*a*LOINC Order Code Initiative Update

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CLIAC Meeting
April 15, 2015
Atlanta, Georgia

Topics

- Using LOINC - Demonstration
- Standards &Interoprability Framework Initiative – *a*LOINC Order Code
- Key Deliverables
- Data Reviewed
- Data Analysis
- Lessons Learned
- Summary of Preliminary Recommendations
- Next Steps

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LOINC from Regenstrief

creatinine

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LOINC	LongName	Component	Property	Timing	System	Scale	Method	ex
39802-4	Creatinine in dialysis fluid/Creatinine in serum or plasma	Creatinine dial fld/Creatinine ser_plas	RelRto	Pt	Dial fld+Ser/Plas	Qn		m
44909-0	5-Hydroxyindoleacetate and Creatinine [interpretation] in Urine	5-Hydroxyindoleacetate & Creatinine	Imp	Pt	Urine	Nom		
44288-9	5-Hydroxyindoleacetate/Creatinine [Mass Ratio] in 24 hour Urine	5-Hydroxyindoleacetate/Creatinine	MRto	24H	Urine	Qn		m
11145-0	5-Hydroxyindoleacetate/Creatinine [Mass Ratio] in Urine	5-Hydroxyindoleacetate/Creatinine	MRto	Pt	Urine	Qn		m
47545-9	5-Hydroxyindoleacetate/Creatinine [Molar ratio] in 24 hour Urine	5-Hydroxyindoleacetate/Creatinine	SRto	24H	Urine	Qn		ur
29520-4	5-Hydroxyindoleacetate/Creatinine [Molar ratio] in Urine	5-Hydroxyindoleacetate/Creatinine	SRto	Pt	Urine	Qn		m
45066-8	Creatinine and Glomerular filtration rate.predicted panel	Creatinine & Glomerular filtration rate.predicted panel	-	Pt	Ser/Plas	Qn		
65634-8	Creatinine 24 hour urine panel - 24 hour Urine	Creatinine 24 hour urine panel	-	24H	Urine	Qn		
70266-2	Creatinine in peritoneal fluid/Creatinine in serum	Creatinine.periton fld/Creatinine.serum	RelRto	Pt	Periton fld+Ser/Plas	Qn		{r
70264-7	Creatinine in pleural fluid/Creatinine in serum	Creatinine.plr fld/Creatinine.serum	RelRto	Pt	Ser/Plas+Plr fld	Qn		{r
62807-3	PhenX - serum creatinine assay for kidney function protocol	PhenX - serum creatinine assay for kidney function protocol	-	Pt	^Patient	-	PhenX	
62811-5	PhenX - urinary creatinine assay for kidney function protocol	PhenX - urinary creatinine assay for kidney function protocol	-	Pt	^Patient	-	PhenX	
34206-3	11-Deoxycortisol/Creatinine [Molar ratio] in Urine	11-Deoxycortisol/Creatinine	SRto	Pt	Urine	Qn		ur
40812-0	11-Hydroxyandrosterone/Creatinine [Mass Ratio] in 24 hour Urine	11-Hydroxyandrosterone/Creatinine	MRto	24H	Urine	Qn		m

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LOINC from Regenstrief

creatinine in serum or plasma

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LOINC	LongName	Component	Property	Timing	System	Scale	Method	ex
39802-4	Creatinine in dialysis fluid/Creatinine in serum or plasma	Creatinine dial fld/Creatinine ser_plas	RelRto	Pt	Dial fld+Ser/Plas	Qn		m
70266-2	Creatinine in peritoneal fluid/Creatinine in serum	Creatinine.periton fld/Creatinine.serum	RelRto	Pt	Periton fld+Ser/Plas	Qn		{r
70264-7	Creatinine in pleural fluid/Creatinine in serum	Creatinine.plr fld/Creatinine.serum	RelRto	Pt	Ser/Plas+Plr fld	Qn		{r
45066-8	Creatinine and Glomerular filtration rate.predicted panel	Creatinine & Glomerular filtration rate.predicted panel	-	Pt	Ser/Plas	Qn		
1728-5	Adenosine monophosphate.cyclic/Creatinine [Mass Ratio] in Serum or Plasma	Adenosine monophosphate.cyclic/Creatinine	MRto	Pt	Ser/Plas	Qn		ng
44789-6	Amylase and Creatinine clearance panel - Urine and Serum or Plasma	Amylase & Creatinine clearance panel	-	Pt	Urine+Ser/Plas	Qn		
1810-1	Amylase/Creatinine [Mass Ratio] in Serum or Plasma	Amylase/Creatinine	MRto	Pt	Ser/Plas	Qn		ug
1811-9	Amylase/Creatinine renal clearance [Ratio] in 24 hour Urine and Serum or Plasma	Amylase/Creatinine renal clearance	Ratio	24H	Urine+Ser/Plas	Qn		
30077-2	Amylase/Creatinine renal clearance [Ratio] in Urine and Serum or Plasma	Amylase/Creatinine renal clearance	Ratio	Pt	Urine+Ser/Plas	Qn		%
2048-7	Carnitine/Creatinine [Mass Ratio] in Serum or Plasma	Carnitine/Creatinine	MRto	Pt	Ser/Plas	Qn		
2160-0	Creatinine [Mass/volume] in Serum or Plasma	Creatinine	MCnc	Pt	Ser/Plas	Qn		m
44784-7	Creatinine [Mass/volume] in maximum Serum or Plasma	Creatinine	MCnc	Stdy^max	Ser/Plas	Qn		m
35203-9	Creatinine [Mass or Moles/volume] in Serum or Plasma	Creatinine	MSCnc	Pt	Ser/Plas	Qn		
14682-9	Creatinine [Moles/volume] in Serum or Plasma	Creatinine	SCnc	Pt	Ser/Plas	Qn		ur

