Alert Features for Healthcare in Increasing Hospital Revenue from DRG Reimbursement: A Systematic Literature Review

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ABSTRACT

The inadequate quality of medical records and the elevated rate of insurance claim denials worldwide have necessitated the incorporation of alert functionalities into Electronic Health Record (EHR) systems to enhance documentation precision and reimbursement effectiveness. This research seeks to evaluate the impact of alerts on healthcare professionals' ability to enhance the quality of medical records (completeness, accuracy, timeliness) and insurance claim results through a Systematic Literature Review (SLR) following PRISMA 2020 guidelines. Out of 538 studies sourced from PubMed, Scopus, and Web of Science, 14 were selected based on strict inclusion criteria. The synthesis of results reveals that alerts—particularly those integrated with clinical decision support—substantially enhance documentation quality and decrease claim rejections. The successful execution of this integration relies on EHR compatibility, management backing, user education, and the alleviation of alert fatigue. These results offer an empirical foundation for optimizing hospital revenue by improving the quality of medical records and the efficiency of claims, although additional research is required in the contexts of developing countries and for evaluating cost-effectiveness.

KEYWORDS

alert, medical records, insurance claims, EHR, documentation quality, reimbursement

INTRODUCTION

Medical records (MR) play an essential role in maintaining the quality of healthcare services and addressing legal and insurance-related aspects of patient care. A well-managed MR system serves as a comprehensive resource to improve clinical outcomes, facilitate effective billing, and ensure accurate documentation, which is crucial for successful service delivery and legal support (Sharifi, Zahiri, Dargahi, & Khiavi, 2021)(Wiji, Retno, & Isworo, 2020). However, numerous studies have indicated significant quality issues within MR structures, particularly concerning low completeness, delayed documentation, and frequent errors in data entry. Inadequate filling of medical records can adversely impact patient care, often leading to claim denials and operational inefficiencies (Supriadi & Dewi, 2020)(Swari et al., 2023). The practice of delayed documentation not only affects patient follow-up treatments but also complicates the claims process with insurance providers, resulting in increased instances of denials due to incomplete or inaccurate information (Baum, Sullivan, Kohne, Seaberry, & Powers, 2022). Consequently, improving the completeness and accuracy of MR documentation is critical for minimizing claim denial rates, streamlining administrative procedures, and ensuring legal protection for healthcare providers (Nurmawati & Handayani, 2021)(Fazaeli, Meraji, Yousefi, Jamali, & agahi, 2020).

The integration of information technology into electronic health records (EHRs) has revolutionized healthcare documentation by implementing alerts, reminders, and decision support systems that aim to enhance the quality of medical records. These technologies serve as vital tools for healthcare providers, allowing for timely alerts related to patient care requirements, vaccination schedules, and medication management. Studies indicate that the use of reminders within EHRs can substantially improve adherence to immunization schedules and ensure critical medical interventions (Stephens et al., 2021). Furthermore, clinical decision support systems embedded in EHRs can enhance documentation quality by providing real-time prompts that guide clinicians in capturing essential patient information accurately and comprehensively, thereby reducing the risk of inaccuracies and omissions (McGreevey, Mallozzi, Perkins, Shelov, & Schreiber, 2020). This technological adoption not only bolsters the clinical workflow but also fosters better communication between healthcare providers and strengthens compliance with documentation standards required for successful insurance claims (Jindal & Raziuddin, 2018).

Despite the promising advantages of utilizing alerts and reminders within EHRs, there exists a notable research gap. Current literature presents fragmented evidence on how these technologies specifically correlate with the quality of medical records and their subsequent effect on insurance claim success rates. While individual studies have examined the effectiveness of alerts in improving healthcare delivery, there remains a lack of systematic reviews that comprehensively link the presence of EHR alerts directly to enhanced medical record quality and the financial implications for insurance claims. Research indicates that fragmented data limits validation of these relationships, creating barriers to understanding the true impact of technological solutions on claims outcomes (Willis et al., 2022)(Behrendt et al., 2019). The absence of consolidated evidence highlights a critical area for future research to explore how EHR-driven interventions can systematically improve documentation practices, ultimately leading to more successful insurance claim outcomes and enhanced healthcare provider accountability (Amroze et al., 2019).

Risk management (RM) quality remains a significant concern at both global and national levels, with many organizations—especially in sectors like insurance—struggling

to implement comprehensive and effective RM practices due to limited resources, lack of standardized procedures, and varying levels of risk awareness (Crovini, Ossola, & Britzelmaier, 2020)(Ahmed, Yuantao, & Bhutta, 2021). Denied insurance claims continue to have substantial financial repercussions, as fraudulent or mishandled claims can result in billions of dollars in losses annually, driving up costs for both insurers and policyholders (Dhieb, Ghazzai, Besbes, & Massoud, 2020)(Maiano et al., 2023). In response, alert systems and remote monitoring technologies are being increasingly adopted to streamline claims processing, detect fraud, and improve RM efficiency. However, the evidence regarding their effectiveness is mixed: while some studies show that alert-driven remote monitoring can reduce unnecessary workload and hospital costs, others highlight increased staff burden and inconsistent impacts on care quality and reimbursement models (Sane, Jantti, Marjamaa, Karvonen, & Raatikainen, 2024)(Chew, Piccini, Frazier-Mills, Michalski, & Varma, 2024)(Bae & Hwang, 2024). Furthermore, the ability of alert systems to meaningfully improve RM quality and reduce the financial impact of denied claims remains unclear, with research showing inconsistent results across different settings and implementations (Vandenberk & Raj, 2023)(Bae & Hwang, 2024). This ongoing uncertainty underscores the need for further investigation into how alert systems can best support RM quality and insurance claim outcomes.

This study holds significant academic and theoretical value by addressing the gaps in the literature regarding the effectiveness of alert features in electronic health records (EHRs) for improving medical record quality and insurance claim outcomes. By synthesizing fragmented evidence, it contributes to a cohesive understanding of how alerts mitigate documentation errors and enhance clinical workflows, responding to the urgent need for comprehensive reviews in this area (Willis et al., 2022). Practically, the findings will provide actionable recommendations for healthcare workers to implement alert features, streamline documentation, reduce administrative burdens, and minimize claim denials, thereby improving operational efficiency. From a policy perspective, this research informs the development of health information systems and insurance claim regulations, advocating for standardized EHR integrations that prioritize alert functionalities to support risk management and financial sustainability. The novelty of this research lies in its focus on the underexplored linkage between alert systems, medical record quality, and claim outcomes, addressing critical inconsistencies in existing evidence (Vandenberk & Raj, 2023).

The main objective of this systematic literature review is to synthesize empirical evidence on the effectiveness of alert features for healthcare workers in enhancing medical record quality and insurance claim outcomes. The research questions guiding this inquiry are: (1) How do alert features affect the completeness, accuracy, and timeliness of medical records? (2) Does the use of alerts impact the success of health insurance claims? (3) What types of alerts are most effective in health administration contexts? (4) What factors facilitate or hinder the implementation of alerts in healthcare facilities?

RESEARCH METHOD

In order to guarantee transparency, reproducibility, and comprehensiveness of reporting during the literature identification, selection, and synthesis phases, this investigation implemented a Systematic Literature Review (SLR) in accordance with the PRISMA 2020 guidelines (Snyder, 2019). In order to guarantee that the research objectives were adequately addressed, article eligibility criteria were meticulously established. The literature was screened to determine the impact of alert features in electronic medical record systems on the quality of medical records and the outcomes of insurance claims using

inclusion and exclusion criteria. In order to mitigate bias and guarantee the quality of the studies that were included, these criteria were consistently implemented throughout the selection process (Rogers, De Brún, & McAuliffe, 2020). The criteria were established in accordance with the Population, Intervention, Comparison, Outcome (PICO) principle, which was modified for literature studies. These criteria are summarized in the subsequent Table 1.

Table 1. Inclusion and Exclusion Criteria

Component	**Inclusion Criteria**	**Exclusion Criteria**
Population	Healthcare workers (doctors, nurses, administrators) who use medical records or insurance claims systems.	Studies that do not involve healthcare professionals.
Intervention	Alert features (reminders, notifications, clinical decision support, administrative alerts) within the system.	Systems without specific alert features.
Outcome	Quality of medical records (completeness, accuracy, timeliness) or insurance claims outcomes (approval rate, efficiency).	Studies without relevant outcomes.
Year of Publication	2015–2025	Publication outside the current year range.
Language	English or Indonesian.	Languages other than English/Indonesian.
Study Type	Empirical research articles (quantitative, qualitative, mixed-methods).	Editorials, opinion pieces, commentaries, or secondary reviews.
Text Access	Full-text available.	Full-text inaccessible.

A comprehensive literature search was implemented in the primary electronic databases, including Scopus, Web of Science, and PubMed. Furthermore, in order to mitigate publication bias, grey literature, including government institutional reports and conference proceedings, was also investigated. The following keyword combinations were applied to the search strategy: ("medical record" OR "electronic health record" OR "EHR") AND ("alert" OR "reminder" OR "notification" OR "decision support") AND ("insurance claim" OR "reimbursement"). Boolean operators were employed to achieve this. In order to guarantee comprehensive coverage, the search was not restricted by language or year range during the initial phase.

The selection of studies was conducted in two phases. The titles and abstracts were initially evaluated in accordance with the inclusion and exclusion criteria. The full-text review was conducted on studies that successfully completed this stage in order to conduct a more comprehensive eligibility assessment. The PRISMA flowchart was employed to provide a transparent report of the entire selection process, which includes the number of studies identified, screened, and included, as well as the reasons for removal. This literature review implemented the PRISMA methodology, as illustrated in Figure 1.

