The Electronic Medical Record Search Engine

TECHNOLOGY NUMBER: 3348

Technology ID
3348

Category
Software
Software & Content

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BACKGROUND

Hospitals and independent medical practitioners alike face the problem of searching through multiple patients electronic records for necessary data on diagnoses, test results, billing, reimbursements, and other related issues. These searches often require complex search queries that are hard to construct, especially for personnel who might have limited technical experience. Delays in obtaining relevant information reduce staff productivity and may delay patients treatment or care plan.

INNOVATE

EMERSE is the Electronic Medical Record Search Engine. It was designed to work with the free text (unstructured) clinical documents in an electronic health record (EHR) system. Most importantly, EMERSE was made for regular users, not those with IT or informatics expertise. It was developed at the University of Michigan in 2005 and has been continuously improved and updated since then. EMERSE has been used to support a variety of tasks, including clinical and translational research, internal quality improvement and quality assurance initiatives, as well as for hospital operational support tasks. It has been used very successfully by the billing and coding team for complex case reviews, improving reimbursement rates by nearly $1 million per year. The software is used routinely by our compliance office, risk management, and infection control departments. It has also been used in the clinical setting, to support rapid data retrieval to answer clinical questions as well as to reduce the burden of prior authorizations, required by many insurance companies. EMERSE has also been used to support hundreds of research

projects, resulting in many peer-reviewed publications.

EMERSE can integrate documents from multiple sources. At the University of Michigan, EMERSE has tens of millions of documents, including those from our original, homegrown EHR system, CareWeb, as well as newer documents from our replacement vendor EHR, Epic. EMERSE was designed to be vendor-neutral--as long as you can get your documents out of the system, EMERSE should be able to search through them. We've even created an interface to move cohorts identified through the i2b2 Workbench directly into EMERSE for further searching of their free text notes.

EMERSE provides features to help get your work done quickly and accurately. For example, the tool includes a large list of over 60,000 synonyms and related keywords to help you expand your search even if you don't know the right terms to use. This includes a large collection of trade and generic drug names, acronyms and abbreviations, and other wording variations including spelling errors. Applications Clinical and translational research involving chart reviews and data abstraction Operational applications in clinical care, infection control surveillance, compliance, and medical billing/reimbursements. Advantages Improved productivity: EMERSE has been implemented at the University of Michigan Medical Center and has directly increased productivity of support staff. Easy to use and does not require extensive technical or informatics experience.

ADDITIONAL DETAILS

More Information: http://project-emerse.org

UM inquiries, please contact the Project Emerse team directly for assistance and or request access via the self service data tools request process.

More Information is available at:

https://medicine.umich.edu/medschool/research/office-research/data-office-clinical-and-translational-research/self-serve-data-tools

PLEASE NOTE: After your license is approved, instructions for downloading EMERSE will be sent to you.