

Network of Electronic Health Records Pathogenic Disease: a Short Review

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Abstract

Electronic health records (EHRs) have grown in use and functionality during the last ten years. Despite the fact that EHRs are primarily utilised for clinical purposes, epidemiologists have used them to undertake studies ranging from cross-sectional studies within a single hospital to longitudinal studies on geographically dispersed patients. There have been concurrent efforts to harness EHR data for research as the use of electronic health records (EHRs) for clinical care has increased significantly. Clinical epidemiology and comparative

effectiveness studies, including analysis to identify patients at higher risk for problems or who are better candidates for therapy, are facilitated by EHR repositories. The requirement for quick turnaround during the COVID-19 global pandemic has increased the popularity of these types of studies in the field of infectious illnesses. This brief study examines the benefits and drawbacks of such networks, as well as some previous research in the realm of infectious diseases.

Keywords

EHR, Disease, Community health

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1. Introduction

Data from electronic health records (EHRs) could significantly aid infectious disease surveillance, but their application differs across Europe. Researchers looked at how EHRs were used to see if they could be used for infectious disease surveillance. Electronic health records (EHR) have the potential to improve the timeliness and completeness of infectious disease surveillance while also reducing the burden of reporting data. The information gathered could be useful in a variety of areas, such as test results, clinical diagnosis, and illness prevention and therapy. Infectious diseases continue to be a major source of illness in people all over the world, particularly among the very young, the elderly, and those with underlying medical disorders [1].

Vaccination can prevent a growing number of these diseases, and vaccination campaigns are important public health measures for reducing infectious disease-related illness. Prevalent ideas, available risk factor measurements, and the expense of getting pertinent data all influence how epidemiologic research is designed and inferred. Cause-and-effect analysis was limited due to a lack of longitudinal data. Funding enabled researchers to create cohorts of people who were followed over time in the second part of the twentieth century. Traditional costly and time-consuming prospective investigations are made more difficult in the twenty-first century by diminishing research support and participation rates [2].

Electronic health records (EHRs), which have become increasingly popular in recent years, provide a viable alternative.

These databases provide a low-cost way for epidemiologists to obtain extensive longitudinal data on big populations. EHRs are more than just a digital replica of a paper record; they may be linked to contextual data through geographic information systems and integrated with self-reported data to answer questions about complicated causal networks. The inclusion of a uniform EHR system and the degree of transition to a fully computerised medical record system have no bearing on whether or not an EHR system is used to exchange data with public health authorities or to report infectious diseases. Only about a third of the nations covered in the study had protocols in place to facilitate interoperability – the sharing of various types of data – between national or subnational systems and public health agencies (PHAs) [3].

Issues with system usability, as well as a lack of staff time and resources, appear to be the most major barriers to EHR implementation as countries progress toward entirely electronic systems. Concerns about confidentiality and privacy, as well as data quality issues including completeness and timeliness, and a lack of data exchange between organisations, are all barriers to using EHR data. Most medical doctors' current goal is to practise evidence-based medicine. But not all evidence is created equal. Several papers have debated how the evidence pyramid might be changed, although randomised clinical trials (RCTs) are consistently regarded as the highest-quality evidence, followed by big cohort studies, case-control studies, and finally case series and reports [4].

EHR data is collected for the purposes of the clinical interaction, unlike standardised primary data collection in epidemiologic

research. The data collected is directly influenced by patient health state, how and when they seek care and variation in physician care methods and documentation, rather than being driven by research demands. Case series, nested case-control studies, and prospective and retrospective cohorts are the most common EHR-based studies. EHRs can be utilised to assess case and control status on a given outcome, exposure measures, and confounders, as well as to characterise illness onset and consequences [5]. A single appearance of a diagnostic code does not necessarily indicate that a patient has a disease for a variety of reasons. EHR studies are similarly plagued by issues of representativeness and missing data. On the one hand, the fact that EHR research can include every person who receives care in the analysis eliminates selection bias. Patients engaged in a particular health-care system, on the other hand, may differ from the broader community in significant ways.

2. Conclusion

EHR-based epidemiological already has produced a substantial amount of valuable research, and it will continue to do so as EHR use grows, costs drop, linkage to vital or other records grows, and accessibility improves. Additionally, as new technologies allow for the collecting of patient data without the involvement of medical experts, opportunities will grow. Patients, for example,

can use a patient portal linked to their EHR to self-report data. The use of a portal has been linked to increased patient autonomy and self-efficacy, as well as enhanced care adherence and patient-provider relationships. Patients who are empowered are more likely to make educated health decisions and to participate more readily in research, which benefits both clinical treatment and community health.

3. References

1. Galea S, Tracy M. Participation rates in epidemiologic studies. *Ann. Epidemiol.* 2007; 17: 643-653.
2. Murad MH, Asi N, Alsawas M, Alahdab A. New evidence pyramid. *Evid Based Med.* 2016; 21: 125-127.
3. Alonso A, Jick SS, Hernan MA. Allergy, histamine 1 receptor blockers, and the risk of multiple sclerosis. *Neurology.* 2006; 66:572-575.
4. Hennessy S. Use of health care databases in pharmacoepidemiology. *Basic Clin. Pharmacol. Toxicol.* 2006; 98:311-313.
5. Shulman S, Geevarghese B, Kim KY, Rowley A. The impact of social distancing for COVID-19 upon diagnosis of Kawasaki Disease. *J Pediatric Infect Dis Soc.* 2021; 10(1): 742-744.