

LOINC WORKSHOP 2013

John MOK
Health Informatician
21 June 2013

Browser window showing the LOINC website (https://loinc.org/slideshows). The page features the LOINC logo (from Regenstrief) and navigation links: Home, Downloads, and Documentation (highlighted with a red box and a "CLICK HERE 1" callout).

Presentations About LOINC

 **LOINC and RELMA Presentations**

An Introduction to LOINC

- [LOINC Overview and Introduction - Brief \(June 2013\)](#)
Daniel Vreeman
- [LOINC Overview and Introduction - 1hr - Webinar with Audio \(March 2012\)](#)
Daniel Vreeman
[slidedeck available online here](#)

Other Resources (highlighted with a box and a "CLICK HERE 2" callout):

- [Online training and other presentations about LOINC](#)



CLICK HERE 3 callout points to the "LOINC and RELMA Presentations" section.

The materials are from LOINC and RELMA tutorials.

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Introduction and Overview

Daniel J. Vreeman, PT, DPT, MSc

*Assistant Research Professor, Indiana University School of Medicine
Research Scientist, Regenstrief Institute, Inc*



INDIANA UNIVERSITY
DEPARTMENT OF MEDICINE
School of Medicine



Regenstrief Institute
Medical Informatics

Acknowledgements

LOINC Development Team

Kathy Mercer, Jaci Phillips, Jami Deckard, Kelly Malott,
David Baorto, Clem McDonald

