abordagem qualitativa, e nível de evidência VI. A partir de uma análise descritiva, foram elencadas os seguintes termos-definidores: Gestão do Cuidado; Integração; Relações humanas; Desafios; Capacitação dos profissionais; Colaboração e Contribuição do PEC. Conclusão: Conclui-se que a implementação do PEC ainda é um desafio, e que quando ela ocorre, traz inúmeros benefícios para a Saúde da Família.
**DESCRITORES:** Prontuário Eletrônico; Atenção Básica; Saúde da Família; Registros Eletrônicos de Saúde.

**ABSTRACT**

Objective: To describe the process of implementing the Electronic Medical Record in primary care based on the literature. Method: Integrative literature review, carried out in the databases/data libraries selected for the research were: Latin American and Caribbean Literature in Health Sciences – LILACS, Medical Literature Analysis and Retrieval System Online – MEDLINE, Google academic and Scientific Electronic Library Online – SciELO, between the months of November and December of 2022. The survey gathered 10 articles on the subject, which were organized into two tables. Results: Articles from 2021 predominated, with a qualitative approach, and level of evidence VI. From a descriptive analysis, the following defining terms of the results of the articles found were listed: Care Management; Integration; Human relations; Challenge; Training; Collaboration and Contribution. Conclusion: It is concluded that the implementation of the PEC is still a challenge, and that when it occurs it brings numerous benefits to the Family Health.
**DESCRIPTORS:** Electronic Medical Record; Primary Care; Family Health; Electronic Health Records.

**RESUMEN**

Objetivo: Describir el proceso de implantación de la Historia Clínica Electrónica en la atención primaria a la luz de la literatura. Método: Revisión bibliográfica integradora, realizada en las bases de datos/bibliotecas seleccionadas para la investigación: Literatura Latinoamericana y del Caribe en Ciencias de la Salud - LILACS, Medical Literature Analysis and Retrieval System Online - MEDLINE, Google Scholar y Scientific Electronic Library Online - SciELO, entre los meses de noviembre y diciembre de 2022. La investigación reunió 10 artículos sobre el tema, que fueron organizados en dos tablas. Resultados: Hubo predominio de artículos de 2021, con abordaje cualitativo y nivel de evidencia VI. A partir de un análisis descriptivo, se listaron los siguientes términos definitorios: Gestión de Cuidados; Integración; Relaciones Humanas; Desafíos; Formación de Profesionales; Colaboración y Contribución del PSC. Conclusión: Se puede concluir que la implantación de la PEC todavía es un desafío, pero que cuando ocurre, trae innumerables beneficios para la Salud de la Familia.
**DESCRIPTORES:** Historia Clínica Electrónica; Atención Primaria; Salud de la Familia; Historia Clínica Electrónica.

**Maria Carolina Salustino dos Santos**
Resident in Family and Community Health. School of Medical Sciences of Paraíba. Masters in nursing from the Federal University of Paraíba.
ORCID: 0000-0002-9288-2017

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**Élida de Fátima Diniz Souza**
Specialist in Preceptorship at SUS by Sírio Libanês. Field Preceptor in the Family Health Residency of the Schoolof Medical Sciences of Paraiba. Master's student in Family Health at the Postgraduate Program in Family Health of the State University of Paraíba
ORCID: 0000-0003-3090-8792

**Anne Carolinne Marie dos Santos Gomes**
Nurse. Masters in nursing from the Graduate Program in Nursing at UFPB. Specialist in Urgency, Emergency, and Intensive Care Unit by CEFAPP.
ORCID: 0000-0001-8464-2585

**Anna Laura Maciel de Melo**
Bachelor in Physiotherapy, Specialist in family and community health by FCM.
ORCID: 0000-0001-6826-4422

**Merlayne Pâmela de Oliveira e Silva**
Physiotherapist. Specialist in Collective Health and Resident in Family Health by FCM.
ORCID: 0000-0003-0409-3913

**Vinícius André Gouveia de Sousa**
Bachelors in psychology, Specialist in family and community health by FCM.
ORCID: 0000-0003-1965-6811

**Liliane de Almeida Cardoso**
Graduated in Nursing. Resident in Family and Community Health at FCM.
ORCID: 0000-0002-1291-6361

