



Role of Medical Records in Enhancing Collaboration between Nursing, Paramedical, and Pharmaceutical Teams.

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Abstract:

Medical records, especially in the form of electronic health records (EHRs), play a critical role in enhancing collaboration between nursing, paramedical, and pharmaceutical teams. These records act as a centralized hub of patient information, providing real-time access to comprehensive medical histories, treatment plans, and medication details. This accessibility fosters seamless communication between teams, ensuring that paramedics, nurses, and pharmacists can coordinate their efforts effectively in both emergency and long-term care settings. Medical records also improve patient safety by reducing medication errors, streamlining care transitions, and supporting accurate decision-making. Moreover, the use of medical records helps manage chronic diseases, supports regulatory compliance, and promotes patient-centered care by ensuring that all healthcare professionals are aligned in their treatment approaches. Overall, medical records are integral to creating a more efficient, effective, and collaborative healthcare environment.

Keywords:- Medical records, electronic health records (EHR), nursing, paramedical services, pharmacists, interdisciplinary collaboration, patient safety, chronic disease management, medication management, healthcare communication, regulatory compliance, patient-centered care.

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Introduction:

In modern healthcare systems, the integration and collaboration between various professional teams—nurses, paramedical staff, and pharmaceutical experts—are critical to delivering effective patient care. Each of these disciplines brings unique expertise and skills to patient management, whether it is the life-saving interventions of paramedics in emergency settings, the clinical care provided by nurses, or the

pharmaceutical oversight that ensures the safe administration of medications. To ensure these professionals work cohesively, medical records, particularly electronic health records (EHRs), play an essential role.¹

Medical records serve as a repository of critical patient information, including medical histories, lab results, treatment plans, and current medications, accessible to all members of the healthcare team. This allows for streamlined communication, better decision-making, and continuity of care across different care environments—from pre-hospital interventions by paramedics to in-hospital nursing care and medication oversight by pharmacists.²

The healthcare ecosystem relies heavily on the seamless coordination of multiple disciplines, including nursing, paramedical services, and pharmaceutical teams. Medical records play a pivotal role in fostering this collaboration by serving as a central repository of patient information that can be accessed and updated by all healthcare providers involved in a patient's care. Here's an in-depth look at how medical records enhance interdisciplinary collaboration among these teams.

In an era of increasingly complex patient needs, the collaboration between these disciplines is not only vital for improving patient outcomes but also for reducing medical errors, optimizing resource use, and ensuring regulatory compliance. Medical records provide the infrastructure that enables this interdisciplinary cooperation, making them indispensable tools in healthcare.³

This article explores the role of medical records in enhancing collaboration between nursing, paramedical, and pharmaceutical teams, focusing on how they improve communication, patient safety, care coordination, and overall healthcare delivery.

1. Centralized Patient Information for Streamlined Care

Medical records, especially when digitized as Electronic Health Records (EHRs), act as a centralized repository for patient information, accessible by healthcare professionals across various disciplines. This centralization is crucial for creating a streamlined and efficient healthcare environment where paramedics, nurses, and pharmacists can collaborate effectively. By having instant access to a patient's complete medical history, lab results, allergies, current medications, and treatment plans, each team can make informed decisions, contributing to more accurate and timely care.

1. Unified access across teams.

In the absence of a centralized medical record system, vital patient information may be fragmented across different departments or providers, leading to communication gaps and inefficiencies. EHRs solve this problem by allowing:

- **Paramedics** to quickly review patient histories or allergies in emergency situations, enabling them to administer the correct treatment in critical moments.
- **Nurses** to build on the information gathered by paramedics, using the documented pre-hospital interventions to guide in-hospital care.
- **Pharmacists** to access up-to-date prescriptions and care notes, ensuring they dispense the correct medications and monitor for any potential drug interactions.⁴

The unified access provided by medical records eliminates delays in communication between departments, ensuring that all healthcare professionals work from the same set of data.

2. Continuity of Care

In emergency situations, paramedics are often the first to respond, making critical decisions regarding immediate treatment. With centralized records, paramedics can document all pre-hospital interventions and relay this information to the hospital team in real time. This allows nurses to seamlessly continue care without having to start from scratch, as they have all the data on what interventions have already been performed.