RELMA Development Team

John Hook, Anandhi Sowmyan, James Dennis

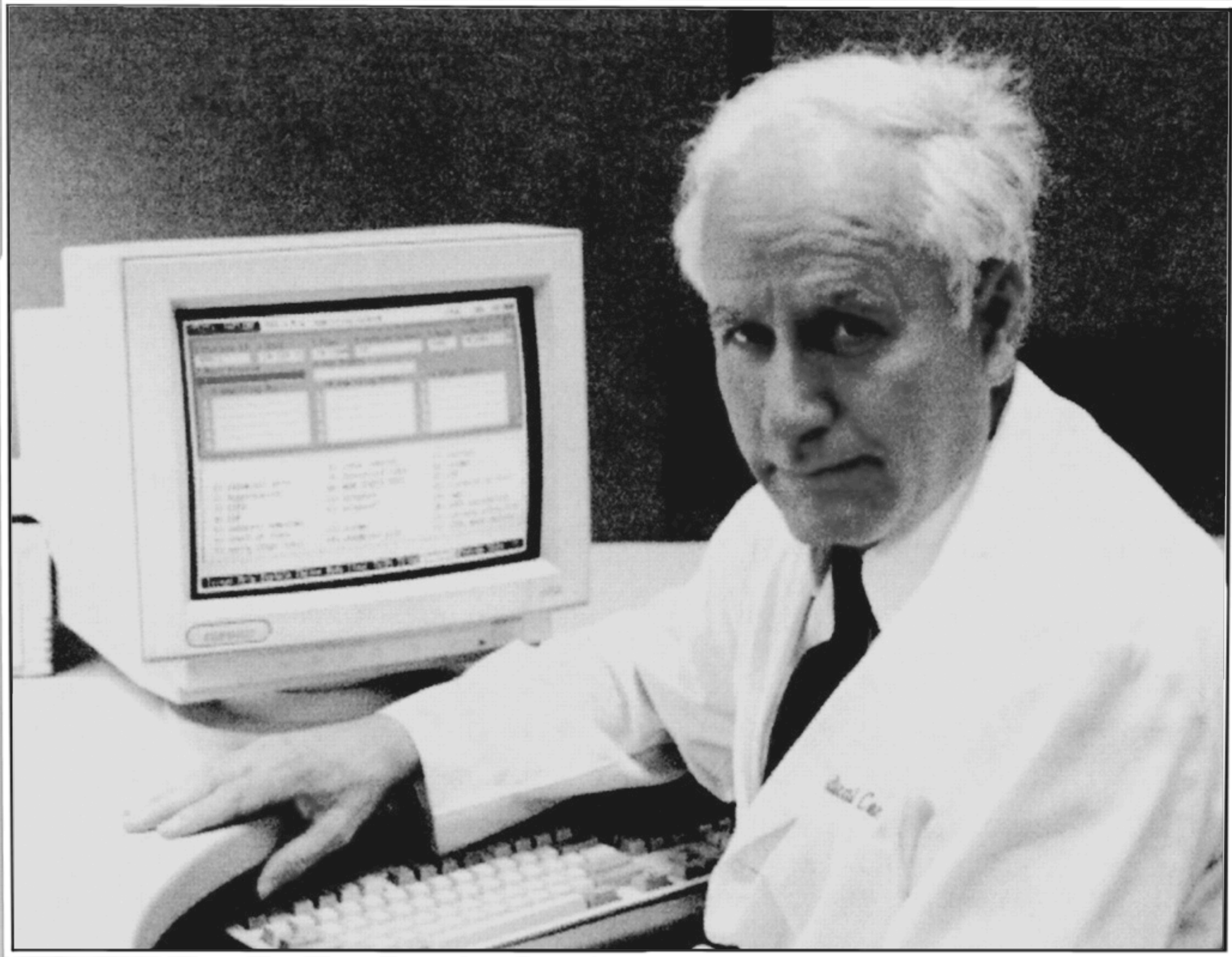
LOINC Committee

Sandy Poremba



Origins of LOINC

The lingua franca of clinical observation exchange



Arboreal Informatics Pioneers

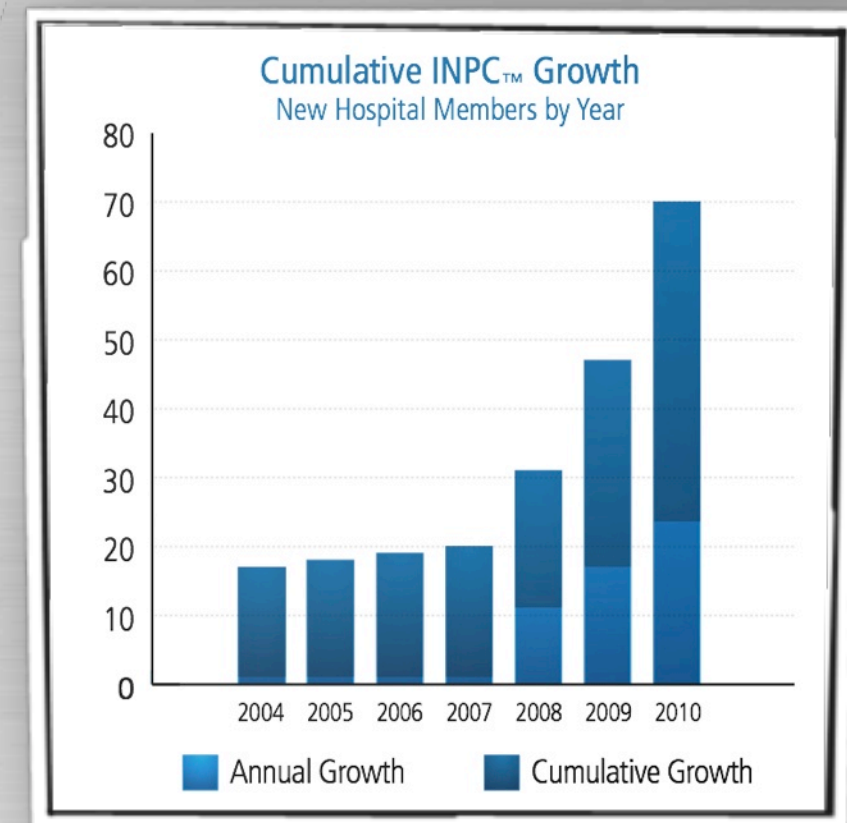
40 years of EMR work

Indiana Network for Patient Care

Nation's most comprehensive and longest tenured HIE

Regenstrief

– the “Data Switzerland”



Fundamental challenge:

Local systems have different ways of identifying the same concept.



**Only way to corral the
infinite indiosyncracies is
with standards**

Logical Observation Identifiers Names and Codes

A universal code system that facilitates exchange,
pooling, and processing of results

Established in 1994 by
Regenstrief Institute.

