



ZyDoc to Present MediSapien™ as a Platform Facilitating “Dictation for EHR Data Capture and Analytics” at ASRS 2013 Retinal Innovation Forum

Toronto, ON (PRWEB) August 26, 2013 – ZyDoc, an Islandia, NY-based medical informatics company, has been selected to participate in the Retinal Innovation Forum at the 31st Annual Meeting of the American Society of Retina Specialists (ASRS) held August 24-28, 2013 in Toronto, Canada. ZyDoc Chairman James M. Maisel, M.D. will present “Dictation for EHR Data Capture and Analytics,” highlighting ZyDoc’s MediSapien™ Platform and associated innovations in health care data capturing, structuring, and mining technologies. Maisel, a retinal specialist, will also present his research on “Using Unstructured Data Sources for Analytics in a Retinal Practice,” as an educational poster at the ASRS conference.

MediSapien is an enterprise-class web-based platform from ZyDoc for conversion of unstructured text into fully coded structured data. MediSapien accepts dictation or text from transcription vendors, legacy data and EHRs. The fully coded structured output, including ICD-10, is optimized for insertion into EHRs and facilitates interoperability. MediSapien also performs computer-assisted coding (CAC) for revenue cycle management (RCM) companies and data mining optimized for health data analytics. The MediSapien platform supports independent application developers.

MediSapien empowers doctors to work efficiently dictating their encounters rather than performing tedious mouse and keyboard EHR data entry. The dictations are automatically speech-recognized to assist the typist in rapid generation of perfectly transcribed documents. Authors can approve the transcriptions that are automatically inserted into EHRs along with structured data and text. The text can be mined for analytic reporting, and the codes include ICD-10 for revenue cycle management. Legacy unstructured text or semi-structured EHR data can be converted to EHR structured data meeting Meaningful Use Stage II requirements.

According to Maisel, “MediSapien, a platform under development since 2010, incorporates innovative disruptive yet enabling natural language processing (NLP) and patent-pending health care informatics technologies to capture and unlock meaning from patient health data for health care providers. It is a powerful tool for use by practices, pharmaceutical companies, RCM vendors, researchers, and public agencies in analyzing de-identified data (analytics). MediSapien is an excellent tool for answering clinical questions with over 110,000 macular degeneration and 16,000 retinal vein occlusion encounters in the database.”

The 31st Annual Meeting of the American Society of Retina Specialists (ASRS) will be held August 24-28, 2013 in Toronto, Canada. The Retinal Innovation Forum, on Monday, August 26, will offer a glimpse into the future, as retina pharmaceutical and device manufacturers and private companies present their retinal innovations and pipeline products. A detailed agenda is available at <http://www.asrs.org/annual-meeting/asrs-retinal-innovation-forum>.

About ZyDoc and MediSapien

ZyDoc, based in Islandia, NY, was founded in 1993 to develop medical informatics technologies. ZyDoc has developed award-winning e-transcription infrastructure and speech recognition solutions. Augmenting its transcription business, ZyDoc launched MediSapien, an NLP-powered web-based platform that converts unstructured text to fully coded structured data for EHRs, analytics, and reporting. The MediSapien Knowledge Management Platform is powered by disruptive patent-pending proprietary technologies, and NLP technology from Health Fidelity. For clinician end-users, MediSapien can be utilized in conjunction with existing or planned EHR installations, and can

facilitate compliance with Meaningful Use mandates. ZyDoc is a certified reseller of the Philips SpeechExec Enterprise Solution, and a Speech Processing Solutions partner.

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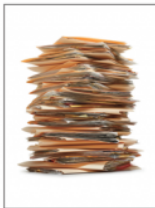
Using unstructured data sources for analytics in a retinal practice

Presented by James M. Maisel, MD

31st Annual ASRS Scientific Meeting, Toronto, Canada
 August 24 - 28, 2013

Purpose

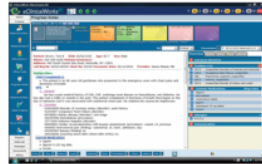
Much retina practice data is generated in unstructured formats. However, for secondary uses, structured data is required. A method for producing structured data from unstructured ophthalmic data is required.



Legacy Records

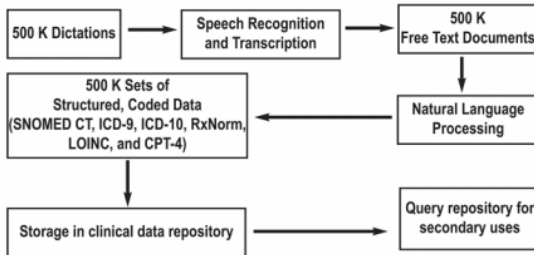


Dictated Data



Free Text in EHR

Methods



Results

- (1) ICD-10, ICD-9, CPT-4, SNOMED-CT, RxNorm and LOINC codes were generated for all of the notes processed.
- (2) A query tool was able to identify all notes including a structured and unstructured data element.
- (3) The query tool was able to perform searches for documents containing certain combinations of structured and unstructured data element using the and, or, and not operators.
- (4) Searches could be performed nearly instantaneously for data sets containing several thousand notes.
- (5) The structured data generated from each note could be outputted in a de-identified format.
- (6) The following identifying data could be extracted from notes: sex, age.

Criteria	# records	# unique patients	# unique Drs.
Avastin	51328	21033	456
Lucentis	32346	12403	218
Eylea	4990	2064	66
Amnig	19427	10113	480
Chusides	470	262	49
Triamcinolone	3598	2421	292
Cystoid Macular Edema	10885	7238	262
Diabetic Macular Edema (DME)	38667	9209	205
Age-Related Macular Degeneration (AMD)	110355	51006	660
Macular Edema	82240	43375	428
Retinal Vein Occlusion	16450	8438	355

[De-identified data]

Examples: Analytics can help determine if aspirin use is associated with macular degeneration or other anti-inflammatory medications using SNOMED terminology. AMD searches can be combined or subclassified using ICD-9, ICD-10 or SNOMED medical concepts to include all expressions of AMD using NLP technology.



SEARCH: AMD and Aspirin — Analytics can help determine if aspirin use is associated with macular degeneration or other anti-inflammatory medications using SNOMED terminology. AMD searches can be combined or subclassified using ICD-9, ICD-10 or SNOMED medical concepts to include all expressions of AMD using NLP technology.



SEARCH: DME and Avandia — An analytic extraction of all patients over 18 with diabetic macular edema using Avandia. The search can be expanded to the class of anti-diabetic drugs called thiazolidinediones to include other pioglitazone (Actos) with a SNOMED term for that class or by including all RxNorm codes for the drug.

Secondary data use of generated codes to perform functions other than to receive, store and transmit medical codes can include: **Epidemiological Research • Clinical Research • Outcomes Analysis • Case Management • Pharmacovigilance • Population Surveillance • Syndromes Surveillance and Trend Analysis • Disease Registries • Vital Records Databases**

Conclusion

Natural language processing was demonstrated to extract structured codes from unstructured data sources such as transcription. The structured codes could be queried with a basic analytic tool to provide subsets of patients based upon SNOMED CT, ICD-9, ICD-10, RxNorm, LOINC and CPT-4 codes with typical stratifications required for clinical studies and practice management issues.

James M. Maisel, MD Financial Stakeholder, Chairman, ZyDoc Medical Transcription and MedBagin Knowledge Management, Founder, Retina Group of New York. (Use of Human Subjects: IRB Exempt)