For instance, if a paramedic administers medication or starts an IV in the field, this information is recorded in the medical records, so the nursing team can pick up the care without duplicating efforts. Similarly, when patients are discharged from the hospital, pharmacists can review the records to ensure they provide the right medications for at-home care, based on what was administered during the patient's stay.

3. Real-time Updates for Dynamic Care

Centralized medical records allow for real-time updates, meaning any changes in a patient's condition or treatment can be immediately reflected and accessed by all team members. This is especially critical in fast-paced environments like emergency rooms or intensive care units (ICUs), where conditions can rapidly evolve.

For example:

- **Paramedics** in the field may record vital signs, medications administered, or emergency procedures performed, which nurses can review upon the patient's arrival at the hospital.
- **Nurses** can input updated treatment plans or progress notes that pharmacists can reference when filling or adjusting medications.
- **Pharmacists** can also add notes about medication interactions or changes in dosage that will be accessible to both paramedics and nurses, ensuring a cohesive care strategy.

4. Reducing redundancy and avoiding errors

Without centralized medical records, different healthcare providers might repeat diagnostic tests, unnecessarily administer medications, or prescribe treatments that could conflict with one another. A shared medical record ensures that all providers have the same information, preventing these redundancies.

- **Paramedics** can review recent lab results before deciding on emergency interventions, avoiding unnecessary duplicate tests.
- **Nurses** can cross-check prescribed medications to prevent overdosing or incorrect drug administration, especially for patients with chronic conditions or multiple prescriptions.
- **Pharmacists** can view a patient's medication history to avoid adverse drug reactions or contraindications, ensuring the safety and efficacy of treatments.⁵

This system improves overall care efficiency and patient safety by minimizing errors that could result from miscommunication or incomplete data.

Centralized medical records streamline patient care by ensuring that paramedics, nurses, and pharmacists work with the same comprehensive, real-time data. This promotes continuity of care, reduces redundancies, and allows for swift, informed decision-making across interdisciplinary teams. The availability of unified patient information helps bridge the gaps between emergency, in-hospital, and pharmaceutical care, resulting in better outcomes for patients and a more efficient healthcare system overall.

2. Facilitating real-time communication between teams.

Effective communication is essential for high-quality healthcare, especially when multiple teams paramedics, nurses, and pharmacists are involved in patient care. Medical records, particularly electronic health records (EHRs), play a pivotal role in ensuring that this communication occurs in real time. EHRs enable seamless information sharing and updates across teams, allowing healthcare providers to collaborate more effectively, respond faster, and make informed decisions based on up-to-the-minute patient data.

1. Bridging the gap between emergency and In-hospital care

One of the most critical moments in patient care is the transition from pre-hospital (paramedic) care to in-hospital nursing and medical services. In emergency situations, paramedics are often the first to provide treatment, and the timely transfer of this information to the hospital team is crucial for the continuation of care.

- **Paramedics** can document vital details, such as the patient's initial condition, treatments administered (e.g., oxygen therapy, IV fluids, or medications), and the patient's response during transport. These updates are immediately available to **nurses** upon the patient's arrival at the hospital, allowing them to continue care seamlessly.
- Nurses do not need to rely solely on verbal handovers or incomplete information; they can refer directly to the detailed paramedic reports stored in the medical records, ensuring that no important information is missed.

This real-time transfer of information reduces the risk of duplicated treatments or delays in care, which can be critical in emergency situations.

2. Streamlining communication between nursing and pharmacy teams.

Nurses and pharmacists work closely together to ensure that medications are prescribed, dispensed, and administered safely and accurately. Medical records facilitate this relationship by ensuring that both teams have access to the same, real-time information.

- **Nurses** can use EHRs to place medication orders, which **pharmacists** can instantly view. This helps pharmacists prepare medications faster, reducing wait times for patients. It also ensures that any necessary adjustments (such as dosage changes or substitutions) can be communicated quickly, especially if new lab results or patient conditions arise.⁶
- **Pharmacists** can add notes or recommendations to the medical records, providing nurses with critical information regarding drug interactions, side effects, or alternative medication options. This collaborative approach helps optimize medication safety and efficacy.

By having a direct line of communication through EHRs, nurses and pharmacists can work together more efficiently, reducing the risk of medication errors and improving overall patient care.