Vocabulary standard for
observation identifiers.

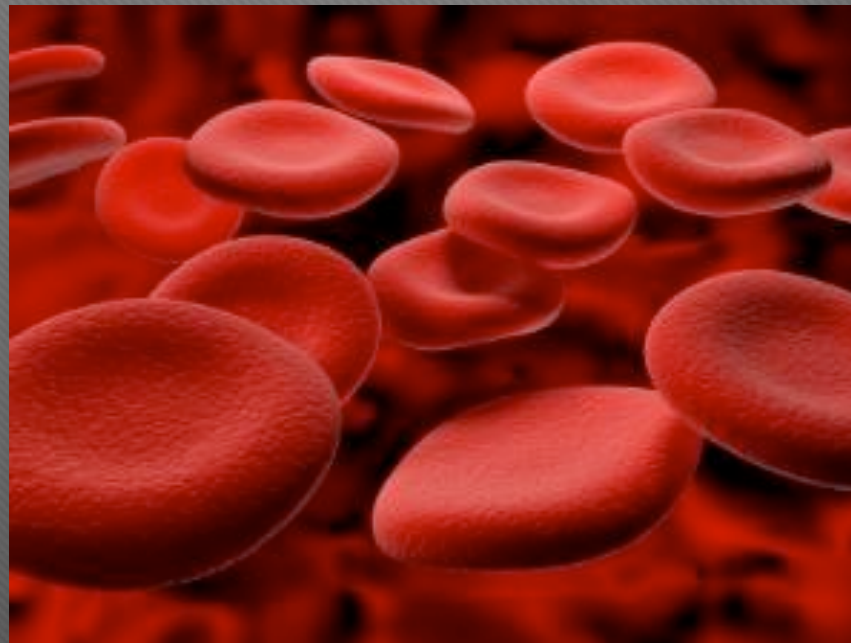
***If an observation is a question and
the observation value is
an answer...***

LOINC provides codes for
questions

Where needed, other
vocabularies provide codes for
answers

What is my patient's hemoglobin level?

718-7:Hemoglobin:MCnc:Pt:Bld:Qn

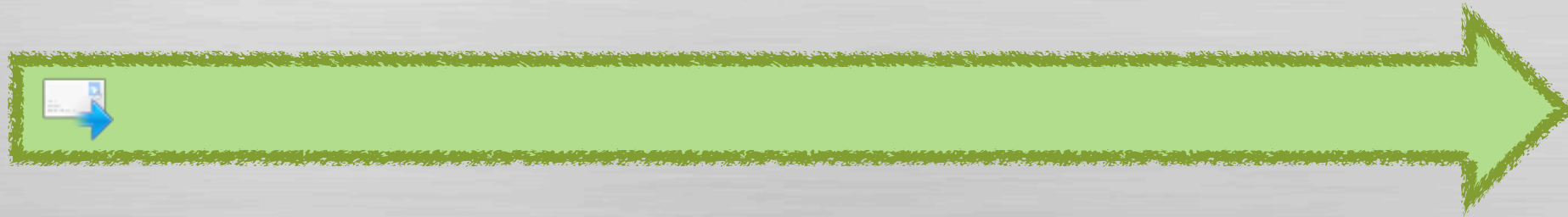
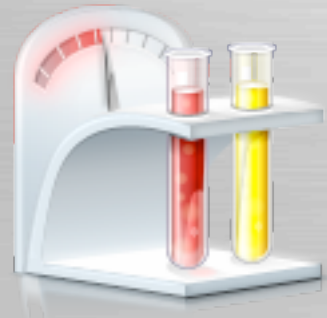


How fast does my patient usually walk?

