IR Meets EHR: Retrieving Patient Cohorts for Clinical Research Studies

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Failure analysis for 2011 topics (Edinger, 2012)

Reasons for Incorrect Retrieval	Visits	Topics					
Visits Judged Not Relevant							
Topic terms mentioned as future possibility	16	9					
Topic symptom/condition/procedure done in the past	22	9					
All topic criteria present but not in time/sequence specified by the topic description	19	6					
Most, but not all, required topic criteria present	17	8					
Topic terms denied or ruled out	19	10					
Notes contain very similar term confused with topic term	13	11					
Non-relevant reference in record to topic terms	37	18					
Topic terms not present—unclear why record was ranked highly	14	8					
Topic present—record is relevant—disagree with expert judgment	25	11					
Visits Judged Relevant	·	-					
Topic not present—record is not relevant—disagree with expert judgment	44	21					
Topic present in record but overlooked in search	103	27					
Visit notes used a synonym or lexical variant for topic terms	22	10					
Topic terms not named in notes and must be inferred	3	2					
Topic terms present in diagnosis list but not visit notes	5	5					



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Туре	Patients	Encounters	Records	Average	Median	Max
Administered Meds	47,208	125,831	6,497,157	51.634	6	-
Ambulatory Encounters	99,965	3,760,205	3,760,205	-	-	-
Current Meds	92,783	-	31,997,402	344.863	64	20,102
Demographics	99,965	-				
Encounter Attributes	99,965	6,273,137	6,273,137			
Encounter Diagnoses	99,938	3,725,603	18,170,896	4.877	4	107
Notes	99,868	3,491,659	10,111,930			
Hospital Encounters	73,303	466,252	466,252			
Lab Results	83,435	733,461	20,186,748	27.523	12	19488
Microbiology Results	27,515	65,373	296548	4.536	1	268
Medications Ordered	94,089	1,388,086	5,336,506	3.845	1	1551
Procedures Ordered	98,514	1,880,309	7,229,854	3.845	1	6681
Problem List	90,722	-	761,260	8.391	6	182
Result Comments	72,716	468,814	916,554	1.955	1	691
Surgeries	18,640	29,895	31,889	1.067	1	41
Vitals	99,098	1,362,431	6.647.115	4.879	2	6387

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