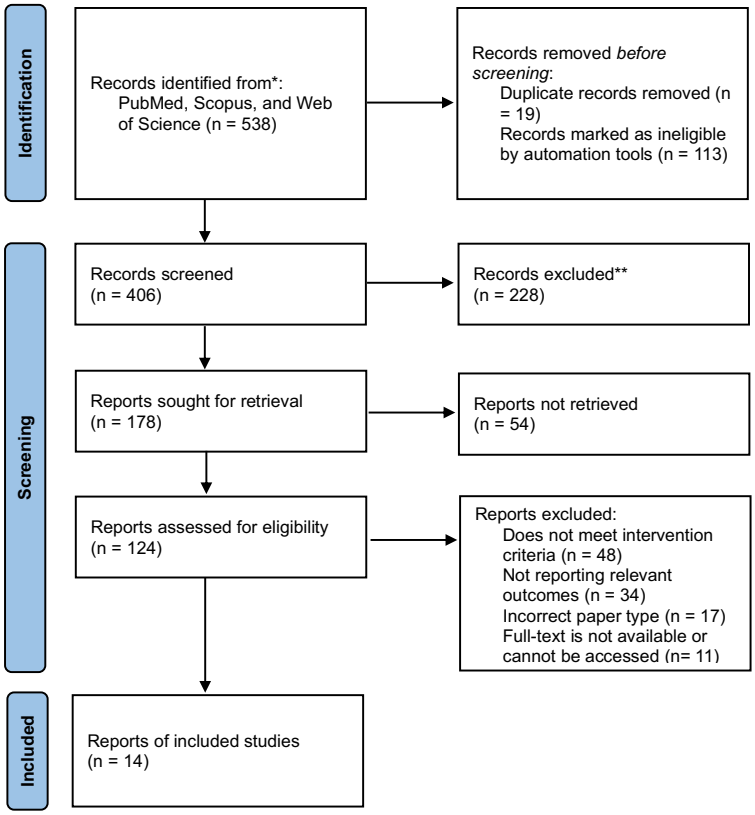

Figure 1. PRISMA Process

The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines were adhered to during the article identification and selection procedure. A total of 538 documents were identified during a literature search that was conducted using PubMed, Scopus, and Web of Science. Following the automatic exclusion of articles that did not meet the initial criteria (113 records) and the removal of duplicates (19 records), 406 records were left for title and abstract screening. From this list, 228 records were eliminated for their relevance to the research query, resulting in 178 reports that were able to advance to the full-text search. 54 reports were inaccessible for full text during the eligibility assessment phase, and 110 reports were eliminated due to not meeting intervention criteria (48 reports), not reporting relevant outcomes (34 reports), being an inappropriate manuscript type (17 reports), or not having full text available (11 reports). In conclusion, 14 studies that satisfied all of the inclusion criteria were selected and extracted for analysis, guaranteeing that the systematic synthesis contained only high-quality and pertinent studies.

RESULT AND DISCUSSION

RQ1: How does the alert feature affect the quality of medical records (completeness, accuracy, timeliness)?

The quality of medical records is generally improved by the implementation of electronic health records (EHRs) with alert features, particularly in terms of the timeliness and completeness of documentation, as demonstrated by literature analysis. Numerous studies have indicated that automated notifications motivate healthcare professionals to promptly update clinical data or complete missing entries, thereby decreasing the likelihood

of missing or delayed data (Murphy et al., 2016)(McGreevey et al., 2020). Additionally, the implementation of electronic medical record (EMR) alerts for antimicrobial stewardship has been demonstrated to decrease the adoption of inappropriate documentation practices, which suggests that the accuracy and consistency of diagnosis codes have been enhanced (Horowitz, 2021)(Lai & Afseth, 2019).

The literature emphasizes that the success of alert systems is significantly impacted by the governance and implementation context, in addition to these quantitative findings. It has been demonstrated that alert governance strategies that involve the establishment of notification thresholds, the modification of priority messages, and continuous monitoring can mitigate cognitive burden while simultaneously ensuring user compliance (McGreevey et al., 2020). Alert fatigue, increased administrative burden, and decreased clinician responsiveness may result from high notification frequencies in the absence of these optimizations (Russo, Singh, & Gregory, 2017)(Nijor, Rallis, Lad, & Gokcen, 2022). Studies demonstrating disparities in clinical impact and sensitivity among institutions and EHR vendors also demonstrate variability in efficacy (Benthin, Pannu, Khan, & Gong, 2016)(McEvoy et al., 2016). These results underscore the necessity of adequate organizational and policy support to sustain the advantages of enhancing the completeness, accuracy, and timeliness of documentation by means of alert design and implementation.

Nevertheless, these quality enhancements are not without their obstacles. High alert volumes have been demonstrated to increase cognitive burden and administrative work, which can ultimately result in alert fatigue and a decrease in adherence to system recommendations (Russo et al., 2017)(Nijor et al., 2022). This scenario has the potential to diminish the efficacy of alerts in the long term, particularly if it is not counterbalanced by the optimization of system design and governance (McGreevey et al., 2020). Therefore, alerts have been demonstrated to enhance the accuracy and comprehensiveness of medical records; however, their continuous advantages are contingent upon the equilibrium between the frequency of notifications, the burden of clinicians, and the support of organizational policies.

RQ2: Does the use of alerts impact the success of health insurance claims?

There is a scarcity of literature that explicitly evaluates the influence of electronic health record (EHR) alerts on the success of health insurance claims. However, certain findings suggest a positive correlation by enhancing the accuracy and comprehensiveness of medical records. In environments with strict reimbursement pressures, studies have demonstrated that high notification burdens do increase administrative work. However, the risk of claim denials can be mitigated by providing more comprehensive and timely documentation (Budd, 2023)(Murphy et al., 2016). The completion of medical records, which is facilitated by alerts, has been demonstrated to support billing and claims verification processes. Consequently, the efficacy of processing time and the likelihood of claim approval rates are increased.

Electronic health record (EHR) alerts have the potential to serve as a critical balancing mechanism in the context of disparities in treatment between privately and publicly insured patients. By ensuring that documentation is comprehensive and prompted by alerts, it is possible to satisfy the unique administrative requirements of each insurance system, thereby minimizing the likelihood of claims denials and expediting the reimbursement process (Budd, 2023). This is significant because research indicates that publicly insured patients frequently encounter restricted access and lower rates of medical intervention than privately insured patients (Fourquet et al., 2019)(Moreno, Buckelew, Accurso, & Raymond-Flesch, 2023). Alerts can assist healthcare providers in maintaining the necessary documentation standards for both public and private insurance by enhancing

the accuracy and timeliness of medical record entries, thereby reducing the gap in claims success that results from differences in underwriting policies (Kumar et al., 2024)(Funke, Canal, Ziegenhain, Pape, & Neuhaus, 2021).

Additionally, the extent of these advantages is contingent upon the nature of insurance systems. In public insurance schemes, where reimbursement rates are comparatively fixed and documentation standards are typically stricter, enhancements in documentation quality have a direct effect on the success of claims. In contrast, the positive effects of alerts can fluctuate and are occasionally mitigated by alert fatigue or user resistance in private insurance schemes with varying internal policies and audit thresholds (Russo et al., 2017)(Nijor et al., 2022). Consequently, the literature indicates that the successful implementation of EHR alerts has the potential to enhance health insurance claims success by enhancing the quality of documentation and the efficiency of invoicing, despite the scarcity of quantitative evidence.

RQ3: What are the most effective types of alerts in the context of healthcare administration?

The literature review reveals that electronic health record (EHR) systems employ four primary categories of alerts: notifications, pop-ups, reminders, and integrated clinical decision support. Pop-ups are interruptive, displaying messages that must be acknowledged before continuing data entry, while reminders and notifications serve as routine reminders, such as for laboratory tests or record updates. In contrast, integrated decision support integrates clinical algorithms with patient data to generate recommendations that are supported by empirical evidence. Research indicates that this variety of alert categories enables the adaptation of administrative requirements, including claims processing and medical record entry (McGreevey et al., 2020)(Horowitz, 2021)(Benthin et al., 2016).

EHR-integrated alerts have been demonstrated to consistently enhance the quality of medical records. Thus, they are the most effective of these varieties. The implementation of integrated decision support promotes the timeliness and completeness of documentation, as well as the reduction of entry errors that can impede administrative processes (Wilson et al., 2021)(Murphy et al., 2016). This type of alert also enables the adjustment of notification intensity, which mitigates alert fatigue, a significant impediment to the implementation of EHR-based alerts (Russo et al., 2017)(Nijor et al., 2022). Integrated alerts facilitate the data quality standards necessary for insurance invoicing and audits by employing contextual clinical recommendations and automated reminders.

While the evidence for administrative alerts that are specifically targeted at the insurance claims process is more limited, numerous studies have demonstrated their efficacy in expediting the reimbursement process and reducing claim denials, particularly when the alerts are directed at the completeness of billing documentation (Murphy et al., 2016). Literature findings also emphasize that the most optimal outcomes are achieved by integrating administrative alerts with clinical decision support. This hybrid model not only enhances the quality of medical records but also guarantees that administrative documentation satisfies audit criteria, thereby promoting both efficiency and claims accuracy (Lai & Afseth, 2019)(McGreevey et al., 2020). In order to enhance the overall performance of healthcare administration, the most promising approach is to implement a strategy that integrates clinical and administrative components.

RQ4: What factors facilitate or hinder the implementation of alerts in healthcare facilities?

The most critical factor in the successful implementation of an alert is its complete integration with the EHR system, as demonstrated by the literature. Effective integration

enables the real-time flow of clinical and administrative data, reduces the need for duplicate data entry, and enhances the precision of notification messages (Benthin et al., 2016)(McEvoy et al., 2016). Organizational management support has also been demonstrated to be essential, as internal policies and resource allocation have an impact on system maintenance priorities and workflow adjustments (McGreevey et al., 2020). Additionally, incentive systems, such as financial incentives or performance-based rewards, can enhance adherence to alert recommendations, while staff training and digital competency enhancement programs enhance user acceptance and reduce input errors.

Conversely, the efficacy of the system is frequently compromised by a number of inhibitory factors. When clinicians perceive technological interventions as disrupting workflow or increasing the burden of documentation, user resistance occurs (Russo et al., 2017). Alert fatigue becomes a significant issue when the habit of disregarding critical messages is established as a result of excessive notification volumes, which in turn diminishes the efficacy of interventions and the response rates (Nijor et al., 2022). Additionally, technological constraints, such as user-unfriendly interfaces and system speed, can impede optimal utilization and exacerbate data input errors (Wilson et al., 2021). These challenges frequently interact, resulting in a negative cycle that erodes the confidence of staff in the alert system.