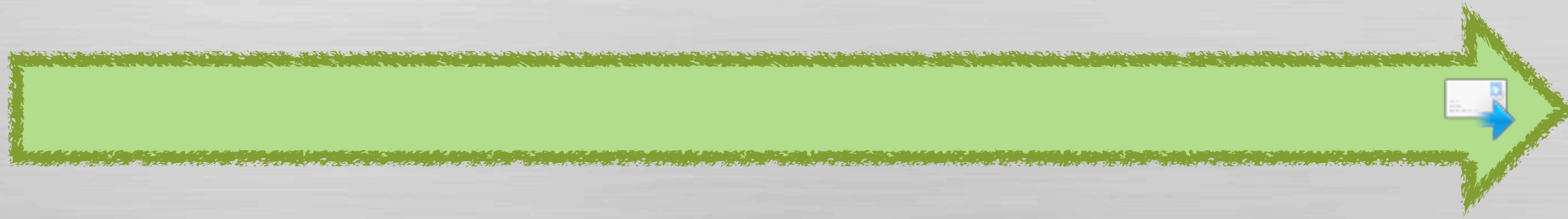
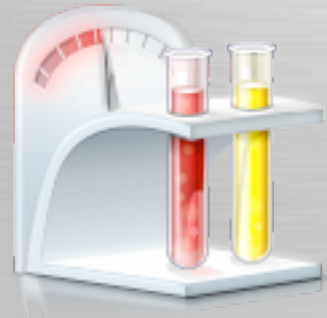
41959-8:Walking speed:Vel:1W^mean:^Patient:Qn:Calculated