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LOINC from Regenstrief

creatinine in serum or plasma mass/volume

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LOINC	LongName	Component	Property	Timing	System	Scale	Method	ex
2160-0	Creatinine [Mass/volume] in Serum or Plasma	Creatinine	MCnc	Pt	Ser/Plas	Qn		m
44784-7	Creatinine [Mass/volume] in maximum Serum or Plasma	Creatinine	MCnc	Stdy^max	Ser/Plas	Qn		m
40251-1	Creatinine [Mass/volume] in Serum or Plasma --1.5 hours post XXX challenge	Creatinine^1.5H post XXX challenge	MCnc	Pt	Ser/Plas	Qn		m
39956-8	Creatinine [Mass/volume] in Serum or Plasma --1.5 hours pre XXX challenge	Creatinine^1.5H pre XXX challenge	MCnc	Pt	Ser/Plas	Qn		m
39970-9	Creatinine [Mass/volume] in Serum or Plasma --10 hours post XXX challenge	Creatinine^10H post XXX challenge	MCnc	Pt	Ser/Plas	Qn		m
39971-7	Creatinine [Mass/volume] in Serum or Plasma --12 hours post XXX challenge	Creatinine^12H post XXX challenge	MCnc	Pt	Ser/Plas	Qn		m
39972-5	Creatinine [Mass/volume] in Serum or Plasma --16 hours post XXX challenge	Creatinine^16H post XXX challenge	MCnc	Pt	Ser/Plas	Qn		m
39973-3	Creatinine [Mass/volume] in Serum or Plasma --18 hours post XXX challenge	Creatinine^18H post XXX challenge	MCnc	Pt	Ser/Plas	Qn		m
40258-6	Creatinine [Mass/volume] in Serum or Plasma --1 day post XXX challenge	Creatinine^1D post XXX challenge	MCnc	Pt	Ser/Plas	Qn		m
40250-3	Creatinine [Mass/volume] in Serum or Plasma --1 hour post XXX challenge	Creatinine^1H post XXX challenge	MCnc	Pt	Ser/Plas	Qn		m
39957-6	Creatinine [Mass/volume] in Serum or Plasma --1 hour pre XXX challenge	Creatinine^1H pre XXX challenge	MCnc	Pt	Ser/Plas	Qn		m
40253-7	Creatinine [Mass/volume] in Serum or Plasma --2.25 hours post XXX challenge	Creatinine^2.25H post XXX challenge	MCnc	Pt	Ser/Plas	Qn		m
40254-5	Creatinine [Mass/volume] in Serum or Plasma --2.5 hours post XXX challenge	Creatinine^2.5H post XXX challenge	MCnc	Pt	Ser/Plas	Qn		m
39974-1	Creatinine [Mass/volume] in Serum or Plasma --2 days post XXX challenge	Creatinine^2D post XXX challenge	MCnc	Pt	Ser/Plas	Qn		m

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Regenstrief LOINC Mapping Assistant (RELMA) - Map Local Terms for SAMPLE

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Search | Mapping | View All Working Set Terms | Hierarchy & Search Limits | Part Search | Answer List Search

Local Term

Next
Previous
First
Last

View: All

Mapped to:

Name:

Local Term Details

OBR-4 Code:

OBX-3 Code:

Units:

Sample Values:

Limit to Default Specimen:

Accept or enter OBR name and/or OBX name

CREATININE

Search

Show Words | Propose Term | Clear Inputs | Reset Limits | Standard Search | Common Labs US

No Common Limits
Lab Terms Only
Common Labs US
Common Labs SI

Grid | Tree

R...	Score	LOINC	Component	Property	Ti...	System	Scale	Method	ExU...	ExU...	Rank...	Rank...	ComMaps	Class	ComInst	LongName	ShortName	T	
1	6.0669	14958-3	Albumin/Creatinine	MRto	24H	Urine	Qn	Detection limit...	mg/...	mg/...	1979	1979	1	CHEM	1	Microalbumin/Creatinine [Mass Ratio] in 24...	Microalbumin/Creat 24h Ur	1	Both
2	6.0669	14959-1	Albumin/Creatinine	MRto	Pt	Urine	Qn	Detection limit...	mg/...	mg/...	212	212	12	CHEM	7	Microalbumin/Creatinine [Mass Ratio] in...	Microalbumin/Creat Ur	1	Both
3	6.0669	14115-0	Collagen crosslinked N-...	SRto	Pt	Urine	Qn		nmol...	umol...	1140	1140	10	CHEM	8	Collagen crosslinked N-...	Collagen NTx/Creat Ur-sRto	1	Both
4	6.0669	2159-2	Creatinine	MCnc	Pt	Amnio fld	Qn		mg/dL	mg/dL	1908		8	CHEM	5	Creatinine [Mass/volume] in Amniotic fluid	Creat Amn-mCnc	1	Both
5	6.0669	38483-4	Creatinine	MCnc	Pt	Bld	Qn		mg/dL	mg/dL	283		11	CHEM	5	Creatinine [Mass/volume] in Blood	Creat Bld-mCnc	1	Both
8	6.0669	20624-3	Creatinine	MCnc	24H	Urine	Qn		mg/dL	g/L;...	1978		12	CHEM	6	Creatinine [Mass/volume] in 24 hour Urine	Creat 24h Ur-mCnc	1	Both
11	6.0669	2162-6	Creatinine	MRat	24H	Urine	Qn		g/...	g/24 H	445		123	CHEM	11	Creatinine [Mass/time] in 24 hour Urine	Creat 24h Ur-mRate	1	Both
9	6.0669	2161-8	Creatinine	MCnc	Pt	Urine	Qn		mg/dL	g/L;...	161		345	CHEM	14	Creatinine [Mass/volume] in Urine	Creat Ur-mCnc	1	Both
10	6.0669	35674-1	Creatinine	MCnc	XXX	Urine	Qn		mg/dL	g/L;...	359		6	CHEM	1	Creatinine [Mass/volume] in unspecified...	Creat ?Tm Ur-mCnc	1	Both
7	6.0669	2160-0	Creatinine	MCnc	Pt	Ser/Plas	Qn		mg/dL	mg/dL	1		113	CHEM	14	Creatinine [Mass/volume] in Serum or Plasma	Creat SerPl-mCnc	1	Both
6	6.0669	12190-5	Creatinine	MCnc	Pt	Body fld	Qn		mg/dL	mg/dL	1234		13	CHEM	8	Creatinine [Mass/volume] in Body fluid	Creat Fld-mCnc	1	Both
12	6.0669	13451-0	Creatinine dialysis fluid...	VRat	Pt	Dial...	Qn		mL/...	mL/...	398	398		CHEM		Creatinine dialysis fluid clearance	Creat Cl Dial fld+SerPl-...	1	Both
13	6.0669	2164-2	Creatinine renal clearance	VRat	24H	Urine+Ser/P...	Qn		mL/...	mL/s...	586	586	51	CHEM	12	Creatinine renal clearance in 24 hour	Creat Cl 24h Ur+SerPl-...	1	Both
14	6.1086	35591-7	Creatinine renal...	VRat	Pt	Ser/Plas	Qn	Cockcroft-...	mL/...	mL/...	303	303	2	CHEM	2	Creatinine renal clearance predicted by...	Creat Cl predicted SerPl C...	1	Observation
15	6.1086	12195-4	Creatinine renal...	ArVRat	24H	Urine+Ser/P...	Qn		mL/...	mL/s...	1269	1269	24	CHEM	6	Creatinine renal clearance/1.73 sq M in 24...	Creat Cl/1.73 sq M 24h...	1	Observation
16	6.0669	33914-3	Glomerular filtration...	ArVRat	Pt	Ser/Plas	Qn	Creatinine-...	mL/...	mL/...	26	26	49	CHEM	12	Glomerular filtration rate/1.73 sq...	GFR/BSA.pred SerPl...	1	Both
17	6.1086	48643-1	Glomerular filtration...	ArVRat	Pt	Ser/Plas	Qn	Creatinine-...	mL/...	mL/...	30	30	55	CHEM	8	Glomerular filtration rate/1.73 sq M...	GFR/BSA pred.black SerPl...	1	Observation
18	6.1086	48642-3	Glomerular filtration...	ArVRat	Pt	Ser/Plas	Qn	Creatinine-...	mL/...	mL/...	29	29	40	CHEM	7	Glomerular filtration rate/1.73 sq M...	GFR/BSA pred.non black...	1	Observation
19	6.0669	2890-2	Protein/Creatinine	MRto	Pt	Urine	Qn		mg/...	mg/...	509	509	58	CHEM	11	Protein/Creatinine [Mass Ratio] in Urine	Prot/Creat Ur	1	Both
20	6.0669	3097-3	Urea nitrogen/Creatinine	MRto	Pt	Ser/Plas	Qn		mg/...	mg/...	55	55	32	CHEM	8	Urea nitrogen/Creatinine [Mass Ratio] in...	BUN/Creat SerPl	1	Both