3. Real-time Updates to Support Dynamic Patient Needs

Healthcare is a constantly evolving field, where patient conditions can change rapidly, especially in critical care or emergency settings. Medical records allow for continuous updates, ensuring that all team members have the latest information and can act accordingly.

- **Nurses** frequently update medical records with changes in a patient's condition, new test results, or adjustments to treatment plans. These updates are instantly available to the entire healthcare team, including paramedics and pharmacists.
- **Pharmacists** can make real-time adjustments to medications based on these updates, ensuring that patients are receiving the most appropriate and safe drug therapies.
- **Paramedics**, in cases of home visits or community care, can also update the records with real-time information on the patient's current status, allowing nurses and pharmacists to modify care plans if necessary.

This continuous flow of information helps healthcare teams stay aligned and respond proactively to patient needs.

4. Enhancing Decision-Making and Reducing Delays

In a fast-paced healthcare environment, real-time communication through medical records reduces delays in decision-making, especially when time-sensitive interventions are required.

- **Paramedics** in the field can quickly access a patient's medical records to check for allergies, pre-existing conditions, or medication histories before administering treatments, ensuring they make informed decisions even in high-pressure situations.
- **Nurses** in the hospital can immediately see what treatments paramedics have already provided, allowing them to decide on the next steps without repeating previous interventions.
- **Pharmacists** can access these same records to prepare medications that align with the patient's current treatment plan, minimizing the risk of drug interactions or improper dosages.

This integrated, real-time communication structure enables faster, more accurate decision-making, improving patient outcomes.

5. Supporting Interdisciplinary Team Collaboration

Effective communication between paramedics, nurses, and pharmacists is essential for coordinated, patient-centered care. Medical records provide a platform where these professionals can collaborate, share insights, and contribute to the overall care strategy.

- **Paramedics** provide essential updates on emergency interventions and initial assessments, giving **nurses** and **pharmacists** a clear picture of the patient's immediate needs.
- **Nurses** often serve as the central point of contact, coordinating between paramedics' initial care and pharmacists' medication management, ensuring that the right drugs are prescribed and administered based on the patient's current condition.
- **Pharmacists** can use the records to suggest modifications to the medication regimen based on the patient's evolving clinical status, while paramedics and nurses incorporate these recommendations into their care practices.

This interdisciplinary approach, facilitated by real-time medical record sharing, fosters a collaborative environment where patient care is comprehensive and continuous.

6. Improving Documentation Accuracy and Accountability

Real-time communication through medical records also enhances the accuracy of documentation and ensures accountability across all teams.

- **Paramedics** can document treatments and observations as they happen, reducing the chance of errors or omissions in their reports.
- **Nurses** can input care plans, test results, and observations immediately, ensuring that all providers have the latest information.
- **Pharmacists** can document medication orders, changes, and recommendations directly into the records, ensuring a clear and traceable record of all drug-related decisions.

This precise documentation improves overall care quality and ensures that all actions taken by paramedics, nurses, and pharmacists are recorded and can be referenced later for quality control, audits, or legal compliance.⁷

Medical records are invaluable tools for facilitating real-time communication between paramedics, nurses, and pharmacists, ensuring that patient care is cohesive, informed, and timely. By providing a platform for sharing up-to-date information, medical records reduce the risk of errors, support faster decision-making, and improve the coordination of care. This real-time communication not only enhances patient safety and outcomes but also creates a more efficient, collaborative healthcare system where every team member is fully informed and aligned in their approach.

3. Enhancing Patient Safety.

Patient safety is a primary concern in healthcare, and medical records play a significant role in ensuring that paramedics, nurses, and pharmacists can collaborate effectively to minimize risks and prevent medical errors. By providing access to accurate and up-to-date information, medical records help these teams make informed decisions, avoid harmful interventions, and ensure the highest standard of care. In this way, medical records are integral to creating a safer healthcare environment where errors related to medication, treatment, or communication are reduced.

1. Reducing Medication Errors

Medication errors are among the most common threats to patient safety, especially in cases where patients receive care from multiple providers. Medical records, particularly electronic health records (EHRs), help prevent these errors by giving paramedics, nurses, and pharmacists access to a patient's comprehensive medication history.