**Elenice Maria Cecchetti Vaz**
Professor at the Federal University of Paraíba - UFPB PhD in Nursing from UFPB.
ORCID: 0000-0001-6149-1892

## INTRODUCTION

The National Primary Care Policy (PNAB) conceptualizes Primary Care (PC) as the coordinator of care in the Health Care Network (RAS), with the main function of structuring the Brazilian health system, ensuring primary care for individual and collective health. In Brazil, the Unified Health System (SUS) has funding to adhere to the programs and guidelines that constitute the PNAB, one of these programs is the Health Information System for Primary Care (SISAB), which emerged from Ordinance GM/MS No. 1,412 of July 10, 2013. [1]

The SISAB allows continuity of care through the monitoring of actions within Family Health, in addition to qualifying the information issued by AB, promoting effective assistance. In this context, there is the e-SUS AB, which has two software possibilities, the first is the Simplified Data Collection (CDS), which provides initial information on the population and its health conditions; and the Electronic Citizen's Record (PEC), which records the care provided by the health team, allowing data to be fed into SISAB[2].

Continuously, the PEC was developed with the objective of integrating health data, and gathering information among health professionals, resulting in the sharing of information in Primary Care, enhancing the work process, as well as health planning. It is important to emphasize that the CSP can be used in the HCN, and not only in primary care, but that the deficit of a system that allows this contact between the levels of health care is still growing.

It is understood that CSP is essential for health care delivery and quality assurance. In the PEC, we have the user's information, from their personal data to the exams, clinical history and conduct in the care. The study points out that for the implementation of the CSP, there are faces and inter-faces, as it is surrounded by responsibilities from management to health professionals. For the CSP to work, you need internet access, computers, training, and commitment from those who will use it. The record is effectively better, when compared to the paper medical record[3].

It is evident that with the implementation of the PEC, records become more secure, using technology as a resource, expanding knowledge about health information systems. The PEC provides reference and counter-reference between health professionals in PHC, in which they have access to the consultations in which the patient passed, as well as the procedures performed[2].

Thus, although the PEC has not been implemented in all health services in the national territory, the MS continues to try to make this process feasible, however, it is something that starts from health management and that needs to be conducted correctly for professionals in PC[1,2,3]. Thus, the following resear-

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ch question was raised How does the implementation of the Electronic Health Record occur in primary care and what are the faces and interfaces of this process? To describe the process of implementation of the Electronic Health Record in primary care in the light of the literature.

## METHOD

Structured research in the integrative literature review modality, descriptive, qualitative, and exploratory, guided by the following construction phases: definition of the research question, selection of descriptors and databases, determination and organization of the articles found and finally, presentation of the results. The databases/libraries selected for the search were: Latin American and Caribbean Literature in Health Sciences - LILACS, Medical Literature Analysis and Retrievel System Online - MEDLINE, Google Scholar and Scientific Electronic Library Online - SciELO. The data collection period was between the months of November and December 2022, making the research recent in its impacts.

The following inclusion criteria were defined: complete articles, available in full, free of charge, in Portuguese, English and Spanish, which respond to the objective and research question of this study, published between the years 2019 to 2022. The following were not included: paid texts, published in congress, theses, dissertations, or incomplete works, in another timeline. To perform the search for quality articles, the Health Sciences Descriptors (DeCS) were listed, which are: Electronic Health Record; Primary Care; Family Health; Electronic Health Records. These descriptors were searched using the Boolean operator AND and cross-referenced in each database search.

In the search for articles, a total of 116 scientific texts were found. To carry out the selection of articles, it was necessary to follow these steps: 1- Application of the timeline filter and the inclusion criteria; 2- Reading of titles, 3- Reading of abstracts and descriptors, 4- Reading of the full article. In the meeting of the 116 articles identified, the time from 2019 to 2022 was applied, and the inclusion criteria, in which 78 articles remained for analysis. Thus, the 78 titles of the articles were read and the presence of descriptors and relationship with the research theme were observed. At this point, only 12 articles were directed to the theme under study. The 12 articles had their abstracts thoroughly analyzed in all aspects.

Of these 12 articles, 2 were conference materials and could not be included. Finally, the corpus of this research consisted of 10 scientific articles. These articles were filed and read in full, in order to confirm that they were consistent with the objective and the guiding question of the research. The research was validated by two researchers specialized in family health, in which they repeated the publication search process.

