Use of Clinical Systems to Improve Outcomes and Efficiencies

Name

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Date

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Introduction

Proper clinical systems play an important role in revitalizing the healthcare delivery system worldwide. All primary healthcare professionals need to come together to establish and implement the target clinical systems. The use of evidence-based practices, health information technology and developing clinical systems have been shown to improve patient outcomes and efficiencies. Clinical systems can be used to improve healthcare processes, identify patients at risk, improve efficiency, and advance research in order to improve patient outcomes. Electronic healthcare records (EHR) have been selected as the clinical system. accordingly, this paper will critique five research articles on the application of electronic healthcare records to improve outcomes and efficiencies.

Summary 1

Bowles, K. H., Dykes, P., & Demiris, G. (2015). The use of health information technology to improve care and outcomes for older adults. *Research in gerontological nursing*, *8*(1), 5–10. doi: 10.3928/19404921-20121222-01.

According to Bowles, Dykes and Demiris, (2015), EHR are vital in improving documentation and billing in the delivery of healthcare. Healthcare organizations implement EHR to improve quality, safety, and efficiency of care. In regard to improving outcomes, Bowles et al (2015), explains that effective application of EHR can improve care outcomes. For instance, the use of EHR systems has been shown to improve documentation of pressure ulcer and fall risk assessments. Improved documentation using EHR led to a 13% drop in the rates of nosocomial pressure ulcers. These findings clearly indicate the impact of EHR to improve outcomes.

The study also highlights the key element of documentation and organization, which are very important in the efficient operations of daily processes with healthcare organizations. The study findings indicate that implementation of EHR led to improved teamwork, collaboration and supportive leadership which led to sustained improvement in safety and quality outcomes (Bowles et al., 2015). Bowles et al (2015), further indicate that the use of EHR supported the integration of clinical decisions for personalized treatment plans into the workflow, improving the efficiency of the workflow.

From this article, we learn that EHR can be used to improve assessment of adverse events such as documentation of pressure ulcer and fall risk assessments. For example, organizations should ensure all patient data is stored electronically in order to facilitate easy assessment for patients at risk of adverse events.

Summary 2

Kruse, C. S., Stein, A., Thomas, H., & Kaur, H. (2018). The use of Electronic Health Records to Support Population Health: A Systematic Review of the Literature. *Journal of medical systems*, *42*(11), 214. doi: 10.1007/s10916-018-1075-6.

According to Kruse, Stein, Thomas and Kaur (2018), EHRs are among the clinical systems that improve the quality of care and efficiency of healthcare. Regarding outcomes, this study found out that implementation of EHRs led to improved delivery and integration of the recommended preventative care into care practices, leading to improved care outcomes. In addition, according to Kruse et al (2018), implementation of EHRs in the ICU significantly lower central line-associated bloodstream infections and mortality rates within the surgical ICU.

EHRs facilitate the provision of patient-centered care and more coordinated care improving efficiency. EHRs also facilitate the provision of secure access to patients’ information which leads to better outcomes in regard to the quality of care and productivity (Kruse et al., 2018). EHR systems are applied in the management of chronic diseases such as diabetes and regular utilization of the EHRs can decrease data fragmentation and hence improve continuity of care between healthcare professions if healthcare providers engage in health information exchanges. In addition, EHRS within the emergency department improves the decision-making process when utilizing a decision tree and hence improves the quality of life for the patients and is also cost-effective (Kruse et al., 2018).

From this article, it is evident EHRs facilitate safe continuity of care. For example, with EHRs, human errors likely to occur during handover using manual paper are eliminated.

Summary 3

Manca D. P. (2015). Do electronic medical records improve quality of care? Yes. *Canadian family physician Medecin de famille canadien*, *61*(10), 846–851. doi: 10.14236/jhi. v18i1.751

Manca (2015) explains various ways that EHRs improve outcomes and efficiency. According to Manca (2015), EHRs improve the management of chronic disease, and screening and prevention of disease, which leads to improved quality of care and outcomes. EHRs can provide treatment goals and notifications to remind healthcare providers when specific preventative and screening planned activities are due or outdated. The EHRs also facilitates access to important information and resources necessary to handle various health conditions which leads to better outcomes (Manca, 2015).

