

Integrating the SEER*RX Tool into Registry Software

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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

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SOLUTIONS

Launch SEER*RX Drop-in:

Field Name	Data
Treatment: Chemotherapy #1	
Chemotherapy, Course	FIRST COURSE [01]
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

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

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

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

Data Value inserted into field:

Field Name	Data
Treatment: Chemotherapy #1	
Chemotherapy, Course	FIRST COURSE [01]
Chemotherapy, Procedure	MULTI-AGENT CHEMO [03]
Chemotherapy, NSC Number	029630
Chemotherapy, Hospital of RX	CCR [00000000001]
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

Generic Drug Name	<input type="text" value="Triptorelin"/>	Category	Hormones and agents acting via hormonal mechanisms
Brand Name(s)	AY-254 52014		
Abbreviation(s)			
Primary Sites	Ovarian		
Chemical Name	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		
Remarks	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