## RESULTS

The articles were fully analyzed, and from this, aiming at a better exposition of the results, it was possible to organize them in two tables, the first with the main characteristics, which are: authors, titles, year of publication, research method and level of evidence. The second table explored the information found on the implementation process of the CSP, as well as its faces and interfaces in primary care. The articles were identified with the codifications "A1, A2, A3" up to number 10.

Predominant articles were found from the year 2021 (5); followed by the years 2022 and 2020 (2) in each year and finally the year 2019 (1). Regarding the level of evidence, all studies were classified as level VI, which corresponds to well-designed research with consistent evidence. Levels of evidence range from I to VI, with level VI being the highest level of evidence[14]. This classification allows a detailed, integral, and targeted analysis, in which it is possible to perceive the presence of bias and methodological flaws, guided by the Joanna Briggs Institute [14]. Regarding the research approach, the predominant studies were of qualitative origin.

From a descriptive analysis, the following defining terms were listed: Care Management; Integration; Human Relations; Challenges; Training of professionals; Collaboration and Contribution of the PEC. In the studies analyzed, these were the main relevant terms on the research topic. It was realized that the PEC is a great technological advance, and that it has benefits for the team and its patients in Family Health, on the other hand, it needs an efficient management that provides the ideal conditions for its operation.

## DISCUSSION

Care Management is linked to technology in the health sector, which helps to monitor

| Code | Authors | Titles | Publication year: | Research Method | Level of Evidence |
|------|---------|--------|-------------------|-----------------|-------------------|
| A1 | Ávila GS. et al. [4] | Prontuário Eletrônico na Gestão do Cuidado em Equipes de Saúde da Família | 2022 | Pesquisa da modalidade estudo de caso com abordagem qualitativa, utilizando a técnica de entrevistas e observação direta. | VI |
| A2 | Beserra LRM. et al. [5] | Impactos e Desafios do uso de Prontuários Eletrônicos na prática Odontológica | 2021 | Estudo guiado pela experiência dos autores junto a base de dados científicas. | VI |

TABLE 1- Characteristics of the articles related to the theme:

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| | | | | | |
|---|---|---|---|---|---|
| A3 | Macedo, TLS. et al.[6] | Implantação de um prontuário eletrônico a luz da teoria ator-rede | 2021 | Pesquisa de campo, qualitativa, que ocorre mediante entrevista com profissionais de saúde e gestores, usando as escalas de visualização das dinâmicas sociais cartografadas. | VI |
| A4 | Ávila GS. et al.[7] | Difusão do Prontuário Eletrônico do Cidadão em Equipes de Saúde da Família | 2021 | Estudo de caso de abordagem qualitativa fundamentado na teoria da difusão da inovação. A pesquisa contou com 39 profissionais da atenção básica em saúde, a partir da observação direta. | VI |
| A5 | Nunes JFN et al.[8] | Análise comparativa dos prontuários eletrônico e físico sobre a segurança das informações | 2021 | Pesquisa com referencial teórico e experiências científicas dos autores. | VI |
| A6 | Santos ER. et al.[9] | A utilização do Prontuário Eletrônico: um relato de experiência pelo olhar de estudantes de Medicina do interior do Amazonas | 2022 | Relato de experiência, por estudantes de medicina junto a profissionais de saúde da atenção básica, mediante a observação. | VI |
| A7 | Toledo PPS. et al.[10] | Prontuário Eletrônico: implementação sob as diretrizes da Política Nacional de Humanização | 2021 | Estudo com ênfase na problematização do tema, utilizando desde aos contextos científicos até as experiências individuais dos autores. | VI |
| A8 | Barbosa DV. et al.[11] | Prontuário eletrônico do cidadão: aceitação e facilidade de uso pelos cirurgiões-dentistas da atenção básica | 2020 | Estudo quantitativo, a partir de um formulário estruturado, realizado com profissionais dentistas da atenção básica. | VI |
| A9 | Gomes PAR, Farah BF, Rocha RS, et al.[12] | Prontuário Eletrônico do Cidadão: Instrumento Para o Cuidado de Enfermagem | 2019 | Pesquisa de abordagem qualitativa realizada com 11 enfermeiros da Atenção Básica. | VI |
| A10 | Schönholzer TE. et al.[13] | Avanço no Uso do Prontuário Eletrônico do Cidadão na Atenção Primária À Saúde. | 2020 | Estudo teórico, construído mediante a reflexão de diversos textos sobre o tema, usando como recurso áreas e descritores especializados na enfermagem. | VI |

Source: Survey data, 2023.

the health of the population. The identified studies pointed out that the participation of technological resources in management provides greater results in the health care offered by PC. Knowing that the CSP is a unique instrument, which acts encompassing personal, diagnostic, treatment and procedural information, its implementation is surrounded by faces and interfaces[4,5,6].