The structured EHRs data provide access to point-of-care information which can be utilized in informing practice and conducting research. With meaningful use, the EHR data provides healthcare providers with vital practice-level information that can be utilized for practice-level interventions like identification of patients who missed screening for specific diseases. Such data provides important feedback to the healthcare providers regarding the quality of care (Manca, 2015). Manca (2015) also explains that the use of point-of-care EHR data can provide important information regarding the efficacy of specific medications and other treatment modalities.

It is therefore evident that EHRs improve disease outcomes. For instance, screening of patients with hypertension using an EHR intervention facilitates provision of the appropriate/specific lifestyle modification education to the target group and hence improves disease outcome, for example reduces blood pressure for the patients.

Summary 4

# Selvaraj S, Fonarow G, Sheng S, Matsouaka R, DeVore A, Heidenreich A, Hernandez A, Yancy W & Bhatt D. (2018). Association of Electronic Health Record Use with Quality of Care and Outcomes in Heart Failure: An Analysis of Get with the Guidelines—Heart Failure. *Journal of the American Heart Association*, 7(7), pii: e008158. doi: 10.1161/JAHA.117.008158.

Selvaraj, Fonarow, Sheng, Matsouaka, DeVore, Heidenreich, Hernandez, Yancy and Bhatt (2018) provide that implementation of the EHRs leads to improved coordination of care and thus improves efficiency during care provision. Similarly, EHRs have been demonstrated to be effective in decreasing medical errors and hence improve the quality of care and outcomes. However, the findings of this study indicate that the use of EHRs was not attributable to improved quality of care and did not have a significant impact on heart failure-related outcomes (Selvaraj et al., 2018).

From this article, it is evident that use of EHRs alone may not be sufficient in improving heart failure-related outcomes. Therefore, other interventions such as monitoring patient adherence to treatment and patient education should be integrated in patients’ treatment plan.

Summary 5

Campanella P, Lovato E, Marone C, Fallacara L & Mancuso A. (2015). The impact of electronic health records on healthcare quality: a systematic review and meta-analysis. *European Journal of Public Health*, 1(5), 60-4. doi: 10.1093/eurpub/ckv122

Campanella, Lovato, Marone, Fallacara and Mancuso (2015) explore the impact of EHRs on the quality of care. The study explains that the EHR leads to reduced medical errors and thus improves the quality of care and health outcomes. In addition, EHR has been shown to improve time inefficiency and also reduces healthcare costs and thus EHR has led to improved efficiency. Campanella et al (2015) further explain that EHR has been an effective method to reduce healthcare costs and thus improve the quality of care and reduce harm to patients. The availability of the stored computerized enables computerized quality assessment and automated chart review, which is cost-effective and also a time-saving process. Evidence indicates that EHR systems improve the quality of care and outcomes by improving time efficiency and decreasing medication errors (Campanella et al., 2015). Therefore, the implementation of EHR systems significantly improves health outcomes and efficiencies of healthcare processes.

The article demonstrates that by use of EHRs, medical errors and the consequent adverse events can be avoided. For example, EHR technologies can assist in preventing medication errors by flagging possible adverse reactions and/or drug interactions.

Conclusion

Clinical systems such as EHR systems have been shown to improve outcomes, efficiency, and effectiveness in health care. All the selected studies indicated that EHRs improve outcomes by reducing the rate of medical errors, improve documentation, and facilitating the provision of coordinated care: this significantly contributes to improved outcomes. On the other hand, EHRs improve efficiency by promoting teamwork and collaboration among healthcare providers which improves the efficiency of care. In addition, EHR systems save time and reduce costs further indicating the efficiency of EHRs in the healthcare system.

References

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# Selvaraj S, Fonarow G, Sheng S, Matsouaka R, DeVore A, Heidenreich A, Hernandez A, Yancy W & Bhatt D. (2018). Association of Electronic Health Record Use with Quality of Care and Outcomes in Heart Failure: An Analysis of Get with the Guidelines—Heart Failure. *Journal of the American Heart Association*, 7(7), pii: e008158. doi: 10.1161/JAHA.117.008158.