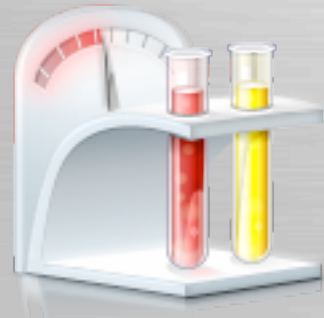
Indiana Network for Patient Care



Indiana Network for Patient Care



Indiana Network for Patient Care

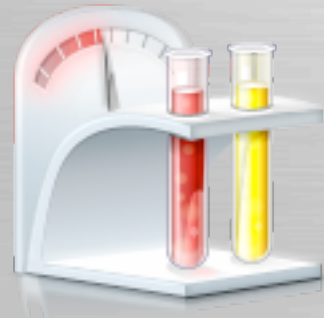


HL7 v2.x Message



```
MSH|^~\&|HOSPITAL_A|SAMPLE_HOSPITAL_A|||$YearMonthDay|||||  
PID|||$patientId$||$patientName$|||||  
PV1|||||$attendingDoctor$||$consultingDoctor$|||||  
OBR|1|||012^CBC/Auto Diff^HSPA^57021-8^CBC W Auto Diff^LN||$reqDate|||||  
OBX|2|NM|123^WBC^HSP_A^26464-8^Leukocytes [# /volume] in Blood^LN||10.8|K/MM3||||F|  
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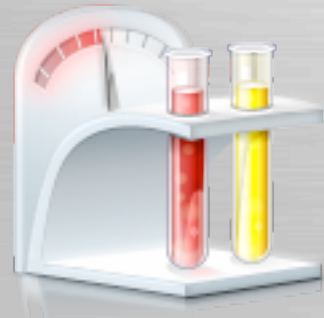


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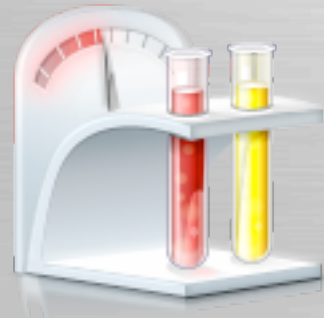


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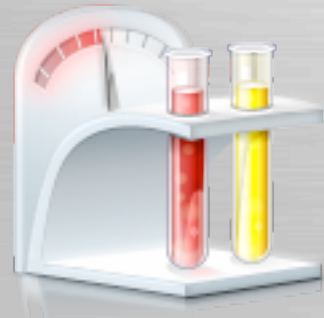


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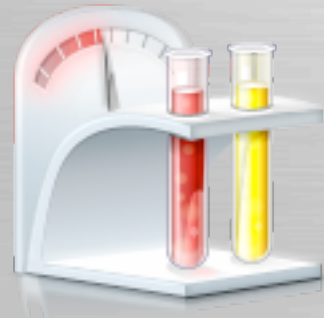


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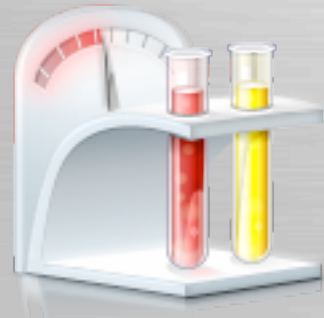


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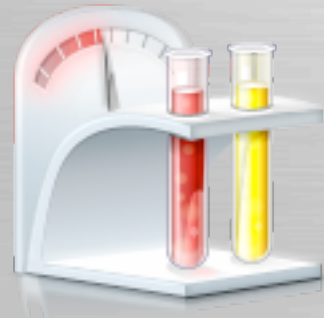


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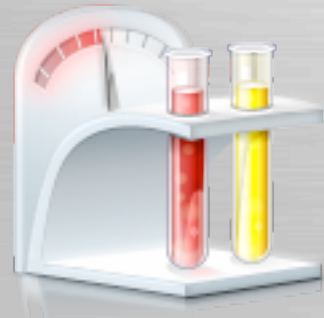
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Local Code^Local Name^Code System^LOINC code^LOINC name^Code System

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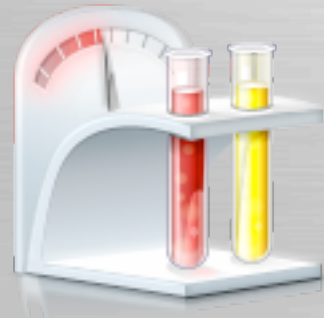
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Local Code^Local Name^CodeSystem^LOINCcode^LOINCname^CodeSystem

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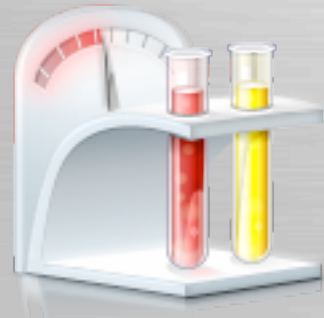
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Local Code^Local Name^CodeSystem^LOINCcode^LOINCname^CodeSystem

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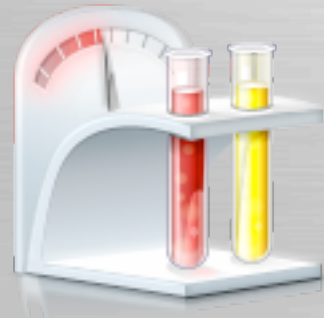
HL7 v2.x Message



Local Code^Local Name^CodeSystem^LOINCcode^LOINCname^CodeSystem

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PID|||$patientId$||$patientName$|||||  
PV1|||||$attendingDoctor$||$consultingDoctor$|||||  
OBR|1|||012^CBC/Auto Diff^HSP_A^57021-8^CBC W Auto Diff^LN||$negDate$|||||  
OBX|2|NM|123^WBC^HSP_A^26464-8^Leukocytes [# /volume] in Blood^LN|10.8|K/MM3||||F|  
OBX|3|NM|234^RBC^HSP_A^26455-1^Erythrocytes [# /volume] in Blood^LN|4.82|ML/MM3||||F|  
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Indiana Network for Patient Care



HL7 v2.x Message



Local Code^Local Name^Code System^LOINC code^LOINC name^Code System

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```


Result with a Coded Value

```
OBX||CE|57131-5^Newborn conditions with pos markers^LN||7573000^PKU^SCT
```

Result with a Coded Value

Data type of result
(OBX-5) is a coded
element

OBX||CE|57131-5^Newborn conditions with pos markers^LN||7573000^PKU^SCT

Result with a Coded Value

Data type of result
(OBX-5) is a coded
element

This code is
from LOINC

OBX||CE|57131-5^Newborn conditions with pos markers^LN||7573000^PKU^SCT

Code identifying this
observation
(what are these results?
Conditions identified by
newborn screening)

Result with a Coded Value

Data type of result
(OBX-5) is a coded
element

This code is
from LOINC

This code is from
SNOMED

OBX||CE|57131-5^Newborn conditions with pos markers^LN||7573000^PKU^SCT

Code identifying this
observation
(what are these results?
Conditions identified by
newborn screening)

Code identifying the result
(Phenylketonuria)