

# **Integrating the SEER\*RX Tool into Registry Software**

**Alan R. Houser, MPH**

**C/NET Solutions**

**June 21, 2011**



# There's all that data....

- Registry data comes in all kinds of lists
  - Site and Histology
  - Geography
  - Treatment Codes
  - Et cetera, et cetera, ...



# Sometimes the data is stable

- Site and histology codes
- Geographic codes
- Treatment codes



# Sometimes it changes

- Zip codes
- Collaborative staging
- Therapeutic agents
- Facility lists
- Physician lists

**Software needs  
to be adaptable**



# The Collaborative Staging Model

- Self-contained module
  - All of the data is within the DLL
  - API allows access to the data by other programs for
    - Data entry
    - Data validation
    - User help
  - Drop-in updates



# Using the CStage API

The Calling Program can:

- Determine schema
- Read data tables
- Display data tables with full text
- Assign default values
- Validate data (EDITS)



# New in 2011: CER

- Code chemo, hormone, and immuno agents by NSC number
- Use SEER\*RX Tool to retrieve numbers



# SEER\*RX Tool

- Database of antineoplastic agents
  - Easy lookup
  - Detailed descriptions for abstractor
  - CER: provides NSC numbers for agents
- No connectivity for registry software



# The Proposal

We wanted to see what it would take to extend the capabilities of the SEER\*RX Tool to be interactive with CNExT, our registry software product.

We obtained a copy of the SEER\*RX database to play with



# Adding an API to SEER\*RX

- Looking for a way to assist abstractors in coding NSC fields for CER
- Develop a wrapper with API to pass data between SEER\*RX and a prototypical abstract editor



# Interface Requirements

- Retain the features of the SEER\*RX Tool: look up, description, modality
- Accessible from within registry program
- Minimize keystrokes to select an agent
- Validate selection

C/NET



SOLUTIONS

# Launch SEER\*RX Drop-in:

Field Name	Data
<b>Treatment: Chemotherapy #1</b>	
<b>Chemotherapy, Course</b>	<b>FIRST COURSE [01]</b>
Chemotherapy, Procedure	MULTI-AGENT CHEMO [03]
Chemotherapy, NSC Number	
Chemotherapy, Hospital of RX	CCR [0000000001]
Chemotherapy, Date Started	11/27/2010
Chemotherapy, Date Ended	01/02/2011
Chemotherapy, Planned Dose	999998
Chemotherapy, Num Doses Planned	18
Chemotherapy, Planned Dose Unit	MILLIGRAMS [01]
Chemotherapy, Received Dose	999998
Chemotherapy, Num Doses Received	15
Chemotherapy, Planned Dose Unit	MILLIGRAMS [01]
Text, Chemotherapy	Chemotherapy was received, but the dose received is not kr
Chemotherapy, Completion Status	INCOMPLETE, OTHER REASON [08]

SEER\*Rx in CNExT Demo

SEER\*Rx Close



# Enter agent name or abbreviation:

**SEER\*Rx Drug Search**

Search for a drug (enter all or part of the name or abbreviation)

**Your search for "MTX" found 3 results** 1

<b>Generic Drug Name</b>	<input type="text" value="Dichloromethotrexate"/>	<b>Category</b>	<input type="text" value="Chemotherapy"/>
<b>Brand Name(s)</b>	<input type="text" value="DichloroMethotrexate"/>	<b>Subcategory</b>	<input type="text" value="Antimetabolite; enzyme inhibitor"/>
<b>Abbreviation(s)</b>	<input type="text" value="DCM; DCMTX"/>	<b>NSC Number</b>	<input type="text" value="029630"/>
<b>Primary Sites</b>	<input type="text"/>		
<b>Chemical Name</b>	<input type="text" value="Dichloroamethopterin"/>		
<b>Remarks</b>	<input type="text"/>		

# Note multiple results:

**SEER\*Rx Drug Search** [X]

Search for a drug (enter all or part of the name or abbreviation)