- **Paramedics**, in emergency settings, can check a patient's medication history before administering drugs. This helps avoid administering medications that could interact dangerously with the patient's current prescriptions.
- **Nurses** have access to up-to-date information on the medications patients are taking, reducing the risk of giving the wrong medication or dosage. They can also cross-check medications that have been prescribed by doctors and alert pharmacists to any potential concerns.
- **Pharmacists** can review the patient's full medication history, including any drugs administered by paramedics or nurses, ensuring that new prescriptions do not conflict with ongoing treatments or existing conditions.

This real-time access to accurate medication records significantly reduces the chances of adverse drug reactions, duplicative medications, or harmful drug interactions.

2. Preventing Duplication of Treatments and Tests

Unnecessary duplication of treatments or diagnostic tests can lead to patient harm, increased healthcare costs, and delays in care. Centralized medical records help prevent this by ensuring that all healthcare providers, including paramedics, nurses, and pharmacists, have access to the same patient data.

- **Paramedics** can review a patient's recent diagnostic tests, avoiding the need to perform duplicate procedures in the field unless absolutely necessary. This is particularly useful when transporting a patient who has already received care at another facility.
- **Nurses** can check whether tests or treatments have already been performed, ensuring they do not order redundant procedures. This helps streamline the care process, reducing unnecessary patient exposure to radiation, invasive tests, or repeated interventions.
- **Pharmacists** can verify that medication prescriptions are aligned with the most recent diagnostic information, ensuring the treatment plan is based on the latest available data and avoiding over-prescription or unnecessary medications.

By reducing unnecessary interventions and testing, medical records not only save time and resources but also protect patients from the risks associated with redundant care.⁸

3. Ensuring Allergies and Contraindications Are Addressed

Medical records provide essential information about patient allergies and contraindications, ensuring that all healthcare providers involved in care are aware of potential risks before administering treatments or medications.

- **Paramedics**, during emergency care, can check for documented allergies in the medical records before administering drugs or treatments that could cause allergic reactions. This is critical in situations where patients may not be able to communicate their medical histories.
- **Nurses** can verify patient allergies and contraindications before administering medications or initiating treatments, avoiding potentially dangerous allergic reactions or adverse interactions.
- **Pharmacists** rely on this information when filling prescriptions to ensure that no medication conflicts with documented allergies or existing medical conditions.

By maintaining accurate and up-to-date allergy information, medical records significantly reduce the risk of allergic reactions or harmful drug interactions, enhancing patient safety.

4. Supporting Early Detection of Clinical Deterioration

Medical records allow healthcare providers to track changes in a patient's condition over time, helping to detect early signs of clinical deterioration. By having access to continuous updates from paramedics, nurses, and pharmacists, healthcare teams can intervene promptly to prevent complications or worsening of the patient's condition.

- **Paramedics**, who are often the first responders, can document initial vital signs and emergency interventions, which nurses can use to monitor any changes upon the patient's arrival at the hospital.
- **Nurses** can track and document ongoing patient vitals, symptoms, and responses to treatments, making it easier to identify trends that may indicate worsening conditions.
- **Pharmacists** can review changes in a patient's condition and adjust medications accordingly, ensuring that treatments remain appropriate as the patient's health evolves.

This continuous monitoring helps detect complications early, reducing the risk of patient harm and enabling faster interventions.

5. Improving Care Transitions and Handoffs

One of the most vulnerable points in patient care is during transitions or handoffs between different healthcare providers or care settings. Poor communication during these transitions can result in incomplete information transfer, leading to potential patient harm. Medical records help mitigate this risk by ensuring that all relevant patient data is available to each member of the care team.

- **Paramedics** document all pre-hospital care, treatments, and observations in the medical records, allowing **nurses** to seamlessly pick up care once the patient arrives at the hospital. This ensures that critical information about interventions and the patient's condition is not lost during the transition.
- **Nurses** can use medical records to document care plans, treatments, and changes in the patient's condition, which **pharmacists** can access to adjust medications accordingly.
- **Pharmacists** can document any changes in medication orders or recommendations directly into the medical records, ensuring that paramedics and nurses are aware of these updates during future care interactions.

By ensuring that accurate, complete information is available during care transitions, medical records significantly reduce the risk of errors that could arise from incomplete or inaccurate handoff information.

6. Enabling Compliance with Safety Protocols

Medical records support adherence to established safety protocols and guidelines, ensuring that paramedics, nurses, and pharmacists follow best practices in patient care.

