

AUG Email 2012-Oct

Last Updated: 03/18/2013

i2b2 – ICD – ICD9 <--> ICD10 map - UMLS [10-31-2012]

From: Russ Waitman [rwaitman.kumc] **Sent:** Wednesday, October 31, 2012 4:20 PM **To:** i2b2 AUG Members; Peter Beninato **Cc:** Bhargav Adagarla; Dan Connolly; Mani Nair; Nathan Graham **Subject:** Re: i2b2 - ICD - ICD9<-->ICD10 map - UMLS

Hi Peter,

Our strategy is to wait for someone else to figure this out at i2b2 or on the West coast at NCBO.

Seriously, as part of our Epic install, the hospital purchased IMO which subdivides ICD9 into SNOMED concepts stored as DX_IDs. Physicians here currently choose from the expanded vocabulary of IMO when building their problem lists.

DanC just started bringing in subfolder concepts below ICD9 in our i2b2 ontology in an earlier release in September when we also added modifiers to Diagnoses so people can distinguish between billing diagnoses from our ambulatory billing system and inpatient billing data (from Seimens SMS via UHC feed) versus the clinical diagnoses from Epic. <https://informatics.kumc.edu/work/blog/heron-waconda-update> specific details in this ticket on the subfolders <https://informatics.kumc.edu/work/ticket/1319>

I am thinking as the hospital handles the ICD10 migration it would be a component of the IMO solution. We would then harvest those concepts similar to now, at their lowest representation, a DX_ID. Ideally, they would map to leaves underneath the existing ICD9 tree but that's probably an inaccurate simplistic view I hold. I imagine there will be non parent-child relationships for ICD9 to 10. I hope that's an exception and people could use one ontology that unifies ICD9 and 10 for clinical research. We will actually be working this winter with the College of American Pathology and the hospital on terminologic consistency and hope that i2b2 might be a useful tool in the exercise to review terminology use for the problem list, orderables/ordersets, and nursing flowsheets.

As a fallback, it is likely the entire clinical world will struggle with the new ICD10 ontology versus their prior ICD9 world view so the actually ontology in i2b2 may be less useful during the migration than just looking up the codes via a browser and searching for the explicit codes.

Russ

Peter Beninato <beninato.ohsu> 10/31/2012 12:35 PM

Hi,

I was wondering if anyone in the community has extracted and ICD9/10 map (possibly derived from the UMLS)?

Also, how are you going to handle Diagnosis?

Are you going to present ICD9 *and* ICD10 trees?

Will you map one tree to another and only present *one tree* to the users?

Thanks.

Peter Beninato – OCTRI DW Developer

Oregon Health & Science University

How old am I when I am dead in i2b2 [10-31-2012]

From: Russ Waitman [rwaitman.kumc] **Sent:** Wednesday, October 31, 2012 10:48 AM **To:** Jack London **Cc:** i2b2 AUG Members; Darren W Henderson **Subject:** Re: How old am I when I am dead in i2b2?

Thanks Jack! We'll plan to do the same, wrt age of dead people. We have a fair number of users who do prospective-oriented queries as they use i2b2 to find potential cohorts for trials and studies,

Russ

Jack London <Jack.London.jefferson> 10/31/2012 9:43 AM

Russ,
We have always used age = (death date - birth date) for dead people, and age = (current date - birth date) for those not known to be dead. For those patients having human curation (e.g., cancer patients via tumor registrars) where patient follow-up is done, a "date of last contact" may be used rather than current date. Also, we don't use a demographics ontology with age "bins" but rather use the c_metadatatxml column entry to allow an age range to be chosen at query time.

That said, queries usually do not use the "age" observation, but rather contextual age selections, such as age at diagnosis, age at treatment, age at specimen accession. The current patient age would of course be of interest for prospectively-oriented queries, such as "how many current patients under age 50 have PSA values?"

Jack

On Oct 30, 2012, at 6:50 PM, Russ Waitman wrote:

Hi Jack,

Thanks for the reply but what are you practically doing now for "Age" under the common i2b2 Demographics folder that has the various age bins? How is age currently defined in your i2b2 instance or do you only define things like "age at diagnosis"?

We just recently added the "age at visit" feature so users can use that as you suggest but it's brand new here as of this month's release and most of our training references current age the common i2b2 Demographics folder

This basic "Age" under Demographics is currently calculated at KU as current date minus birthdate.

thus our dead people keep getting older which seems incorrect in the sense that I always think of Jimi Hendrix as being dead a 27 and not celebrating his 70th birthday next month.

Conceptually to me I think we ought to change that to
if (dead)

```
{  
  age = _date_of_death - birthdate;  
}  
else  
{  
  age = current_date - birthdate;  
}
```

That would reflect their age at time of death.

