## **Computerized Medical Record** in Child AdolescentNeuropsychiatry: the Implementation Project in the Benevento Local Health Authority (ASL)

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#### KEYWORDS:

Computerized medical record, Child and Adolescent Neuropsychiatry, Neuropsychiatric disorders, Healthcare digitalization, TaleteWeb.

#### ABSTRACT

The project of the Computerized Medical Record in Child and Adolescent Neuropsychiatry arises from the need for a digital tool that documents the entire clinical-diagnostic-care pathway of patients accessing outpatient services in public healthcare facilities. It also stems from the necessity to share clinical-health information among different professionals, often located in various sites of the specialist services, from anamnesis data to information derived from multiprofessional evaluations.

The Computerized medical record thus aims to be an essential tool supporting professional interdisciplinarity, which today represents a key prerequisite to ensure the homogeneity and continuity of care for young patients and their families. Among the numerous advantages associated with the use of this digital tool, particular importance is given to its ability to align the evaluation procedures and diagnostic pathways with the most recent evidence-based guidelines and protocols currently in force, while generating the necessary certifications for the patient.

This article presents the experience of the implementation and development project of the Computerized Medical Record for the Unit of Child and Adolescent Neuropsychiatry - Mental Health Department - of the Benevento Local Health Authority (ASL), in collaboration with the company Equipe srl, the owner of the TaleteWeb platform. The project involved various professionals who participate in multidisciplinary team evaluations. The article also presents and discusses the results of a survey conducted among the staff who took part in the project trial, using a questionnaire derived from validated tools in the literature, aimed at assessing the perceived effectiveness and impact on clinical activities related to the use of the Electronic Health Record.

#### Introduction

The Computerized Medical Record (CMR) is, within the national context, the digital tool for the collection and global management of data (clinical and health-related) referring to the medical history of a patient who accesses the services of a hospital and/or outpatient facility, as well as the set of processes involved in the clinical-diagnostic-care pathway supported by information technologies.

In the era of healthcare digitization, the CMR presents itself as a valid computer system to support healthcare professionals, interdisciplinary multiprofessional work, as well as an appropriate tool to improve the coordination of healthcare interventions pediatric neuropsychiatric conditions and optimize clinical risk management.

The Computerized Medical Record thus represents a significant evolution in the field of health information management [1] and within the broader framework of recent healthcare digitization, offering countless advantages.

Among these, the easy accessibility of all clinical documents produced in digital format and the greater ease of exchanging medical information among team members stand out, streamlining data transfer procedures, especially when these are

physically located across different areas.

In general, digital healthcare is emerging as an innovative scenario, improving patient medical management, diagnostic and personalized care capabilities, thanks to the secure sharing of clinical data entered into the computer system [2].

All of this is currently widely reflected in Ministerial Decree N° 77/2022, which defines new models and standards for the development of territorial healthcare, and in the National Recovery and Resilience Plan (PNRR), where Mission 6 aims for a newer and more modern National Health Service (NHS), one that is also closer to the citizen. Here, the concepts of digitization and sharing of health data are the fundamental pillars of this healthcare modernization process.

#### Computerized Medical Record and PNRR: the **Background**

The digital transformation process of our healthcare system has represented, for several years, a turning point. To date, numerous interventions, supported by the PNRR (National Recovery and Resilience Plan), are leading healthcare toward a true transformation.





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The digitization of the healthcare system is, in fact, the focus of the 6th Mission of the Plan, the "Health Mission." Specifically, Component 2 of Mission 6 includes "the adoption of innovative and technologically advanced solutions and the enhancement of the digital infrastructure of public healthcare facilities, to improve the efficiency of care levels and align structures and organizational models with the best international safety standards." [4]

A study conducted by the Digital Health Observatory at the Polytechnic University of Milan reveals that the electronic medical record has been the project in which the majority of healthcare facilities across Italy have invested, also leveraging resources provided by the PNRR. As a result, it has represented the primary tool for most institutions to embrace Mission 6 of the Plan and align with the digitalization of the national healthcare service.

# The Benefits of the Computerized Medical Record

In addition to responding to the urgent process of healthcare transformation, the computerized medical record brings with it numerous benefits and advantages, both technical and professional, including:

- Rapid access and immediate consultation of medical records, thanks to data traceability and full access to information through the use of metadata, in compliance with privacy regulations;
- Reduction in the time required for information exchange, maintaining the operational efficiency of the healthcare facility and limiting the worsening of the patient's health condition;
- Immediate sharing of data with other healthcare providers (e.g., general practitioners, other specialists treating the patient), leading to benefits for the individual, the healthcare facility, and the National Health Service (S.S.N.);
- Accurate preservation and prevention of deterioration and risk of loss of clinical documents in archives;
- Improved management of regional/ministerial information flows and effective and efficient fulfillment of informational obligations required by current regulations;
- Mitigation of the risk of errors in the diagnostic, therapeutic, and care processes, leading to improved safety and quality of care.

Based on the above, it can be concluded that the adoption of a computerized tool, such as the computerized Medical Record (CMR), is today a fundamental measure to implement in a Child and Adolescent Neuropsychiatry service, with the inherent potential to positively transform the management of neuropsychiatric disorders and children with such conditions.

#### The Benevento Local Health Authority (ASL)

#### Project in collaboration with TaleteWeb: Defining a model for the Computerized Medical Record in Child Neuropsychiatry

In the Italian healthcare landscape, there is currently no systematic and specific use of software tools in the Child and Adolescent Neuropsychiatry services of public and/or private healthcare facilities.

In this sector, the company TaleteWeb has been involved in healthcare digitization for years, with the goal of transferring and adapting industrial methods and technologies to clinical governance processes. In 2007, the "TaleteWeb Project" was launched, developing and consolidating from 2010 onward. The last 10 years have seen the team engaged in the complex field of IT technologies, integrating expertise and technology into a single system: "the TaleteWeb platform" [5].

Through this platform, it became possible to conceive the creation of a digital tool that met the specific needs of Child Neuropsychiatry, one that was functional, highly intuitive, designed by healthcare professionals for healthcare professionals, and customizable by profession.

The experience presented here involves the mentioned company in collaboration with the Benevento Local Health Authority (ASL) for the implementation project of the Computerized Medical Record in Child Neuropsychiatry.

In October 2023, a technical committee and project workgroup were established, followed by several meetings that involved various professional figures present in the Territorial Operational Units for Neurodevelopmental and Neuropsychiatric Disorders in Children and Adolescents of the Benevento ASL.

Specifically, the professional referents were involved (Child Neuropsychiatrist, Psychologist-Psychotherapist, Social Worker, Nurse, Child neuropsychomotor therapist, Speech Therapist, Occupational Therapist, and Professional Educator), who outlined the specific sections by incorporating evaluation scales, checklists, and certification formats (e.g., DSA Certification, Autism Spectrum Disorder Certification), adhering to the current protocols and guidelines in force.

Additionally, sections were created for the compilation of the clinical diary and for reporting the services provided by each professional, ensuring absolute traceability for each individual.

The platform is equipped with features for electronic digital signatures, graphometric signatures, and qualified signatures, ensuring document and report validation in compliance with current regulations. The system is also set up for integration with the Electronic Health Record 2.0, while the acquisition of informed consents is directly managed by the system through the graphometric signature of the patient or the minor's legal guardian.

### The Computerized Medical Record in Child **Neuropsychiatry: Key Functions**

The Computerized Medical Record (CMR), designed for Child Neuropsychiatry services, offers a range of functions in addition to the benefits associated with its use. Beyond enabling the "dematerialization" of paper records and facilitating easier access to any type of information or document, the main functions it serves can be outlined as follows:

- Support for Clinical-Diagnostic-Care Activities: The CMR acts as a digital tool that guides the professional through the completion of specific sections, allowing for the logical and chronological entry of data. This makes it possible to document each action taken for the patient. Additionally, it enables the creation of documents/reports, conducting assessments by filling out evaluation scales and checklists, retrieving previous documents, and printing new ones. This helps the professional define the best diagnostic and evaluative path, analyze the data obtained, and ultimately design the most appropriate therapeutic-care plan for the patient.
- Documentary Function: The presence of sections dedicated to the compilation of the clinical diary for each professional profile allows the CMR to perform a documentary function for both the patient and the professional. In the CMR, it is possible to record all services provided to each patient, note episodes, document the scheduling of visits and evaluations, and track meetings with external institutions (e.g., schools, hospitals, rehabilitation centers). In this way, all actions that make up the clinicaldiagnostic-care pathway can be documented, ensuring protection for both the patient and the healthcare professional.
- Reporting Function for Clinical Activity: A key function of this digital tool is its reporting capability concerning the management of regional/ministerial information flows.

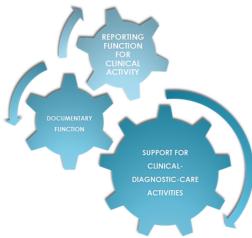


Figure 1: Diagram of the main functions of the Computerized Medical Record.

addition to making all operations carried out by each professional traceable, the CMR allows for the reporting of services provided and their integration into the regional registry. Therefore, in a healthcare organization, its implementation allows for post-operation control (feedback) through activity planning tools, reviews, and reporting.

#### The Computerized Medical Record in Child Neuropsychiatry:

#### Definition and presentation of the pathway for digitization of clinical and health data

The software developed for the implementation of the Computerized Medical Record (CMR) follows a simple and linear process for data entry, organized into specific sections, from personal details to areas dedicated to prescriptions and identified therapies, thus covering every aspect of the care and medical management of the young patient [6].

By accessing their personal area using credentials, it will be possible to initiate an internal search to select the patient being assisted.

The software's design was created to provide an overview of the sections that make up the CMR and to quickly guide the professional toward the relevant section to complete. The organization of the sections, in terms of layout, follows a chronological sequence, as shown in Figure 2, although their completion does not necessarily need to follow the same order. Therefore, it is possible to fill out a section even if the previous one has not yet been completed.

The sections present in the Computerized Medical Record are listed below:

- Personal Information (Anagrafica)
- Admission/Reception (Presa in carico/ Accoglienza)
- Diagnostic Data (Dati diagnostici)
- Social History (Anamnesi sociale)
- Nursing Assessment (Accertamento infermieristico)
- Child Neuropsychiatric Record (Cartella Neuropsichiatrica infantile)
  - Evaluations (Valutazioni)
  - Certifications (Certificazioni)
  - (Unit of Rehabilitation Need **UVBR** Assessment)
  - Clinical Diary (Diario clinico)
  - Certificates (Certificati)
  - Prescriptions (Prescrizioni)
  - Therapies (Terapie)
  - Resolution (Risoluzione)
  - Performance Reporting (Rendicontazione delle prestazioni)

In the case of a first-time visit to the Child and Adolescent Neuropsychiatry service, it is necessary to enter all required information in "Personal Information" section. This includes







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Figure 2: Graphic representation of the sections of the Computerized Medical Record.

not only the patient's details but also those of the parents and/or caregivers. The signed consent forms for data processing and clinical-diagnostic care of the minor will also need to be attached or signed digitally.

In the section "Admission/Reception", the professional team members who will be responsible for the care of the minor will be defined, while in the "Diagnostic Data" section, the fields related to the hypothesized and/or definitive diagnosis will be filled out, according to DSM-V<sup>1</sup> criteria and ICD-10<sup>2</sup> codes.

Managed by the social worker, the "Social History" section will gather all relevant information about the patient's socio-cultural background, family nucleus, school activities, and any extracurricular/social activities the patient participates in.