- **Nurses** can ensure that medication administration protocols, including dosage and timing, are followed correctly by referencing up-to-date medical records.

- **Pharmacists** can ensure that prescribed medications comply with safety guidelines, adjusting treatments if necessary based on the latest clinical data.
- **Paramedics** can follow protocols for emergency interventions and document them in the medical records, ensuring that all actions are recorded and traceable.

Medical records also provide a clear audit trail, making it easier to track adherence to safety protocols and identify areas for improvement in patient care.

Medical records play a crucial role in enhancing patient safety by reducing medication errors, preventing redundant treatments, ensuring that allergies and contraindications are addressed, supporting early detection of clinical deterioration, improving care transitions, and enabling compliance with safety protocols. By providing paramedics, nurses, and pharmacists with access to accurate, real-time information, medical records create a safer, more coordinated healthcare environment where patient well-being is the top priority.

4. Improving Coordination of Chronic Disease Management

For patients with chronic diseases, medical records help create a continuity of care plan that spans across paramedical, nursing, and pharmaceutical teams.

Multidisciplinary Care Plan Development:

- **Nurses** often develop care plans for chronic disease patients, incorporating input from paramedics (who may be involved in home visits) and pharmacists (who adjust medication regimens).
- **Pharmacists** can access nursing notes to evaluate whether current medications are adequately managing symptoms, and collaborate with both paramedics and nurses to adjust treatments when necessary.

Shared Monitoring and Interventions:

- **Paramedics** engaged in home care or emergency responses can update medical records after every interaction with the patient, enabling nurses and pharmacists to adjust ongoing treatment based on the patient's evolving needs.
- **Nurses** use the updated records to schedule follow-up care, monitor progress, and manage complications, while pharmacists ensure that medication protocols remain relevant to the patient's condition.

5. Reducing Redundancies and Improving Efficiency

Medical records significantly reduce the redundancy of care by preventing repeated tests, incorrect medication administration, or duplicated treatments.

Avoiding Duplicative Diagnostics:

- **Paramedics** can check recent diagnostic tests or imaging results before deciding on pre-hospital interventions, ensuring that patients don't undergo unnecessary procedures.
- **Nurses** can access lab results already recorded in the medical records, avoiding the need to order repeat tests and allowing for more prompt decision-making.

Streamlining Medication Management:

- **Pharmacists** can quickly cross-reference a patient's past prescriptions with current treatments, ensuring that no unnecessary or conflicting medications are prescribed. This is particularly useful for patients with complex medication regimens that involve multiple healthcare providers.

6. Supporting Regulatory Compliance and Quality Assurance

Medical records also play a role in ensuring that healthcare providers adhere to legal and regulatory standards.

Regulatory Compliance:

- **Nurses and Paramedics:** Must document all care provided in a manner that is compliant with healthcare regulations (such as HIPAA in the U.S.). Medical records provide the necessary documentation trail, ensuring that every treatment or medication administered is recorded accurately.⁹
- **Pharmacists:** Rely on accurate documentation to ensure that prescriptions comply with legal standards and safety protocols, especially for controlled substances or high-risk medications.

Quality Assurance and Audits:

- Medical records are essential tools for conducting quality assurance audits. Healthcare institutions can review these records to ensure that interdisciplinary teams—paramedics, nurses, and pharmacists—are working in harmony and adhering to best practices for patient care.

7. Enhancing Patient-Centered Care

By integrating medical records across paramedical, nursing, and pharmaceutical teams, healthcare providers can focus more on patient-centered care.

Comprehensive Care Plans:

- **Nurses** can develop care plans that incorporate input from pharmacists (for medication management) and paramedics (for home or emergency interventions). This holistic approach ensures that care is tailored to the patient's unique needs.

Patient Education and Engagement:

- **Pharmacists** and **nurses** can use medical records to educate patients about their medications, side effects, and the importance of adherence, while **paramedics** may provide follow-up care in the community, reinforcing these teachings.¹⁰

Conclusion

Medical records are critical to enhancing collaboration between nursing, paramedical, and pharmaceutical teams. They ensure accurate, real-time information sharing, promote patient safety, streamline care coordination, and foster multidisciplinary approaches to patient care. In today's healthcare landscape, leveraging technology to maintain and access comprehensive medical records is essential for improving patient outcomes and ensuring that all healthcare professionals are working in unison.

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