**Your search for "MTX" found 3 results** 1

<b>Generic Drug Name</b>	<input type="text" value="Dichloromethotrexate"/>	<b>Category</b>	<input type="text" value="Chemotherapy"/>
<b>Brand Name(s)</b>	<input type="text" value="DichloroMethotrexate"/>	<b>Subcategory</b>	<input type="text" value="Antimetabolite; enzyme inhibitor"/>
<b>Abbreviation(s)</b>	<input type="text" value="DCM; DCMTX"/>	<b>NSC Number</b>	<input type="text" value="029630"/>
<b>Primary Sites</b>	<input type="text"/>		
<b>Chemical Name</b>	<input type="text" value="Dichloroamethopterin"/>		
<b>Remarks</b>	<input type="text"/>		

# Select agent:

**SEER\*Rx Drug Search** [X]

Search for a drug (enter all or part of the name or abbreviation)

**Your search for "MTX" found 3 results** 1

<b>Generic Drug Name</b>	<input type="text" value="Dichloromethotrexate"/>	<b>Category</b>	<input type="text" value="Chemotherapy"/>
<b>Brand Name(s)</b>	<input type="text" value="DichloroMethotrexate"/>	<b>Subcategory</b>	<input type="text" value="Antimetabolite; enzyme inhibitor"/>
<b>Abbreviation(s)</b>	<input type="text" value="DCM; DCMTX"/>	<b>NSC Number</b>	<input type="text" value="029630"/>
<b>Primary Sites</b>	<input type="text"/>		
<b>Chemical Name</b>	<input type="text" value="Dichloroamethopterin"/>		
<b>Remarks</b>	<input type="text"/>		

# Data Value inserted into field:

Field Name	Data
<b>Treatment: Chemotherapy #1</b>	
<b>Chemotherapy, Course</b>	<b>FIRST COURSE [01]</b>
Chemotherapy, Procedure	MULTI-AGENT CHEMO [03]
Chemotherapy, NSC Number	029630
Chemotherapy, Hospital of RX	CCR [0000000001]
Chemotherapy, Date Started	11/27/2010
Chemotherapy, Date Ended	01/02/2011
Chemotherapy, Planned Dose	999998
Chemotherapy, Num Doses Planned	18
Chemotherapy, Planned Dose Unit	MILLIGRAMS [01]
Chemotherapy, Received Dose	999998
Chemotherapy, Num Doses Received	15
Chemotherapy, Planned Dose Unit	MILLIGRAMS [01]
Text, Chemotherapy	Chemotherapy was received, but the dose received is not kr
Chemotherapy, Completion Status	INCOMPLETE, OTHER REASON [08]

SEER\*Rx

Close

# Validate selection:

SEER®Rx Drug Search

Search for a drug (enter all or part of the name or abbreviation)

**Your search for "trip" found 3 results** 3

<b>Generic Drug Name</b>	<input type="text" value="Triptorelin"/>	<b>Category</b>	Hormones and agents acting via hormonal mechanisms
<b>Brand Name(s)</b>	AY-25 52014		
<b>Abbreviation(s)</b>			
<b>Primary Sites</b>	Ovarian		
<b>Chemical Name</b>	D-Trp(6)-LHRH, [6-D-Tryptophan] luteinising hormone-releasing factor; 5-Oxo-L-prolyl-L-histidyl-L-tryptophyl-L-seryl-L-tyrosyl-D-tryptophyl-L-leucyl-L-arginyl-L-prolylglycinamide		
<b>Remarks</b>	A luteinizing hormone-releasing hormone (LHRH) agonist; a synthetic analogue of gonadorelin .		

# Advantages

- Standardize registry software solutions
- Provide pick list for data entry
- Built-in validation
- Easy to distribute updates to vendors and registries



# Some current issues

- Fewer than half the drugs in the database have NSC numbers
- Some drugs have multiple numbers
- Update schedule? Regular or ad hoc?

# Recommendations

- Provide a published API to the SEER\*RX Tool to allow software developers to integrate it into their products
- Add NSC numbers to all agents in the database; resolve multiple numbers
- Provide advance notification of upcoming updates