Recent literature has also confirmed that the success of alert implementation is contingent upon a multifaceted interplay between human, technical, and organizational factors. Unintuitive interface design, alert fatigue, low message accuracy, and restricted customization capabilities are among the primary obstacles (Jung et al., 2020). Healthcare personnel frequently disregard notifications as a result of workflow disruptions and inadequate integration with existing systems (Lazzarino et al., 2024). (Scott et al., 2019)(Kinshella et al., 2020) have demonstrated that implementation success is significantly influenced by staff availability, leadership support, and adequate training from an organizational perspective. Acceptance and adherence are facilitated by user-friendly interface design, appropriate alert trigger timing, and unambiguous evidence of clinical value (Brien et al., 2023)(Fraser et al., 2024). These studies underscore the significance of continuous evaluation, stakeholder engagement, and comprehensive planning in order to guarantee the sustainability of system quality and organizational readiness (Zhang, Ma, Guo, & Li, 2022)(Iqbal et al., 2024).

A multifactorial approach that integrates management support, ongoing training, and adaptive system design is the foundation of successful implementation, as underscored by numerous studies. It has been demonstrated that alert governance practices that regulate the frequency and priority of notifications can reduce alert fatigue while ensuring user compliance (McGreevey et al., 2020). Additionally, resistance can be reduced and ownership can be increased by involving users during the design phase (Horowitz, 2021). Healthcare facilities can enhance the quality of documentation, administrative efficiency, and patient safety by optimizing the use of alerts by concurrently managing these enabling factors and anticipating barriers.

The synthesis of the results suggests that electronic health record (EHR) alerts are essential for enhancing the quality of medical records (MR) and the efficacy of healthcare administrative processes. In RQ1, there is consistent evidence that suggests that the completeness, accuracy, and timeliness of documentation can be enhanced through the use of various alert types, particularly integrated decision support (McGreevey et al., 2020). RQ2 confirms that insurance claims success is directly correlated with enhanced MR quality, as more comprehensive and timely documentation expedites the reimbursement process and reduces the likelihood of claim denials (Budd, 2023). RQ3 identifies a combination of clinical and administrative alerts as the most effective for supporting

administrative and claims needs, while RQ4 emphasizes that EHR integration, management support, staff training, and notification governance are critical success factors, with alert fatigue and user resistance serving as the primary obstacles (Russo et al., 2017)(Nijor et al., 2022). Nevertheless, the scarcity of cost-effectiveness evaluations, the rarity of studies in developing countries, and the limited research on the impact of alerts on insurance claims reveal a research void that requires attention.

ACKNOWLEDGEMENT

We would like to thank you for the funding support from the Directorate of Research and Community Service, Directorate General of Research and Development, Ministry of Higher Education, Science, and Technology of the Republic of Indonesia.

CONCLUSION

In conclusion, the results of this investigation verify that the implementation of well-designed EHR alerts can enhance the quality of medical records, facilitate the efficient processing of health insurance claims, and enhance the administrative efficiency of healthcare facilities. This success is contingent upon the integration of technology, the support of management, and the active engagement of users through adaptive alert governance and training. Nevertheless, the necessity for additional research to evaluate the long-term impact and sustainability of alert implementation in a variety of healthcare settings is underscored by the absence of studies in developing countries, variations in insurance system contexts, and voids in evidence regarding cost-effectiveness.

REFERENCES

Ahmed, Danish, Yuantao, Xie, & Bhutta, Umair Saeed. (2021). Insurers' risk management as a business process: a prospective competitive advantage or not? *European Journal of Management and Business Economics*. https://doi.org/10.1108/ejmbe-08-2021-0221

Amroze, Azraa, Field, Terry S., Fouayzi, Hassan, Sundaresan, Devi, Burns, Laura, Garber, Lawrence, Sadasivam, Rajani S., Mazor, Kathleen M., Gurwitz, Jerry H., & Cutrona, Sarah L. (2019). Use of Electronic Health Record Access and Audit Logs to Identify Physician Actions Following Noninterruptive Alert Opening: Descriptive Study. *Jmir Medical Informatics*, *7*(1), e12650. https://doi.org/10.2196/12650

Bae, Hannah, & Hwang, Youmi. (2024). Economic Evaluation of Remote Monitoring for Implantable Cardiac Devices: Evidence from a Remote-Care Study. *ClinicoEconomics and Outcomes Research: CEOR*, *16*, 697–705. https://doi.org/10.2147/CEOR.S478089

Baum, Gwen, Sullivan, Michaela, Kohne, Lisa, Seaberry, Colette, & Powers, Taryn. (2022). Reducing Inpatient Psychiatric Unit Denials. *Professional Case Management*, *27*(6), 288–294. https://doi.org/10.1097/ncm.0000000000000587

Behrendt, Christian-Alexander, Schwaneberg, Thea, Hischke, Sandra, Müller, Tobias, Petersen, Tom, Marschall, Ursula, Debus, Sebastian, & Kriston, Levente. (2019). Data Privacy Compliant Validation of Health Insurance Claims Data: The IDOMENEO Approach. *Das Gesundheitswesen*, *82*(S 02), S94–S100. https://doi.org/10.1055/a-0883-5098

Benthin, Cody, Pannu, S., Khan, Akram, & Gong, M. (2016). The Nature and Variability of Automated Practice Alerts Derived from Electronic Health Records in a U.S.