The applicability of technological resources brings together knowledge, capacity building and feasibility for their implementation. With PEC it is not different, the articles showed these aspects in an enlightening way, because CSP has its benefits, but it is not such a facilitating implementation process, because it depends on human relations and technologies[7,8,9].

Th PEC is a scientific tool, first focused

## TABLE 2- Faces and Interfaces of the CSP implementation process in Primary Care:

| Code | |
|---|---|
| A1 | The study showed that the PEC can benefit in three dimensions related to **Care Management: professional, organizational, and systemic.** |
| A2 | Better **integration between professionals**, from consultations, test interpretation and health decision making. |
| A3 | It was realized that the use of CSP depends on human relations, but also on management spheres, regarding the use of technology and encouragement to professionals. |
| A4 | The implementation of the Electronic Citizen Record is still considered a **challenge at national level**, as it is related to infrastructure, training, and monitoring. |
| A5 | It was understood that **Electronic Health Record is more advantageous over Physical Health Record**, and it kept patient information secure. |
| A6 | In this study, the Electronic Medical Record provided **greater organization of information**, proving to be more efficient and reducing obstacles in the care process. |
| A7 | **Professional training** is one of the pillars in the implementation of CSP in Brazil, sometimes, the study cites that there is this difficulty, in which it would enable and make effective the use of technology. |

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on the needs of the individual, his family, and the community in which he is inserted. Through the PEC methodology, the provision of health care in PC becomes even more resolutive and targeted. Sequentially, the recording of patient information is extremely important, it is part of the care process and enables sharing and integration between health workers[10,11,12].

With PEC, the articles point out that it is possible to reduce failures, optimize resources, improve care, ensure clinical safety, and integrate professionals. Without the PEC, care becomes unfeasible, with erroneous information, containing spelling mistakes, bad handwriting, incomplete records, and no consistency among professionals. The consultation of health professionals needs a qualified recording tool, which allows listening to the patient and assists in decision making[13,14].

Studies show that the PEC allows better information completion, with a systematized structure, less physical space, and greater organization of the health team. And differently, the paper medical record does not allow this process, on the contrary, there are greater errors in the records, it can only be accessed at the place of care, with the paper in hand, the personal information of the pa-

| | |
|---|---|
| A8 | **Training for professionals involved in care** was the weakness cited in this study. |
| A9 | The PEC **collaborated in the nursing work**, assisting in the Nursing Process and its stages of execution. |
| A10 | The PEC **collaborated in the nursing work**, assisting in the Nursing Process and its stages of execution. |

Source: Survey data, 2023.

tients is more exposed, and sometimes, the presence of erasures occurs. On the other hand, the CSP has some items that can hinder its execution, such as: the use of the internet, due to oscillations and the need for training for professionals, as they need to be trained to use the CSP correctly and requires a greater source of cloud storage[8,9,10].

Thus, it is evident that electronic health records are relevant, which are part of patient safety and effectiveness of health care in PC. Thus, the CSP is part of health informatization, being fundamental for all phases of the primary consultation. The contribution of the CSP is indisputable, and its use is pertinent throughout PHC, and if possible, in the HCN, so that health professionals can communicate and provide their patients with qualified family health care[4-14].

## CONCLUSION

The study achieved its proposed objective and answered its research question. The need to implement the CSP from various dimensions of care in PC was understood. The success of the CSP in the context of Family Health is linked to its implementation stages, from human resources, health, and management to the training of professionals to make the technology viable in the health service routine.

In PHC, having a PECP is synonymous with qualification in care, since it allows better records of consultations, as well as greater organization of the information of the patients attended. Thus, new research on the subject is recommended, both field and experimental, aiming to expand knowledge on the subject, but also to encourage its implementation throughout the national territory, which is still a challenge.

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