The Nursing Assessment section allows the nurse to record all medical and health information obtained from the nursing assessment and the minor's physical examination.

The "Child Neuropsychiatric Record" section is dedicated to collecting and managing the main medical history, grouped into categories such as physiological history, family history, developmental history, and recent and remote medical history. Additionally, the "Neurological and Psychiatric Examination" field allows the clinician to document all clinical elements important for the child neuropsychiatrist's functional assessment. Furthermore, caregivers can attach medical reports and diagnostic examinations, while also noting diagnostic hypotheses or definitive diagnoses.

The "Evaluations" section includes the various assessments performed by different team professionals, which are necessary for diagnostic classification, identifying rehabilitation needs,

and creating an appropriate therapeutic-care plan. The evaluations include psychological, psychoeducational, occupational profile, speech therapy, neuropsychomotor, and multidisciplinary team evaluations. The reports generated by each professional follow a generic format, which includes an initial medical summary, functional evaluation (with scales, psychometric tests, and administered checklists), conclusions, and therapeutic recommendations.

Continuing, the "Certifications" section is designed to collect diagnostic-evaluation documents that follow specific regional and national guidelines. It includes the certification model for Specific Learning Disabilities (SLD), in reference to D.G.R. 43/2014, and a certification model for Autism Spectrum Disorders (ASD), which follows the Diagnostic-Therapeutic-Care Pathway (PDTA) adopted by the Campania Region (D.G.R.C. n. 131, 31/03/2021), along with the diagnostic criteria of DSM-V and ICD-10 codes.

The "UVBR" section contains therapeutic plans created by the Unit of Rehabilitation Need Assessment for the patient and Clinical Diary section allows healthcare professionals to document all actions performed on the patient and any events that affect the clinical-diagnostic pathway.

In addition, the "Certificates" section includes standard certificate models, which can be filled out upon the patient's request. Among these models, there is one for requesting recognition under Law 104/1992 (the framework law for assistance, social integration, and rights of people with disabilities), a diagnostic certificate model, and a certification for the B.E.S. condition (Special educational needs).

The "Prescriptions" section collects medical recommendations for further tests or procedures that need to be performed at specialized facilities. In "Therapies" section, any ongoing pharmacological treatments are documented, including the medication name and dosage instructions.

<sup>1</sup> Diagnostic and Statistical Manual of Mental Disorders – 5th edition.

<sup>2</sup> International Classification of Deseases, 10th edi-

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"Resolution" section is completed at the time of the patient's discharge, recording the reason for the conclusion of the therapeutic-care pathway, while "Performance Reporting" section allows healthcare professionals to register the services provided to the patient and generate necessary reports for regional and ministerial data flows, as well as to monitor the professionals' availability and workload. The software also includes a general service agenda and a dedicated agenda for each professional.

#### Assessment of Perceived Quality and Clinical Impact of the Computerized Medical Record (CMR) in Child and Adolescent Neuropsychiatry: an analysis of the results

#### INTRODUCTION AND OBIECTIVES

The integration of digital tools in clinical settings requires not only technological adequacy but also alignment with the perspectives and needs of healthcare professionals. Understanding their point of view is crucial for anticipating the acceptance and effective use of systems such as the Computerized Medical Record (CMR). In fact, user engagement is widely recognized as a determining factor in the successful implementation of digital health innovations.

In this context, a survey was conducted to evaluate the perceived quality and clinical impact of a CMR specifically designed for the Child and Adolescent Neuropsychiatry Unit, following the experimental use of the CMR developed for the Local Health Authority (ASL) of Benevento.

The primary objective of this study is to assess the perceived usability and functionality of the CMR among healthcare professionals. Additionally, the study investigates its impact on the digital management of clinical data, multidisciplinary team collaboration, and the therapeutic relationship with patients and their families. The survey also aimed to gather feedback and suggestions to support the continuous improvement of the system's quality and efficiency.

