Chart Review in the Digital Age: When will research methods catch up?

Byron Alex, MD,1,2 Elizabeth Lurie, MPH,3 Katharine H McVeigh, PhD, MPH3

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1) Resident, Public Health/Preventive Medicine Residency Program, New York City Department of Health and Mental Hygiene
2) Columbia University Mailman School of Public Health
3) Division of Epidemiology, New York City Department of Health and Mental Hygiene
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Background
Medical chart review is often used in public health and research activities. Historically, medical data may have been accessed by visiting a clinic site where personnel would retrieve the chart and allow data to be abstracted. Electronic record technology now offers the potential for changes in chart review practice.

Objectives
To describe the processes and challenges of carrying out chart review of electronic charts maintained by primary care providers (PCPs) throughout New York City.

Methods
We sought 567 records from 509 providers representing 476 unique patients who are participating in an ongoing public health research effort. We called providers to determine whether the charts were paper or electronic. If electronic, we sent an IRB-approved HIPAA release form signed by the study participant and requested a complete copy of the record. Requests were followed up by telephone if not filled within 4 weeks. Printed records were obtained by mail, fax, or site visit.

Results
Preliminary results show 87 of 509 (17%) of providers did not use electronic records. After initial requests, 83 records were returned within 4 weeks. Of those returned after 4 weeks, the median time to arrival was 71 days.

Qualitative findings obtained by interviewing researchers involved in the chart review process identified complicating factors such as consolidation of providers and facilitating factors such as the ability to print a copy of record at the provider office.

Implications
Electronic records have surpassed paper records among office based providers in the United States and the trend is increasing (Kahn and Weng). Yet many of the functions of chart review are still mediated by older technology: telephone, mail, fax, and in-person visits. Despite permission granted by the individual, we faced many difficulties in locating and accessing records. Adopting electronic methods of record sharing may facilitate future chart review research. Below are some of the areas that may be impacted by adopting electronically mediated record sharing

• Managing permissions: the individual grants permission to the researcher electronically, this is confirmed electronically and the determination is made to grant access to the record.

Electronic address: The location of the chart is registered electronically. After receiving permission, the researcher is linked electronically to the location of the record.

Exchange interface: A dynamic interface allows for multi-directional communication. The individual, researcher, host of the record, provider, and other stakeholders can communicate electronically and update access controls in real time. This may allow the individual to permit use of specific data elements that the researcher can access in a tabular format.

References: