Slide 1	Networking and Health Information Exchange Unit 7c Supporting Standards for EHR Application	
Slide 2	Unit 7c Objectives Understand the Infobutton Understand disease management Other clinical decision support applications	
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Slide 3	Infobutton • Context-sensitive links embedded within a clinical information system to allow easy	

- clinical information system to allow easy retrieval of relevant information

 Functions by generating and sending queries to CDSS using data from EHRs

 CIS displays button next to data such as a diagnosis or abnormal lab data. When clicked, Infobutton formulates a query based on context of the interaction, including patient demographics, activity being performed, and user role.

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-	

Infobutton Manager

- Software that supports implementation of Infobuttons in an application independent manner.
- The application passes parameters to the Infobutton Manager which generates an HTML document with a set of natural language questions that are hyperlinks to clinical information resources.

Slide 5

Information Resources

- · Many resources available
 - MicromedexMDConsultUpToDate
- Access different

 http://resource1/com/search = "azithromycin" AND

 - oose
 http://resource2.com/query = "azithromycin" [Mesh
 Terms] AND dose [All Fields]
 http*//resource3.com/searchConcept = 3333 ^
 azithromycin filter = 11 ^ dosage

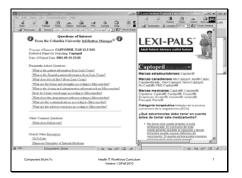
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Slide 6

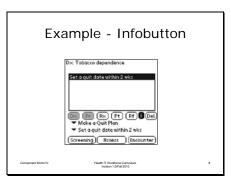
HL7 Infobutton Standard

- Implementations
 - XML based
 - URL based
- · Terminologies supported
 - -RxNorm
 - -LOINC
 - -SNOMED-CT
 - -MeSH

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Slide 8



Slide 9

Disease Management

- Includes all data and treatments related to a particular disease
- Tracks events
 - Reminders for required tests
 - Identifies patients whose goals are not reached
 - Tracks compliance
 - Compares patients
- Manages Workflow

Component 9/Unit 7c

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Slide 11

Order Entry Standards

- Sharing knowledge
- Patient focused
- Meets auditing requirements

Component 9/Unit 7

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Slide 12

Pseudo-code

Heparin is started and adjusted according to the patient's weight and the last APTT

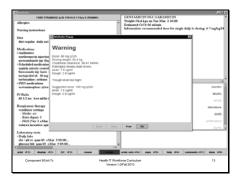
IF starting heparin drip THEN

Give kg based bolus. Adjust the dose by protocol IF APIT $\!<\!35\,\text{THEN}$

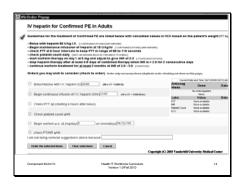
Give 80/kg bolus and increase drip by 4 units/kg.h Repeat APTT in 6 hours $\,$

Component 9/Unit 7c

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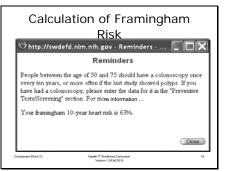


Slide 14



Slide 15

CARE - Regenstrief IF TODAY IS NOT AFTER 10/1 & BEFORE 12/31 OR "FLU SHOT LAST" IS AFTER 8/1 OR LAST "REFUSED FLU INJ." WAS = 1 & SINCE 1 YEAR AGO OR "DRUG ALLERGIES" WAS = "SERUM ALRGY" THEN EXIT IF "AGE" IS GT 65 THEN Consider use of "flu shot AB" if no egg allergy because age places patient in high risk category AND EXIT IF "X LAST" WAS = ASTHMA" V "COPD" OR "CHEST X-RAY LAST" WAS = "COPD" THEN Consider giving "flu shot AB" if no egg allergy because patient's lung disease places him in high risk category. R:2124 AND EXIT



Slide 17

Create the Decision Tree

- Define the decision problemIdentify the decision alternatives
- List the possible clinical outcomes of each of the decision alternatives
- Represent the sequence of events leading to the clinical outcomes by a series of chance nodes and decision nodes
- Choose a time horizon for the problem
- Determine the probability of each chance outcome
- Assign a value (preference, utility, payoff) to each clinical outcome

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Slide 18

Simple Decision Tree Health IT Worldorce Curriculum Version 1.0/Fall 2010



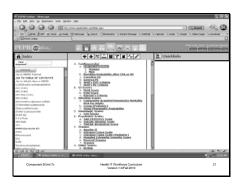
Slide 20

What is Evidence-based Practice?

- Traditional conceptualizations
 - -Research utilization
 - -Clinical trials-based
- -Clinical practice guidelines
 Application of domain knowledge to patient care
 - -Evidence as a continuum

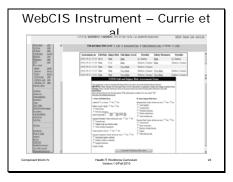
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Slide 21

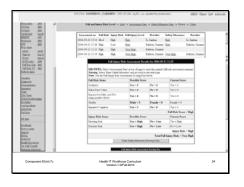




Slide 23



Slide 24



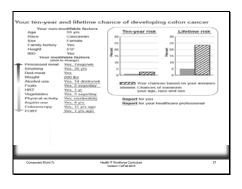
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Slide 26



Slide 27



Summary

This subunit has presented the HL7 standard Infobutton – a feature that provides context-sensitive access to key knowledge. The value of the Infobutton is that it is easy to implement and use; it can be used for almost any purpose; and it provides trusted links to key knowledge resources. This subunit also illustrated several of the knowledge resources that are available on the Internet.

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