#### MATERIALS AND METHODS

This study utilized a structured questionnaire, administered via the online platform Google Forms to healthcare professionals, employed at the Child and Adolescent Neuropsychiatry Unit (U.O.C.) of the Telese Terme District (BN), within the Local Health Authority (ASL) of Benevento. Participants included those involved in the pilot implementation of the Computerized Medical Record system (CMR) during the period from January to November 2024. The questionnaire was distributed to a multidisciplinary group comprising child and adolescent Neuropsychiatrists, Psychologists, Neurodevelopmental Therapists, Speech therapists, Professional educators, Occupational therapists, as well as administrative and nursing staff who routinely

employ the platform in their clinical practice.

Respondents were invited to provide feedback on multiple dimensions of their user experience with the digital system, with particular emphasis on perceived quality and the impact of the CMR on clinical activities. Collected data were anonymized and analyzed in accordance with privacy regulations outlined in the introductory consent form.

#### Questionnaire: sources and adaptations

In the absence of internationally or European validated questionnaires specifically designed to assess the operational usability of Computerized Medical Records (CMR) within the context of Child and Adolescent Neuropsychiatry, the questionnaire developed for this study was elaborated and adapted based on internationally validated instruments for evaluating CMR use. The items were customized to reflect the specific characteristics of Child Neuropsychiatry and the software developed by TaleteWeb, such as the documentation of clinical scales (ADOS, Vineland, WISC), continuity of diagnostic-clinical-care pathways, and traceability management for each individual professional.

The literature search was conducted through PubMed and the Agency for Healthcare Research and Quality (AHRQ) website, selecting only studies related to the validation of questionnaires capable of investigating clinicians' perceived usability and functionality of computerized medical records. The PubMed search identified a particularly relevant article published in 2004 in BMC Medical Informatics and Decision Making, while from the AHRO website a questionnaire developed by the Michigan Public Health Institute (MPHI) in 2011 was identified.

Below is a summary of the selected studies and questionnaires:

#### Evaluation of Electronic Medical Records

- Questionnaire 1: developed by the Faculty of Medicine at the Norwegian University of Science and Technology (NTNU), Trondheim, Norway, this questionnaire was designed to assess CMR systems from the clinician's perspective. Its main feature is a list of 24 general clinical tasks, for which healthcare professionals report the frequency of CMR use. The questionnaire applies to most physicians across various specialties and covers essential parts of their computerized work. The tasks are presented in two separate sections: CMR usage and performance in tasks involving the CMR. The study results demonstrate that this questionnaire is relevant to clinical work and CMR systems, providing reliable and interpretable outcomes. It can be used as part of any evaluation effort involving clinicians' perspectives on computerized systems such as CMRs.

Electronic Health Record End User Survey:









developed by the Michigan Public Health Institute (MPHI), Ann Arbor, MI, USA, in 2011 via the AHRQ website, this survey targets clinical staff in outpatient settings and evaluates the current state of computerized medical records, with particular focus on usability. The survey is designed to be freely used without restrictions, making it a publicly available tool with an open license, which can be modified or used as is without further permission from the authors.

#### **Questionnaire Structure**

The questionnaire was structured into specific sections and items designed to capture both the potential benefits of the Computerized Medical Record (CMR) on the perceived performance of healthcare professionals and the impact of CMR use on clinical activities, particularly regarding the improved management of clinical and health data for users accessing the Child and Adolescent Neuropsychiatry service.

The questionnaire comprises six sections, each containing a variable number of items. For each item, respondents were asked to indicate their level of agreement or disagreement concerning the operational and technical functionalities of the CMR, the ease of use (rated on a 4-point scale: difficult/medium/easy/do not use), and whether the system had worsened, improved, or had no significant effect on clinical efficiency. Additionally, the final section provided space for suggestions and/or modifications aimed at enhancing the use of the electronic health record in Child and Adolescent Neuropsychiatry. The sections are as follows:

SECTION 1: Previous experience with electronic health records.