Russ

Russ Waitman

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rwaitman.kumc <http://informatics.kumc.edu> <http://www2.kumc.edu/aa/ir/>

Jack London <Jack.London.jefferson> 10/30/2012 3:24 PM

My initial take would be to include only those who are not known to be deceased. But we all know that in the absence of a positive indicator that a person is alive on a certain date (e.g., they have a glucose lab value dated 5/23/2012), we cannot assume them to be alive. (Conversely, a positive indicator of being dead – a social security death index date – reliably means the person is no longer alive, and that they were NN years old at death.)

The real question is what are you trying to determine by just asking "who is alive today." Our experience with age queries is that they have a context, such as "age at diagnosis," or "age at specimen accession," or post-diagnostic survival. The context provides a means of defining age, being the birth date subtracted from date of diagnosis, treatment, etc.

Don't know if this helps with your question ...

Jack

From: dwhend0.gmail [dwhend0.gmail] on behalf of Darren W Henderson [darren.henderson.uky] **Sent:** Tuesday, October 30, 2012 11:50 AM **To:** Russ Waitman **Cc:** i2b2 AUG Members **Subject:** Re: How old am I when I am dead in i2b2?

We haven't added this to ours yet, but my first instinct would be to set those who have died to a negative age of your choosing as to not include them in any of your age bins, and then set your mortality metadata to look for age positive or negative. That would be an easy brute approach in my opinion.

So in your example, your patient from 2002 is now set to -70. If they search for age today >70, this deceased person wouldn't be included. You could still search for them by age at visit at 70 wherever you store it. Then you just set your deceased metadata to point to the patient dimensions age_num field and look for <0 or >0 right?

The only thing I can think of that might need to change with this approach is the age breakdown, so you could count up deceased as well to display them in the breakdown.

On Tue, Oct 30, 2012 at 11:43 AM, Russ Waitman <rwaitman.kumc> wrote:

Hi everybody,

We've got a question related to how people manage their i2b2 etls and managing "age".

Example: somebody dies in 2002 at the age of 70.

If I query i2b2 today at our i2b2 instance for people over 70, we'll be including this person.

We can also inform users they can exclude deceased people.

But overall, what do people do? Should we add code that stops people from aging once they die?

Of course, there will be many cases where we don't know if they are dead yet who will be aging anyway (though we've integrated the social security death index to cover some of those people)

We also have the standard i2b2 "Age at Visit" concept, so clearly in that case, they will be 70 years old or less.

Sincerely,

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Outpatient procedures CPT ontology [10-30-2012]

From: Wilson Lau [wlau.uw] **Sent:** Tuesday, October 30, 2012 9:37 PM **To:** Darren W Henderson **Cc:** i2b2 AUG Members; Pablo, Ray; Siller, John T. **Subject:** Re: outpatient procedures CPT ontology

Thank you for all of your help, especially Darren's SQL.
I am able to build the CPT ontology out of UMLS.

Wilson

Biomedical Informatics and Medical Education
UW Medicine

From: Russ Waitman [rwaitman.kumc] **Sent:** Tuesday, October 30, 2012 9:12 AM **To:** Darren W Henderson; Wilson Lau **Cc:** i2b2 AUG Members **Subject:** Re: outpatient procedures CPT ontology

Hi Wilson,

We also base our ontologies off the UMLS. Our ETL and Ontology construction code is here: https://informatics.kumc.edu/work/browser/heron_load

A wiki page describing our process is here: <https://informatics.kumc.edu/work/wiki/HeronLoad>

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From: Darren W Henderson <darren.henderson.uky> **Date:** Mon, 29 Oct 2012 22:50:24 -0400 **To:** Wilson Lau <wlau.uw> **Cc:** i2b2 AUG Members **Subject:** Re: outpatient procedures CPT ontology

Wilson, if you do go with UMLS, here is some SQL that can get you started on pulling an ontology. You'll get diagnoses and procedures.

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From: Key, Dustin [key.d.ghc] Sent: Monday, October 29, 2012 10:13 PM To: 'Wilson Lau'; i2b2 AUG Members Subject: RE: outpatient procedures CPT ontology

Wilson,

You may want to try the UMLS metathesaurus. <http://www.nlm.nih.gov/research/umls/sourcereleasedocs/current/CPT/index.html> It should have most of the current codes, although I believe that older codes drop out over time, so this may impact you if you are doing historical research. I'm aware of no solution to this problem. The UMLS license agreement is at <https://uts.nlm.nih.gov/help/license/LicenseAgreement.pdf>

You can build the ontology by joining the MRHIER and MRCONSO files that compiling UMLS creates. Users on this forum have posted SAS and SQL methods for creating the terminology from this source. Let me know if you need help with that. This approach will work for some other taxonomies too.

Dustin

Dustin Key

Group Health Research Institute

206-287-2916

From: Wilson Lau [wlau.uw]

Sent: Monday, October 29, 2012 6:40 PM

To: i2b2 AUG Members

Subject: outpatient procedures CPT ontology

Hi,

The i2b2 v1.6 comes with icd9 inpatient procedures ontology.