Nationwide Critical Care Research Network. *Annals of the American Thoracic Society*, *13 10*, 1784–1788. https://doi.org/10.1513/ANNALSATS.201603-172BC

Brien, Rita, Volpe, Isabelle, Grigg, Jasmin, Lyons, Tom, Hughes, Caitlin, McKinnon, Ginny, Tzanetis, Stephanie, Crawford, Sione, Eade, Alan, Lee, Nicole, & Barratt, Monica J. (2023). Co-designing drug alerts for health and community workers for an emerg ing early warning system in Victoria, Australia. *Harm Reduction Journal*, *20*(1). https://doi.org/10.1186/s12954-023-00761-6

Budd, Jeffrey. (2023). Burnout Related to Electronic Health Record Use in Primary Care. *Journal of Primary Care & Community Health*, *14*. https://doi.org/10.1177/21501319231166921

Chew, Derek, Piccini, J., Frazier-Mills, Camille, Michalski, Justin, & Varma, N. (2024). Alert-Based Remote Monitoring: A Model for Increased Reimbursement to Meet Device Clinic Workload while Achieving Overall Health System Cost Savings. *Heart Rhythm*. https://doi.org/10.1016/j.hrthm.2024.02.049

Crovini, Chiara, Ossola, G., & Britzelmaier, B. (2020). How to reconsider risk management in SMEs? An Advanced, Reasoned and Organised Literature Review. *European Management Journal*. https://doi.org/10.1016/j.emj.2020.11.002

Dhieb, Najmeddine, Ghazzai, Hakim, Besbes, Hichem, & Massoud, Yehia. (2020). A Secure AI-Driven Architecture for Automated Insurance Systems: Fraud Detection and Risk Measurement. *IEEE Access*, *8*, 58546–58558. https://doi.org/10.1109/ACCESS.2020.2983300

Fazaeli, Somayeh, Meraji, Marziyhe, Yousefi, Mahdi, Jamali, Jamshid, & agahi, masoumeh. (2020). Comparative Study of Quantitative Analysis Indicators of Inpatient Medical Records: Providing Analysis Tool. *Journal of Modern Medical Information Sciences*, *6*(1), 45–57. https://doi.org/10.29252/jmis.6.1.45

Fourquet, Jessica, Zavala, Diego E., Missmer, Stacey, Bracero, Nabal, Romaguera, Josefina, & Flores, Idhaliz. (2019). Disparities in healthcare services in women with endometriosis with pu blic vs private health insurance. *American Journal of Obstetrics and Gynecology*, *221*(6), 623.e1-623.e11. https://doi.org/10.1016/j.ajog.2019.06.020

Fraser, Hamish S. F., Mugisha, Michael, Bacher, Ian, Ngenzi, Joseph Lune, Seebregts, Christopher, Umubyeyi, Aline, & Condo, Jeanine. (2024). Factors Influencing Data Quality in Electronic Health Record Systems i n 50 Health Facilities in Rwanda and the Role of Clinical Alerts: Cros s-Sectional Observational Study. *JMIR Public Health and Surveillance*, *10*, e49127. https://doi.org/10.2196/49127

Funke, Lukas, Canal, Claudio, Ziegenhain, Franziska, Pape, Hans Christoph, & Neuhaus, Valentin. (2021). Does the insurance status influence in-hospital outcome? A retrospecti ve assessment in 30,175 surgical trauma patients in Switzerland. *European Journal of Trauma and Emergency Surgery*, *48*(2), 1121–1128. https://doi.org/10.1007/s00068-021-01689-x

Horowitz, H. (2021). Use of an electronic medical record alert. *Clinical Infectious Diseases : An Official Publication of the Infectious Diseases Society of America*. https://doi.org/10.1093/cid/ciab009

Iqbal, Fahad Mujtaba, Aggarwal, Ravi, Joshi, Meera, King, Dominic, Martin, Guy, Khan, Sadia, Wright, Mike, Ashrafian, Hutan, & Darzi, Ara. (2024). Barriers to and Facilitators of Key Stakeholders Influencing Successfu l Digital Implementation of Remote Monitoring Solutions: Mixed Methods Analysis. *JMIR Human Factors*, *11*, e49769. https://doi.org/10.2196/49769

Jindal, S. K., & Raziuddin, Faryal. (2018). Electronic Medical Record Use and Perceived Medical Error Reduction. *International Journal of Quality and Service Sciences*,