SECTION 2: Usage context: training, technical support, and infrastructure.

SECTION 3: Impact on clinical practice: effects on care, communication, and work-related stress.

SECTION 4: General evaluation: satisfaction, ease of use, intuitiveness.

SECTION 5: Functionalities: data entry, consultation, communication, data analysis.

SECTION 6: Open space for suggestions and observations.

#### RESULTS

The analysis of data collected from the questionnaire assessing perceived quality and the impact on clinical practice of the Computerize Medical Record (CMR) reveals a significant improvement in the management of patient care and the diagnostic-evaluative-assistance pathway within the Child and Adolescent Neuropsychiatry service. This improvement is reflected both in the perceived effectiveness reported by healthcare professionals and in the clinical effectiveness of the services provided.

All respondents reported using the digital health record for a period ranging between 6 and 12 months. Of these, 73% indicated that they had never previously used other digital systems for the electronic management of health data, while 27% responded affirmatively (Figure 3). Although the adaptation phase to the new system is still ongoing, the positive feedback suggests a generally favorable reception.

# Before CMR-TaleteWeb, did you use another electronic system?

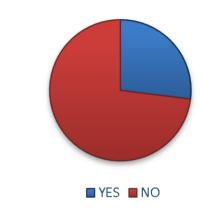


Figure 3.

Examining the subsequent sections of the questionnaire regarding the overall evaluation of the digital system, the majority of respondents considered the CMR-TaleteWeb to be better (55%) or much better (45%) compared to traditional paper-based data management (Figure 4). Additionally, 64% of users found it easy to use, while 36% rated it as somewhat easy. No respondent evaluated the Electronic Health Record negatively compared to the paper system. Therefore, the transition to digital is perceived as a clear improvement in terms of efficiency and functionality.

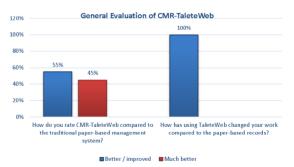


Figure 4.

One hundred percent of users reported that the use of CMR-TaleteWeb has overall improved their professional activities, including the quality of patient care, continuity of care, clinical documentation, and communication within the multidisciplinary team. Regarding work-related stress associated with the use of a digital system, 18% reported no significant change, whereas the remaining 82% perceived an improvement.

Considering the context of use, including training

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and technical support received, 82% of professionals agreed that they had received adequate training, while 18% strongly agreed. Furthermore, the majority of respondents rated the technical support as accessible and timely. Approximately 64% of users considered the available computer workstations insufficient (Figure 5).

(Figure 6).

Eighty-two percent (82%) of respondents believe that the functionalities of the CMR-TaleteWeb meet the clinical needs and requirements of the outpatient service, and 73% of them consider that using a digital system, such as the Computerized Medical Record, does not hinder the relationship

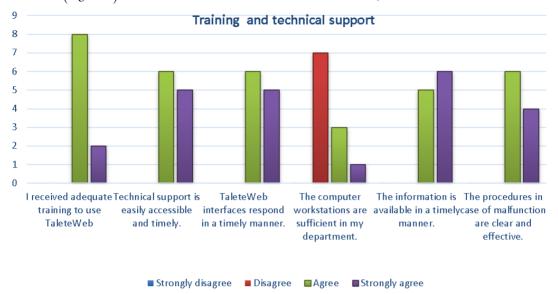


Figure 5.

Regarding usability and functionalities, it was found that recording interviews, assessments, and/ or reports is easy for the majority of users (91%); viewing the clinical and psychosocial history is equally easy (91%), as is monitoring treatment plans (91%). Communication with colleagues is considered facilitated by the use of the electronic health record, while entering and updating standardized scales is regarded as an easy function by most users (82%), with a minority reporting moderate difficulty (18%). Extracting data for reporting, auditing, or research purposes is considered easy by the majority (91%), although some users report moderate difficulty

with patients, while 27% believe it does (Figure 7). Overall, 91% of healthcare professionals are satisfied with their experience using CMR-TaleteWeb, and all recommend the CMR to other Child Neuropsychiatry services (Figure 8).

In the section dedicated to suggestions, the majority of users reported no missing functionalities. Other responses suggested improvements such as enhancing the internet connection to avoid slowdowns, updating devices, and increasing the number of computer workstations to allow for smoother use of the system.

#### Ease of use of CMR-TaleteWeb

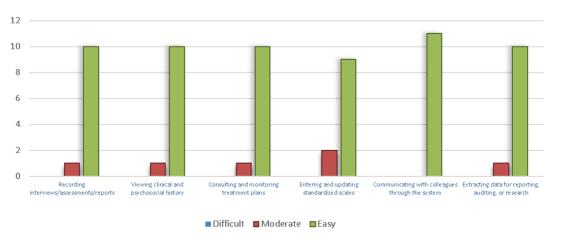


Figure 6







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## Does the use of CMR-TaleteWeb hinder direct interation with patients?

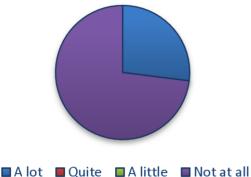


Figure 7

# **DISCUSSION**

The analysis of the data collected through the questionnaire on the CMR-TaleteWeb system provides a significant overview of the perceived impact of digitizing clinical and care processes. The results highlight that, in a context of transition from paper-based to electronic management, the healthcare professionals involved responded positively overall, recognizing tangible benefits in terms of work efficiency and quality. The adaptation to the new software was perceived as smooth, and its use acted as a catalyst for the innovation of clinical processes, facilitating access to and management of information, improving traceability of activities, and reducing the risk of errors and omissions. However, some critical issues emerged that deserve attention. In particular, about half of the sample reported insufficient availability of computer workstations, suggesting the need for infrastructural investments to ensure system accessibility for all operators. Additionally, some difficulties were noted in using advanced features, such as data extraction for reporting or auditing, highlighting the opportunity to implement targeted training or practical support tools (e.g., quick guides or tutorials). A particularly interesting element is the absence of substantial criticisms regarding the system itself: most observations focused on surrounding conditions (hardware availability, internet connectivity) rather than the software. This finding supports the hypothesis that CMR-TaleteWeb is perceived as a valid tool whose effectiveness could be further enhanced by a more adequate technological ecosystem. Although limited to a specific sample and an initial phase of use, the results of this study offer valuable insights for broader reflections on the digitalization process in healthcare. Two key areas for future research emerge: the long-term impact of CMR-TaleteWeb on quality of care and clinical outcomes, and the evolution of healthcare professionals' digital skills over time,

# Are you satisfied with your overll experience using CMR-TaleteWeb?



Figure 8

coupled with the role of continuous training. In conclusion, the computerized health record CMR-TaleteWeb represents a notable case study of how technological innovation, if supported by adequate training and solid technical infrastructure, can be favorably received by operators and contribute to the improvement of clinical and care processes.

#### **Conclusions**

The digital management of medical and healthcare information represents a real challenge for the National Health Service (S.S.N.), for the modernization of healthcare in the post-COVID-19 pandemic era, and for a general adaptation to an era that bases its operations on digital informatization. In the context of sector evolution in E-Health, the computerized medical record (CMR) is positioned among the new operational tools for the benefit of human health. The Ministerial Decree 77/2022 - "Regulation establishing models and standards for the development of territorial assistance in the National Health Service"- has established the obligation for all territorial operating units of public healthcare structures to adopt digital solutions suitable for sharing patient data among the various healthcare professionals involved in patient care [7]. It is clear that the success of the reform of territorial assistance, as outlined by D.M. 77/2022, will be closely linked to digital innovation and the integration of all management systems within healthcare structures on the territory, necessary to create a data ecosystem supporting all professionals in the evaluation and care of the patient [8].