Is there a way we can get outpatient CPT ontology? Eg. <http://biportal.bioontology.org/visualize/42994>

I know that CPT is commercial and requires license.

If we can get the license, how would recommend building that ontology? By parsing their data file?

If anyone has been through this process, please advise.

Thanks.

Wilson

Biomedical Informatics and Medical Education UW Medicine

i2b2 Tutorial Nov. 7, 2012 (VM ready) [10-24-2012]

From: Mendis, Michael E. Sent: Wednesday, October 24, 2012 9:54 AM To: <i2b2 AUG Members> Subject: Re: i2b2 Tutorial Nov. 7, 2012 (VM ready)
First thanks for all who have signed up.

I have posted the vmware image that will be used during the tutorial at: <https://www.i2b2.org/software/ctsa2012.html>

If you are using Windows download vmware Player - <http://www.vmware.com/products/player/overview.html>

If you are using Macintosh download vmware fusion - <http://www.vmware.com/products/fusion/overview.html>

Download the vmware image from the <https://www.i2b2.org/software/ctsa2012.html> site and open it into either player or fusion, prior to attending the tutorial.

Try starting the vm image, you should see the following screenshot.

See you in a few weeks.

mike

1.6.07 Upgrade: Jumbled Panel [10-18-2012]

From: Nathan Graham [ngraham.kumc] **Sent:** Thursday, October 18, 2012 11:45 AM **To:** <i2b2 AUG Members> **Subject:** Re: 1.6.07 Upgrade: Jumbled Panels?

Mike,

Thanks for the reply.

I cleared my browser cache and restarted the browsers (IE and FireFox) and still had the problem. I also tried the ctrl+F5 trick in FireFox to reload and ignore cache. Finally, I had a couple of my coworkers try as well - they also experienced the issue.

Just for good measure, I restarted JBoss/Apache as well.

I'm double-checking my merge - let me know if you have any debugging suggestions.

Thanks again.

Regards,

Nathan

Nathan Graham
Software Engineer
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"Mendis, Michael E." <MMENDIS.PARTNERS> 10/18/2012 10:16 AM Nathan, I have seen this also, I have noticed that it occurs when the client has previous gone to a 1.6.06 and then to a 1.6.07, and the browser cache gets confused. The solution is to clear the client browser cache and reload the page. After clearing the cache, it is best to restart the browser. mike

On Oct 18, 2012, at 11:11 AM, Nathan Graham wrote: AUG Members, Has anyone upgraded to i2b2 webclient version 1.6.07? I attempted the upgrade from 1.6.06 and ended up with a jumbled looking screen in the browser. I tried both IE and FireFox. I downgraded to 1.6.06 and it looked correct again. We have our own repository with the webclient code where we've made some seemingly minor changes so it's certainly possible I've made a mistake with the merge. But, I thought I'd check to see if anyone else has seen this. Attached is a screenshot. Thanks! Regards, Nathan Nathan Graham Software Engineer Department of Biostatistics University of Kansas Medical Center ngraham.kumc <ngraham.kumc> <http://informatics.kumc.edu>

i2b2 Applications [10-04-2012]

From: Churchill, Susanne E. Sent: Thursday, October 04, 2012 8:36 AM To: i2b2 AUG Members Subject: i2b2 Applications

Dear Colleagues,

i2b2's home base, Brigham and Women's Hospital, is doing an interesting experiment to engage the public in research. The hospital is highlighting three research proposals to the public and allowing the public to determine which proposal receives funding in a competition for the BR!ght Future Award. A panel of senior BWH investigators selected these three proposals as the finalists from over a dozen candidates. All three are deemed scientifically interesting and worthy of funding. Information describing these three projects have been made available online to enable the public to learn more about the projects before voting for the most compelling one. <http://brighamandwomens.org/research/BFF/default.aspx>

i2b2 is proud to have two of these projects led by i2b2 faculty. One, led by Elizabeth Karlson, Phil de Jager and Zongqi Xia, focuses on "Using Electronic Health Records and Genetics to Personalize the Treatment of Multiple Sclerosis" and is a direct spin off of our current i2b2 Driving Biology Project (DBP) Autoimmune and Cardiovascular Diseases: Insight into Inflammatory Pathways. The other, led by Robert Plenge, focuses on "Using Cutting Edge Technology to Unravel the Mysteries of the Immune System"; this project is also intimately related to the same DBP and our interest in broadly expanding the understanding of immune dysregulation by mining patient data.

We thought you would be interested in the model and, perhaps, inclined to vote for your favorite proposal. Voting begins this week. Please feel free to use either of these projects in your various efforts to demonstrate the value of EHR for both discovery and translational research.

Thanks!

Susanne

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Executive Director

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