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Truncated Text | Print Preview

Entry #: 1 of 190 Units Specimen Methodless Common Labs US Battery

20 records found: 0.04s

S&I Framework Initiative

- **December 10, 2013 - Meeting announcement**
- **Launch – January 8, 2014**
- **Charge –**
  - To provide a common order code value set* for the Laboratory Orders Interface and Electronic Directory of Services Implementation Guides.
- **Webinars held weekly from January 8, 2014 until March 4, 2015**

*A value set is a collection of enumerated codes.

Key Deliverables

- ***a*LOINC Common Orders Value Set**
  - Contains 1377 codes for single analytes
  - Contains 157 codes for panels
- **Input to Regenstrief on guidance for comparing user panels to LOINC® panels**
  - Provides some flexibility to laboratories that change tests ordered in a panel
  - Decreases the number of new tests codes requested
- **Recommendations to ONC for using LOINC for laboratory orders**
- **Recommended content updates for Regenstrief based on review of laboratory order LOINC codes**

Data Reviewed

- aLOINC Common Order Code Value Set was developed by wiki members based on a comparison to LOINC's Top 2000 Result Codes and Top 300 Order Codes
- Indiana Network for Patient Care (INPC) laboratory order data analyzed by Regenstrief
- MarketScan commercial carrier and Medicare data base of LOINC result codes analysis
- Review of tests listed in the directory of services for four reference laboratories

Data Analysis

- Volume data for a national sample was not obtainable
- In the 2 datasets with volume we reviewed, fewer than 200 different tests made up 95% of the total volume
- If a national sample of volume data were obtained, it would likely reflect significantly more test codes than the number of analytes.

Data Analysis

- **A comparison of the two data sets demonstrated that the codes did not match**
  - Different methods
  - Different measurements
  - Selection varies among coders

Lessons Learned

- Laboratories often customize panels for their clientele, LOINC is not flexible enough to account for additions or deletions from a panel, resulting in requests for new codes
- For a single analyte test, the same code is used for test ordering and resulting
- The LOINC code does not uniquely identify panels from single analytes

Lessons Learned (continued)

- **Providers order by test name or analyte, which has to be mapped to many codes**
- **Anatomic pathology reporting model needed**
  - Current model has several codes referring to one test (specimen collection, gross observation, interpretation, etc.)
  - Does not meet the definition of a panel if only one analyte is involved

Summary of Preliminary Recommendations

- Follow best practices when comparing laboratory data to the *a*LOINC Common Order Value Set
- A major barrier to developing an empirical laboratory order value set is lack of national data
- Manufacturers could provide the order and result reporting codes in the package insert

Summary of Preliminary Recommendations

- **Laboratories need help selecting the appropriate test code from the 46,000+ tests in LOINC**
  - Most laboratories lack coding expertise
  - Expertise in BOTH coding and laboratory practices
- **Standardization efforts should include clinical and public health laboratory tests**
- **A new format is needed to address multiple tests ordered on one analyte (anatomic pathology and molecular testing)**

Next Steps

- Draft of the final report and recommendations http://wiki.siframework.org/a+LOINC+Order+Code+Homepage
- Accepting comments until noon April 22, 2015
- Final draft will be posted April 27, 2015
- Last wiki call to discuss and finalize the report April 29, 2015 at 3:00pm https://siframework1.webex.com/siframework1/onstage/g.php?t=a&d=665254609

  Dial In: 1-650-479-3208

  Access code: 665 254 609

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