Child Adolescent Neuropsychiatry, In and where multidisciplinary teamwork is essential for the management of complex conditions like neuropsychiatric disorders, the use of the CMR will undoubtedly offer better multiprofessional and interdisciplinary management, leading to increased efficiency in the overall care of the patient.

#### REFERENCES

- 1. Veronese S. e al., (2019), La Cartella clinica informatizzata: l'esperienza dell'Ospedale di Santorso, Associazione Nazionale dei Medici delle Direzioni Ospedaliere, ANMDO. https://www.anmdo.org/wp-content/uplo-ads/2019/05/80\_Veronese\_cartella-informatizzata.pdf
- 2. Governo italiano, Dipartimento per la trasformazione digitale (2023), Sanità digitale: Le iniziative per un sistema sanitario più moderno, digitale e inclusivo. Innovazione.gov.it. https://innovazione.gov.it/italia-digita-le-2026/il-piano/sanita-digitale/
- 3. De Cesare D., (2023), Cartella Clinica Elettronica, CCE: cos'è e come funziona, Osservatori.net. https://blog.osservatori.net/it\_it/cartella-clinica-elettronica-cce-cose-come-funziona
- 4. Ministero della Salute, (aggiorn. 2024), Ammodernamento del parco tecnologico e digitale ospedaliero. Pnrr. salute.gov.it https://www.pnrr.salute.gov.it/portale/pnrrsalute/dettaglioContenutiPNRRSalute.jsp?lingua=italia-no&id=5807&area=PNRR-Salute&menu=investimenti
- 5. TaleteWeb, https://www.taleteweb.it/equipe/
- 6. TaleteWeb (2021), NPI: la cartella clinica informatizzata per la Neuropsichiatria Infantile. TaleteWeb. https://www.taleteweb.it/npi-la-cartella-clinica-informatizzata-la-neuropsichiatria-infantile/
- 7. Odio C. (2024), Servizi per l'aggiornamento del Software delle Cartelle Cliniche dei MMG e PLS e collegamento con Applicativi regionali e nazionali", Regione Abruzzo. Ordine dei Medici Chirurghi e Odontroiatri della provincia di Chieti, OMCEOCH. https://www.omceoch.it/lista-documenti-docman/articoli/2024/vari-1/sistemi-informativi-regione-abruzzo/491-alleagto-1/file
- 8. Ministero della Salute, (2022, 23 Maggio), Decreto Ministeriale n°77/ 2022, Regolamento recante la definizione di modelli e standard per lo sviluppo dell'assistenza territoriale nel Servizio sanitario nazionale, Gazzetta Ufficiale, Serie Generale, 144. https://www.gazzettaufficiale.it/eli/id/2022/06/22/22G00085/SG
- 9. Healthtech360, (2022, 18 Maggio), PNRR dalla teoria alla pratica: tecnologie e soluzioni per l'innovazione in Sanità. Healthtech360. https://www.healthtech360.it/pnrr-sanita/pnrr-dalla-teoria-alla-pratica-tecnologie-e-soluzioni-per-linnovazione-in-sanita/.
- 10. Caccia C., Cucciniello M., Nasi G., (2009), La valutazione degli impatti della cartella clinica elettronica, in Cantù E. (Ed.), L'aziendalizzazione della sanità in Italia. Rapporto OASI 2009, pp 521-548, Egea.
- 11. Regione Campania (2018), Linee di indirizzo per l'implementazione del sistema informativo sanitario regionale. https://www.regione.campania.it/assets/documents/linee-guida-sinfonia.pdf
- 12. Lærum, H., Faxvaag, A. Task-oriented evaluation of electronic medical records systems: development and validation of a questionnaire for physicians. BMC Med Inform Decis Mak 4, 1 (2004). (https://doi.org/10.1186/1472-6947-4-1).
- 13. AHRQ Health IT Survey Compendium, https://digital.ahrq.gov/.







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