10(1), 84–95. https://doi.org/10.1108/ijqss-12-2016-0081

Jung, Se Young, Hwang, Hee, Lee, Keehyuck, Lee, Ho Young, Kim, Eunhye, Kim, Miyoung, & Cho, In Young. (2020). Barriers and Facilitators to Implementation of Medication Decision Sup port Systems in Electronic Medical Records: Mixed Methods Approach Bas ed on Structural Equation Modeling and Qualitative Analysis (Preprint) . *JMIR Medical Informatics*. https://doi.org/10.2196/preprints.18758

Kinshella, Mai Lei Woo, Walker, Celia R., Hiwa, Tamanda, Vidler, Marianne, Nyondo-Mipando, Alinane Linda, Dube, Queen, Goldfarb, David M., & Kawaza, Kondwani. (2020). Barriers and facilitators to implementing bubble CPAP to improve neona tal health in sub-Saharan Africa: a systematic review. *Public Health Reviews*, *41*(1). https://doi.org/10.1186/s40985-020-00124-7

Kumar, Neerav, Akosman, Izzet, Mortenson, Richard, Xu, Grace, Kumar, Abhinav, Mostafa, Evan, Rivlin, Jessica, De La Garza Ramos, Rafael, Krystal, Jonathan, Eleswarapu, Ananth, Yassari, Reza, & Fourman, Mitchell S. (2024). Disparities in postoperative complications and perioperative events ba sed on insurance status following elective spine surgery: A systematic review and meta-analysis. *North American Spine Society Journal (NASSJ)*, *17*, 100315. https://doi.org/10.1016/j.xnsj.2024.100315

Lai, Y., & Afseth, J. (2019). A review of the impact of utilising electronic medical records for clinical research recruitment. *Clinical Trials*, *16*, 194–203. https://doi.org/10.1177/1740774519829709

Lazzarino, Runa, Borek, Aleksandra J., Honeyford, Kate, Welch, John, Brent, Andrew J., Kinderlerer, Anne, Cooke, Graham, Patil, Shashank, Gordon, Anthony, Glampson, Ben, Goodman, Philippa, Ghazal, Peter, Daniels, Ron, Costelloe, Céire E., & Tonkin-Crine, Sarah. (2024). Views and Uses of Sepsis Digital Alerts in National Health Service Tru sts in England: Qualitative Study With Health Care Professionals. *JMIR Human Factors*, *11*, e56949. https://doi.org/10.2196/56949

Maiano, Luca, Montuschi, Antonio, Caserio, Marta, Ferri, Egon, Kieffer, Federico, Germanò, Chiara, Baiocco, Lorenzo, Celsi, L., Amerini, Irene, & Anagnostopoulos, Aris. (2023). A deep-learning-based antifraud system for car-insurance claims. *Expert Syst. Appl.*, *231*, 120644. https://doi.org/10.1016/j.eswa.2023.120644

McEvoy, D., Sittig, Dean, Hickman, Thu Trang, Aaron, Skye, Ai, Angela, Amato, M., Bauer, D., Fraser, G., Harper, Jeremy, Kennemer, Angela, Krall, M., Lehmann, Christoph, Malhotra, S., Murphy, D., O'Kelley, Brandi, Samal, L., Schreiber, R., Singh, Hardeep, Thomas, E., Vartian, C., Westmorland, Jennifer, McCoy, A., & Wright, A. (2016). Variation in high-priority drug-drug interaction alerts across institutions and electronic health records. *Journal of the American Medical Informatics Association : JAMIA*, *24*, 331–338. https://doi.org/10.1093/jamia/ocw114

McGreevey, John D., Mallozzi, Colleen P., Perkins, Randa, Shelov, Eric, & Schreiber, Richard. (2020). Reducing Alert Burden in Electronic Health Records: State of the Art Recommendations From Four Health Systems. *Applied Clinical Informatics*, *11*(01), 1–12. https://doi.org/10.1055/s-0039-3402715

Moreno, Ruby, Buckelew, Sara M., Accurso, Erin C., & Raymond-Flesch, Marissa. (2023). Disparities in access to eating disorders treatment for publicly-insur ed youth and youth of color: a retrospective cohort study. *Journal of Eating Disorders*, *11*(1). https://doi.org/10.1186/s40337-022-00730-7

Murphy, D., Meyer, Ashley, Russo, Elise, Sittig, Dean, Wei, Li, & Singh, Hardeep. (2016). The Burden of Inbox Notifications in Commercial Electronic Health Records. *JAMA*

Internal Medicine, *176* *4*, 559–560. https://doi.org/10.1001/jamainternmed.2016.0209

Nijor, Sohn, Rallis, Gavin, Lad, Nimit, & Gokcen, E. (2022). Patient Safety Issues From Information Overload in Electronic Medical Records. *Journal of Patient Safety*, *18*. https://doi.org/10.1097/PTS.0000000000001002

Nurmawati, Ida, & Handayani, Sari. (2021). Returning of Medical Record Documents Among Hospitalized Patients: Literature Review. *Jurnal Aisyah Jurnal Ilmu Kesehatan*, *6*(3). https://doi.org/10.30604/jika.v6i3.516

Rogers, L., De Brún, A., & McAuliffe, E. (2020). Defining and assessing context in healthcare implementation studies: a systematic review. *BMC Health Services Research*, *20*(1). https://doi.org/10.1186/s12913-020-05212-7

Russo, Elise, Singh, Hardeep, & Gregory, M. (2017). Electronic Health Record Alert-Related Workload as a Predictor of Burnout in Primary Care Providers. *Applied Clinical Informatics*, *08*, 686–697. https://doi.org/10.4338/ACI-2017-01-RA-0003

Sane, M., Jantti, T., Marjamaa, A., Karvonen, J., & Raatikainen, P. (2024). A sane approach to the high volume of alert transmissions in remote monitoring- turning of clinically non-relevant alerts decreases substantially workload. *European Heart Journal*. https://doi.org/10.1093/eurheartj/ehae666.733

Scott, Jason, Finch, Tracy, Bevan, Mark, Maniatopoulos, Gregory, Gibbins, Chris, Yates, Bryan, Kilimangalam, Narayanan, Sheerin, Neil, & Kanagasundaram, Nigel Suren. (2019). Acute kidney injury electronic alerts: mixed methods Normalisation Pro cess Theory evaluation of their implementation into secondary care in England. *BMJ Open*, *9*(12), e032925. https://doi.org/10.1136/bmjopen-2019-032925

Sharifi, Saiedeh, Zahiri, Mansour, Dargahi, Hosein, & Khiavi, Farzad F. (2021). Medical Record Documentation Quality in the Hospital Accreditation. *Journal of Education and Health Promotion*, *10*(1), 76. https://doi.org/10.4103/jehp.jehp_852_20

Snyder, Hannah. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, *104*. https://doi.org/10.1016/j.jbusres.2019.07.039

Stephens, Ashley, Wynn, Chelsea S., Hofstetter, Annika M., Kolff, Chelsea A., Peña, Oscar, Kahn, E., Dasgupta, Balendu, Natarajan, Karthik, Vawdrey, David K., Lane, Mariellen, Robbins-Milne, Laura, Ramakrishnan, Rajasekhar, Holleran, Stephen, & Stockwell, Melissa S. (2021). Effect of Electronic Health Record Reminders for Routine Immunizations and Immunizations Needed for Chronic Medical Conditions. *Applied Clinical Informatics*, *12*(05), 1101–1109. https://doi.org/10.1055/s-0041-1739516

Supriadi, Supriadi, & Dewi, Nurmala. (2020). Factors Causing Incomplete Filling of Medical Records of Inpatients in Private Hospitals X Tangerang City. *Proceedings of the Third Andalas International Public Health Conference, AIPHC 2019, 10-11th October 2019, Padang, West Sumatera, Indonesia*. https://doi.org/10.4108/eai.9-10-2019.2297246

Swari, Selvia J., Fransiska, Cindy K. R., Mudiono, Demiawan R. P., Selviyanti, Erna, Alfiansyah, Gamasiano, & Santi, Maya W. (2023). Analysis of Causes of Inpatient Medical Records Delayed Retrieval at Muna Anggita Hospital Bojonegoro, Indonesia. *Jurnal Medicoeticolegal Dan Manajemen Rumah Sakit*, *12*(3), 324–340. https://doi.org/10.18196/jmmr.v12i3.89

Vandenberk, B., & Raj, S. (2023). Remote Patient Monitoring: What Have We Learned and Where Are We Going? *Current Cardiovascular Risk Reports*, *17*, 103–115. https://doi.org/10.1007/s12170-023-00720-7

Wiji, Lestari, Retno, Astuti, & Isworo, Slamet. (2020). Completeness of Filling Medical

Record Documents on Inpatient Ward, Ungaran General Hospital-Semarang, Central Java -Indonesia. *GSC Biological and Pharmaceutical Sciences*, *12*(1), 145–155. https://doi.org/10.30574/gscbps.2020.12.1.0209

Willis, Van C., Craig, Kelly J. T., Jabbarpour, Yalda, Scheufele, Elisabeth, Arriaga, Yull, Ajinkya, Monica, Rhee, Kyu, & Bazemore, Andrew. (2022). Digital Health Interventions to Enhance Prevention in Primary Care: Scoping Review. *Jmir Medical Informatics*, *10*(1), e33518. https://doi.org/10.2196/33518

Wilson, F., Martin, Melissa, Yamamoto, Yu, Partridge, C., Moreira, Erica, Arora, T., Biswas, Aditya, Feldman, H., Garg, A., Greenberg, J., Hinchcliff, M., Latham, S., Li, Fan, Lin, Haiqun, Mansour, Sherry, Moledina, D., Palevsky, P., Parikh, C., Simonov, M., Testani, J., & Ugwuowo, Ugochukwu. (2021). Electronic health record alerts for acute kidney injury: multicenter, randomized clinical trial. *The BMJ*, *372*. https://doi.org/10.1136/bmj.m4786

Zhang, Xue, Ma, Chao, Guo, Feng, & Li, Zhongqiu. (2022). Does perceived overqualification cultivate angels or demons? Examining its interpersonal outcomes through pride from an evolutionary psychology perspective. *Applied Psychology*, *71*(1), 243–270. https://doi.org/10.1111/apps.12319